

**SPECIFICATIONS**

**THEIL ROAD PROPERTIES, LP  
48 UNIT RESIDENTIAL DEVELOPMENT  
for HILLSIDE MANOR  
2002 RECTOR ROAD  
PARAGOULD, ARKANSAS**

**OWNER**

**THEIL ROAD PROPERTIES, LP**  
612 E. Canal Street, Paragould, Arkansas 72450 PHONE (870) 239-8084

\_\_\_\_\_  
*(OWNER'S SIGNATURE)*

\_\_\_\_\_  
*(DATE)*

**ARCHITECT**

**STUDIO 6 ARCHITECTS**  
1120 Garrison Avenue, Suite 1A, Fort Smith, Arkansas 72901 PHONE (479) 782-4085

\_\_\_\_\_  
*(ARCHITECT'S SIGNATURE)*

\_\_\_\_\_  
*(DATE)*

**GENERAL CONTRACTOR**

**CRAIG CUSTOM CONSTRUCTION, LLC**  
13200 W. Markham Street, Suite 104, Little Rock, Arkansas 72211 PHONE (501) 255-6688

\_\_\_\_\_  
*(CONTRACTOR'S SIGNATURE)*

\_\_\_\_\_  
*(DATE)*

**CONTRACTOR'S BONDING COMPANY**

**NORTH AMERICAN SPECIALTY INSURANCE COMPANY**  
1200 Main Street, Suite 800, Kansas City, Missouri 64105-2478

\_\_\_\_\_  
*(CONTRACTOR'S BONDING COMPANY SIGNATURE)*

\_\_\_\_\_  
*(DATE)*

**MORTGAGE COMPANY**

**PRUDENTIAL HUNTOON PAIGE**  
6805 Morrison Blvd, Suite 385, Charlotte, North Carolina 28211

\_\_\_\_\_  
*(MORTGAGE COMPANY'S SIGNATURE)*

\_\_\_\_\_  
*(DATE)*

**JANUARY 29, 2021**

**SPEC NO.**



*Jan. 29, 2021*

JOB NUMBER: 20-003  
HUD PROJECT NUMBER: TBD

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CONTRACTING REQUIREMENTS**

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Supplementary Conditions of the Contract for  
Construction (HUD 92554M)

Wage Determination (AR20190081)

**CONTRACT DRAWINGS**

Accompanying these specifications are the following drawings which are to become a part of these specifications, and is intended to coordinate the Work of the Contract. Any Work included on one and not the other shall be executed as though included on both.

THEIL ROAD PROPERTIES, LP  
48 UNIT RESIDENTIAL DEVELOPMENT  
for HILLSIDE MANOR  
2002 RECTOR ROAD  
PARAGOULD, ARKANSAS

JOB NUMBER: 20-008  
HUD PROJECT NUMBER: TBD

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END OF SECTION



# AIA® Document A201® – 2017

## General Conditions of the Contract for Construction

for the following PROJECT:  
(Name and location or address)

Their Road Properties  
48 Unit Residential Development  
for Hillside Manor  
2002 Rector Road  
Paragould, Arkansas

**THE OWNER:**  
(Name, legal status and address)

Theil Road Properties, LP  
612 E. Canal Street  
Paragould, Arkansas 72450

**THE ARCHITECT:**  
(Name, legal status and address)

Studio 6 Architects  
1120 Garrison Avenue, Suite 1A  
Fort Smith, Arkansas 72901

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**ADDITIONS AND DELETIONS:**  
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.

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## **ARTICLE 1 GENERAL PROVISIONS**

### **§ 1.1 Basic Definitions**

#### **§ 1.1.1 The Contract Documents**

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

**§1.1.1.1** In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities:

1. Modifications, including Requests for Information (RFI's) and written interpretations issued to Contractor by Architect.
2. Addenda, with those of later date having precedence over those of earlier date.
3. The Agreement.
4. The General Conditions of the Contract for Construction.
5. Division 01 of the Specifications.
6. Divisions 02 through 33 of the Specifications: where, should there be conflict, the Initial Decision Maker shall decide which stipulation will provide the best installation.
7. The Drawings: where the precedent shall be drawings of larger scale over those of smaller, figured dimensions over scaled dimensions, and noted materials over graphic indications.

#### **§ 1.1.2 The Contract**

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

#### **§ 1.1.3 The Work**

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

#### **§ 1.1.4 The Project**

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

#### **§ 1.1.5 The Drawings**

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

#### **§ 1.1.6 The Specifications**

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

**§ 1.1.6.1** Whenever the following words are used in the Specifications, they shall have the respective meanings given herein as follows:

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- .1 Whenever the words "as directed", "as required", or words of like effect are used, it is understood that the direction or the requirements of the Owner is intended.
- .2 Whenever the words "approved", "acceptable", "satisfactory" or words of like effect or import are used, they shall be interpreted as approved by, acceptable to, or satisfactory to the Owner.
- .3 Where the words "equal to", "like", or "similar to" are used, it is intended that the contractor shall have the option of substituting materials equal to or similar to the article named; provided however, that the contractor shall within thirty days after the signing of the contract documents, submit the proposed substitution to the Owner for approval and the Owner's decision as to the equal merits of the substitution shall be final and binding and should the contractor fail to submit the proposed substitutes within the period above named, then he shall forfeit the option and use the materials named in the specifications.
- .4 Wherever the words "General Contractor" are used it shall mean the prime Contractor for the project.
- .5 Whenever the words "Each Contractor" is used it shall mean all Contractors having a contract with the General Contractor and / or all Contractors having a contract with Owner for the project, including the General Contractor.

#### **§ 1.1.7 Instruments of Service**

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

#### **§ 1.1.8 Initial Decision Maker**

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

#### **§ 1.2 Correlation and Intent of the Contract Documents**

**§ 1.2.1** The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

**§ 1.2.1.1** The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

**§ 1.2.2** Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

**§ 1.2.3** Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

#### **§ 1.3 Capitalization**

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

#### **§ 1.4 Interpretation**

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

**§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service**

**§ 1.5.1** The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights, except as stated in the Agreement between Owner and Architect. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

**§ 1.5.2** The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

**§ 1.6 Notice**

**§ 1.6.1** Where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission.

*(Paragraph Deleted)*

**§ 1.7 Digital Data Use and Transmission**

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

**§ 1.8 Building Information Models Use and Reliance**

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™-2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

**ARTICLE 2 OWNER**

**§ 2.1 General**

**§ 2.1.1** The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

**§ 2.1.2** The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

**§ 2.2 Evidence of the Owner's Financial Arrangements**

**§ 2.2.1** Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

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**§ 2.2.2** Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

**§ 2.2.3** After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

**§ 2.2.4** Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

**§ 2.3 Information and Services Required of the Owner**

**§ 2.3.1** Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

**§ 2.3.2** The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

**§ 2.3.3** If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

**§ 2.3.4** The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

**§ 2.3.5** The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

**§ 2.3.6** The Architect will furnish the Owner with the following Construction Documents (plans and specifications):

Maximum of Ten (10) full size sets of Construction Documents (plans and specifications) as required for Financial Closing, Arkansas Development Finance Authority Pre-Construction Conference, City of Paragould Plan Review / Permitting, and Arkansas Department of Health Services (plumbing) Plan Review;

Maximum of Two (2) half-size sets of Construction Documents (plans and specifications) as required for S.E. Clark

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& Associates and Owner's Field Personnel; and,

Maximum of Ten (10) electronic digital copies of the Construction Documents (plans and specifications) in

Portable Documents Format (pdf) for distribution to the Contractor for bidding and construction of the project.

#### **§ 2.4 Owner's Right to Stop the Work**

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

#### **§ 2.5 Owner's Right to Carry Out the Work**

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

### **ARTICLE 3 CONTRACTOR**

#### **§ 3.1 General**

**§ 3.1.1** The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

**§ 3.1.2** The Contractor shall perform the Work in accordance with the Contract Documents. All labor shall be performed in the best and most workmanlike manner by mechanics skilled in their respective trades.

**§ 3.1.3** The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

#### **§ 3.2 Review of Contract Documents and Field Conditions by Contractor**

**§ 3.2.1** Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

**§ 3.2.2** Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the

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Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents. Each Contractor shall check and verify all measurements and dimensions shown on contract drawings, shop drawings, of all of the work as it progresses including the dimensions of all existing conditions of buildings and structures on the site of the work and shall be responsible for the accuracy, coordination, proper placing and fitting of their particular parts and components of the work.

**§ 3.2.3** The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

**§ 3.2.3.1** All work shall be executed in strict conformity with all laws and regulations of the City and State in which the building is located. None of the terms or provisions of this specification shall be construed as waiving or canceling any of said laws and regulations.

**§ 3.2.4** If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

**§ 3.2.5** The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for evaluating and responding to the Contractor's requests for information that are not prepared in accordance with the Contract Documents or where the requested information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation.

### **§ 3.3 Supervision and Construction Procedures**

**§ 3.3.1** The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

**§ 3.3.2** The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

**§ 3.3.3** The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

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### § 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

- .1 represents that it has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
- .2 represents that it will provide the same warranty for the substitution as it would have provided for the product specified;
- .3 certifies that the cost data presented is complete and includes all related costs for the substituted product and for Work that must be changed as a result of the substitution, and waives all claims for additional costs related to the substitution that subsequently become apparent; and
- .4 shall coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

### § 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.5.3 Except as otherwise specified all work shall be guaranteed by each Contractor against defects resulting from the use of inferior materials and equipment or resulting from inferior or negligent workmanship for one year from the date of Final Completion of the Contract, or from full occupancy of the building by the Owner, whichever is earlier.

If, within any guarantee period, repairs or changes are required in connection with guaranteed work, which, in the opinion of the Owner, is rendered necessary as the result of the use of materials, equipment, or workmanship which are inferior, defective, or not in accordance with the terms of the contract, the Contractor shall, promptly upon receipt of notice from the Owner, and without expense to the Owner:

- .1 Place in satisfactory condition in every particular all of such guaranteed work, correct all defects therein; and
- .2 Make good all damage to the building or site, or equipment or contents thereof, which, in the opinion of the Owner is the result of the use of materials, equipment, or workmanship which are inferior, defective, or not in accordance with the terms of the contract; and

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**.3** Make good any work or material, or the equipment and contents of said building or site disturbed in fulfilling any such guarantee.

In any case wherein fulfilling the requirements of the Contract or any guarantee, embraced in or required thereby the Contractor disturbed any work guaranteed under another Contract, he shall restore such disturbed work to a condition satisfactory to the Owner and guarantee such restored work to the same extent as it was guaranteed under such other Contract.

If the Contractor, after notice, fails to proceed promptly to comply with the terms of the guarantee, the Owner may have the defects corrected and the Contractor and his surety shall be liable for all expense incurred.

All special guarantees applicable to definite parts of the work that may be stipulated in the specifications or other papers forming a part of the Contract shall be subject to the terms of this paragraph during the first year of the life of such special guarantee.

### **§ 3.6 Taxes**

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect. Each Contractor shall pay all State and Federal Social Security Unemployment Compensation and for all other fees, and / or taxes which may be incurred in connection with his Work.

### **§ 3.7 Permits, Fees, Notices and Compliance with Laws**

**§ 3.7.1** Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

**§ 3.7.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

**§ 3.7.3** If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

### **§ 3.7.4 Concealed or Unknown Conditions**

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

**§ 3.7.5** If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

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### **§ 3.8 Allowances**

**§ 3.8.1** The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

**§ 3.8.2** Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

**§ 3.8.3** Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

### **§ 3.9 Superintendent**

**§ 3.9.1** The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

**§ 3.9.2** The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

**§ 3.9.3** The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

### **§ 3.10 Contractor's Construction and Submittal Schedules**

**§ 3.10.1** The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

**§ 3.10.1.1** The Schedule of Work shall be in a format approved by the Architect and Owner, and shall include all Work required by the Contract Documents.

**§ 3.10.2** The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

**§ 3.10.3** The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

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### **§ 3.11 Documents and Samples at the Site**

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

### **§ 3.12 Shop Drawings, Product Data and Samples**

**§ 3.12.1** Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

**§ 3.12.2** Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

**§ 3.12.3** Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

**§ 3.12.4** Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

**§ 3.12.5** The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

**§ 3.12.6** By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

**§ 3.12.7** The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

**§ 3.12.8** The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

**§ 3.12.9** The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

**§ 3.12.10** The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of

the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

**§ 3.12.10.1** If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

**§ 3.12.10.2** If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

### **§ 3.13 Use of Site**

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

**§ 3.13.1** Possession or use of any part of the work by the Owner prior to final acceptance and payment shall not constitute an acceptance of the work taken or used. If such use prior to the contract time for completion increases the cost of the work or delays its completion, the Contractor shall be entitled to extra compensation or extension of time, or both; the contractor's claim for such extra compensation shall be in writing, with vouchers and other supporting data attached substantiating such claim. After the contract time for completion has expired the Contractor shall not be entitled to extra compensation for extension of time due to such use, neither shall the amount of the liquidated damages be reduced because of partial use or occupancy.

### **§ 3.14 Cutting and Patching**

**§ 3.14.1** The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

**§ 3.14.2** The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

### **§ 3.15 Cleaning Up**

**§ 3.15.1** The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

**§ 3.15.2** If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

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### **§ 3.16 Access to Work**

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

### **§ 3.17 Royalties, Patents and Copyrights**

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

### **§ 3.18 Indemnification**

**§ 3.18.1** To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

**§ 3.18.2** In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

**§ 3.18.3** The obligations of the Contractor under this Paragraph 3.18 shall not extend to the liability of the Architect, the Architect's consultants, and agents and employees of any of them arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Purchase Orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the Architect, the Architect's consultants, and agents and employees of any of them provided such giving or failure to give primary cause of the injury or damage.

## **ARTICLE 4 ARCHITECT**

### **§ 4.1 General**

**§ 4.1.1** The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

**§ 4.1.1.1** The Architect shall have no authority to direct or advise the Contractor or any subcontractor or their employees or agents concerning the method or manner by which the work is to be performed. The Contractor shall have exclusive authority, responsibility and control over the method and manner by which the work is to be performed and shall remain in all respects an independent contractor.

**§ 4.1.2** Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

### **§ 4.2 Administration of the Contract**

**§ 4.2.1** The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract

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Documents. The Architect shall not have the authority to amend the Contract time or the Contract amount without prior approval of the Owner.

**§ 4.2.2** The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

**§ 4.2.2.1** The Owner shall be entitled to reimbursement from the Contractor for amounts paid to the Architect for site visits made necessary by the fault of the Contractor or by defects and deficiencies in the Work.

**§ 4.2.3** On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

#### **§ 4.2.4 Communications**

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols. The Architect may allow communications at times between the Contractor and the Architect's consultants with a proper request and as long as the Architect is copied on such communications.

**§ 4.2.5** Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

**§ 4.2.6** The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

**§ 4.2.7** The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

## **ARTICLE 5 SUBCONTRACTORS**

### **§ 5.1 Definitions**

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

### **§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work**

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but



rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

**§ 5.2.4** The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

### **§ 5.3 Subcontractual Relations**

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

### **§ 5.4 Contingent Assignment of Subcontracts**

**§ 5.4.1** Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

**§ 5.4.2** Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

**§ 5.4.3** Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

## **ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

### **§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts**

**§ 6.1.1** The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

**§ 6.1.2** When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

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§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

#### § 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

#### § 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

### ARTICLE 7 CHANGES IN THE WORK

#### § 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

**§ 7.1.4** Unless otherwise agreed upon, the combined overhead and profit included in the total cost to the Owner for a change in the Work shall be based on the following schedule:

- .1 Costs to which overhead and profit is to be applied shall be determined in accordance with Section 7.3.4, excluding 7.3.4.4 which shall be added as a direct net cost without overhead or profit.
- .2 Overhead and profit charge of 18% of items 7.3.4.1, 7.3.4.2, 7.3.4.3 and 7.3.4.5 is the maximum collective amount allowed to be charged by the General Contractor and any sub-contractor(s), including any sub-sub-contractor(s) involved in a change. The maximum percentage that can be charged as overhead, collectively between the General Contractor and any sub-contractor(s), including any sub-sub-contractor(s) involved in the change shall be 12%.
- .3 Each Contractor shall be required, if called upon to furnish the original bills and payrolls and support the statement with proper affidavits. The burden of proof of costs to be on the Contractor.

## **§ 7.2 Change Orders**

**§ 7.2.1** A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

## **§ 7.3 Construction Change Directives**

**§ 7.3.1** A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

**§ 7.3.2** A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

**§ 7.3.3** If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

**§ 7.3.4** If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change. Costs of supervision and field office personnel will only be allowed when the Architect has determined that the change has

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affected their time for the change. Extra duties for a superintendent or project manager already assigned to the project will not be an acceptable reason for including additional costs in the proposed change.

**§ 7.3.5** If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

**§ 7.3.6** Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

**§ 7.3.7** A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

**§ 7.3.8** The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase or decrease, if any, with respect to that change.

**§ 7.3.9** Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

**§ 7.3.10** When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

#### **§ 7.4 Minor Changes in the Work**

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

### **ARTICLE 8 TIME**

#### **§ 8.1 Definitions**

**§ 8.1.1** Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

**§ 8.1.2** The date of commencement of the Work is the date established in the Agreement.

**§ 8.1.3** The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

**§ 8.1.4** The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

#### **§ 8.2 Progress and Completion**

**§ 8.2.1** Time is of the essence of the Contract. The Work shall be started with promptness after obtaining possession of the property and must be diligently prosecuted with a sufficient number of workmen and a sufficient supply of

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materials, and if necessary, the Contractor shall work overtime and on Saturdays, Sundays, and Holidays at his own expense, to completion, within the time stated in the Contract and each Contractor shall take proper measures not injurious to the structure of finish, to complete the Work within the agreed time.

**§ 8.2.2** The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

**§ 8.2.3** The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

### **§ 8.3 Delays and Extensions of Time**

**§ 8.3.1** If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

**§ 8.3.2** Claims relating to time shall be made in accordance with applicable provisions of Article 15.

**§ 8.3.3** This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

## **ARTICLE 9 PAYMENTS AND COMPLETION**

### **§ 9.1 Contract Sum**

**§ 9.1.1** The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

**§ 9.1.2** If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

### **§ 9.2 Schedule of Values**

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

### **§ 9.3 Applications for Payment**

**§ 9.3.1** At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents. The form of Application for Payment, duly notarized, shall be a current authorized edition of AIA Document G702-1992, Application and Certificate for Payment, supported by a current authorized addition of AIA Document G703-1992, Continuation Sheet. Such application shall reflect retainage as provided in the Contract Documents. The General Contractor shall submit a Conditional Lien Waiver for all work covered under the Application for Payment at the time the Application for Payment is submitted to the Architect. The General Contractor shall submit Unconditional Lien Waiver to the Owner within ten calendar days after receipt of payment, and before subsequent Applications for Payment are submitted to the Architect.

**§ 9.3.1.1** As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

**§ 9.3.1.2** Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

**§ 9.3.1.3** Certificates for Payment will be issued for ninety (90) percent of the value of the materials properly stored at the site and work completed if in full compliance with the Contract Documents during the preceding month.

**§ 9.3.2** Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

**§ 9.3.3** The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

#### **§ 9.4 Certificates for Payment**

**§ 9.4.1** The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

**§ 9.4.2** The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

#### **§ 9.5 Decisions to Withhold Certification**

**§ 9.5.1** The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to

such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

**§ 9.5.2** When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

**§ 9.5.3** When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

**§ 9.5.4** If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

#### **§ 9.6 Progress Payments**

**§ 9.6.1** After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

**§ 9.6.2** The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

**§ 9.6.3** The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

**§ 9.6.4** The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

**§ 9.6.5** The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

**§ 9.6.6** A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

**§ 9.6.7** Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any

fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

**§ 9.6.8** Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

#### **§ 9.7 Failure of Payment**

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

#### **§ 9.8 Substantial Completion**

**§ 9.8.1** Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

**§ 9.8.2** When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

**§ 9.8.3** Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

**§ 9.8.4** When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

**§ 9.8.5** The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

#### **§ 9.9 Partial Occupancy or Use**

**§ 9.9.1** The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security,



maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

**§ 9.9.1.1** Possession or use of any part of the work, prior to final acceptance and payment, shall not constitute an acceptance of the work taken or used.

.1 If such use prior to the contract time for completion increases the cost of the work or delays its completion, the Contractor shall be entitled to extra compensation or extension of time, or both; the contractor's claim for such extra compensation shall be in writing, with vouchers and other supporting data attached substantiating such claim.

.2 After the contract time for completion has expired the Contractor shall not be entitled to extra compensation for extension of time due to such use, neither shall the amount of the liquidated damages be reduced because of partial use or occupancy.

**§ 9.9.2** Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

**§ 9.9.3** Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

#### **§ 9.10 Final Completion and Final Payment**

**§ 9.10.1** Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

**§ 9.10.1.1** The Architect will perform no more than one (1) field observation to determine whether the Work or designated portion thereof has attained Final Completion in accordance with the Contract Documents.

**§ 9.10.2** Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

**§ 9.10.3** If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the

Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

**§ 9.10.4** The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

**§ 9.10.5** Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

## **ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY**

### **§ 10.1 Safety Precautions and Programs**

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

### **§ 10.2 Safety of Persons and Property**

**§ 10.2.1** The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

**§ 10.2.2** The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

**§ 10.2.3** The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

**§ 10.2.4** When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

**§ 10.2.5** The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

**§ 10.2.6** The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

**§ 10.2.7** The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

**§ 10.2.8 Injury or Damage to Person or Property**

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

**§ 10.3 Hazardous Materials and Substances**

**§ 10.3.1** The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

**§ 10.3.2** Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

**§ 10.3.3** To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

**§ 10.3.4** The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

**§ 10.3.5** The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

**§ 10.3.6** If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

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#### § 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

### ARTICLE 11 INSURANCE AND BONDS

#### § 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under worker's compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed, including private entities performing Work at the site and exempt from the coverage on the account of number of employees or occupation, which entities shall maintain voluntary compensation coverage at the same limits as specified for mandatory coverage for the duration of the project;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employee, or persons or entities excluded by statute from the requirements of Section 11.1.1 but required by the Contract Documents to provide the insurance required by that section;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Liability Insurance shall include all major divisions of coverage and be on a comprehensive basis including:
  - .1 Premises Operations (including X, C and U coverage's as applicable).
  - .2 Independent Contractor's Protective. (Owner/Architect Protective or OCP):
  - .3 Products and Completed Operations.
  - .4 Personal Injury Liability with Employment Exclusion deleted.
  - .5 Owned, un-owned and hired motor vehicles.
  - .6 Broad Form Property Damage including Completed Operations.
  - .7 Builder's Risk – "All Risk" (Coverage shall equal the Contract Amount.)

NOTE: Owner's and Contractor's Protection Liability shall be written to provide coverage of \$2,000,000 Combined Single Limit. Both Owner and Architect shall be named insureds and certificate holders.

.9 If the General Liability coverage's are provided by a Commercial General Liability Policy of a claims-made basis, the policy date or retroactive date shall predate the Contract; termination date of the policy or applicable extended reporting period shall be no earlier than the termination date of coverage's required to be maintained after final payment, certified in accordance with Subparagraph 9.10.2.

.10 The insurance required by Section 11.1.1 shall be written for not less and the following limits, or greater if required by law:

- .1 Worker's Compensation:
  - (a) State: Statutory
  - (b) Applicable Federal: \$100,000
  - (c) Employer's Liability: \$100,000 per Accident  
\$500,000 Disease, Policy Limit

\$100,000 Disease, Each Employee

.2 Comprehensive or Commercial General Liability (including Premises-Operations; Independent Contractor's Protective; Products and Completed Operations; Broad Form (Property Damage):

- (a) Personal Injury:  
\$1,000,000 Each Occurrence  
\$2,000,000 Aggregate
- (b) Property Damage:  
\$1,000,000 Each Occurrence  
\$2,000,000 Aggregate
- (c) Property Damage Liability Insurance shall provide X, C and U coverage as applicable.
- (d) The policy shall be written by a casualty company authorized to do business in the State of Arkansas. The Certificate of Insurance shall show the agent's signature, business name, address and telephone number and be submitted to the Architect. The Certificate shall stipulate 15 days written notice to be given prior to policy coverage cancellation.

.3 Business Auto Liability (including owned, non-owned and hired vehicles):

- (a) Bodily Injury:  
\$500,000 Each Person  
\$1,000,000 Each Occurrence
- (b) Property Damage:  
\$500,000 Each Occurrence

.4 Builder's Risk and Fire Insurance: The Contractor shall procure and maintain during the term of this contract and until work has been completed and accepted, Builder's Risk (All Risk) Insurance for an amount equal to 100 percent completed value basis against damage to the equipment, structures or material. The Owner and the Contractor, as their interest may appear, shall be named as the Insured.

.5 In addition to the above insurances, the Contractor shall provide an "Umbrella" policy with a minimum coverage amount of \$1,000,000.

.11 If this insurance is written on the Comprehensive General Liability policy form, the Certificates shall be ACORD form 25-S, completed and supplemented in accordance with AIA Document G715-1991m Instruction Sheet and Supplemental Attachment for ACORD Certificate of Insurance 25-S.

.12 The Contractor shall at the Contractor's own expense provide insurance coverage for materials stored off the site after written approval of the Owner at the value established in the approval, and also for portions of the Work in transit until such materials are permanently attached to the Work.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.2.1 The Contractor shall furnish and pay for a Performance and Payment Bond in the amount equal to the sum of the Contract as security for the faithful performance of this contract, and shall pay all indebtedness for labor and materials furnished or performed in connection with this contract. These bonds shall be executed by a solvent corporate surety company authorized to do business in the State of Arkansas and must be in compliance with Act 351 of Acts of Arkansas 1953 as amended by Act 209 of Acts of Arkansas 1957.

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After the bond has been approved by the Architect, the Contractor shall file one copy with the Clerk of the County in which the work to be performed is located. The Contractor shall obtain from the County Clerk a certificate as evidence that the bond has been filed, and said certificate shall be filed with the Architect. The Contractor shall pay all expense incident to the filing of the bond. Date of bond shall be the date of contract. Bond must have Power of Attorney attached to each copy of Bond and dated same date as Bond. An original and three copies of the bond must be furnished.

**§ 11.1.3** Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

**§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance.** Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

#### **§ 11.2 Owner's Insurance**

**§ 11.2.1** The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

**§ 11.2.2 Failure to Purchase Required Property Insurance.** If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

**§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance.** Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

#### **§ 11.3 Waivers of Subrogation**

**§ 11.3.1** The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the

individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

**§ 11.3.2** If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

**§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance**

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

**§11.5 Adjustment and Settlement of Insured Loss**

**§ 11.5.1** A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

**§ 11.5.2** Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

**ARTICLE 12 UNCOVERING AND CORRECTION OF WORK**

**§ 12.1 Uncovering of Work**

**§ 12.1.1** If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

**§ 12.1.2** If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

**§ 12.2 Correction of Work**

**§ 12.2.1 Before Substantial Completion**

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or

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completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

#### **§ 12.2.2 After Substantial Completion**

**§ 12.2.2.1** In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

**§ 12.2.2.2** The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

**§ 12.2.2.3** The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

**§ 12.2.3** The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

**§ 12.2.4** The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

**§ 12.2.5** Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

#### **§ 12.3 Acceptance of Nonconforming Work**

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

### **ARTICLE 13 MISCELLANEOUS PROVISIONS**

#### **§ 13.1 Governing Law**

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

#### **§ 13.2 Successors and Assigns**

**§ 13.2.1** The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.



§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

### § 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

### § 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

### § 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

## ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

### § 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;

- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

**§ 14.1.2** The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

**§ 14.1.3** If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

**§ 14.1.4** If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

**§ 14.2 Termination by the Owner for Cause**

**§ 14.2.1** The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

**§ 14.2.2** When any of the reasons described in Section 14.2.1 exist, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

**§ 14.2.3** When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

**§ 14.2.4** If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner.

**§ 14.3 Suspension by the Owner for Convenience**

**§ 14.3.1** The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

**§ 14.3.2** The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

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- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

**§ 14.4 Termination by the Owner for Convenience**

**§ 14.4.1** The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

**§ 14.4.2** Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

**§ 14.4.3** In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

**ARTICLE 15 CLAIMS AND DISPUTES**

**§ 15.1 Claims**

**§ 15.1.1 Definition**

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

**§ 15.1.2 Time Limits on Claims**

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

**§ 15.1.3 Notice of Claims**

**§ 15.1.3.1** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

**§ 15.1.3.2** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

**§ 15.1.4 Continuing Contract Performance**

**§ 15.1.4.1** Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

**§ 15.1.4.2** The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

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#### **§ 15.1.5 Claims for Additional Cost**

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

#### **§ 15.1.6 Claims for Additional Time**

**§ 15.1.6.1** If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

**§ 15.1.6.2** If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

#### **§ 15.1.7 Waiver of Claims for Consequential Damages**

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

#### **§ 15.2 Initial Decision**

**§ 15.2.1** Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

**§ 15.2.2** The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

**§ 15.2.3** In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

**§ 15.2.4** If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon

receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

**§ 15.2.5** The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

**§ 15.2.6** Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

**§ 15.2.6.1** Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

**§ 15.2.7** In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

**§ 15.2.8** If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

### **§ 15.3 Mediation**

**§ 15.3.1** Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

**§ 15.3.2** The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

**§ 15.3.3** Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

**§ 15.3.4** The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

**SUPPLEMENTARY CONDITIONS  
TO THE CONSTRUCTION  
CONTRACT**

U.S. Department of Housing  
and Urban Development  
Office of Housing

OMB Approval No. 2502-0598  
(Exp. 9/30/2021)

Public Reporting Burden for this collection of information is estimated to average 0.2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Response to this request for information is required in order to receive the benefits to be derived. This agency may not collect this information, and you are not required to complete this form unless it displays a currently valid OMB control number. While no assurance of confidentiality is pledged to respondents, HUD generally discloses this data only in response to a Freedom of Information Act request.

**Warning:** Federal law provides that anyone who knowingly or willfully submits (or causes to submit) a document containing any false, fictitious, misleading, or fraudulent statement/certification or entry may be criminally prosecuted and may incur civil administrative liability. Penalties upon conviction can include a fine and imprisonment, as provided pursuant to applicable law, which includes, but is not limited to, 18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802, 24 C.F.R. Parts 25, 28 and 30, and 2 C.F.R. Parts 180 and 2424.

**Article 1: Labor Standards**

**A. Applicability.** The Project or program to which the construction work covered by this Contract pertains is being assisted or insured by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract or related instrument pursuant to the provisions applicable to such Federal assistance or insurance. Any statute or regulation contained herein shall also include any subsequent amendment or successor statute or regulation. The terms of this Supplementary Conditions to the Construction Contract (HUD-92554M) takes precedence over all provisions of the "General Conditions of the Contract for Construction" (AIA Document A201) inconsistent with said Supplementary Conditions.

**B. Minimum Wages.** Pursuant to Section 212 of the National Housing Act, as amended, 12 U.S.C. 1715c, the minimum wage provisions contained in this paragraph B do not apply to those projects with Security Instruments insured under Section 221(h)(1) designed for less than 9 families and they do not apply to those projects with Security Instruments insured under either Section 220 or 233 designed for less than 12 families.

1. (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the Project) shall be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1 (b)(2) of the Davis-Bacon Act (40 U.S.C. 3141(2)(B)(ii)) on behalf of laborers or mechanics are considered wages paid to such laborers or

mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii)) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics that is not listed in the wage determination and that is to be employed under this Contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, D.C. 20210 (“**Administrator**”). The Administrator, or an authorized representative, shall approve, modify, or disapprove every additional classification action within thirty (30) days of receipt and so advise HUD or its designee or shall notify HUD or its designee within the thirty (30) day period that additional time is necessary.

(c) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, shall issue a determination within thirty (30) days of receipt and so advise HUD or its

designee or shall notify HUD or its designee within the thirty (30) day period that additional time is necessary.

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs B.1.(ii)(b) or (c) of this Article, shall be paid to all workers performing work in the classification under this Contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the Contract for a class of laborers or mechanics includes a fringe benefit that is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

**2. Withholding.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this Contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the Contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the Project), all or part of the wages required by the Contract, HUD or its designee may, after written notice to the Contractor, sponsor, applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the Contractor, disburse such amounts withheld for and on account of the Contractor or subcontractor to the respective employees to whom they are due.

### **3. Payrolls, records, and certifications.**

(i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the Project). Such records shall contain the name, address, and social security number of each such worker, his or her correct



classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1 (b)(2)(B) of the Davis-Bacon Act (40 U.S.C. 3141(2)(B)(ii))), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1 (b)(2)(B) of the Davis-Bacon Act (40 U.S.C. 3141(2)(B)(ii)), the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(a) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the Contract, but if the agency is not such a party, the Contractor shall submit the payrolls to the applicant, sponsor, or Owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired, whether paper (Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/whd/forms/wh347.pdf> or its successor site), or electronically pursuant to Program Obligations. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the Contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant sponsor, or Owner, as the case may be, for transmission to HUD or its designee, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee.

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or

supervises the payment of the persons employed under the Contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete.

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the Contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the Contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph B.3.(ii)(b) of this Article.

(d) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Sections 3801 et seq of Title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under subparagraph B.3.(i) of this Article available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the Contractor, sponsor, applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### **4. Apprentices and Trainees.**

(i) **Apprentices.** Apprentices shall be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship, or with a State Apprenticeship Agency recognized by such Office, or if a person is employed in his or her first ninety (90) days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the

program, but who has been certified by the Office of Apprenticeship, or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where the Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship, or a State Apprenticeship Agency recognized by such Office, withdraws approval of an apprenticeship program, the Contractor shall no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees shall not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman's hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on

the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor shall no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) **Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

**5. Compliance with Copeland Act Requirements.** The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this Contract.

**6. Subcontracts.** The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraphs 1 through 10 of this paragraph B and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage determination, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all Contract clauses referenced in this subparagraph.

**7. Contract termination and debarment.** A breach of the Contract clauses in 29 CFR 5.5 may be grounds for termination of the Contract, and for debarment as a contractor or a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this Contract.

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this Contract shall not be subject to the general disputes clause of this Contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of Eligibility.**

(i) By entering into this Contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act (40 U.S.C. 3144(b)(2)) or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this Contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act (40 U.S.C. 3144(b)(2)) or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Department . . . makes, passes, utters or publishes any statement, knowing the same to be false . . . shall be fined under this title or imprisoned not more than two years, or both."

### **C. Contract Work Hours and Safety Standards Act.**

**1. Applicability and Definitions.** This paragraph C of Article 1 is applicable only if a direct form of federal assistance is involved, such as Section 8, Section 202/811 Capital Advance, grants etc., and is applicable only where the prime contract is in an amount greater than \$100,000. As used in this paragraph C, the terms "laborers" and "mechanics" include watchmen and guards.

**2. Overtime requirements.** No contractor or subcontractor contracting for any part of the Contract work that may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty (40) hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek.

**3. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the immediately preceding subparagraph C.2, the Contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, the Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of such subparagraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty (40) hours without payment of the overtime wages required by the clause set forth in such subparagraph.

**4. Withholding for unpaid wages and liquidated damages.** HUD or its designee shall, upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract, or under any other Federal contract with the same prime contractor, or under any other Federally-assisted contract subject to the Contract Work

Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph 3 of this paragraph C.

**5. Subcontracts.** The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraphs 1 through 5 of this paragraph C and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in such subparagraphs 1 through 5.

#### **D. Certification.**

For projects with Security Instruments insured under the National Housing Act, as amended, that are subject to paragraph B of this Article 1, the Contractor is required to execute the Contractor's Prevailing Wage Certificate within HUD-92448 as a condition precedent to insurance by HUD of the Loan, or an advance thereof, made or to be made by the Lender in connection with the construction of the Project.

### **Article 2: Equal Employment Opportunity**

**A. Applicability.** This Article 2 applies to any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee.

**B.** The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, disability, or national origin. The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, disability or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided setting forth the provisions of this nondiscrimination clause.

**C.** The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor state that all qualified applicants shall receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, disability, or national origin.

**D.** The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a

notice to be provided advising the said labor union or workers representatives of the Contractor's commitments hereunder, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

E. The Contractor shall comply with all provisions of Executive Order 11246 of September 24, 1965 and of the rules, regulations, and relevant orders of the Secretary of Labor.

F. The Contractor shall furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and shall permit access to its books, records, and accounts by the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

G. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part and Contractor may be declared ineligible for further government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulations or order of the Secretary of Labor, or as otherwise provided by law.

H. The Contractor shall include the provisions of paragraphs A through H of this Article 2 in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions shall be binding upon each subcontractor or vendor. The Contractor shall take such action with respect to any subcontract or purchase order as HUD or the Secretary of Labor may direct as a means of enforcing such provisions, including sanctions for noncompliance. *Provided, however,* that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by HUD or the Secretary of Labor, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

### **Article 3: Equal Opportunity for Businesses and Lower Income Persons Located Within the Project Area**

A. This Article 3 is applicable to projects covered by Section 3, as defined in 24 CFR Part 135.

B. The work to be performed under this Contract is on a project assisted under a program providing Federal financial assistance from HUD and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u. Section 3 requires that to the greatest extent feasible opportunities for training and employment be given to low and very-low income residents of the unit of local government or the metropolitan area (or non-metropolitan county) as determined by HUD in which the Project is located and contracts for work in connection with the Project be awarded to business concerns which are located in, or owned in substantial part by persons residing in the same metropolitan area (or non-metropolitan county) as the Project.

#### **Article 4: Health and Safety**

A. This Article 4 is applicable only where the prime contract is in an amount greater than \$100,000.

B. No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

C. The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926, and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, 40 USC 3701 et seq.

D. The Contractor shall include the provisions of this Article 4 in every subcontract so that such provisions shall be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as HUD or the Secretary of Labor shall direct as a means of enforcing such provisions.





HVAC MECHANIC (System Installation Only):	\$ 10.00	0.00
INSTALLER - SIDING, Including Vinyl:	\$ 10.75	0.00
LABORER: Common or General:	\$ 7.50	0.00
LABORER (Mason Tender – Brick):	\$ 8.38	0.00
LABORER (Mason Tender - Cement/Concrete):	\$ 8.07	0.00
OPERATOR (Backhoe/Excavator/Trackhoe):	\$ 10.50	0.00
PAINTER (Brush and Spray, Excluding Drywall Finishing/Taping):	\$ 10.75	0.00
PLUMBER:	\$ 12.00	0.00
ROOFER:	\$ 11.72	0.00
SHEETMETAL WORKER:	\$ 10.54	0.00
TILE SETTER:	\$ 8.00	0.00
TRUCK DRIVER (Dump Truck):	\$ 9.15	0.00

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

**Union Rate Identifiers**

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

**Survey Rate Identifiers**

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

**Union Average Rate Identifiers**

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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**WAGE DETERMINATION APPEALS PROCESS**

- 1.) Has there been an initial decision in the matter? This can be:
- \* an existing published wage determination
  - \* a survey underlying a wage determination
  - \* a Wage and Hour Division letter setting forth a position on a wage determination matter
  - \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF WAGE DETERMINATION

**DIVISION 01 GENERAL REQUIREMENTS**

010000	General Requirements
013323	Shop Drawings, Product Data, and Samples
015000	Temporary Facilities and Controls
017700	Closeout Procedures

1. SCOPE

- (a) Separation of these specifications into Divisions and Sections is for convenience only and is not intended to establish limits of work.
- (b) Consult Section 000110 – Table of Contents to be certain that set of documents is complete.

2. EXAMINATION OF SITE

- (a) Submission of a bid will be deemed evidence that each Contractor has examined the site and is familiar with the conditions under which work will be done.
- (b) Signing of contract indicates acceptance by each Contractor of conditions under which work will be done.
- (c) Extra payments will not be authorized for work that could have been determined by an examination of site and prevailing conditions.

3. SCHEDULING OF WORK WITH OWNER

- (a) Prior to commencing work on the project, Craig Custom Construction, LLC shall schedule a conference with the Owner, Developer, and Architect for the purpose of coordinating time schedules of operations during the contract period. Craig Custom Construction, LLC shall furnish the Owner, Developer, and Architect a Work Progress Schedule indicating time allocated for the various categories of building operations. Each Sub-Contractor shall submit a preliminary schedule to Craig Custom Construction, LLC for review and for use in preparing the final Work Progress Schedule. The Work Progress Schedule shall be updated monthly, and shall be submitted to Architect with each Application for Payment.

4. PUBLIC UTILITIES

- (a) Craig Custom Construction, LLC shall notify the public utility companies involved and request the location, removal or relocation of any utilities that are in or near premises in such manner as will interfere with the carrying out of this contract. If, after due notice, such items are not removed, Craig Custom Construction, LLC shall notify the Owner, Developer, and Architect in writing.

5. MAINTAINING TRAFFIC

- (a) At any time during the construction of the project, when it becomes necessary to disrupt traffic or close streets, Craig Custom Construction, LLC shall coordinate such action with the local governing authority and shall follow the recommended procedure for such interruption of traffic.

6. SIGNS

- (a) Sign privileges will be retained by Owner and all Contractors shall keep the premises free from unauthorized posters, signs and decorations. Signs may be installed only if authorized in writing by the Owner.

7. PROTECTION FROM WATER

- (a) Each Contractor shall keep their excavations clear of standing water and shall protect all incomplete walls with suitable coverings during rain or snow; he shall make temporary provisions to take the water away from the building before leaders are erected and shall in every way protect the building and contents from damage or unnecessary wettings.

8. HOUSING AND STORAGE OF MATERIALS

- (a) Each Contractor shall furnish, erect and maintain their own individual Conex units for the storage and protection of materials. All materials shall be kept in storage until immediately before use, and shall be stored as directed by Craig Custom Construction, LLC, and shall be protected from weather as required.
- (b) All fine and coarse aggregate, such as sand, gravel, etc., shall be handled in such a manner as will prevent any mixture with earth or other impurities.
- (c) Reinforcing steel shall be stored on racks at least 6" from the ground and shall be protected from the weather.

9. LAYING OUT WORK

- (a) Craig Custom Construction, LLC shall assist each contractor in establishing all lines, elevations and measurements required for execution of the work included under each contract. Verify dimensions shown on drawings before establishing lines, etc., and consult the Architect regarding any discrepancies before proceeding with the work.
- (b) Maintain all lines, elevations and measurements until construction progresses to the point that they are no longer required.

10. MEASUREMENTS

- (a) Each Contractor shall verify measurements at the site, and where the necessary measurements cannot be secured at the site when required, the matter shall be referred to Craig Custom Construction, LLC who in turn will refer the matter to the Architect. Each Contractor shall be responsible for the correctness of measurements taken at the site. No extra charge or compensation will be allowed on account of difference between actual dimensions and the measurements indicated on the drawings; any difference which may be found shall be submitted to Craig Custom Construction, LLC in writing before proceeding with the work.

11. COLD WEATHER

- (a) All concrete, masonry, or other work subject to damage by cold weather shall not be executed when the temperature falls below forty degrees, except upon permission of the Architect and his approval of measures taken to protect the work from freezing; said permission of the Architect is not to relieve the Contractor of his responsibility for damage which may occur to the work from cold weather.

12. SURPLUS MATERIALS AND CLEANING UP

- (a) All materials delivered on the premises to form a part of the work shown on the drawings and described in the specifications shall be considered the property of the Owner and shall not be removed without the Owner's written consent.
- (b) Upon completion of their work each contractor shall remove stains and dirt from finished surfaces, clean hardware, clean fixtures, clean exposed masonry and concrete surfaces, clean floors and leave the buildings in condition suitable for occupancy by the Owner or continued work by other contractors.

13. CONSTRUCTION STAGING AND PARKING AREAS

- (a) Adequate area will be provided to each Contractor for staging of the project and for storage of materials. Fencing of the work and storage areas, and security of such shall be each Contractor's option.
- (b) Adequate area is available for parking for the Contractor and the Employees of the Contractor. Existing streets shall be maintained clear for use by emergency vehicles.

14. OWNERS RIGHT TO DO WORK

- (a) The Owner reserves the right to perform work at the same time and along side each Contractor, which is not in any Contractor's Scope of Work.

15. ALLOWANCES

- (a) The following allowances shall be included in the Contractor's Lump Sum Price:
  - (1) **FACE BRICK:** King size brick as specified in Section 042000, page 1, paragraph 3(a). Allow the sum of \$400.00/m delivered F.O.B. to the jobsite. Allowance shall include procurement, delivery, handling, and taxes.

END OF SECTION

Project Number 20-003



1. SCOPE

- (a) The GENERAL CONDITIONS and Division 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of submission requirements for all shop drawings, product data, brochures, samples, color charts, etc. as specifically set out in the Technical Specification Sections (Division 2 through 32).
- (c) This work does not include Schedule of Values, Pay Applications or Construction Reports. Refer to General Conditions, Supplementary General Conditions, and Division 1, General Requirements.

2. SCHEDULE FOR SUBMITTALS

- (a) The Architect will review shop drawings, product data and/or samples with reasonable promptness so as to cause no delay in the work, but only for conformance with the design concept of the project and with the information given in the contract documents.
- (b) All major submittals such as steel, HVAC, Plumbing, Mechanical and Electrical Submissions shall be shown in the final accepted Work Progress Schedule as required by Section 010000 - GENERAL REQUIREMENTS and as prepared by the Contractor.
- (c) All shop drawings, product data, brochures, samples or other submittals as required by the various specification sections shall be submitted to the Architect for review within 60 days after the date of the "NOTICE TO PROCEED" unless specified otherwise. No portion of the work requiring a shop drawing, product data or samples may be begun until submission has been approved by the Architect.
- (d) All submittals for products or materials which are being proposed as "substitutions" for the products or materials specified in the technical specification sections shall be submitted to the Architect for review within 30 days after the date of the "NOTICE TO PROCEED." Request for substitutions received after that date will not be considered, and the specified product will be required to be used in the construction of the project.

3. ARCHITECT'S REVIEW

- (a) Architect's review is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the Contractor from compliance with the project plans and specifications, nor departures therefrom. Each Contractor remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing his work in a safe manner.
- (b) The Architect may take any of the following actions on submitted shop drawings or product data:

**"APPROVED"**

Approved for use in the project with no comments made.

3. ARCHITECT'S REVIEW (Cont'd)**"APPROVED AS NOTED"**

Approved for use in the project with commentary and notations by Architect. "Confirmations" may be requested and shall be submitted to the Architect as required by paragraph 3(c).

**"REJECTED"**

Rejected for use in the project. The Architect will state reason for rejection to facilitate resubmittal of another product or material by the Contractor.

**"REVISE AND RESUBMIT"**

The submittal has enough errors or discrepancies to concern the Architect.

- (c) Resubmittals: Drawings, brochures or product data sheets being resubmitted shall be clearly marked as "Resubmittal" or "Confirmation" on the first sheet or cover sheet as applicable, and shall also be so identified in the letter which transmits them to the Architect. Number of resubmittal copies shall be in accordance with provisions stated in paragraph 4, Submittal Requirements.
- (d) Updates: Updated sets of shop drawings which are for making corrections and changes or submissions, and which were not requested by the Architect, such as when the action of "APPROVED AS NOTED" is made are not necessary or required. If updated submittals are provided, they shall be clearly marked and identified in the transmittal letter to the Architect as "Updated, Unrequested Resubmittals." Provide four copies of such submittals, one for the Owner, one for the Developer, one for the Architect's file and one for the Engineer's, or provide via electronic mail (pdf format).

4. SUBMITTAL REQUIREMENTS

- (a) Before submission to the General Contractor, each subcontractor shall review all submittals and field verify all measurements, field construction criteria, materials, catalog numbers and similar data, satisfy himself that adequate information is contained in the submittal to fulfill the purpose intended and shall check and coordinate the submittal data with the requirements of the work and the contract documents. After the above review, each subcontractor shall affix a notation over his signature to the effect that the above action has been taken and the submittal is approved by him. Before submission to the Architect, the General Contractor shall review all submittals and field verify all measurements, field construction criteria, materials, catalog numbers and similar data, satisfy himself that adequate information is contained in the submittal to fulfill the purpose intended and shall check and coordinate the submittal data with the requirements of the work and the contract documents. After the above review the General Contractor shall affix a notation over his signature to the effect that the above action has been taken and the submittal is approved by him. Unsigned submittals or submittals which evidence numerous errors and discrepancies and thus indicate no review or careless review by each subcontractor and/or the General Contractor, even though they may be stamped and/or signed, will be returned with **"NO ACTION TAKEN"**.
- (b) Each Contractor shall inform the Architect in writing of any deviation from the requirements of the contract documents in the submittal form or transmittal letter.

4. SUBMITTAL REQUIREMENTS (Cont'd)

- (c) All submittals shall be delivered to the General Contractor and in turn the Architect via mail, legitimate contract carriers, electronic mail (pdf format only) or shall be hand delivered by the Contractor. Facsimile (FAX) submittals will not be accepted.
- (d) Manufacturer's brochures, product data and sample warranties where required shall be submitted in original form. Copies will not be accepted. All booklets showing multiple products shall be properly indexed, and organized. Provide minimum of (6) six copies of each submittal.
- (e) Product sample or color charts shall be provided as required by the various technical sections of the specifications. Provide three (3) sets of each such item in original form unless specified otherwise. Unless specified otherwise, the Architect and Owner will retain all such samples and color charts. All such samples or color charts shall be submitted at the same time as the related shop drawing or product data brochure.
- (f) Copies of the Architect's construction document drawings shall not be acceptable for use as a shop drawing. Shop drawings will be drawn by each Contractor or Sub-contractor.
- (g) All shop drawings, product data booklets or brochures shall have a 5-1/2" wide x 7-1/2" high blank space reserved on the cover sheet or first page or sheet for the Architect to affix his action stamp.
- (h) All submittals shall have a cover sheet or title block area as appropriate which shall clearly indicate the following information:

- Project name and location
- Name, address and telephone number of Architect
- Architect's job number
- Date of submittal preparation
- Name, address and telephone number of General Contractor
- Name, address and telephone number of Contractor and/or Sub Contractor
- Name, address and telephone number of supplier
- Name, address and telephone number of manufacturer
- Product and material name and/or category as appropriate

- (i) All submittals shall be transmitted to the Architect with a "Transmittal Letter" that shall clearly indicate the following information.

- Project name and location
- Architect's job number
- Name, address and telephone number of Architect
- Date
- Name, address and telephone number of General Contractor
- Product or material name or category as appropriate, and reference to the appropriate Technical Specification Section name and number.

END OF SECTION

1. SCOPE

- (a) Provide temporary facilities and controls as specified in this section, that any contractor may require as a normal part of the work.

2. OFFICE

- (a) During the performance of the contract the Contractor shall maintain an adequate office near the work, fittingly furnished. Space shall be provided for Architect's representative.
- (b) Copies of the specifications, working drawings, details and all shop drawings shall be kept at said office ready for use at any time. Working drawings and specifications shall be properly posted with all supplemental instructions from the Architect, including, but not limited to Addenda, Change Orders, Architect's Supplemental Instruction, and authorized field changes made during the construction of the project.
- (c) Office areas as may be required for any sub-contractor are to be provided by that sub-contractor at his option. Location of such offices shall be coordinated with the Contractor.

3. SANITARY PROVISIONS

- (a) The Contractor shall, at the beginning of the work, provide the necessary and proper toilet conveniences for all employees on the project, which shall be in accordance with the directions of the Architect and other authorized parties having jurisdiction, and the Contractor shall maintain same at all times during the progress of the work in a proper sanitary condition. Location of "job johnnies" shall be coordinated with the Owner.

4. PARKING

- (a) Adequate area is available for parking for the Contractor and the Employees of the Contractor. Existing streets shall be maintained clear for use by emergency vehicles.

5. UTILITIES FOR CONSTRUCTION AND TESTING

- (a) The Contractor shall furnish and install water lines from the available or accessible source of supply, and shall pay for all water used for building purposes.
- (b) The Contractor shall make all necessary applications, pay all fees and charges, to provide and maintain temporary energy for power and light as required for surfacing machines, hoists, other electrical tools and equipment and as necessary for providing and maintaining artificial light in the progress of all branches of the work during the course of construction and the Contractor shall pay for all electricity used. Each contractor shall furnish and install all temporary power cords they may need for the execution of their work and shall closely coordinate their needs through the Contractor.

5. UTILITIES FOR CONSTRUCTION AND TESTING (Cont'd)

- (c) The Contractor shall furnish and pay for all water, fuel and electricity required for testing of all mechanical and electrical equipment.

6. TEMPORARY HEAT

- (a) The buildings must be kept dry and warm at all times when by being cold or wet it will suffer injury before completion.
- (b) At all times, building temperature inside shall be maintained at not less than forty-five degrees, nor less than fifteen degrees warmer than the outside air in more moderate weather.
- (c) The Contractor will furnish and install all temporary heating units and cooling units, and shall pay for fuel required to heat or cool the building during the course of the work. The permanent HVAC systems shall not be used for temporary heat or cooling without written permission from the Owner and Architect. Each contractor shall coordinate their needs for temporary heat and cooling through the Contractor.

7. REMOVAL

- (a) Each Contractor shall remove their particular temporary work when need for its use has passed.
- (b) Each Contractor shall clean spaces that were occupied by their particular temporary work. Remove debris and rubbish from site.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all closeout procedures, final cleaning, adjusting, project record documents, operation and maintenance data, warranties, spare parts, and maintenance materials.

2. SUBSTANTIAL COMPLETION – INDIVIDUAL BUILDINGS

- (a) Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, or Permission to Occupy, complete the following, and submit items to the Architect as hereinafter specified:
  - 1. Advise the Owner, in writing, of pending insurance change-over requirements and utility change-over requirements.
  - 2. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
  - 3. Make final change-over of permanent locks and transmit keys to the Owner with copy of transmittal to the Architect. Advise the Owner's personnel of change-over in security provisions.
  - 4. Complete start-up testing of systems, and instruction of the Owner's maintenance personnel as hereinafter specified in Paragraph 9. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
  - 5. Complete final clean-up requirements as hereinafter specified in Paragraph 4, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.
  - 6. Submit Contractor's written punch list to the Architect. Punch list shall identify individual building by Physical Street Address, and each individual unit within the Building.
- (b) Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that the Work is complete in accordance with the Contract Documents and ready for pre-final and / or final inspection by the Owner and the Architect.
- (c) Provide copies of inspections by Authorities having jurisdiction including Certificates of Occupancy from such Authorities.
- (d) Inspection Procedures: Upon receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfulfilled requirements. The Architect will prepare a Permission to Occupy (HUD Form 92485), or advise the Contractor of construction that must be completed or corrected before the Permission to Occupy (HUD Form 92485) will be issued.

2. SUBSTANTIAL COMPLETION – INDIVIDUAL BUILDINGS (Cont'd)

1. The Architect will conduct one (1) repeat inspection (during a regularly scheduled Pay Request Meeting Date) when requested and assured by the Contractor that the Work has been substantially completed, and the Building is ready for immediate occupancy by the Owner.

3. FINAL ACCEPTANCE – ENTIRE PROJECT

- (a) Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment for the entire project, complete the following:

1. Submit the final payment request with conditional and unconditional lien waivers and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
2. Submit an updated final accounting statement for final additional changes to the Contract sum.
3. Submit Contractor's written Punch List to Architect stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Owner and the Architect.
4. Submit consent of surety to final payment.
5. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
6. Submit all warranties (fully executed for all appliances, HVAC units, water heaters, etc), workmanship bonds, maintenance agreements, final certifications and similar documents as hereinafter specified in Paragraph 7(f).
7. Submit, operations and maintenance manuals for each piece of equipment in the building as herein specified in Paragraph 7(e).
8. Deliver tools, spare parts, extra stock, and similar items as hereinafter specified in Paragraph 8.

- (b) Re-inspection Procedure: The Architect will conduct one (1) repeat inspection (during a regularly scheduled Pay Request Meeting Date) when requested and assured by the Contractor that the Work, including punch list items from earlier inspections has been completed, except items whose completion has been delayed because of circumstances acceptable to the Owner and Architect.

1. Upon completion of re-inspection, the Architect will prepare a Permission to Occupy (HUD Form 92485), or advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.

3. FINAL ACCEPTANCE – ENTIRE PROJECT (Cont'd)

2. If necessary, re-inspection will be repeated. However, the Architect may, at his discretion provide an additional charge for services to the Contractor for re-inspections if, in the opinion of the Architect, the Work has not been completed, or if the Work is not satisfactory.

4. FINAL CLEANING

- (a) Execute final cleaning prior to final inspection for each Phase of the Work, if Phased, or for the entire Project as applicable.
- (b) Clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, clean all interior walls, doors, cabinets and trim, vacuum all carpets, and properly clean all other flooring materials.
- (c) Replace all filters for HVAC units.
- (d) Clean debris from roofs, gutters, downspouts, and drainage systems.
- (e) Clean equipment and fixtures to a sanitary condition.
- (f) Clean site, sweep and power wash paved areas (including public streets affected by construction operations), rake clean landscaped surfaces.
- (g) Remove waste and surplus materials, rubbish, and construction facilities from the site.

5. ADJUSTING

- (a) Adjust all operating products and equipment to ensure smooth and unhindered operation.

6. PROJECT RECORD DOCUMENTS – AS BUILTS

- (a) Maintain on site, one set of the following record documents; record all actual revisions to the Work, including changes made by Addenda, Change Order, Field Directives, Architect's Supplemental Instructions or Construction Change Directive:
  1. Contract Drawings.
  2. Specifications.
  3. Addenda.
  4. Change Orders and other Modification to the Contract.
  5. Reviewed shop drawings, product data, and samples.



6. PROJECT RECORD DOCUMENTS – AS BUILTS (Cont'd)

- (b) Store Record Documents separate from documents used for construction.
- (c) Record information concurrent with construction progress.
- (d) Specifications: Legibly mark and record at each product section description the actual products installed, including the following:
  - 1. Manufacturer's name and product model and number.
  - 2. Product substitutions or alternates utilized.
  - 3. Changes made by Addenda and Modifications.
- (e) Contract Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
  - 1. Measured depths of foundations in relationship to finish first floor datum.
  - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
  - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
  - 4. Field changes of dimension and detail.
  - 5. Details not on original Contract Drawings.
- (f) Submit electronic set (pdf format) and one paper set of Contract Drawings and Specifications to the Architect for distribution with final Application for Payment. Final Application for Payment will not be processed until "as-built" documents have been submitted.

7. OPERATION AND MAINTENANCE DATA

- (a) Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.
- (b) Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- (c) Contents: Prepare a Table of Contents for each volume.
- (d) Part 1: Directory, listing names, addresses, and telephone numbers of Architect, Engineers, Contractor, Subcontractors, and major equipment suppliers.

7. OPERATION AND MAINTENANCE DATA (Cont'd)

- (e) Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
1. List of equipment.
  2. Parts list for each component.
  3. Operating instructions.
  4. Maintenance instructions for equipment and systems.
  5. Maintenance instructions for special finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
- (f) Part 3: Project documents and certificates, including the following:
1. Test results (i.e. concrete, air balance, water pressure, etc.)
  2. Fully executed certificates and warranties.
- (g) Submit one electronic copy (pdf format) of completed volumes in final form to Architect 15 days prior to final inspection and acceptance of entire project. This copy will be returned after the final inspection with the Architect's comments. Revise content of documents as required prior to final submittal.
- (h) Submit one electronic copy (pdf format) of the final volumes revised, within ten days after final inspection.

8. SPARE PARTS AND MAINTENANCE MATERIALS

- (a) Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.

9. MAINTENANCE AND CARE INSTRUCTIONS

- (a) Prior to final completion and closeout of project, schedule with the Owner a maintenance and care session to instruct the Owner and the Owner's maintenance and cleaning staff of the various maintenance, operation, adjustment and cleaning of all equipment and finish materials installed in the project.
- (b) Upon completion of maintenance and care instruction, submit final report including subject matter discussed and sign-in sheet recording all attendees to Architect and Owner.

END OF SECTION

**DIVISION 02 EXISTING CONDITIONS**

023200      Geotechnical Investigations  
                 Geotechnical Engineering Report  
                 Supplement Number 1

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.

2. SUBSURFACE SOIL INVESTIGATIONS

- (a) Subsurface soil investigations have been made and the complete Soils Investigation Report is included at the end of this specification section for the convenience of the bidders. These results are not to be made a part of the contract, but are for general information only to the contractor. Bidders are expected to examine the site and the record of investigations, and then to determine for themselves the character of materials to be encountered. The Owner, Developer, and/or Architect will not assume responsibility for sub-soil conditions at locations other than places shown.

END OF SECTION



# Geotechnical Engineering Report

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**Hillside Manor Development  
Paragould, Arkansas**

October 16, 2020

Terracon Project No. 35205125

**Prepared for:**

Theil Road Properties, LP  
Paragould, Arkansas

**Prepared by:**

Terracon Consultants, Inc.  
Little Rock, Arkansas



October 16, 2020

Theil Road Properties, LP  
612 East Canal Street  
Paragould, Arkansas 72450



Attn: Mr. David Lange  
P: (870) 239 8084  
E: PHA1@gmco.net

Re: Geotechnical Engineering Report  
Hillside Manor Development  
2002 Rector Road  
Paragould, Arkansas  
Terracon Project No. 35205125

Dear Mr. Lange:

We have completed the Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. P35205125 dated September 15, 2020. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations, floor slabs and pavements for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,

**Terracon Consultants, Inc.**

*Certificate of Authorization #223, Expires 12/31/2021*

Renuka S. Ranade, E.I.  
Field Engineer

Christopher S. Handley, P.E. (AR and TX)  
Geotechnical Department Manager  
Arkansas No. 16585

## REPORT TOPICS

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**Note:** This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the **GeoReport** logo will bring you back to this page. For more interactive features, please view your project online at [client.terracon.com](http://client.terracon.com).

## ATTACHMENTS

**EXPLORATION AND TESTING PROCEDURES**  
**SITE LOCATION AND EXPLORATION PLANS**  
**EXPLORATION RESULTS**  
**SUPPORTING INFORMATION**

**Note:** Refer to each individual Attachment for a listing of contents.

**Geotechnical Engineering Report**  
**Hillside Manor Development**  
**2002 Rector Road**  
**Paragould, Arkansas**  
**Terracon Project No. 35205125**  
**October 16, 2020**

**INTRODUCTION**

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed apartment buildings to be located at 2002 Rector Road in Paragould, Arkansas. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- subsurface soil conditions
- groundwater conditions
- site preparation and earthwork
- foundation design and construction
- floor slab design and construction
- pavement design and construction
- seismic site classification per IBC

Maps showing the site and boring locations are shown in the **Site Location and Exploration Plan** section. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs in the **Exploration Results** section.

**SITE CONDITIONS**

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
<b>Parcel Information</b>	The project is located at 2002 Rector Road in Paragould, Arkansas. The property is approximately 9.9 acres Latitude 36.082389°, Longitude -90.477628° See <b>Site Location Plan</b>
<b>Existing Improvements</b>	Several existing concrete pads on the eastern portion of the site
<b>Current Ground Cover</b>	Grass, few trees and existing concrete pads on eastern portion
<b>Existing Topography</b>	Based on the provided topographic survey, the site appears to slope down to the south with an elevation difference of about 3 feet across most of the site. The elevation difference is about 9 feet near the eastern side of the site.



Item	Description
<b>Geology</b> <sup>1,2</sup>	<u>Terrace Deposits, Qt</u> - The terrace deposits include a complex sequence of unconsolidated gravels, sandy gravels, sands, silty sands, clayey silts, and clays. The individual deposits are often lenticular and discontinuous.
<ol style="list-style-type: none"> <li>1. Interactive Geologic Map of Arkansas and Geological Google Earth files published by the Arkansas Geological Survey, 2015, <a href="http://www.geology.ar.gov">www.geology.ar.gov</a></li> <li>2. "Stratigraphic Summary of Arkansas", published by the Arkansas Geological Commission, 1998, revised 2004</li> </ol>	

## PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
<b>Proposed Structures</b>	The project includes 24 single-story dwellings with footprints of 2,162 or 2,826 square feet and one single-story community building with a footprint of 1,122 square feet. The buildings will be slab-on-grade with wood framing.
<b>Finished Floor Elevation</b>	The FFE of the structures were not provided. We anticipate the FFE will be within $\pm 2$ feet of existing grades.
<b>Maximum Loads</b>	Anticipated structural loads for the new buildings were not provided. Based on our experience with similar structures, we have considered the following maximum loads: <ul style="list-style-type: none"> <li>■ Columns: 100 kips</li> <li>■ Walls: 5 kips per linear foot</li> <li>■ Slabs: 100 pounds per square foot</li> </ul>
<b>Grading/Slopes</b>	We have considered no more than 2 feet of cut and 2 feet of fill will be required to develop final grades. Final slope angles of 3H:1V (Horizontal: Vertical) or flatter are expected.
<b>Below-Grade Structures</b>	None anticipated
<b>Free-Standing Retaining Walls</b>	None anticipated
<b>Pavements</b>	No information regarding anticipated vehicle types, axle loads, or traffic volumes was provided. We anticipate the pavements will be utilized primarily by passenger vehicles (cars, pickup trucks, SUV's) with occasional panel delivery trucks and trash collection trucks.
<b>Estimated Start of Construction</b>	Late 2020 or Early 2021

## GEOTECHNICAL CHARACTERIZATION

### Subsurface Profile

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical analyses and evaluation of site preparation and foundation options. Conditions encountered at each exploration point are indicated on the individual logs. The individual logs can be found in the **Exploration Results** section and the GeoModel can be found in the **Figures** section of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	Surficial lean clay soils	Lean clay soils, trace rootlets, brown, dark brown and gray, medium stiff to stiff
2	Medium- to high-plasticity clay soils	Lean clay and fat clay soils, brown and gray, medium stiff to stiff
3	Fat clay soils	Fat clay, yellowish brown and reddish brown, wet, medium stiff to stiff

### Groundwater Conditions

The boreholes were observed while drilling and after completion for the presence and level of groundwater. Groundwater was observed at depths of about 15 to 18 feet in all the borings while drilling. Due to the low permeability of the soils encountered in the borings, a relatively long period may be necessary for a groundwater level to develop and stabilize in a borehole in these materials. Long-term observations in piezometers or observation wells sealed from the influence of surface water are often required to define groundwater levels in materials of this type.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels may be higher or lower at the time of construction or during the life of the project. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

## **GEOTECHNICAL OVERVIEW**

The general soil stratigraphy at this site is comprised of an upper layer of lean clay soils underlain by medium- to high-plasticity lean clay and fat clay soils which extend to the boring termination depths of about 20 feet. Groundwater was observed at depths of about 15 to 18 feet in all the borings during the field exploration.

Medium- to high-plasticity soils are present at this site. Fat clay soils were observed at Boring B-8 and could likely be present at other locations across the site. The high-plasticity fat clay soils are prone to volume changes with variations in moisture content. Based on the laboratory test results and the subsurface conditions observed at the boring locations, we estimate a potential vertical rise (PVR) of about 2 to 3 inches could be possible at the existing ground surface. The typical method for mitigating the effects of expansive soils for these types of structures is to undercut some of the soil and construct a building pad of low volume-change engineered fill below the floor slab of the thickness required to reduce the PVR to about 1 inch. We recommend at least 4 feet of low volume change soils be present below floor slabs, which will require over-excavation of the lean clay and fat clay soils in portions of the building pad, though the final FFE will dictate the extent of overexcavation. More detailed recommendations are discussed in the **Earthwork** section.

This report provides recommendations to help mitigate the effects of soil shrinkage and expansion. However, even if these procedures are followed, some movement and (at least minor) cracking in the structure could still occur. The severity of cracking and other damage, such as uneven floor slabs will likely increase if modification of the site results in excessive wetting or drying of the expansive soils. Eliminating the risk of movement and distress may not be feasible, but it may be possible to further reduce the risk of movement if more extensive measures are used during construction. Some of these options could include complete replacement of expansive soils, or a structural slab.

Near-surface low-strength soils (SPT N-values equal to or less than 5 blows per foot) were observed at depths of about 3.5 to 8.5 feet below existing grades at Borings B-3, B-4, B-5, B-8, B-9, B-12 and B-13. In their present condition, the low-strength soils are not suitable for providing direct support to new fill, shallow foundations, on-grade slabs, or pavements. Subgrade improvement will be required to support new fills, foundations, slabs-on-grade or pavements on these soils. The removal of 4 feet of the existing soils and replacement with new, engineered fill would fulfil the earthwork recommendations for replacement of the expansive clay soils and the low-strength soils. It is likely that a majority of the low-strength soils will be removed during the excavations for removal of the expansive clays. However, weak soils may be encountered to depths exceeding 4 feet in portions of the building areas, which may require further overexcavation. Low-strength soils could also be encountered in pavement areas to depths of about 3.5 to 8.5 feet.

The near-surface lean clay soils observed at the boring locations are moisture-sensitive and susceptible to strength loss with moisture content increase, and when exposed to repetitive construction traffic. We anticipate subgrade improvement will likely be necessary during site grading and construction to support the planned buildings and pavements, as well as construction traffic, particularly when wet conditions exist. We anticipate that undercuts of about 3.5 to 5 feet may likely be required to develop the site, especially if earthwork activities occur during the wet season.

Based on the subsurface conditions observed at the boring locations, the buildings can be supported on conventional shallow footing foundations bearing on tested and approved new engineered fill or native lean clay and fat clay soils. The **Shallow Foundation** section addresses support of the buildings bearing on new engineered fill or native lean clay and fat clay soils. The **Floor Slab** section addresses the slab-on-grade floors supported on new engineered fill.

Recommendations for designing and constructing flexible and rigid pavement systems are provided in the **Pavements** section. As discussed in the **Earthwork** section, the owner may elect to assume some risk of shrink/swell movement and support the pavement on a 1-foot thick layer of low volume-change engineered fill, rather than the 4 feet of new low volume change engineered fill as required in the building footprint. Terracon was not able to locate publicly available information regarding thickness requirements of public streets in the City of Paragould. However, we believe that the recommendations presented in this report will likely meet thickness requirements established by the City. If City of Paragould street thickness specification can be provided, we would be happy to review and revise, if necessary, the minimum pavement thickness recommendations presented in this report.

The **General Comments** section provides an understanding of the report limitations.

## **EARTHWORK**

Earthwork will include clearing and grubbing, excavations and fill placement. The following sections provide recommendations for use in the preparation of specifications for the work.

### **Site Preparation**

Surface vegetation, topsoil, and any other existing surface or subsurface structures or otherwise unsuitable materials, should be removed from the construction areas. Any low-strength soils present in the building and pavement areas should also be completely removed, and consideration be given to the recommended 4-foot low volume change layer beneath floor slabs. New engineered fill should then be placed to restore grades. Close observation and testing by the Geotechnical Engineer should be performed after clearing and undercutting to evaluate the exposed soils and to provide recommendations if subgrade improvement is needed.

The native soils observed at the boring locations are moisture-sensitive and susceptible to strength loss with moisture content increase, and when subjected to repetitive construction traffic. We anticipate subgrade improvement could be necessary during site preparation and grading, particularly if the soils are wet and exposed to repetitive construction traffic. We recommend Terracon be retained to evaluate the site conditions during site grading and construction, and provide subgrade improvement recommendations based on the actual conditions. Additional recommendations are provided in the **Earthwork Construction Considerations** section.

After stripping the surface materials and completing required undercuts to remove the low-strength soils, but prior to placing any new fill required to raise site grades to the planned FFE, the subgrade should be proof-rolled to aid in locating soft areas. Terracon should observe the site to confirm that the site has been effectively stripped of unsuitable materials. Terracon should also monitor a proof-rolling procedure to evaluate and approve the stability of the exposed subgrade materials. Proof-rolling can be performed with a rubber-tired construction vehicle weighing at least 25 tons, such as a loaded scraper or tandem-axle dump truck. If proof-rolling is not practical, the subgrade should be evaluated by Terracon using other methods.

Unstable areas identified by proof-rolling or evaluation should be scarified, moisture conditioned, and compacted, or removed and replaced full-depth with new engineered fill. The appropriate method of improvement, if required, would depend on factors such as schedule, weather, the size of area to be improved, and the nature of the instability. Performing site grading operations during warm, dry periods would help reduce the amount of subgrade treatment required.

After proof-rolling and treating any unstable soils, and just prior to placing fill in areas below design grade, the top 9 inches of the subgrade should be scarified, moisture conditioned to within 1 percent below to 3 percent above the material's optimum moisture content, and compacted to the density recommended in the **Compaction Requirements** table below.

Close monitoring of the site preparation operations will be critical in providing proper subgrade support for fill placement and support of the on-grade slabs and foundations. This is why we recommend Terracon be retained during initial critical phases of the earthwork to observe the actual site conditions and make the necessary recommendations.

### **Fill Material Types**

Earthen materials used for structural and general fill should meet the following material property requirements:

Soil Type <sup>1</sup>	USCS Classification	Acceptable Location for Placement
Imported low volume-change material	CL, GC, SC LL ≤ 45 and 8 ≤ PI ≤ 15	All locations and elevations
On-site low- to medium-plasticity lean clay soils <sup>2</sup>	CL LL ≤ 45 and 8 ≤ PI ≤ 15	All locations and elevations
On-site medium- to high-plasticity lean clay and fat clay soils <sup>3</sup>	CL, CH LL > 45 or PI > 15	General fill in nonstructural areas
Well-graded granular	GW/GM <sup>4</sup>	Beneath floor slabs and pavements

1. Structural and general fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to the Geotechnical Engineer for evaluation prior to use on this site.
2. The on-site lean clay soils can be reused as low volume-change engineered fill, provided they are tested and meet the requirements for low volume-change engineered fill.
3. The medium- to high-plasticity lean clay and fat clay soils should not be reused as engineered fill.
4. Similar to AHTD Class 7 aggregate base course.

## Fill Compaction Requirements

Structural and general fill should meet the following compaction requirements.

Item	Description
<b>Fill lift thickness</b>	9 inches or less in loose thickness when heavy, self-propelled compaction equipment is used 4 to 6 inches in loose thickness when material is placed in confined spaces or hand-guided equipment (i.e. jumping jack or plate compactor) is used
<b>Compaction requirements <sup>1</sup></b>	At least 95 percent of the material's standard Proctor maximum dry density (ASTM D 698)
<b>Moisture content cohesive soil</b>	Within 1 percent below to 3 percent above the material's optimum moisture content value as determined by the standard Proctor test at the time of placement and compaction
<b>Moisture content granular material <sup>2</sup></b>	Workable moisture levels

1. We recommend that engineered fill be tested for moisture content and compaction during placement. Should the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested, as required, until the specified moisture and compaction requirements are achieved
2. Specifically, moisture levels should be maintained low enough to allow for satisfactory compaction to be achieved without the granular fill material pumping when proof-rolled

## **Utility Trench Backfill**

Utility trenches are a common source of water infiltration and migration. All utility trenches that penetrate beneath the buildings should be effectively sealed to restrict water intrusion and flow through the trenches, which could migrate below the buildings. The trench should provide an effective trench plug that extends at least 5 feet out from the face of the building exterior. The plug material should consist of cementitious flowable fill or low permeability clay. The trench plug material should be placed to surround the utility line. If used, the clay trench plug material should be placed and compacted to comply with the water content and compaction recommendations for structural fill stated previously in this report.

## **Grading and Drainage**

The clay soils have low permeability and perched water may collect on these clays during construction. Water that collects in excavations will likely require removal with pumps. During construction, grades should be developed to direct surface water flow away from, or around, the site. Exposed subgrade should be sloped to provide positive drainage so that saturation of the subgrade is avoided. Surface water should not be permitted to accumulate on the site as this could increase the potential for shrinking and swelling of the clay soils.

All grades must provide effective drainage away from the buildings during and after construction and should be maintained throughout the life of the structure. Water retained next to the building can result in soil movements greater than those discussed in this report. These greater movements can result in unacceptable differential floor slab and/or foundation movements, cracked slabs and walls, and roof leaks. The roof should have gutters/drains with downspouts that discharge onto splash blocks at a distance of at least 10 feet from the building.

Exposed ground should be sloped and maintained at a minimum 5 percent away from the buildings for at least 10 feet beyond the perimeter of each building. Locally, flatter grades may be necessary to transition ADA access requirements for flatwork. After building construction and landscaping, final grades should be verified to document effective drainage has been achieved. Grades around the structures should also be periodically inspected and adjusted, as necessary, as part of the structures' maintenance program. Where paving or flatwork abuts the structures, a maintenance program should be established to effectively seal and maintain joints and prevent surface water infiltration.

## **Earthwork Construction Considerations**

Unstable subgrade conditions are likely to develop during general construction operations, particularly where the soils are wetted and/or subjected to repetitive construction traffic. Unstable soils, where encountered, should be improved in-place prior to placing new engineered fill. In some areas, it may be necessary to strip and/or undercut the rutted and wet surface soils prior to

performing subgrade improvement. Subgrade improvement techniques are discussed in detail in the following paragraphs.

The near-surface clay soils observed at the site are susceptible to disturbance from construction activity, particularly when the soil has a high natural moisture content or is wetted by surface water or seepage. During wetter periods of the year, these soils will pump and rut under the weight of heavy construction equipment, especially rubber-tired vehicles. The contractor should consider using track-mounted (low ground pressure) equipment to reduce subgrade disturbance and/or instability. Dedicated haul roads and work areas should be used for construction traffic on the building and pavement subgrades.

After the stripping operations, care should be taken to maintain the subgrade moisture content prior to new fill placement. If the subgrade should become excessively wet or dry, frozen, or disturbed, the affected material should be removed, or these materials should be scarified, moisture conditioned, and compacted to meet the requirements in the **Compaction Requirements** table, or replaced with new engineered fill.

If site grading occurs during wet periods of the year or if wet conditions develop, the potential for subgrade issues will increase. Alternatives for subgrade improvement could include the following:

- **Scarification and Recompaction** - It may be feasible to scarify, dry, and recompact the exposed soils. The success of this procedure would depend primarily upon favorable weather and sufficient time to dry the soils. Even with adequate time and weather, stable subgrade may not be achievable if the thickness of the soft soil is greater than 1 to 1-1/2 feet. The soil should be moisture conditioned and compacted to meet the requirements in the **Compaction Requirements** table.
- **Crushed Stone** - Crushed stone or gravel could be used to improve subgrade stability. Typical undercut depths would range from 1 foot to 2 feet below finished subgrade elevation. The use of high modulus geotextiles (i.e., engineering fabric or geogrid) could also be considered after underground work, such as utility construction, is completed. Equipment should not be operated above the fabric or geogrid until one full lift of crushed stone fill is placed above.

The maximum particle size of granular material placed over geotextile fabric or geogrid should not exceed 1½ inches. Geotextiles can also be considered for severe subgrade conditions during winter months. It should be expected that a minimum of 12 to 18 inches of engineered fill will be required with any geogrid application. The geogrid product manufacturer should recommend engineered fill gradation requirements.



## Geotechnical Engineering Report

Hillside Manor Development ■ Paragould, Arkansas

October 16, 2020 ■ Terracon Project No. 35205125



Terracon should be retained during construction to observe earthwork and to perform tests and observations during undercutting; subgrade preparation; proof-rolling; placement and compaction of engineered fills; and just prior to construction of building floor slabs, foundations and pavements.

### Excavations

We anticipate the native lean clay and fat clay soils will be excavatable using conventional back-hoes, front-end loaders and motorized scrapers.

Temporary excavations will be required during grading and site development operations. The contractor, by his contract, is usually responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required to maintain stability of the excavation sides and bottom.

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, "Excavations" and its appendices, and in accordance with any applicable local, and/or state regulations.

Construction site safety is the sole responsibility of the contractor who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming any responsibility for construction site safety, or the contractor's activities; such responsibility shall neither be implied nor inferred.

### Construction Observation and Testing

The earthwork efforts should be monitored by the Geotechnical Engineer. This monitoring should include documentation of removal of vegetation and top soil, proof-rolling and mitigation of areas delineated by the proof-roll to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked as necessary until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at an appropriate frequency.

In areas of foundation excavations, the bearing subgrade should be evaluated by the Geotechnical Engineer. In the event unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

## SHALLOW FOUNDATIONS

If the site has been prepared in accordance with the requirements noted in **Earthwork**, including remediation for low-strength soils and expansive soils, then the following design parameters are applicable for shallow foundations.

### Design Parameters – Compressive Loads

Item	Description
Maximum net allowable bearing pressure <sup>1, 2</sup>	2,000 psf
Required bearing stratum <sup>3</sup>	Tested and approved, new engineered fill. Bearing stratum to be confirmed by Terracon
Minimum foundation dimensions	Columns: 30 inches Continuous: 18 inches
Minimum embedment below existing grade <sup>4</sup>	24 inches
Estimated total settlement from structural loads <sup>2, 5</sup>	Approximately 1 inch
Estimated differential settlement <sup>2, 6</sup>	About 2/3 of total settlement
Ultimate coefficient of sliding friction <sup>7</sup>	0.35 (ultimate)

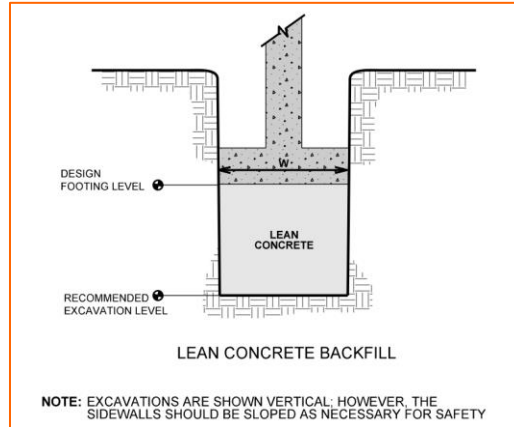
1. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. An appropriate factor of safety has been applied.
2. Values provided are for the maximum loads noted in **Project Description**.
3. Unsuitable or soft soils should be over-excavated and replaced per the recommendations presented in **Earthwork**.
4. For confinement and to reduce the effects of seasonal moisture variation
5. Actual foundation settlement will depend upon the variations within the subsurface soil profile, the structural loading conditions, the embedment depth of the footing, the thickness of compacted fill and the quality of earthwork operations
6. Differential settlements are as measured over a span of up to 50 feet
7. No factor of safety has been applied to the coefficient of sliding friction

### Foundation Construction Considerations

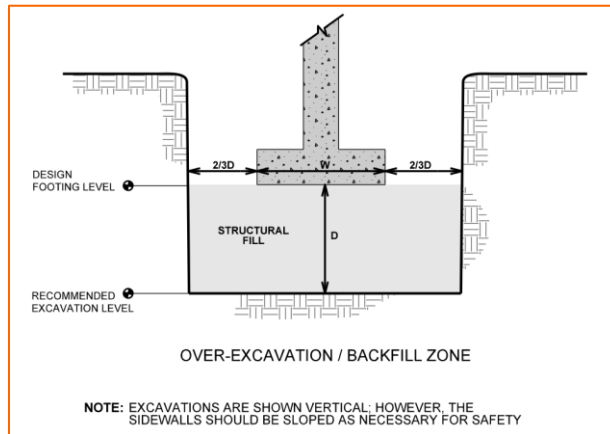
As noted in **Earthwork**, the footing excavations should be evaluated by the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material, or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.

If unsuitable bearing soils are encountered at the base of the planned footing excavation, the excavation should be extended deeper to suitable soils. The footings could then bear directly on

these soils at the lower level or on lean concrete backfill placed in the excavations. This is illustrated on the sketch below.



Over-excavation for structural fill placement below footings should be conducted as shown below. The over-excavation should be backfilled up to the footing base elevation as recommended in the **Earthwork** section.



## SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7-10.

Based on the results of our site characterization program, we conclude that Site Class D is appropriate for the subject site. The scope of services did not include site profile determination

to a depth of 100 feet. Exploration for this project extended to a maximum depth of 20 feet and the site classification assumes that materials encountered at the bottom of the deepest exploration continue to a depth of 100 feet.

## FLOOR SLABS

Based on the subsurface conditions observed at the boring locations and preparing the subgrade as recommended in the **Earthwork** section, including remediation of the low-strength soils and expansive soils, we expect that the on-grade slab will be supported by tested and approved new engineered fill.

### Floor Slab Design Parameters

Item	Description
<b>Floor Slab Support <sup>1</sup></b>	Minimum of 4 feet of low volume change material, per the parameters outlined in the <b>Earthwork</b> section
<b>Estimated Modulus of Subgrade Reaction <sup>2</sup></b>	150 pounds per square inch per inch (psi/in) for point loads
<b>Aggregate base course/capillary break <sup>3</sup></b>	4 inches of free draining granular material or as required by design

1. Floor slabs should be structurally independent of any building footings or walls to reduce the possibility of floor slab cracking caused by differential movements between the slab and foundation.
2. Modulus of subgrade reaction is an estimated value based upon our experience with the subgrade condition, the requirements noted in **Earthwork**, and the floor slab support as noted in this table. It is provided for point loads. For large area loads the modulus of subgrade reaction would be lower.
3. Free-draining granular material should have less than 5 percent fines (material passing the #200 sieve). Other design considerations, such as cold temperatures and condensation development, could warrant more extensive design provisions

Contraction joints should be saw-cut in the slab to help control the location and extent of cracking. For additional recommendations refer to the ACI Design Manual. Joints or any cracks that develop should be sealed with a water-proof, non-extruding compressible compound.

The use of a vapor retarder should be considered beneath concrete slabs-on-grade that will be covered with wood, tile, carpet or other moisture sensitive or impervious coverings, or when the slab will support equipment or materials sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to the applicable ACI guidelines for procedures and cautions regarding the use and placement of a vapor retarder.

## Floor Slab Construction Considerations

On most project sites, the site grading is generally accomplished early in the construction phase. However, as construction proceeds, the subgrade may be disturbed due to utility excavations, construction traffic, desiccation, rainfall, etc. As a result, the floor slab subgrade may not be suitable for placement of aggregate base capillary break material and concrete, and corrective action may be required.

Terracon should review the condition of the floor slab subgrade immediately prior to placement of the granular leveling course/capillary break material and construction of the slab. Particular attention should be paid to high traffic areas that were rutted and disturbed earlier and to areas containing backfilled trenches. Areas where unsuitable conditions are located should be repaired by removing and replacing the affected material with properly compacted engineered fill.

## PAVEMENTS

### General Pavement Comments

Based on the understood grading scheme, the subsurface conditions observed at the boring locations and preparing the subgrade as recommended in **Earthwork**, the pavement subgrade materials should consist of at least 1 foot of tested and approved, new engineered fill or tested and approved, lean clay soils.

Within two days before placing aggregate base or concrete, we recommend the moisture content and density of the top 8 inches of the subgrade be evaluated and the subgrade be proof-rolled. Areas not in compliance with the required ranges of moisture or density should be moisture conditioned and compacted. Particular attention should be paid to high traffic areas that were rutted and disturbed earlier and to areas where backfilled trenches are located. Areas where unsuitable conditions are located should be repaired by removing and replacing the materials with properly compacted engineered fill.

### Pavement Design Parameters

Recommended pavement sections for parking areas and drives are included in the following table. The alternative minimum pavement sections are based on the completed subgrade having a CBR value of at least 3 percent and a modulus of subgrade reaction (k) of at least 100 psi/in. Imported fill materials should have the ability to achieve a minimum CBR value of 3 percent and meet the other requirements for engineered fill recommended in **Earthwork**. In no case should soils classifying as ML, CL-ML, or SM according to the Unified Soil Classification System be used as engineered fill in pavement areas.

The light-duty pavement sections assume that light-duty parking areas will be traveled by only automobiles totaling less than 200 cars per day. The heavy-duty pavement sections assume no more than 10 semi-tractor trailer units and other heavy vehicles per week using the entrance drives. If the anticipated traffic exceeds our assumptions, please contact Terracon so that the recommended pavement sections can be re-evaluated and modified, if necessary.

## Pavement Section Thicknesses

The following table provides options for AC and PCC Sections:

Traffic Area	Pavement Section <sup>1</sup>	Minimum Recommended Pavement Section Thickness (in.)				
		Asphalt Surface Course <sup>2</sup>	Asphalt Binder Course <sup>2</sup>	Portland Cement Concrete <sup>2</sup> (4,000 psi)	Aggregate Base <sup>2</sup>	Total Thickness
Light-duty	I	3	---	---	8	11
	II	---	---	5	4	9
Heavy-duty	I	1.5	2.5		10	14
	II	---	---	6	4	10
Dumpster Pad	II	---	---	7	4	11

1. Pavement Section I = Asphaltic Concrete over Aggregate Base  
Pavement Section II = 4,000 psi, Air Entrained Portland Cement Concrete (PCC) over Aggregate Base
2. Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction

These pavement sections are considered minimum sections based upon the expected traffic and the existing subgrade conditions. Their satisfactory performance will require that timely maintenance be performed, and effective drainage be developed and maintained.

Asphaltic concrete should conform to the requirements for asphaltic concrete hot mix binder course (25 mm) and surface course (9.5 mm) in Sections 406 and 407, respectively, of the AHTD *Standard Specifications for Highway Construction*, 2014 Edition. The aggregate base course should consist of crushed stone that conforms to the requirements for Class 7 aggregate base in Section 303 of the 2014 AHTD specifications. Concrete should conform to the requirements for Portland Cement Concrete Pavement in Section 501 of the AHTD Standard Specifications for Highway Construction.

We recommend all portland cement concrete pavement details for joint spacing, joint reinforcement, and joint sealing be prepared in accordance with ACI guidelines. Portland cement

concrete pavements subjected to heavy trucks should be provided with mechanically reinforced joints (doweled or keyed) in accordance with ACI guidelines.

## **Pavement Drainage**

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section.

## **Pavement Maintenance**

The pavement sections represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g. crack and joint sealing and patching) and global maintenance (e.g. surface sealing). Preventive maintenance is usually the first priority when implementing a pavement maintenance program. Additional engineering observation is recommended to determine the type and extent of a cost-effective program. Even with periodic maintenance, some movements and related cracking may still occur, and repairs may be required. Geogrid reinforcement between the soil subgrade and base rock could be considered to extend the time before major maintenance is required.

Long-term pavement performance will be dependent upon several factors, including maintaining subgrade moisture levels and providing preventive maintenance. The civil engineer should consider the following recommendations in the design and layout of pavements:

- Site grading at a minimum 2 percent grade away from the pavements
- The subgrade and the pavement surface should have a minimum 1/4 inch per foot slope to promote effective surface drainage
- Joint sealant should be applied to cracks
- Effective perimeter drainage should be constructed
- All landscaped areas in or adjacent to pavements should be sealed to reduce or prevent moisture migration to subgrade soils
- Low permeability backfill should be compacted against the exterior sides of curbs and gutters
- Curbs, gutters and/or sidewalks should be placed directly on engineered fill subgrade materials rather than on unbound granular base course materials

## **GENERAL COMMENTS**

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations may occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation costs. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation costs. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, cost estimating, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.



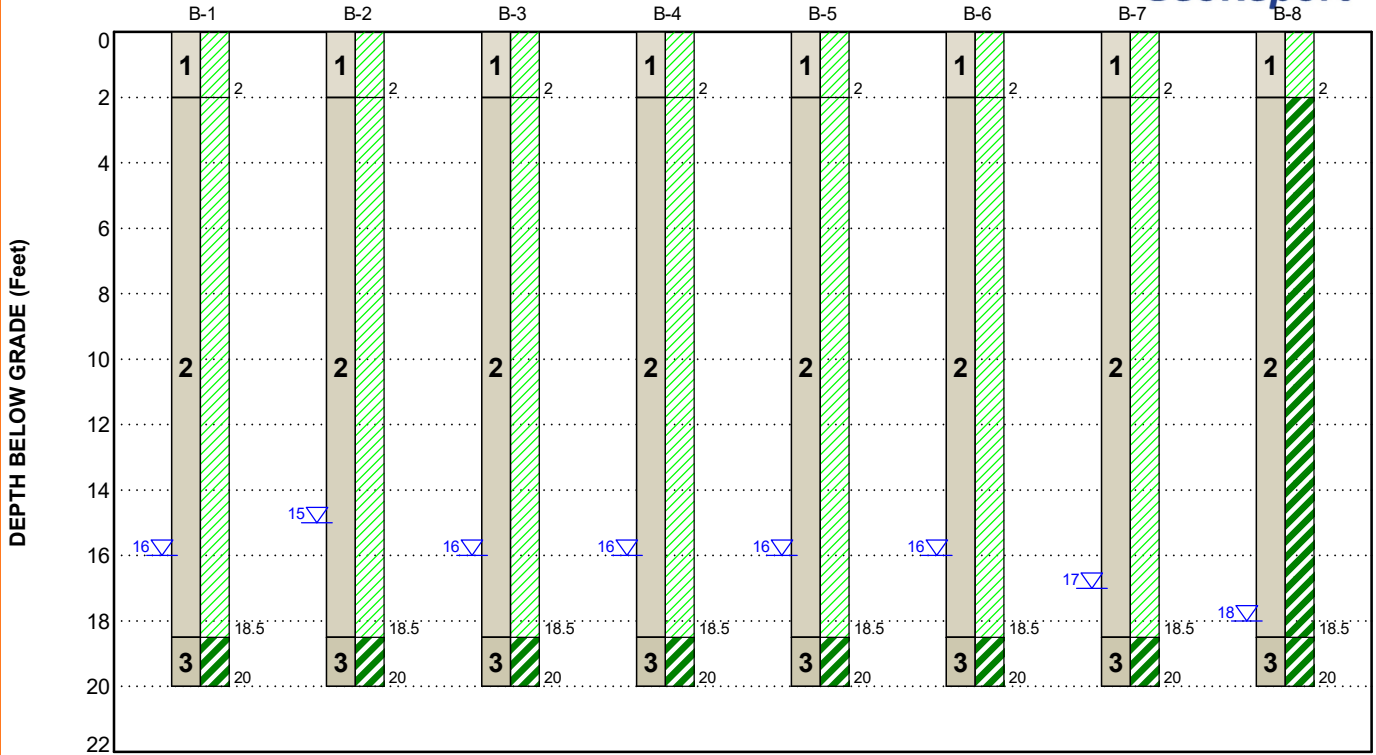
## FIGURES

### Contents:

GeoModel (2 pages)

**GEOMODEL**

Hillside Manor Development ■ Paragould, Arkansas  
Terracon Project No. 35205125



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	Surficial lean clay soils	Lean clay soils, trace rootlets, brown, dark brown and gray, medium stiff to stiff
2	Medium- to high-plasticity clay soils	Lean clay and fat clay soils, brown and gray, medium stiff to stiff
3	Fat clay soils	Fat clay, yellowish brown and reddish brown, wet, medium stiff to stiff

**LEGEND**

Lean Clay

Fat Clay

First Water Observation

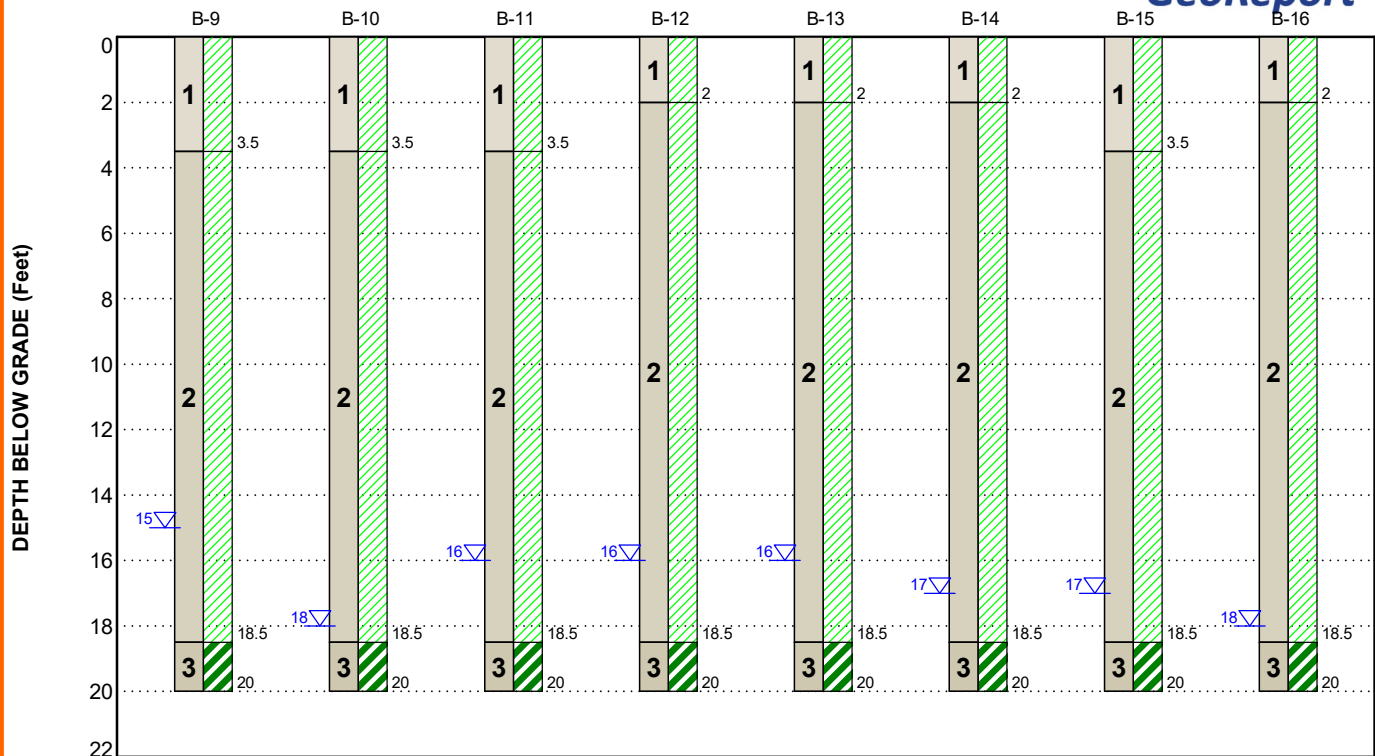
**NOTES:**

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

Groundwater levels are temporal. The levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

# GEOMODEL

Hillside Manor Development ■ Paragould, Arkansas  
Terracon Project No. 35205125



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
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2	Medium- to high-plasticity clay soils	Lean clay and fat clay soils, brown and gray, medium stiff to stiff
3	Fat clay soils	Fat clay, yellowish brown and reddish brown, wet, medium stiff to stiff

## LEGEND

Lean Clay

Fat Clay

First Water Observation

### NOTES:

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

Groundwater levels are temporal. The levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

## ATTACHMENTS

## EXPLORATION AND TESTING PROCEDURES

### Field Exploration

Number of Borings	Boring Depth (feet)	Location
16	20	Planned building and parking/driveway areas

**Boring Layout and Elevations:** Unless otherwise noted, Terracon personnel provided the boring layout. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about  $\pm 10$  feet). If elevations and a more precise boring layout are desired, we recommend borings be surveyed following completion of fieldwork.

**Subsurface Exploration Procedures:** We advanced the borings with a track-mounted rotary drill rig using continuous flight augers (hollow-stem). Five samples were obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon was driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. We observed and recorded groundwater levels during drilling and sampling. For safety purposes, all borings were backfilled with auger cuttings after their completion.

The sampling depths, penetration distances, and other sampling information were recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

### Laboratory Testing

Based on the material's texture and plasticity, we described and classified the soil samples by visual/manual procedures in general accordance with the Unified Soil Classification System. The project engineer reviewed the field data and assigned laboratory tests. The following tests were performed:

- Moisture Content
- Atterberg Limits
- Percent finer than the No. 200 Sieve

## **SITE LOCATION AND EXPLORATION PLANS**

### **Contents:**

Site Location Plan

Exploration Plan

Note: All attachments are one page unless noted above.

**SITE LOCATION PLAN**

Hillside Manor Development ■ Paragould, Arkansas  
October 16, 2020 ■ Terracon Project No. 35205125

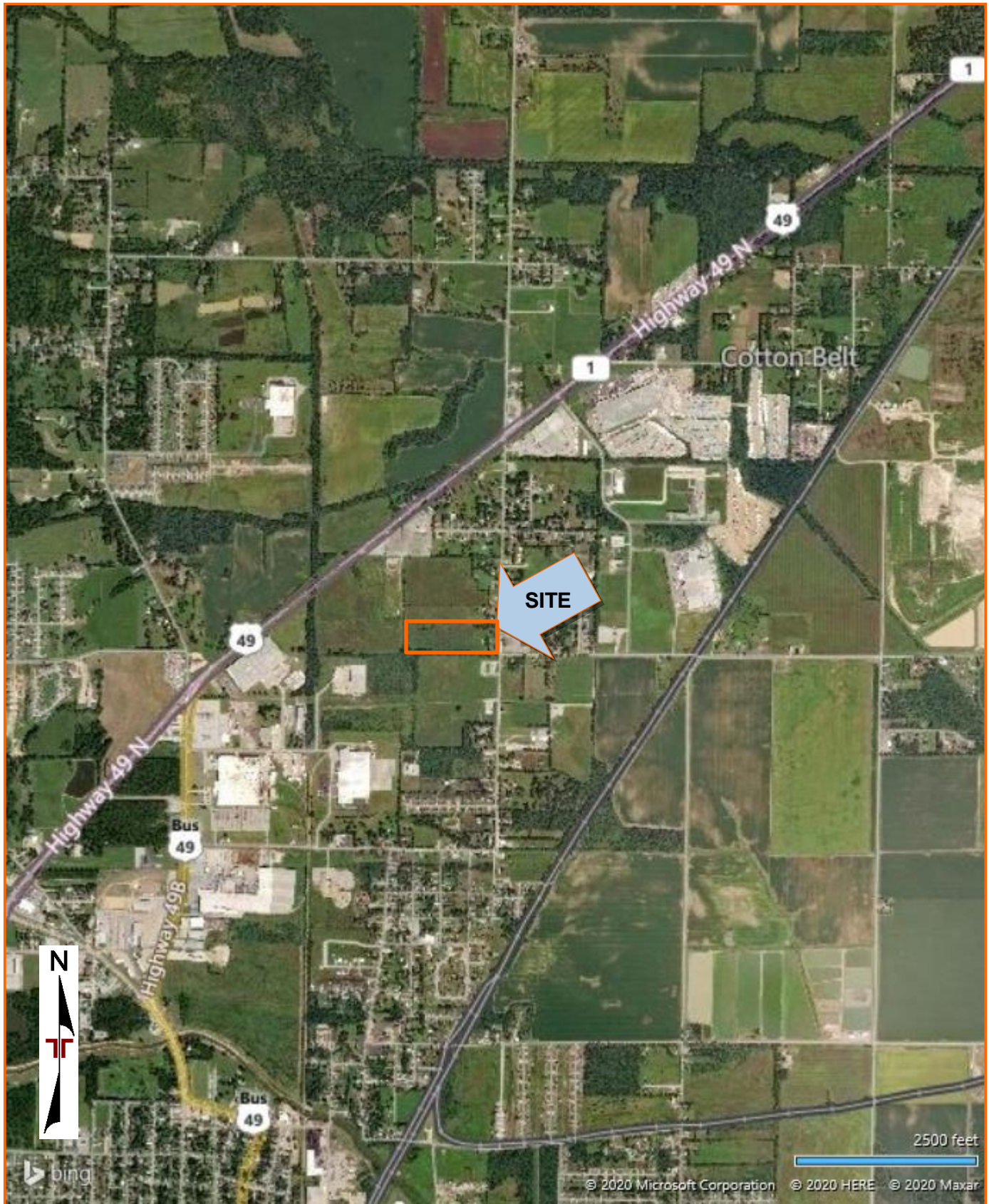


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

**EXPLORATION PLAN**

Hillside Manor Development ■ Paragould, Arkansas  
October 16, 2020 ■ Terracon Project No. 35205125

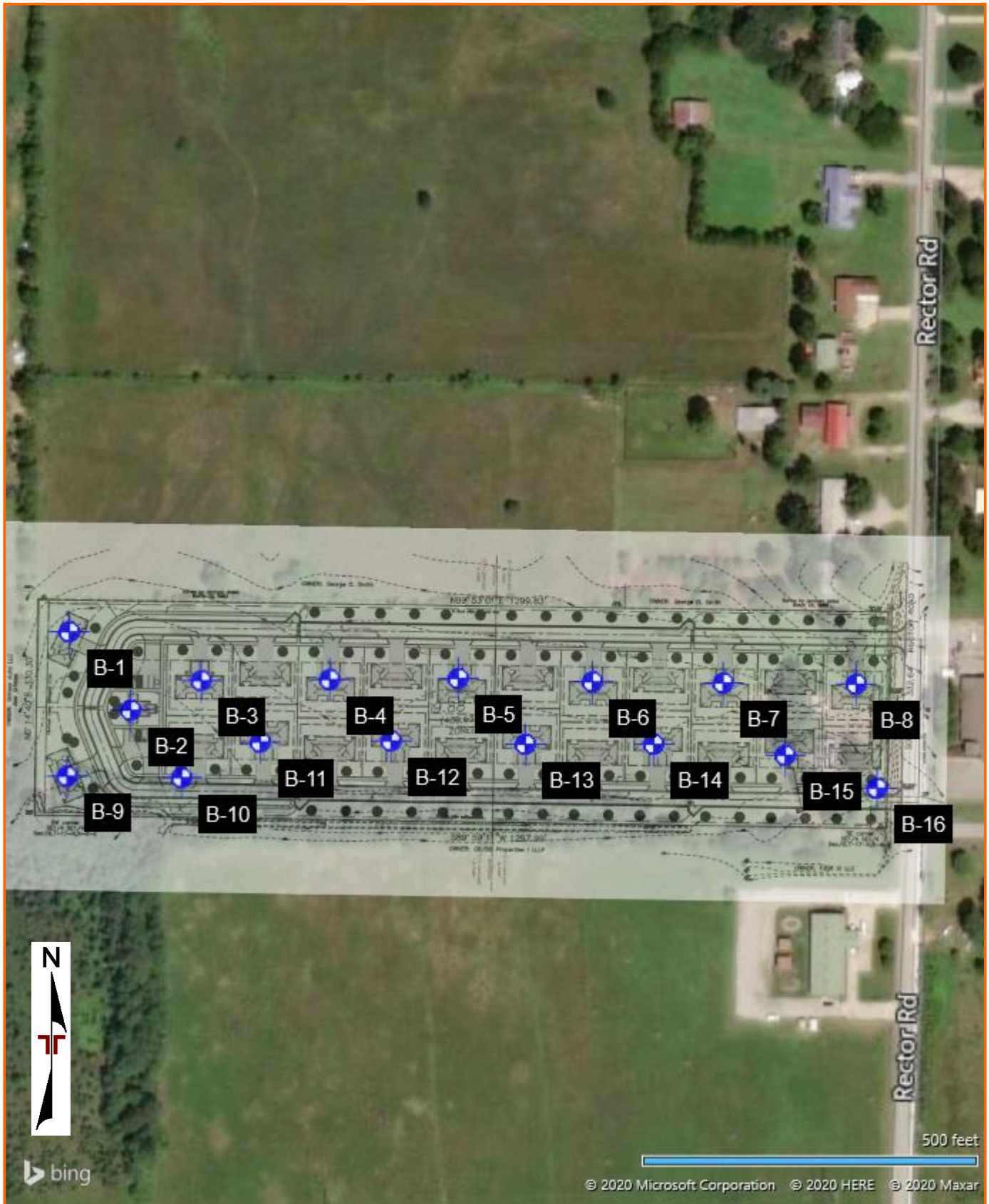


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS



## **EXPLORATION RESULTS**

### **Contents:**

Boring Logs

Note: All attachments are one page unless noted above.

# BORING LOG NO. B-1

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT 10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0827° Longitude: -90.4795°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	2.0		X	4-3-3 N=6	18.4	36-19-17	89	
2		<b>LEAN CLAY (CL)</b> , brown and gray, medium stiff to stiff	5		X	2-3-3 N=6	26.1			
			5		X	3-3-4 N=7	29.1			
			5		X	3-3-4 N=7	26.6			
			10		X	4-5-5 N=10	24.6			
			15	▽	X	4-5-6 N=11	25.2			
3		<b>FAT CLAY (CH)</b> , yellowish brown, stiff - wet toward the bottom of the boring	18.5		X	4-5-7 N=12	33.0			
		<b>Boring Terminated at 20 Feet</b>	20.0							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-06-2020

Boring Completed: 10-06-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-2

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT 10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0824° Longitude: -90.4792°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, stiff	2.0			X	4-4-4 N=8	22.1			
2		<b>LEAN CLAY (CL)</b> , brown and gray, stiff	18.5	5		X	4-4-5 N=9	26.4			
						X	4-4-5 N=9	25.0			
						X	5-5-5 N=10	25.9			
						X	3-4-5 N=9	23.2			
						X	4-5-6 N=11	23.2			
3		<b>FAT CLAY (CH)</b> , yellowish brown, stiff - wet toward the bottom of the boring	20.0	15	▽	X	4-5-7 N=12	29.5			
<b>Boring Terminated at 20 Feet</b>				20							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-05-2020

Boring Completed: 10-05-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-3

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT\_10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0825° Longitude: -90.4789°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	2.0	-		X	3-3-3 N=6	21.6			
2		<b>LEAN CLAY (CL)</b> , brown and gray, medium stiff to stiff	18.5	5		X	2-2-2 N=4	26.0			
						X	2-3-4 N=7	29.5			
						X	3-4-4 N=8	25.6			
						X	4-5-6 N=11	24.2			
						X	4-5-4 N=9	24.9			
					▽						
3		<b>FAT CLAY (CH)</b> , yellowish brown, stiff - wet toward the bottom of the boring	20.0	15		X	5-5-5 N=10	30.3			
		<b>Boring Terminated at 20 Feet</b>		20							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-06-2020

Boring Completed: 10-06-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-4

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT 10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0825° Longitude: -90.4782°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	2.0				3-3-3 N=6	19.8			
2		<b>LEAN CLAY (CL)</b> , brown and gray, medium stiff to stiff	18.5	5			2-2-3 N=5	22.7	40-17-23	96	
				5			2-2-3 N=5	28.7			
				5			2-3-4 N=7	27.2			
				10			3-4-5 N=9	23.6			
				15	▽		4-5-5 N=10	23.8			
3		<b>FAT CLAY (CH)</b> , yellowish brown, stiff - wet toward the bottom of the boring	20.0	20			4-5-6 N=11	29.8			
<b>Boring Terminated at 20 Feet</b>											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-06-2020

Boring Completed: 10-06-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-5

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT\_10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0825° Longitude: -90.4776°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	2.0			X	3-3-3 N=6	16.2			
2		<b>LEAN CLAY (CL)</b> , brown and gray, medium stiff to stiff	18.5	5		X	3-4-5 N=9	26.4			
						X	3-3-2 N=5	25.1			
						X	2-2-3 N=5	26.8			
						X	4-5-6 N=11	23.1			
					▽						
						X	4-5-5 N=10	24.8			
3		<b>FAT CLAY (CH)</b> , reddish brown, stiff - wet toward the bottom of the boring	20.0	15		X	3-4-4 N=8	31.6			
<b>Boring Terminated at 20 Feet</b>				20							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-05-2020

Boring Completed: 10-05-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-6

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT 10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0825° Longitude: -90.4769°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	2.0			X	3-3-3 N=6	17.6			
2		<b>LEAN CLAY (CL)</b> , brown and gray, medium stiff to stiff	18.5	5		X	4-5-6 N=11	21.8			
				5		X	3-4-4 N=8	22.6	43-20-23	94	
				5		X	3-3-4 N=7	24.4			
				10		X	4-5-7 N=12	22.6			
				15	▽	X	4-4-4 N=8	23.4			
3		<b>FAT CLAY (CH)</b> , yellowish brown, medium stiff - wet toward the bottom of the boring	20.0	20		X	2-3-4 N=7	31.3			
<b>Boring Terminated at 20 Feet</b>											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-06-2020

Boring Completed: 10-06-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-7

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT 10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0825° Longitude: -90.4762°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	2.0				3-3-3 N=6	21.0			
2		<b>LEAN CLAY (CL)</b> , brown and gray, medium stiff to stiff	18.5				4-5-7 N=12	23.0			
				5			3-4-4 N=8	23.0			
							3-3-4 N=7	23.5			
				10			3-4-5 N=9	24.3			
				15	▽		4-4-4 N=8	26.6			
3		<b>FAT CLAY (CH)</b> , yellowish brown, stiff - wet toward the bottom of the boring	20.0				3-4-4 N=8	29.9			
<b>Boring Terminated at 20 Feet</b>				20							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-06-2020

Boring Completed: 10-06-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125



# BORING LOG NO. B-8

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL - 35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT 10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0825° Longitude: -90.4755°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS	
								LL-PL-PI	PERCENT FINES
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	2.0		X	3-3-2 N=5	16.3		
2		<b>FAT CLAY (CH)</b> , brown and gray, stiff			X	3-5-8 N=13	17.5	61-19-42	94
					X	4-5-8 N=13	19.2		
					X	3-4-4 N=8	20.8		
					X	4-5-7 N=12	22.9		
					X	3-4-5 N=9	22.7		
3		<b>FAT CLAY (CH)</b> , yellowish brown, medium stiff - wet toward the bottom of the boring	18.5 20.0		X	3-3-3 N=6	28.3		
<b>Boring Terminated at 20 Feet</b>			20						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-06-2020

Boring Completed: 10-06-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-9

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT\_10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0821° Longitude: -90.4795°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	3.5	3.5			3-3-3 N=6	14.6			
				5			2-2-3 N=5	15.9	33-21-12	96	
		<b>LEAN CLAY (CL)</b> , brown and gray, medium stiff to stiff		5			2-2-2 N=4	20.2			
				5			3-3-4 N=7	23.6			
2				10			3-4-6 N=10	26.4			
				15	▽		4-4-4 N=8	24.4			
3		<b>FAT CLAY (CH)</b> , yellowish brown, stiff - wet toward the bottom of the boring	20.0	18.5			4-4-5 N=9	30.1			
		<b>Boring Terminated at 20 Feet</b>		20							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-05-2020

Boring Completed: 10-05-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-10

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT\_10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0821° Longitude: -90.479°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	3.5	-			4-3-3 N=6	19.7			
				5			3-3-4 N=7	18.1			
				5			3-3-4 N=7	25.7			
				5			3-3-4 N=7	29.0			
2		<b>LEAN CLAY (CL)</b> , brown and gray, medium stiff to stiff		10			4-5-6 N=11	22.4			
				15			4-5-5 N=10	23.3			
				18.5	▽						
3		<b>FAT CLAY (CH)</b> , yellowish brown, stiff - wet toward the bottom of the boring	20.0	20			3-4-6 N=10	30.5			
		<b>Boring Terminated at 20 Feet</b>		20							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-05-2020

Boring Completed: 10-05-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-11

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT\_10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0823° Longitude: -90.4786°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	3.5		X	4-3-3 N=6	25.3			
					X	3-3-3 N=6	25.8			
		<b>LEAN CLAY (CL)</b> , brown and gray, medium stiff to stiff	5		X	2-3-4 N=7	24.2	39-17-22	97	
					X	4-4-5 N=9	25.2			
			10		X	3-4-5 N=9	23.4			
2					X	3-3-4 N=7	24.2			
			15	▽						
			18.5		X	3-4-5 N=9	31.5			
3		<b>FAT CLAY (CH)</b> , yellowish brown, stiff - wet toward the bottom of the boring	20.0		X					
		<b>Boring Terminated at 20 Feet</b>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-05-2020

Boring Completed: 10-05-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-12

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT\_10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0823° Longitude: -90.4779°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	2.0	-			3-3-3 N=6	22.7			
2		<b>LEAN CLAY (CL)</b> , brown and gray, medium stiff to stiff	18.5	5			2-3-3 N=6	24.0			
							2-2-3 N=5				
							2-2-3 N=5	26.1			
							3-3-4 N=7	22.6			
							4-5-5 N=10	20.9			
					▽						
3		<b>FAT CLAY (CH)</b> , yellowish brown, stiff - wet toward the bottom of the boring	20.0	15			4-5-6 N=11				
		<b>Boring Terminated at 20 Feet</b>		20							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-05-2020

Boring Completed: 10-05-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-13

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT\_10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0822° Longitude: -90.4772°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	2.0			X	4-3-2 N=5	20.0			
2		<b>LEAN CLAY (CL)</b> , brown and gray, medium stiff to stiff	18.5			X	2-2-3 N=5	21.7			
				5		X	2-3-4 N=7	24.3			
						X	3-3-3 N=6	23.4	45-18-27	95	
				10		X	3-4-4 N=8	23.5			
				15	▽	X	3-3-4 N=7	25.6			
3		<b>FAT CLAY (CH)</b> , yellowish brown, medium stiff - wet toward the bottom of the boring	20.0			X	2-2-3 N=5	31.2			
<b>Boring Terminated at 20 Feet</b>				20							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-05-2020

Boring Completed: 10-05-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-14

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT 10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0822° Longitude: -90.4766°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	2.0	5		X	2-2-3 N=5	21.2			
2		<b>LEAN CLAY (CL)</b> , brown and gray, medium stiff to stiff		5		X	2-3-3 N=6	26.5			
						X	3-4-5 N=9	24.3			
						X	3-4-5 N=9	25.9			
						X	3-3-4 N=7	24.0			
3		<b>FAT CLAY (CH)</b> , yellowish brown, medium stiff - wet toward the bottom of the boring		15		X	3-3-3 N=6	26.0			
						X	2-3-3 N=6	27.5			
<b>Boring Terminated at 20 Feet</b>				20							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-05-2020

Boring Completed: 10-05-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

# BORING LOG NO. B-15

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT\_10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0822° Longitude: -90.4759°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, stiff	3.5	5		X	6-5-5 N=10	11.4			
						X	5-5-6 N=11	11.8	38-18-20	96	
		<b>LEAN CLAY (CL)</b> , brown and gray, stiff				X	6-7-7 N=14	18.5			
						X	3-6-3 N=9	21.1			
2						X	4-5-7 N=12	24.0			
						▽					
						X	4-5-6 N=11	24.3			
3		<b>FAT CLAY (CH)</b> , yellowish brown, medium stiff - wet toward the bottom of the boring	18.5 20.0			X	2-3-3 N=6	30.7			
		<b>Boring Terminated at 20 Feet</b>									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-05-2020

Boring Completed: 10-05-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125



# BORING LOG NO. B-16

**PROJECT:** Hillside Manor Development

**CLIENT:** Theil Road Properties LP  
Paragould, AR

**SITE:** 2002 Rector Road  
Paragould, Arkansas

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35205125 HILLSIDE MANOR DE.GPJ TERRACON\_DATATEMPLATE.GDT 10/16/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 36.0821° Longitude: -90.4754°	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
									LL-PL-PI		
1		<b>LEAN CLAY (CL)</b> , trace rootlets, brown, medium stiff	2.0	-		X	3-3-4 N=7	20.6			
2		<b>LEAN CLAY (CL)</b> , brown and gray, stiff	18.5	5		X	4-5-7 N=12	21.9			
				5		X	4-6-8 N=14	25.4			
				5		X	3-4-4 N=8	23.8			
				10		X	3-4-5 N=9	21.8			
				15		X	3-4-4 N=8	23.7			
				18.5	▽						
3		<b>FAT CLAY (CH)</b> , yellowish brown, stiff - wet toward the bottom of the boring	20.0	20		X	3-4-4 N=8	28.8			
<b>Boring Terminated at 20 Feet</b>				20							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:  
0 to 20 feet: 3-1/4" Hollow-stem auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

▽ While drilling



Boring Started: 10-06-2020

Boring Completed: 10-06-2020

Drill Rig: Truck rig

Driller: AE

Project No.: 35205125

## **SUPPORTING INFORMATION**

### **Contents:**

General Notes












Unified Soil Classification System

Note: All attachments are one page unless noted above.

# GENERAL NOTES

## DESCRIPTION OF SYMBOLS AND ABBREVIATIONS



SAMPLING		WATER LEVEL		FIELD TESTS	
				(HP)	Hand Penetrometer
<b>Auger</b>	<b>Split Spoon</b>		Water Level After a Specified Period of Time	(T)	Torvane
			Water Level After a Specified Period of Time	(b/f)	Standard Penetration Test (blows per foot)
<b>Shelby Tube</b>	<b>Macro Core</b>			(PID)	Photo-Ionization Detector
			Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	(OVA)	Organic Vapor Analyzer
<b>Ring Sampler</b>	<b>Rock Core</b>			(DCP)	Dynamic Cone Penetrometer
					
<b>Grab Sample</b>	<b>No Recovery</b>				

**DESCRIPTIVE SOIL CLASSIFICATION**

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

**LOCATION AND ELEVATION NOTES**

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS				
<b>RELATIVE DENSITY OF COARSE-GRAINED SOILS</b> (More than 50% retained on No. 200 sieve) Density determined by Standard Penetration Resistance		<b>CONSISTENCY OF FINE-GRAINED SOILS</b> (50% or more passing the No. 200 sieve) Consistency determined by laboratory shear strength testing, field visual-manual procedures, or standard penetration resistance		
Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength, Qu, tsf	Standard Penetration or N-Value Blows/Ft.
Very Loose	0 – 3	Very Soft	Less than 0.25	0 – 1
Loose	4 – 9	Soft	0.25 to 0.50	2 – 4
Medium Dense	10 – 29	Medium Stiff	0.50 to 1.00	4 – 8
Dense	30 – 50	Stiff	1.00 to 2.00	8 – 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 – 30
		Hard	> 4.00	> 30

RELATIVE PROPORTIONS OF SAND AND GRAVEL	
Descriptive term(s) of other constituents	Percent (%) of dry weight
Trace	< 15
With	15 – 29
Modifier	> 30

RELATIVE PROPORTIONS OF FINES	
Descriptive term(s) of other constituents	Percent (%) of dry weight
Trace	< 5
With	5 – 12
Modifier	> 12

GRAIN SIZE TERMINOLOGY	
Major component of sample	Particle size
Boulders	Over 12 in. (300mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 sieve (0.075mm)

PLASTICITY DESCRIPTION	
Term	Plasticity Index
Non plastic	0
Low	1 – 10
Medium	11 – 30
High	> 30

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests <sup>A</sup>				Soil Classification		
				Group Symbol	Group Name <sup>B</sup>	
<b>Coarse-Grained Soils:</b> More than 50% retained on No. 200 sieve	<b>Gravels:</b> More than 50% of coarse fraction retained on No. 4 sieve	<b>Clean Gravels:</b> Less than 5% fines <sup>C</sup>	$Cu \geq 4$ and $1 \leq Cc \leq 3$ <sup>E</sup>	GW	Well-graded gravel <sup>F</sup>	
			$Cu < 4$ and/or $1 > Cc > 3$ <sup>E</sup>	GP	Poorly graded gravel <sup>F</sup>	
	<b>Sands:</b> 50% or more of coarse fraction passes No. 4 sieve	<b>Gravels with Fines:</b> More than 12% fines <sup>C</sup>	Fines classify as ML or MH	GM	Silty gravel <sup>F,G,H</sup>	
			Fines classify as CL or CH	GC	Clayey gravel <sup>F,G,H</sup>	
		<b>Clean Sands:</b> Less than 5% fines <sup>D</sup>	$Cu \geq 6$ and $1 \leq Cc \leq 3$ <sup>E</sup>	SW	Well-graded sand <sup>I</sup>	
			$Cu < 6$ and/or $1 > Cc > 3$ <sup>E</sup>	SP	Poorly graded sand <sup>I</sup>	
		<b>Sands with Fines:</b> More than 12% fines <sup>D</sup>	Fines classify as ML or MH	SM	Silty sand <sup>G,H,I</sup>	
			Fines classify as CL or CH	SC	Clayey sand <sup>G,H,I</sup>	
<b>Fine-Grained Soils:</b> 50% or more passes the No. 200 sieve	<b>Silts and Clays:</b> Liquid limit less than 50	<b>Inorganic:</b>	$PI > 7$ and plots on or above "A" line	CL	Lean clay <sup>K,L,M</sup>	
			$PI < 4$ or plots below "A" line <sup>J</sup>	ML	Silt <sup>K,L,M</sup>	
		<b>Organic:</b>	Liquid limit - oven	$< 0.75$	OL	Organic clay <sup>K,L,M,N</sup>
			Liquid limit - not dried		Organic silt <sup>K,L,M,O</sup>	
	<b>Silts and Clays:</b> Liquid limit 50 or more	<b>Inorganic:</b>	$PI$ plots on or above "A" line	CH	Fat clay <sup>K,L,M</sup>	
			$PI$ plots below "A" line	MH	Elastic Silt <sup>K,L,M</sup>	
		<b>Organic:</b>	Liquid limit - oven	$< 0.75$	OH	Organic clay <sup>K,L,M,P</sup>
			Liquid limit - not dried		Organic silt <sup>K,L,M,Q</sup>	
<b>Highly organic soils:</b>	Primarily organic matter, dark in color, and organic odor			PT	Peat	

<sup>A</sup> Based on the material passing the 3-inch (75-mm) sieve

<sup>B</sup> If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

<sup>C</sup> Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

<sup>D</sup> Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$E \quad Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

<sup>F</sup> If soil contains <sup>3</sup> 15% sand, add "with sand" to group name.

<sup>G</sup> If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

<sup>H</sup> If fines are organic, add "with organic fines" to group name.

<sup>I</sup> If soil contains <sup>3</sup> 15% gravel, add "with gravel" to group name.

<sup>J</sup> If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

<sup>K</sup> If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

<sup>L</sup> If soil contains <sup>3</sup> 30% plus No. 200 predominantly sand, add "sandy" to group name.

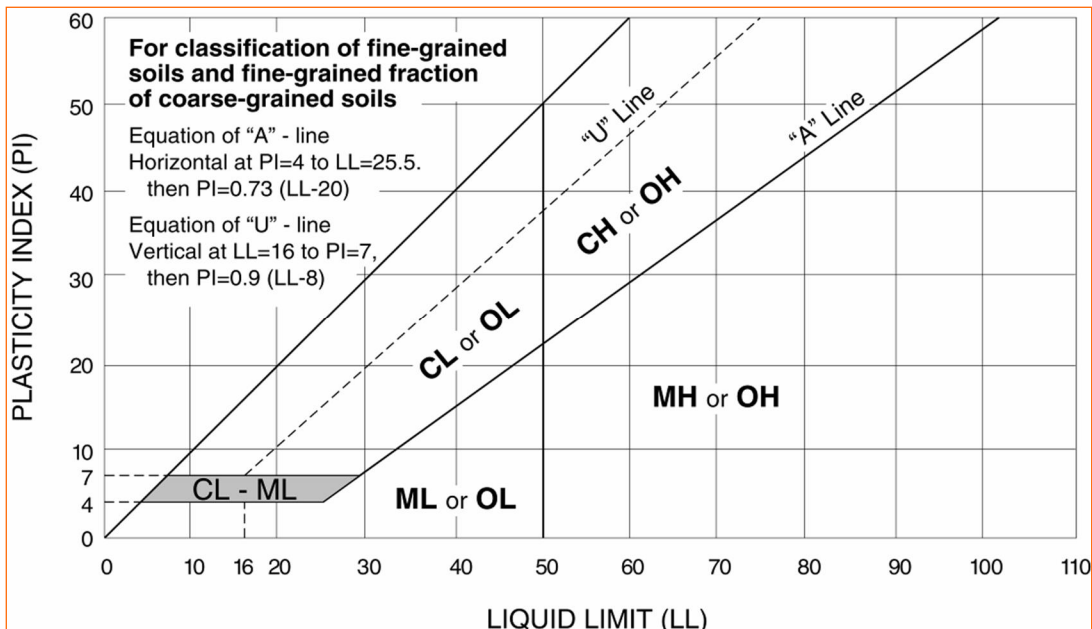
<sup>M</sup> If soil contains <sup>3</sup> 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

<sup>N</sup>  $PI \geq 4$  and plots on or above "A" line.

<sup>O</sup>  $PI < 4$  or plots below "A" line.

<sup>P</sup>  $PI$  plots on or above "A" line.

<sup>Q</sup>  $PI$  plots below "A" line.



January 25, 2021



Theil Road Properties, LP  
612 East Canal Street  
Paragould, Arkansas 72450

Attn: Mr. David Lange  
P: (870) 239-8084  
E: PHA1@gmco.net

Re: Supplemental No. 1 to Geotechnical Engineering Report, Revision 1  
Hillside Manor Development  
2002 Rector Road  
Paragould, Arkansas  
Terracon Project No. 35205125

Dear Mr. Lange:

This supplemental letter presents our earthwork recommendations based on the provided site grading plan for the above-referenced project. Terracon completed Geotechnical Engineering Report No. 35195125 dated October 16, 2020. At the time, a site grading plan was not available.

The table below lists the provided FFE and existing site grades at each boring location.

Boring ID	Building Location	Existing Site Grades <sup>1</sup>	Planned FFE
B-1	Building 24	282.5	284.5
B-2	Club House	282.0	284.0
B-3	Building 13	282.5	284.5
B-4	Building 15	283.0	285.5
B-5	Building 17	283.0	284.5
B-6	Building 19	283.5	285.0
B-7	Building 21	283.5	286.0
B-8	Building 23	284.0	286.8
B-9	Building 25	281.0	283.5
B-10	Building 11	282.0	283.2
B-11	Building 10	282.0	283.5
B-12	Building 8	282.5	283.5
B-13	Building 6	282.5	283.0
B-14	Building 4	283.0	283.5
B-15	Building 2	282.0	282.8

**Supplement No. 1 to Geotechnical Engineering Report**

Hillside Manor Development ■ Paragould, Arkansas

January 25, 2021 ■ Terracon Project No. 35205125



Boring ID	Building Location	Existing Site Grades <sup>1</sup>	Planned FFE
B-16	Building 1	282 to 283	282.0

1. Rounded to the nearest half-foot

We reviewed the boring log data with respect to the provided site grading plan. We observed high-plasticity fat clay soils at Boring B-8, in the vicinity of Buildings 22 & 23. In these locations, we recommend that 4 feet of low volume-change engineered fill be used below the building slabs for expansive soil considerations. This can be a combination of overexcavation and replacement of soils below the existing grade and imported fills to achieve design grades. The high-plasticity soils could be present at other locations across the site and careful observation will be necessary to ensure that these soils are not contained in the upper 4 feet below building slabs.

Low-strength soils were observed at depths of about 3.5 to 8.5 feet below the existing site grades at Borings B-3, B-4, B-5, B-8, B-9, B-12 and B-13. In a general sense the low strength soils at this site are dependent upon moisture content. If moisture contents are elevated due to rain, low levels of evaporation and transpiration, or other factors, it can be expected that low strength soils will be present across the site at that time. If the project is constructed during warm, dry periods, soil strengths will be adequate, and any lower strength areas will be able to be properly manipulated to improve their support characteristics.

This supplemental letter should be used in conjunction with Terracon’s Geotechnical Engineering Report No. 35195125 dated October 16, 2020. The qualifications and limitations stated in our geotechnical report apply to this supplemental letter.

We appreciate the opportunity to be of service to you. If you have any questions or comments, or if we can be of further assistance, please do not hesitate to contact us.

Sincerely,

**Terracon Consultants, Inc.**

Renuka S. Ranade, E.I.  
Field Engineer

Christopher S. Handley, P.E. (AR and TX)  
Geotechnical Department Manager  
Arkansas No. 16585

**DIVISION 03 CONCRETE**

033000 Cast-In-Place Concrete

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all concrete work, forms, reinforcing and related items necessary to complete the work indicated on drawings and described in specifications, unless specifically excluded.
- (c) Set all built-in pipe sleeves, anchors and inserts furnished under other sections of this specification.
- (d) Furnish and install joint fillers in connection with concrete work as indicated on drawings.
- (e) Provide concrete bases under items of mechanical and electrical equipment. Coordinate with mechanical and electrical sub-contractors for exact sizes and locations of bases required. Refer to mechanical-electrical drawings.
- (f) Work specified elsewhere:
  - (1) Inserts and pipe sleeves for various trades.
  - (2) Concrete driveways, approaches, and walks.
  - (3) Gravel fill under concrete slabs on grade.

2. TESTING

- (a) The Contractor shall retain an independent testing laboratory and shall make and pay for concrete tests and submit reports to the Architect. Reports shall be submitted within 10 days of receipt of reports from testing laboratory.
- (b) The Contractor, shall arrange to have samples taken and tests made as hereinafter listed for each 40 cubic yards of fresh concrete or fraction thereof placed at each Building on the project, but not less than one set for each day's concreting involving 10 yards or more.
- (c) **COMPRESSION AND STRENGTH TESTS:** Each test shall consist of four standard 6 inch by 12 inch cylinders; one cylinder to be tested at the age of seven days and two cylinders at the age of 28 days. The remaining cylinder shall be retained until the Architect directs for it to be tested. Samples shall be taken, cured and tested in accordance with latest ASTM standards.
- (d) **SLUMP TESTS:** Tests for slump shall be made at the place of deposit and in accordance with ASTM C 143. Tests shall be made periodically, when cylinders are made, and as often in the opinion of the Architect when a change in consistency of the concrete mix is noted. The Contractor shall have a slump cone at the job site at all times when concreting operations are in progress. Unless otherwise noted or specified, the slump shall be within the following limits.
  - (1) All concrete: Maximum 5 inches, Minimum 2 inches.



2. TESTING (Cont'd)

- (e) When the ultimate compressive strength of any cylinder falls below the specified strength for the class of concrete specified, the design mix and water content shall be adjusted to produce the specified strength for concrete that is subsequently placed. In addition, the Architect may order additional curing for that portion of the structure where the questionable concrete has been placed.
- (f) In the event that such additional curing does not give the strength required, as determined by load tests made in accordance with ACI 318, or cored cylinder tests, and if such tests indicate the necessity, the defective parts shall be removed and replaced, or shall be reinforced as directed by the Architect, at the contractor's expense, including the expense of the tests.

3. SHOP DRAWINGS

- (a) Submit shop drawings to architect in accordance with requirements described in General Conditions and specification Section 013323 – Shop Drawings, Product Data, and Samples. Obtain acceptance of drawings prior to fabricating any material or proceeding with the work.
- (b) Shop drawings shall indicate bending, assembly, splicing, laps, dimensions and details of bar reinforcing and accessories. Prepare drawings in accordance with the "Manual of Standard Practice for Detailing Reinforced Concrete Structures", ACI 315.
- (c) Shop drawings shall be checked and approved by Contractor before submitting to the Architect. Shop drawings unchecked by the Contractor will be returned to the Contractor with "NO ACTION TAKEN", and the Contractor will be required to resubmit the shop drawings after the Contractor has properly checked and approved said shop drawings.

4. MATERIALS

- (a) PORTLAND CEMENT: ASTM C150, Type 1, and ASTM C150, Type 1A for air entrained concrete. No sacks with caked or lumpy cement will be accepted.
- (b) SAND: Clean hard natural meeting the requirements of Standard Specifications of the Arkansas State Highway and Transportation Department.
- (c) COARSE AGGREGATE: Coarse Aggregate shall meet requirements of ASTM C-33. Size shall be 1-1/4" down for all concrete.
- (d) MIXING WATER: Pure city water of drinkable quality.
- (e) METAL REINFORCEMENT: Reinforcing steel shall meet the following specifications.
  - (1) Reinforcing Bars: Bars shall conform to the requirements of ASTM A 615 for billet steel, or to ASTM A 616 for rail steel or to ASTM A 617 for axle steel bars. Bars shall be Grade 60 for #3 bars and larger. Reinforcement shall be clean and free from loose rust, scale or other coatings that will reduce bond. Bars shall be domestic.

4. MATERIALS (Cont'd)

- (2) Welded Wire Fabric Reinforcement: (ASTM A 497) Steel wire spot-welded at intersections and of size indicated. Where size is not noted it shall be 6 by 6 inch mesh, W1.4 x W1.4. Use wire reinforcing only where indicated. Fabric shall be domestic and shall be supplied in “flat” sheets. Rolls will not be accepted.
- (f) METAL ACCESSORIES: Include all spacers, chairs, bolsters, ties, and other devices necessary for properly placing, spacing, supporting and fastening reinforcement in place. Metal accessories shall be galvanized where legs will be exposed in finished concrete surfaces.
- (g) EXPANSION JOINT FILLERS: Premolded cork ASTM D 1751. Joint fillers shall extend full depth of slab or joint and be 1/2" thick for exterior joints, 1/4" thick for interior joints unless noted otherwise on drawings.
- (h) VAPOR BARRIER: 10 mil vapor barrier meeting the requirements of ASTM E-1745 (Class A).
- (i) SLEEVES: Sheet metal as approved by Architect.
- (j) FORMS: Clean, straight lumber or moisture resistant plywood in good condition conforming to U.S. Product Standard PS-1 B-B Concrete form, class 1, exterior grade.
- (k) AIR-ENTRAINING ADMIXTURE: Approved brand to meet the requirements of ASTM C 260.
- (l) WATER-REDUCING ADMIXTURE: Master Builders Pozzolith 300R meeting the requirements of ASTM C494, Type A.

5. EMBEDDED ITEMS

- (a) Notify trades that have work to be embedded in concrete in ample time to permit placing of items without delaying pouring of concrete.
- (b) Provide for installation of inserts, conduits, pipe sleeves, drains, anchor bolts, dowels, thimbles, blocking and other fastening devices required for attachment of other work. Properly locate in cooperation with other trades and secure in position before concrete is poured.
- (c) Sleeves, anchors, inserts and other accessories shall be inspected, in place, before concrete pouring is started.

6. FORMS

- (a) Construct forms of clean, straight lumber or plywood, plumb and straight and sufficiently tight to prevent leakage in accordance with ACI 347, Recommended Practice for Concrete Formwork.
- (b) Brace and shore forms securely to prevent displacement during and after concrete pouring and to safely support construction loads.

6. FORMS (Cont'd)

- (c) Earth sides may be used for forming footings, provided that soil conditions are such that accurate size and shape may be obtained without bracing. Exposed slab edges shall be formed.
- (d) Forms, completely assembled and erected, shall be approved before concrete pour is started.

7. REMOVAL OF FORMS

- (a) Remove forms in accordance with requirements of the ACI Building Code Requirements for Reinforced Concrete No. 318, Chapter 6, without damage to concrete and in manner to insure complete safety of the structure.
- (b) Upon removal of forms, notify the Architect in order that an inspection of the newly stripped surfaces may be made prior to patching.
- (c) Freshly stripped surfaces shall not be pointed up or touched in any manner before having been inspected by the Architect.

8. METAL REINFORCING

- (a) Place metal reinforcing accurately in position shown, securely fasten and support to prevent displacement before or during pouring. Cleaning, bending, placing and splicing of metal reinforcement shall be done in accordance with requirements of the 2012 Arkansas Fire Prevention Code, ACI Manual of Standard Practice 315, (latest edition), and accepted shop drawings.
- (b) Furnish and support bars or accessories as necessary to provide the designated reinforcement to be placed in the location shown or specified.
- (c) Place reinforcing for a minimum of one day's pour, or for a full pour between joints before concrete is ordered.
- (d) Reinforcing steel and mesh, in place, shall be inspected before placing of concrete is started.

9. STRENGTH, PROPORTIONS AND CONSISTENCY

- (a) The proportions of cement, aggregate and water for normal weight concrete to attain required plasticity and compressive strength shall be in accord with the latest editions of ACI Code 318. Proportion changes shall not be made without the Architect's consent. Concrete strength and mix designs shall be as shown on Drawing Sheet S0.1 – Structural Notes.

10. MIXING

- (a) Except as otherwise specified, concrete shall be ready-mixed or job-mixed at the Contractor's option, and in accordance with requirements of The American Concrete Institute Building Code 318, Chapter 4.

10. MIXING (Cont'd)

- (b) Ready-mixed concrete shall be mixed and delivered to the project in accordance with the ASTM Specification C94, using Alternate No. 1 or No. 2 as applicable to the responsibility specified for the mix design.

11. PLACING

- (a) Before placing concrete, remove all debris, water and ice from the places to be occupied by the concrete. Wood forms shall be thoroughly wetted (except in freezing weather) or oiled, and the reinforcement cleaned of ice or other coatings.
- (b) Treat plywood or hardboard forms (except as otherwise specified) with an approved form oil. Remove excess oil before pouring concrete.
- (c) Formwork and the placement of reinforcement, pipes, sleeves, conduit, hangers, anchors and other inserts shall be inspected and approved by the Architect before any concrete is deposited.
- (d) Place all concrete in accordance with requirements of the American Concrete Institute Building Code 318, The 2012 Arkansas Fire Prevention Building Code, and as modified herein. Concrete shall be rapidly handled from mixer to forms and deposited as nearly as possible in its final position to avoid segregation due to rehandling or flowing. No concrete that has partially hardened or been contaminated by foreign material shall be deposited in the work, nor shall retempered concrete be used. All concrete shall be placed on clean well-thawed surfaces, free from water. Slabs on grade shall be placed over a plastic sheet vapor barrier as herein specified. Lap all joints 6" and tightly seal around all obstructions passing through barrier, and tape all lap joints with tape as recommended by the vapor barrier manufacturer. Vapor barrier installation to be approved by the Architect prior to pouring of concrete slabs.
- (e) Place concrete with the aid of mechanical vibrating equipment. Apply vibration directly to the concrete unless otherwise directed by the Architect. The intensity of vibration shall be sufficient to cause flow or settlement of the concrete into place.
- (f) Apply vibration at the point of deposit and in the area of freshly placed concrete. It shall be of sufficient duration to accomplish thorough compaction and complete embedment of reinforcement and fixtures but shall not be long enough to cause segregation of the mix. To secure even and dense surfaces, free from aggregate pockets or honeycomb, vibration shall be supplemented by hand spading in the corners and angles of forms and along form surfaces while the concrete is plastic under the vibratory action.  
  
Caution must be exercised when using vibrators and hand spades to prevent any injury to the inside face of the forms or any movement of the reinforcement.
- (g) Concrete when deposited shall have a temperature not below 50 degrees F. nor above 85 degrees F.
- (h) Follow the methods and recommended practice as described in ACI Standard 604 for winter concreting and ACI Standard 605 shall be followed for hot weather concreting.

11. PLACING (Cont'd)

- (i) Do not mix salt, chemicals or other foreign materials with the concrete for the purpose of preventing freezing.
- (j) Admixtures intended to accelerate the hardening of the concrete or to produce higher than normal strength at early periods will not be permitted unless specified or prior consent is obtained from the Architect.
- (k) Concrete shall not be poured during freezing weather without the consent of the Architect.
- (l) Keep records to show the date of placements, the mix used and the air temperature at time of concreting for the various portions of the work. These records shall be available to Architect when requested.

12. JOINTS

- (a) Form construction joints as indicated on the drawings. Use dowels and keys where detailed.
- (b) The rate and method of placing concrete and the arrangement of construction joint bulkheads shall be such that the concrete between construction joints shall be placed in a continuous operation.
- (c) Form expansion joints as indicated. Keep joints free of all foreign materials and maintain clear widths shown between adjoining surfaces.

13. FINISHES

- (a) **INTEGRAL MONOLITHIC FINISH:** Provide integral monolithic cement finish for all floors to be exposed or to receive resilient floor finishes in the finish work. Apply an integral monolithic finish of mix and workmanship as specified herein to the base slab after it has dried firm, but not yet set. Produce standard integral finish by striking surfaces of the structural slabs at proper level. Roll or tamp the concrete to force aggregate away from surface and then screed. After screening and while the concrete is still plastic, float the surface with wood, cork, or metal floats or with a power-finishing machine. During this operation the surface shall be brought to a true grade by cutting down high spots and filling low spots. Take care not to overwork the plastic concrete. When the concrete has hardened so that water and fine material will not be worked to the surface, finish with a steel trowel to a smooth and even surface within the tolerance specified. Exterior platforms and other areas where noted shall be given a "medium broom" finish as directed. Do not sprinkle dry cement or a mixture of dry cement and sand directly on the surface to absorb moisture or to stiffen the mix. The maximum variation in surface level shall be 1/8" in 10 ft. If variations greater than this exist, the Architect may direct the contractor to grind the floor to bring the surface within the requirements.

14. PROTECTION AND CURING

- (a) Protect concrete against frost and rapid drying and keep moist for at least 6 days after placing; during this period, concrete shall be maintained above 70 degrees F. for at least 3 days or above 50 degrees F. for at least 5 days. Concrete from which forms are removed within 6 days after concreting, and cement finishes shall be sprayed during the curing period as frequently as drying conditions may require.

15. PATCHING

- (a) After the forms have been removed, all concrete surfaces to be exposed in the final work shall be inspected and any pour joints, voids, stone pockets or other defective areas permitted by the Architect to be patched shall be cleaned out and patched before the concrete is thoroughly dry.
- (b) A grout of equal parts of portland cement and sand with sufficient water to produce a brushing consistency shall then be well brushed into the surface, followed immediately by the patching mortar. The patch shall be made of the same material and of the same proportions as used for the concrete except that the coarse aggregate shall be omitted.

16. NOTIFICATION OF CONCRETE PLACEMENT

- (a) Notify the Architect twenty-four (24) hours in advance of the placement of any concrete.

END OF SECTION

**DIVISION 04 MASONRY**

042000 Unit Masonry

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) The work required under this section consists of all brick masonry work, accessories and related items necessary to complete the work indicated on drawings and specified herein.
- (c) Build in flashing and other items furnished under other sections of these specifications.
- (d) Work specified elsewhere:
  - (1) 010000 – General Requirements.
  - (2) 033000 - Cast-In-Place Concrete.
  - (3) 061000 - Rough Carpentry.
  - (4) 072100 - Thermal Insulation.
  - (5) 074600 – Siding.
  - (6) 079200 – Joint Sealants.
  - (7) 099100 – Painting.

2. SAMPLES

- (a) Submit samples of face brick to the Architect in accordance with requirements set forth in General Conditions and specification Section 013323 – Shop Drawings, Product Data, and Samples. Approval must be obtained prior to delivery of brick.
- (b) Prior to starting masonry work, provide sample panel for each color of brick selected to show required type of facing material, range of color and type of mortar joints for Owner approval. Approved sample panels shall remain at the project site during the duration of the project.

3. MATERIALS

- (a) FACE BRICK: King size brick meeting the requirements of ASTM C216, Grade SW, Type FBS, as manufactured by Acme Brick, Triangle Brick, and / or Boral Brick. Colors shall be selected by Owner from manufacturer's standard color pallets. Allow the sum of \$400.00/m delivered F.O.B. to the jobsite. Allowance shall include procurement, delivery, handling, and taxes.
- (b) CONCRETE MASONRY UNITS: Regular weight (CMU) for all walls as shown on the drawings. ASTM Specification C-90, Grade U-1.
  - (1) Units to be 8 x 16 x 8 inches or as shown on the drawings. All dimensions modular.



3. MATERIALS (Cont'd)

- (2) Provide corner units as required by the drawings.
- (b) PORTLAND CEMENT: Light grey color, conforming to ASTM Specification C-150, Type I.
- (c) MASONRY CEMENT: Not allowed.
- (d) LIME: Hydrated. Hydrated lime must be at least 92 percent hydrated.
- (e) SAND: Clean natural sand; when dry 100 percent shall pass a No. 8 sieve and not more than 35 percent shall pass a No. 50 sieve.
- (f) VENEER ANCHORS: Adjustable veneer anchors as manufactured by Hohmann & Barnard, Inc., shall be Seismiclip Interlock System X-Seal Anchor / 3" Byna-Loc Tie with 9/16" continuous wire. All components shall be hot dipped galvanized after fabrication in accordance with ASTM A116, Class 1.
- (g) JOINT REINFORCING: Masonry wall reinforcement as manufactured by Hohmann & Barnard, Inc. Joint reinforcing shall be hot dipped galvanized #220 Ladder Mesh Reinforcement. Reinforcement shall be type (EH) extra heavy with 3/16" side rods and 9 gauge cross rods. Install in walls at 16" o.c. vertically.

4. MORTAR

- (a) MORTAR: Mortar for masonry work to be a pre-mixed, SPEC/MIX, Type N mortar and Type S mortar consisting of Portland Cement, Sand, and Hydrated Lime as specified herein. Mortar mix generally to be one part Portland Cement, one part Hydrated Lime and six parts Sand by volume. Use type S mortar for brick and concrete masonry below grade. Type S mortar to generally be one part Portland, one-half part Hydrated Lime and four and one-half parts Sand by volume.
- (b) MIXING: All cementitious materials and aggregate shall be mixed for a minimum of 5 minutes in a mechanical batch mixer. The consistency of mortar shall be adjusted to the satisfaction of the mason, but as much water shall be added as is compatible with convenience in using the mortar. If the mortar begins to stiffen from evaporation or absorption of a part of the mixing water, the mortar shall be retempered by adding water and remixed.
- (c) Use no mortar that has begun to set or that has been mixed more than 2 hours.

5. PRECAUTIONS

- (a) Do not lay masonry in freezing weather unless suitable means are provided to heat materials, protect work from cold and frost and insure that mortar will harden without freezing. No anti-freeze ingredients shall be used.
- (b) Protect facing material against staining and keep top of walls covered with non-staining waterproof covering when work is not in progress. When work is resumed, top surface of work shall be cleaned of all loose mortar and, in drying weather, thoroughly wet.

5. PRECAUTIONS (Cont'd)

- (c) Brick with more than 8 percent absorption shall be damp when laid.
- (d) The open space at control joints shall be kept clean and free of mortar by using a continuous wood or metal strip temporarily set in the wall.
- (e) All cavities between brick veneer and sheathing shall be kept clean and free of mortar. Mortar shall not be allowed to "bridge" between back of veneer and face of sheathing across wall ties.

6. LAYING CONCRETE MASONRY UNITS

- (a) Lay all exposed units throughout project in running bond in full beds of mortar, plumb, level and true to line, and properly jointed with other connecting work. Units with open cells exposed in wall will not be permitted. Install all bond beam and lintel beam units required.
- (b) Lay all concrete masonry units in 8 inch courses with each course true to a tight line. No jumping of bond will be permitted. On walls of odd bond the small cuts shall be placed at a point near the ends of the runs and maintained in the same position vertically the full height of the wall. The joints in blockwork are to be of equal size and are to be tooled with a stainless steel tool to form a clean concave joint.
- (c) Where cutting is necessary, use motor driven carborundum or diamond saw or other method of producing clean cut edges. Do all necessary cutting to accommodate installation of electric outlets, conduits, plumbing fixtures, pipes and brackets. Units with chipped or irregular cut surfaces will not be accepted.
- (d) Provide an accurate story pole to control the heights of all courses from bottom to top of walls. Each course shall be laid true to tight line. No changing of bond will be permitted.

7. LAYING BRICK

- (a) Lay brick plumb, level and true to line in full beds of mortar. All joints in brickwork and joints between brick and other materials required in connection therewith shall be filled solid with mortar as each course is laid. All head joints to be laid full and in true vertical alignment. Unless shown otherwise, lay brick in one-third running bond, with rowlock courses, soldier courses, and miters where shown.
- (b) Anchor brickwork with wall ties securely attached to the studs through weather barrier and sheathing with corrosion resistant nails. Ties shall be spaced not more than 15" vertically and 16" horizontally.
- (c) All brick shall be laid three courses to 9 inches (vertically). All head joints shall be equal in size to bed joints and of uniform size and shall align vertically with every other course. Face joints for all brickwork exposed on exterior shall be tooled with a stainless steel metal tool to form a smooth concave joint. Close all hairline cracks and crevices. Build in control joints and expansion joints in locations shown on the drawings.

7. LAYING BRICK (Cont'd)

- (d) Provide an accurate story pole to control the heights of all courses from bottom to top of walls. Each course shall be laid true to a tight line. No changing of bond will be permitted. On walls of odd bond, the small cuts shall be placed at a point near the end of the run and maintained in the same position vertically for the required height.
- (e) Where flashing or waterproofing turns out and terminates in horizontal mortar joints, provide weep holes in the mortar joint to permit water to drain from the wall. Space weep holes approximately 20 inches apart horizontally. Form weep holes by pressing minimum 12" lengths of non-staining oil soaked 5/16 inch diameter braided cotton sash cord into the mortar bed while soft. Extend other end of sash cord up cavity as far as possible and duct tape end to sheathing board. Leave just enough (+ or - 1"), of cord protruding through exterior wall to adequately remove after mortar has set. When mortar has set, pull the cords from wall. Plastic inserts for weep holes will not be allowed.
- (f) Extra care shall be taken to keep all cavities behind brick veneer free and clear of mortar droppings. Mortar shall not be allowed to bridge across cavities to masonry or sheathing back-up on wall ties.

8. EMBEDDED ITEMS

- (a) Notify trades that have work to be embedded in masonry in ample time to permit placing of items without delaying masonry work.

9. POINTING AND CLEANING MASONRY

- (a) On completion, point up all exposed masonry, fill all holes and joints; remove loose mortar, cut out defective joints and repoint where necessary. Masonry surfaces to be exposed, shall be thoroughly cleaned. Leave surfaces free from mortar and other stains at completion of work.
- (b) Clean brickwork using an approved brand of cleaning agent. Apply according to manufacturer's directions.

END OF SECTION

**DIVISION 05 METALS**

055000 Metal Fabrications

## 1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all miscellaneous steel, loose angle lintels and related items necessary to complete the work indicated on drawings and described in specifications.
- (d) Work specified elsewhere:
  - (1) 042000 – Unit Masonry.
  - (2) 061000 - Rough Carpentry.
  - (3) 099100 - Painting.

## 2. SHOP DRAWINGS

- (a) Submit shop and erection drawings for all miscellaneous steel work to the Architect for review in accordance with the requirements set forth in General Conditions and Section 013323 - Shop Drawings, Product Data, and Samples. Manufacturing or fabrication of any material or the performing of any work prior to review of shop drawings will be entirely at risk of contractor.
- (b) Contractor shall check and approve all shop drawings and have supplier make all corrections noted before submitting to Architect for review. Any drawings received without this requirement being fulfilled will be returned with no action taken.
- (c) Architect's review of shop drawings will be for size and arrangement of principal and auxiliary members. Any errors in dimensions shown on shop drawings will be responsibility of Contractor.

## 3. MATERIALS

- (a) Steel plates, shapes and bars shall conform to the latest edition of ASTM Standard Specifications A36. All structural steel must be manufactured and rolled in domestic mills. Certified mill tests will be required for any section in question.
- (b) Bolts shall conform to the latest edition of ASTM Standard Specification A325 for beam to beam and beam to column connections. All bolts shall be domestic made.
- (c) Where hot-dip galvanized items are indicated on the drawings or specified herein, the hot dip galvanized finish shall comply with the following standards where applicable:
  - 1. ASTM A 123 for galvanizing steel and iron products.
  - 2. ASTM A 153/A 153M for galvanizing steel and iron hardware.

4. FABRICATION

- (a) Unless otherwise shown or specified herein, fabricate miscellaneous steel in accordance with current editions of American Institute of Steel Construction; "Code of Standard Practice for Steel Buildings and Bridges"; AISC "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings" including "Commentary", and final shop drawings.
- (b) Do all punching and drilling of steel required for attachment of other materials thereto.

5. ANGLES AND BENT PLATES

- (a) Furnish and install miscellaneous angles, ledge angles for masonry and any plates or formed sections as required by detailed drawings. Install steel angles at opening and other locations for installation of all equipment and items where framing or bracing is required for proper installation. Refer to Structural Drawings for size and types of angles and bent plates required.

6. PAINTING

- (a) Remove all loose rust and mill scale from steel and ferrous metals. All steel and ferrous metals shall be cleaned of all rust, sand or other foreign matter and apply one shop coat of an Alkyd Resin primer with corrosion inhibitor (gray).
- (b) After erection touch up field connections and abraded places of painted steel only with paint to match shop coat. Finish painting of any exposed miscellaneous steel is specified under Section 099100 - Painting.

END OF SECTION

**DIVISION 06 WOOD, PLASTIC AND COMPOSITES**

061000      Rough Carpentry

062000      Finish Carpentry

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) Furnish all labor and material necessary to complete all rough carpentry work shown on drawings and specified herein, including but not necessarily limited to the following:
  - (1) Exterior and interior wood blocking, framing and stripping.
  - (2) Centering and scaffolding work.
  - (3) All rough hardware (nails, screws, bolts, anchors, etc.)
  - (4) Installation of all finish door hardware, see Section 087100 - Door Hardware.
  - (5) Wood reinforcement of wood stud partitions for installation of wall-mounted items.
  - (6) Installation of temporary enclosures and guards.
  - (7) Wood framing and trusses.
- (c) See drawings, schedules and details for location and quantity of rough carpentry required.
- (d) Provide all furring strips, blocking, framing, grounds and general carpentry work for all trades, and all miscellaneous items required for the completion of work, whether the item is specifically mentioned or not.
- (e) Work specified elsewhere:
  - (1) 033000 - Cast-In-Place Concrete.
  - (2) 074600 – Siding.
  - (3) 081113 - Entry Doors.
  - (4) 081416 - Pre-Hung Interior Doors.
  - (5) 083113 – Access Doors and Frames.
  - (6) 087100 – Door Hardware.
  - (7) 085313 - Vinyl Windows.
  - (8) 092900 - Gypsum Board.



2. DETAILS AND SHOP DRAWINGS

- (a) All work to be in strict accordance with details as shown on plans.
- (b) The Contractor shall take accurate measurements at the building and make such adjustments as may be necessary for his work to be installed correctly.
- (c) Refer to Section 013323 - Shop Drawings, Product Data, and Samples for additional requirements affecting this section.

3. MATERIALS

- (a) Lumber Standards and Grade-Marking: Each piece of framing lumber and each board shall comply with the American Lumber Standards, SPR 16, and with specific grading requirements of the association recognized as covering the species used and under whose grading rules it is produced. Each piece of framing lumber and each board shall be identified by the grade-mark of a recognized association or independent inspection agency. Such association or independent inspection agency shall be certified by the Board of Review, American Lumber Standards Committee, Washington, D.C., to grade the species.
- (b) Moisture content of framing lumber shall be not more than 15 percent at time of installation:
- (c) Dimensions of lumber specified or called for on the drawings are nominal.
- (d) All framing lumber and lumber used for blocking shall be #2 SPF unless otherwise specified, of sizes and spacing shown or specified. All lumber used for securing exterior material, and all lumber in contact with concrete floor slabs on grade shall be preservative treated. Use only kiln dried lumber with moisture content of not over 12 percent. Wood treatment shall be one of the following methods:

Alkaline copper quat (ACQ-C, ACQ-D, ACQ-D Carbonate)  
Copper azole (CBA-A, CA-B)  
Sodium borates (SBX/DOT)  
Ammoniacal copper zinc arsenate (ACZA)

Wood treatments specified hereinbefore have corrosive action on many metals. All fasteners and connectors used in securing treated wood or other products to treated wood shall be one of the following:

Hot dipped galvanized fasteners complying with ASTM A153.  
Hot dipped galvanized connectors complying with ASTM A653, Class G185.  
Type 304 Stainless Steel fasteners and connectors.  
Type 316 Stainless Steel fasteners and connectors.

- (e) All framing and lumber for roof trusses and other roof framing members to be #2 S.Y.P. Stress Grade or #2 Hemlock-Fir. Lumber used for blocking, firestopping and bridging may be "utility" grade. Wood trusses shall be fabricated as detailed on drawings, using approved connector plates at joints. Install wood bridging for all floor and roof framing, maximum spacing 8 ft. o.c.

3. MATERIALS (Cont'd)

- (f) WALL SHEATHING: Zip System Sheathing as manufactured by Huber Engineering Woods, LLC. Panels shall be 24/16 Span Rated, Structural 1, 7/16” Performance Category sheathing board with medium-density, phenolic-impregnated sheet material qualifying as a Grade D water-resistive barrier in accordance with ICC AC38. Refer to structural drawings for installation requirements and details.
- (g) ROOF SHEATHING: 19/32” Radiant Barrier Oriented Strand Board (OSB), 40/20 span rated panels. All joints to occur only over supports. Install edge clips for roof sheathing where non-supported joints occur. Refer to structural drawings for installation requirements and details.
- (h) EXTERIOR WOOD TRIM: #2 S.Y.P. Size and thickness required by drawings.
- (i) PRE-FABRICATED INSULATED WOOD HEADERS: 5-1/2” thick, R-19 Express Header x depth indicated on drawings, as manufactured by SJS Components, Warsaw, Indiana

4. STORAGE AND PROTECTION

- (a) All lumber shall be piled in a manner which ensures proper ventilation and drainage, and shall be placed clear of the ground. It shall also be covered to protect it from the elements.
- (b) Trusses (or trussed rafters) shall be stored in vertical positions, clear of the ground, on solid blocking located at panel points, and covered for protection from the elements.

5. GENERAL

- (a) Framing, sheathing, bridging, blocking all items of rough carpentry shall be laid out as called for by the drawings, and shall be cut and fitted as necessitated by conditions encountered. All work shall be plumb, leveled, and braced with sufficient nails, spikes, bolts, etc. to insure rigidity.
- (b) Any piece of wood or other carpentry material with a defect or defects that prevent it from serving its intended purpose satisfactorily, including crooked, warped, bowed, or otherwise defective material, even if within the limits of the grade specified, will be rejected and shall be replaced with an acceptable piece.

6. FRAMING(a) Walls and Partitions

- (1) Building framing shall comply with the American Forest and Paper Association (AFPA) “Manual for Wood Frame Construction”, unless otherwise indicated.
- (2) Install framing members of sizes and spacing indicated on the drawings and specified herein.
- (3) Do not splice structural members between supports.

6. FRAMING (Cont'd)

- (4) Firestop concealed spaces of wood framed walls and partitions in accordance with the 2012 Arkansas Fire Prevention Code.
- (5) Arrange studs so that the wide face of the stud is perpendicular to the direction of the wall, partition or endwall roof framing, and narrow face is parallel.
  - (1) Provide single bottom plate and double top plates using members of 2-inch nominal thickness whose widths equal that of studs.
  - (2) For exterior walls at heated spaces, provide 2-inch by 6-inch nominal size wood studs spaced at 16 inches o.c., except where otherwise indicated or required.
  - (3) For interior walls and exterior walls at unheated spaces, provide 2-inch by 4-inch nominal size wood studs spaced at 16 inches o.c. except where otherwise indicated.
  - (4) For roof framing, use member sizes as shown on structural drawings.
- (6) Construct corners and intersections as detailed on the drawings. Provide miscellaneous blocking and framing to support facing materials, fixtures, specialty items and trim.
- (7) Frame openings with multiple studs, pre-fabricated insulated headers at exterior wall locations, and nailed headers at interior wall locations. Provide header members of thickness equal to width of studs. Set headers on edge and support on jamb studs.
  - (1) For non-load bearing partitions, provide double-jamb studs with headers not less than 4-inch nominal depth for openings 36 inches and less in width, and not less than 6-inch nominal for wider openings.
  - (2) For load-bearing walls, provide double-jamb studs for openings 72 inches and less in width, and triple-jamb studs for wider openings. Provide headers of 10-inch nominal depth x thickness of wall studs.
- (8) Plates and sills shall be bolted to foundation walls using properly sized anchors at spacing indicated on the structural drawings.

(b) Engineered Roof Trusses

- (1) Engineered Roof Trusses shall be designed by the manufacturer. Submit one (1) electronic copy (pdf format) of shop drawings and design calculations to the Architect for approval prior to truss fabrication. Trusses shall be designed to carry the loads as indicated on the drawings. Shop drawings and calculations shall be stamped by a Structural Engineer registered in the State of Arkansas.
- (2) Engineered Roof Trusses shall be constructed with precut and carefully fitted members assembled to ensure uniformity. Trusses shall be constructed true to line and dimensions, within a tolerance of 1/4" for length and 1/8" for height.
- (3) Lumber sizes called for by drawings are nominal. Computations are based on the net sizes of American Lumber Standards for dressed lumber corresponding to the given nominal sizes, which are the minimum permissible. Each piece of lumber shall be selected for suitability and cut to avoid large or unsound knots at connections.

6. FRAMING (Cont'd)

- (4) Trusses shall be fabricated using special metal connector plates on each joint secured by nails and hooked teeth into the wood fibers. Gage of metal connector plates shall be selected by the truss manufacturer, shown on required shop drawings and selection shall be supported by design calculations submitted. Trusses shall not be fabricated until shop drawings have been submitted to the Architect and approved.
  - (5) Trusses shall be erected in position, perpendicular to the wall plates. Except as otherwise specified hereinafter, or called for on the drawings, trusses shall be toe-nailed to top plates with 10d nails, using 2 nails on each side of each truss at each end.
  - (6) Trusses shall be secured to top plates with metal framing anchors of the type noted on drawings. Nail per manufacturer's recommendation.
  - (7) Trusses shall be straightened by nailing temporary spacers to top and bottom chords before application of floor or roof sheathing.
- (c) Framing necessary for the proper installation and adequate support of work of mechanical and/or other trades shall be provided.
- (d) Wall Sheathing
- (1) Apply wall sheathing in accord with manufacturer's written installation instructions using corrosion resistant fasteners, and shelf adhering seam and flashing tape. Flash and seal all openings with manufacturer's seam and flashing tape.
  - (2) Panels shall be installed with laminated face to exterior.
  - (3) Stagger end joints of adjacent panel runs.
- (e) Roof Sheathing
- (1) Roof sheathing shall be Radian Barrier Oriented Strand Board (OSB) panels in thicknesses as called for on the structural drawings. Installation shall be in strict accordance with manufacturer's written installation instructions.
  - (2) Radiant Barrier OSB roof sheathing shall be applied with long edge of panel at right angles to supports. End joints of sheets shall be supported on bearings and shall be staggered, with alternate courses in line. Edge blocking or other suitable support shall be provided as noted above. Apply roof sheathing in accord with details shown on the structural drawings, and in strict accordance with manufacturer's written installation instructions.
  - (3) Wood crickets and water sheds shall be provided as necessary for the proper installation of roofing and flashing.

7. WOOD FURRING

- (a) Wood furring including blocking and stripping necessary to maintain lines of and support finishes called for by drawings, shall be provided as necessary, except at locations where metal furring is required.
  - (1) Wood blocking, nailers and grounds shall be provided as necessary to receive engaging woodwork, cabinets and/or other finished items.
  - (2) Wood furring, blocking, stripping, nailers, grounds, etc., called for by drawings or necessitated by conditions, shall be secured in place with approved types and sizes of nails, ties, bolts, inserts, etc. spaced so as to provide secure and rigid support.

8. TEMPORARY ENCLOSURES AND PROTECTION

- (a) Temporary enclosures shall be provided at door, window, and other openings in exterior walls, as necessitated by weather and other conditions. Enclosures shall be maintained in good repair and removed when no longer needed. Door and window frames and masonry sills shall be protected as necessary.

9. ROUGH HARDWARE

- (a) Provide and install all rough hardware and metal fastenings as shown on the drawings, specified herein or required for proper installation of carpentry. Nails, spikes, screws, bolts, and similar items shall be of sizes and types to rigidly secure members in place. See the various headings hereinafter specified for specific sizes and type of rough hardware required.

10. INSTALLATION OF BUILDERS HARDWARE

- (a) Receive, store and be responsible for all finished door hardware. Properly tag, index and file all keys in as directed by Architect. Install hardware in accordance with manufacturer's instructions, fit accurately, apply securely and adjust carefully. Use care not to injure work when applying hardware. When necessary, remove and replace doors so they may have bottoms painted. Protect all hardware, adjust and leave in good working order, free from defects.

END OF SECTION

## 1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all interior finish carpentry including related items necessary to complete the work indicated on drawings and described in specifications, including but not necessarily limited to the following:
  - (1) Wood trim and moldings.
- (c) Work specified elsewhere:
  - (1) 033000 – Cast-In-Place Concrete.
  - (2) 081113 - Entry Doors.
  - (3) 081416 - Pre-Hung Interior Doors.
  - (4) 085313 – Vinyl Windows.
  - (5) 092900 – Gypsum Board.
  - (6) 096516 – Resilient Sheet Flooring.
  - (7) 099100 – Painting.

## 2. DETAILS AND SHOP DRAWINGS

- (a) All work to be in strict accordance with details as shown on plans.
- (b) The Contractor shall take accurate measurements at the building and make such adjustments as may be necessary for his work to be installed correctly.
- (c) Submit manufacturer's product data sheets for all trim and moldings specified hereinafter.
- (d) Refer to Section 013323 – Shop Drawings, Product Data, and Samples for additional requirements affecting this section.

## 3. STORAGE AND PROTECTION

- (a) Materials shall be protected against dampness during and after delivery. Store in well-ventilated buildings and where not exposed to extreme changes in temperature and/or humidity.
- (b) Materials shall not be stored in any building until the building is dry and enclosed.

4. MATERIALS

- (a) INTERIOR TRIM AND MOLDINGS: 1 x 4 (unfinished White Pine), finger joint, paint grade for door casings, cased openings, and window stools.

5. ROUGH HARDWARE

- (a) Rough hardware needed for the proper installation of all trim shall be provided. Nails, spikes, screws, and similar items shall be of proper types and ample sizes to fasten and hold the various members securely in place.

6. TRIM AND MOLDINGS

- (a) Interior trim and moldings called for by drawings shall be provided and installed with tight joints, securely nailed and or fastened in place with finishing nails, the heads of which shall be set for putty. All work shall be left free of blemishes and defects.
- (b) Joints in all work shall be tight and formed to conceal shrinkage. Door trim shall have mitered corners unless otherwise called for by drawings. Running trim shall be in long lengths and jointed only where solid fastenings can be made. End joints in built-up members shall be well distributed. Exterior corners shall be mitered and interior corners and/or angles shall be coped. Wherever necessary, woodwork shall be scribed to adjacent work.
- (c) Trim which will be in contact with concrete or masonry surfaces after setting shall be back primed by the subcontractor for painting work, who shall be notified that the trim is ready for back priming in ample time to permit application and drying of the required paint before installation of the trim is scheduled to start.

END OF SECTION

**DIVISION 07 THERMAL AND MOISTURE PROTECTION**

072100 Thermal Insulation

073113 Asphalt Shingles

074600 Siding

077100 Roof Specialties

078413 Penetration Firestopping

079000 Joint Sealants



1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) Furnish and install thermal insulation where shown on drawings and specified herein, including batt type insulation, and perimeter slab insulation.
- (c) Work specified elsewhere:
  - (1) 033000 – Cast-In-Place Concrete.
  - (2) 061000 - Rough Carpentry.
  - (3) 092900 - Gypsum Board.
  - (4) Insulation required for mechanical, plumbing and electrical trades.

2. SUBMITTALS

- (a) Submit manufacturer’s product data on all insulation materials.
- (b) Refer to Section 013323 – Shop Drawings, Product Data, and Samples for further requirements for submittals and shop drawings affecting this section.

3. POLYSTYRENE INSULATION

- (a) “Foamular 150” extruded polystyrene insulation, as manufactured by Owens Corning.
  - (1) Use 1” thick (R-5 minimum) insulation as perimeter slab insulation as detailed on the drawings. Insulation shall be installed on the exterior side of the building slabs. Install in accordance with manufacturer’s installation instructions.

4. SILL SEALER

- (a) Closed-cell Styrofoam brand foam insulation gasket, as manufactured by Dow Building Solutions.
  - (1) Use 5-1/2” wide material under all exterior insulated walls. Install in accordance with manufacturer’s installation instructions.

5. BATT INSULATION (THERMAL)

- (a) Kraft faced building insulation, as manufactured by Owens Corning. Install 5-1/2" (R-21) full thick batts in exterior stud framed walls of all conditioned Buildings on the site. Install batts firmly fitted together, with Kraft facing on interior (conditioned) side.

6. LOOSE-FILL INSULATION

- (a) Loose-fill insulation shall be ProPink L77 Pink Fiberglas unbonded insulation as manufactured by Owners Corning Insulating Systems, Inc. Install minimum R-38 in all attic spaces above conditioned units and elsewhere as shown on the drawings. Minimum settled thickness shall be 14.75 inches. Install at a rate of 20.1 bags per 1,000 square feet.

7. BATT INSULATION (ACOUSTICAL)

- (a) QuietZone Acoustical Batts, as manufactured by Owens Corning. Install 3-1/2" thick batts at all Dwelling Unit / Tenant Separation Walls, as detailed and called for on the drawings.

7. WORKMANSHIP

- (a) After all piping and wiring is in place, install and support batt insulation in position indicated on drawings, coordinated with and adapted to the framing as installed.
- (b) At completion of project, insulation that has become torn, displaced, water soaked or otherwise damaged shall be removed and replaced with new acceptable material.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all roofing, sheet metal flashings, aluminum eave strips, and related items necessary to complete the work indicated on drawings and described in specifications.
- (c) Work specified elsewhere:
  - (1) 061000 - Rough Carpentry.
  - (2) 077100 - Roof Specialties.

2. GENERAL

- (a) Surfaces to which roofing and sheet metal are to be applied shall be even, smooth, sound, thoroughly clean and dry and free from all defects that might affect the application.
- (b) Provide all accessories or other items essential to the completeness of the sheet metal installation, though not specifically shown or specified. All such items, unless otherwise shown on the drawings or specified, shall be of the same kind of material as the item to which applied. Nails, screws, and bolts shall be of the types best suited for the purpose intended, and shall be of a composition that is compatible with the metal with which it will be in contact.
- (c) Where sheet metal abuts or members into adjacent dissimilar materials, execute the juncture in a manner that will prevent electrolysis between the two materials.
- (d) The type and locations of the various kinds, gauges, thickness and finish of sheet metal to be used is specified hereinafter under the individual items; however, where sheet metal is indicated on drawings and not definitely specified or noted and where it is not exposed, use .040 mill finished aluminum.
- (e) Plastic cement shall be an elastic waterproof material that will not stain brick; corrode copper or be affected by long exposure to extreme outside temperature.
- (f) Solder shall conform to ASTM B 32. Composition shall contain 50 percent tin and 50 percent lead except as specified otherwise. Solder for aluminum shall be as recommended by aluminum manufacturer.
- (g) Nails for nailing metal flashings to wood ground strips: Barbed nails, No. 12 stub gauge of same kind of metal as roof or flashing.

3. SUBMITTALS

- (a) Submit manufacturer's product data for all roofing materials and accessories specified, including manufacturer's color charts.

3. SUBMITTALS (Cont'd)

- (b) Refer to Section 013323 – Shop Drawings, Product Data, and Samples for further requirements for submittals and shop drawings affecting this section.

4. SHINGLES AND UNDERLAYMENTS

- (a) ASPHALT SHINGLES: Heritage 30 “Architectural” laminated asphalt shingles as manufactured by Tamko Building Products. Shingles shall meet the requirements of ASTM D3018 Type 1 and D3462. Each bundle shall bear the UL Class A label. Colors to be selected by Architect.
- (b) UNDERLAYMENT: 15# asphalt or fiberglass non-perforated felt as recommended by shingle manufacturer.
- (c) FASTENERS: Material, length and frequency as recommended by shingle manufacturer for deck and slopes indicated. Staples are strictly prohibited.

4. METAL EAVE STRIPS

- (a) Provide eave strips at perimeter (eaves) of all asphalt shingle roofs. Eave strips shall be prefinished aluminum 0.0320 inch x 8 foot ling minimum and 12 foot long maximum. Color as selected by Architect.
- (b) Form eave strips in maximum lengths possible except where shorter pieces are required by sheet sizes; lap end joints 2 inches.
- (c) Eave strips shall be weathertight with lines, arises and angles sharp and true, and plain surfaces free from waves and buckles.
- (d) Upon completion of work, the contractor shall clean the site of all debris generated by this work. Remove to off-site location.

5. RIDGE VENTS

- (a) Furnish and install Shingle Vent II shingle-over ridge vents as manufactured by Air Vent, Inc., Dallas, Texas in locations as shown on drawings. Ridge vents shall be warranted with manufacturer's 30 year limited warranty.

6. INSTALLATION

- (a) Immediately upon completion of wood roof deck, install single layer of underlayment at all eaves, hips, ridges, and around all roof penetrations; and double layer of underlayment at all roof valleys in strict accordance with manufactures written installation instructions. Underlayment shall be centered at all roof valley, hips, and ridges.
- (b) Install shingles in strict accordance with manufacturers written instructions using special hip and ridge shingles matching roof shingle color.

6. INSTALLATION (Cont'd)

- (c) Do not install underlayments or shingles on wet surfaces.
- (d) Clean Up: Upon completion of all shingle work, replace any damaged shingles. Remove all debris and excess shingles that are not used from project site.
- (e) Warranty: Shingles shall be warranted by the manufacturer for two years full coverage with manufacturer's 30 year limited transferable warranty.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all vinyl siding, aluminum trim, vinyl soffits, and related items necessary to complete the work indicated as shown on the drawings and described in specifications.
- (c) Work specified elsewhere:
  - (1) 042000 – Unit Masonry.
  - (2) 061000 – Rough Carpentry.
  - (3) 081113 – Entry Doors.
  - (4) 085313 – Vinyl Windows.

2. SUBMITTALS

- (a) Submit manufacturer's product data on all, vinyl siding, aluminum trim, vinyl gable vents, and accessories specified, including manufacturer's color charts.
- (b) Refer to Section 013323 – Shop Drawings, Product Data, and Samples for further requirements for submittals and shop drawings affecting this section.

3. GENERAL

- (a) Surfaces to which vinyl siding and sheet metal are to be applied shall be even, smooth, sound, thoroughly clean and dry and free from all defects that might affect the application.
- (b) Provide all accessories or other items essential to the completeness of the vinyl siding and sheet metal installation, though not specifically shown or specified. All such items, unless otherwise shown on the drawings or specified, shall be of the same kind of material as the item to which applied. Nails, screws, and bolts shall be of the types best suited for the purpose intended, and shall be of a composition that is compatible with the materials with which it will be in contact.
- (c) Before starting siding and trim work, verify governing dimensions at building, examine, clean, repair, if necessary, any adjoining work on which this work in any way is dependent for its proper installation.
- (d) Install all vinyl siding, vinyl soffits and aluminum trim in strict accordance with the manufacturer's recommendations and written installation instructions.
- (e) Upon completion of work, the contractor shall clean the site of all debris generated by this work. Remove to off-site location.

3. GENERAL (Cont'd)

- (f) Provide manufacturer's standard limited lifetime warranty to cover all vinyl siding and aluminum trim work.

4. VINYL SIDING

- (a) All exterior wall surfaces throughout the project which are not covered by brick veneer shall be covered with vinyl siding to provide a complete maintenance free exterior.
- (b) Vinyl Siding shall be as manufactured by PlyGem Siding & Accessories, in patterns as hereinafter specified. Provide vinyl edge trim, 3 inch universal outside corner caps, door & window casings, moldings and trim for a complete installation. Furnish and install vinyl siding in the following profiles:
  - 1) Horizontal siding shall be "T-Lok Barkwood", double 4 inch exposure with wood grain texture and nominal thickness of 0.048 inches. Colors to be selected by Architect from manufacturer's standard color charts.
  - 2) Vertical siding shall be "Board+Batten" designer series with wood grain texture and nominal thickness of 0.048 inches. Colors to be selected by Architect from manufacturer's standard color charts.
- (c) Coordinate the installation of the vinyl siding with other trades including electrical work. Furnish and install premium vinyl fixture mounts at exterior wall mounted light fixture locations.

5. VINYL SOFFITS

- (a) All exterior roof eaves throughout the exterior of the project shall be covered with vinyl soffit material and trim to provide a complete maintenance free exterior.
- (b) Vinyl soffit material shall be "Pro-Select" double 5" ventilated and non-ventilated soffit panels as manufactured by PlyGem Siding & Accessories. Use aerated panels at all roof eaves / soffits, and non-aerated panels vertical / horizontal trim at wood headers at Porch areas. Nominal thickness of 0.046". Colors to be selected by Architect from manufacturer's standard color charts. Provide trim accessories as recommended by manufacturer for a complete installation.

6. ALUMINUM EAVES AND TRIM

- (a) All exterior eave members shall be covered with aluminum break metal to form a complete maintenance free exterior.
- (b) Provide job-formed, smooth, pre-finished aluminum coil stock sheet metal where exposed to view in the final installation, as manufactured by PlyGem Siding & Accessories. Material shall be coated on both sides using AlumaLure 2000 finish and shall be .019 thickness. Color to be selected by Architect from manufacturer's standard color charts. Refer to detailed drawings for locations of trim members.

6. ALUMINUM EAVES AND TRIM (Cont'd)
- (c) Form eave and trim strips in maximum lengths possible except where shorter pieces are required by sheet sizes; lap end joints 2 inches. Eave strips shall match existing building profile.
  - (d) All aluminum eave and trim work shall be weathertight with lines, arises and angles sharp and true, and plain surfaces free from waves and buckles.

END OF SECTION



1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all gutters and downspouts, and related items necessary to complete the work indicated on drawings and described in specifications.
- (c) Work specified elsewhere:
  - (1) 061000 – Rough Carpentry.
  - (2) 073113 – Asphalt Shingles.
  - (3) 074600 – Siding.

2. SUBMITTALS

- (a) Submit manufacturer's product data on all roof specialty items specified, including manufacturer's color charts.
- (b) Refer to Section 013323 – Shop Drawings, Product Date, and Samples for further requirements for submittals and shop drawings affecting this section.

3. ALUMINUM GUTTERS AND DOWNSPOUTS

- (a) Gutters shall be K Style, 5", .027 gauge, prefinished, aluminum guttering system with 3" x 4", .027 gauge pre-finished aluminum downspouts as manufactured by Ply Gym Siding Group. Provide all necessary hangers and straps for a complete installation. Install at perimeter of new roof eaves in strict accordance with manufacturer's written installation instructions. Color as selected by Architect.
- (b) Downspouts shall be located at each end of gutter runs, and at intermediate locations not more than 40 o.c. (maximum), in locations as shown on drawings.

4. CONCRETE SPLASH BLOCKS

- (a) Concrete splash blocks shall be Model Number 24" long x 16" wide, gray cement splash blocks as manufacturer by Modern Pre-Cast. Install one splash block at each downspout as shown on the Floor Plans.

END OF SECTION

## 1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of firestopping all architectural, structural, mechanical or electrical penetrations thru fire rated walls and partitions, including the firestopping of fire rated walls or partitions against the roof deck.
- (c) Work specified elsewhere:
  - (1) 061000 - Rough Carpentry.
  - (2) 079200 - Joint Sealants.
  - (3) 092900 - Gypsum Drywall.
  - (4) 099100 - Painting.
  - (5) 220000 - Plumbing Work.
  - (6) 230000 – HVAC Work.
  - (7) 260000 – Electrical Work.

## 2. SUBMITTALS

- (a) Submit manufacturer’s product data on all firestopping materials.
- (b) Submit detail referencing the U.L. System and showing the completed installation of each different system for each different material or product which penetrates a fire rated assembly in the project. Locations of each different system shall also be shown.
- (c) Refer to Section 013323 – Shop Drawings, Product Data, and Samples for further requirements for submittals and shop drawings affecting this section.

## 3. MATERIALS

- (a) All materials shall be as listed in the U.L. System selected for each different type of penetration.

## 4. INSTALLATION

- (a) All materials shall be installed in strict accord with the U.L. System selected for each different type of penetration and the manufacturer’s written specifications.
- (b) The following “F” ratings are to be used for selecting U.L. Systems for each location:

4. INSTALLATION (Cont'd)

1 HR. Assemblies ----- 1 HR. "F" Rating

- (c) All "exposed" firestopping penetrations shall be installed carefully and neatly in a workmanlike manner for a first class appearance. Any exposed penetration performed in a sloppy manner, even though it may afford proper protection, will be rejected.
- (d) Firestopping will be performed as work progresses in the proper sequence. If necessary for access, firestop penetrations immediately after penetration is made.

END OF SECTION

## 1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) Furnish all labor, material and appurtenances necessary to complete all joint sealant work and related items necessary to complete the work shown on the drawings and specified herein.
- (c) Include caulking around exterior openings such as doors, windows, louvers and thresholds.
- (d) Include sealant work at all exterior and interior joints in masonry and elsewhere as indicated on drawings.
- (e) Work specified elsewhere:
  - (1) 042000 – Unit Masonry.
  - (2) 062000 – Finish Carpentry.
  - (3) 085313 – Vinyl Windows.
  - (4) 092900 – Gypsum Board
  - (5) 099100 - Painting.
  - (6) 123530 – Residential Casework.
  - (7) 220000 - Plumbing Fixtures.

## 2. SUBMITTALS

- (a) Submit manufacturer's product data on all caulking, sealants and primers including color charts.
- (b) Refer to Section 013323 – Shop Drawings, Product Data, and Samples for further requirements for submittals and shop drawings affecting this section.

## 3. MATERIALS

- (a) CAULKING COMPOUND: Top Gun 200 Siliconized Acrylic Caulk #1414 as manufactured by PPG Architectural Coatings. Compound shall be color as required to match adjacent work and as selected by the Architect.
- (b) SEALANT: A multi-component epoxidized polyurethane high performance sealant similar to Dymeric as manufactured by Tremco Sealant Systems of Cleveland, Ohio. Color shall be as directed and may be selected from the standard colors available or the "FASTPAK" color system but shall approximate adjacent surface.
- (c) PRIMER: Type recommended by manufacturer of caulking and sealant compound.

4. GENERAL

- (a) Joints and spaces to be caulked and sealed shall be clean, free from dust, and dry. Prime all surfaces that are in contact with caulking before caulking is applied.
- (b) Joints deeper than 1/2" shall be built-up to a depth of 3/8" below adjacent surfaces with polyethylene or polyurethane foam or other approved non-staining filler material prior to applying sealant. Filler shall be of a type acceptable to sealant manufacturer.
- (c) All sealed joints shall be watertight.
- (d) Applications of caulking and sealants shall be in accord with manufacturer's specifications.
- (e) Caulk all joints before final coat of paint is applied to adjacent work.

5. APPLICATION

- (a) Seal with caulking compound, all joints completely around exterior frames and sills of doors, windows, louvers and all other openings in exterior walls making head, sill, jamb and imposts weathertight. Caulking at inaccessible points of window frames to be done by window erector.
- (b) Apply sealants to all expansion joints in masonry and in all joints between masonry and adjacent materials and at other locations as noted on the drawings.
- (c) Sealant shall be tooled with caulking tool or soft bristled brush moistened with approved solvent, within 10 minutes after sealant exposure, to leave a slightly concave surface.

END OF SECTION

**DIVISION 08 OPENINGS**

081113	Entry Doors
081416	Pre-Hung Interior Doors
083113	Access Doors and Frames
083613	Sectional Doors
085313	Vinyl Windows
087100	Door Hardware
088300	Mirrors

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) Furnish all labor and material necessary to complete all entry doors as shown on drawings and specified herein.
- (c) See drawings and schedules for type, size, design and location of pre-hung entry doors.
- (d) Work specified elsewhere:
  - (1) 061000 - Rough Carpentry.
  - (2) 062000 - Finish Carpentry.
  - (3) 087000 - Door Hardware.
  - (4) 099100 - Painting.

2. SHOP DRAWINGS

- (a) Submit shop drawings to the Architect for review showing typical construction and installation of all items. Refer to Section 013323 – Shop Drawings, Product Data, and Samples for other submittal requirements.

3. INSULATED STEEL ENTRY DOORS

- (a) Insulated steel entry doors shall be as manufactured by Masonite Corporation. Doors shall be fabricated of 24 gauge galvanized steel and insulated with 2 pcf density polyurethane, generally as follows:
  - (1) Dwelling Unit Entry Doors, Garage Entry Doors, and Exterior Storage Room Doors (doors Type A) shall be Masonite MHD 2 Panel Square Doors, steel edge.
- (b) Furnish doors factory primed and ready for field painting.

4. INSULATED STEEL PATIO DOORS

- (a) Insulated steel patio doors shall be as manufactured by Masonite Corporation. Doors shall be fabricated of 24 gauge galvanized steel, insulated with 2 pcf density polyurethane, factory glazed with clear tempered insulating glass, 10” door bottom, generally as follows:
  - (1) Dwelling Unit Patio Door (doors Type B) shall be Masonite MHD Full (22”) lite.
- (b) Furnish doors factory primed and ready for field painting.

4. MANUFACTURED KNOCK-DOWN (KD) ENTRY FRAMES

- (a) Manufactured knock-down (kd) entry frames shall be “AK” Series frames (20 gauge) as manufactured by Timely Industries.
- (b) Frames shall be constructed of galvanized steel for exterior use, less casings.
- (c) Furnish frames completed with weather-stripping package, adjustable door strike (oil rubbed bronze finish), and hinge reinforcements.
- (d) Frames shall be factory primed, ready for field painting.

5. STORM SHELTER DOOR AND FRAME

- (a) FEMA compliant, 10-gauge steel door, 2-3/8” thick x height and width shown on the drawings. Door shall be “Logan” style as manufactured by ForceShield Tornado Doors. Furnish complete with four (4) 1” solid barrel hinges with ball bearing, continuous welded to frame and door; and, six (6) 1” solid steel chrome-plated locking pins, welded into 14 gauge 1-1/2” square tube pin bars.
- (b) Door shall be furnished complete with 10 gauge cold rolled steel welded frame
- (c) Furnish door factory primed and ready for field painting.

6. HARDWARE PREPARATION

- (a) Doors and frames shall be factory prepared to receive entry hardware as specified in Section 087100 – Door Hardware.

6. INSTALLATION

- (a) Install all door frames and door units plumb, rigid and in true alignment, and in strict accordance with manufacturer’s written installation instructions.
- (b) Warped, dented or sprung units will not be accepted and all doors must operate smoothly without binding.

END OF SECTION



1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all pre-hung interior doors, and related items necessary to complete the work indicated on drawings and described in specifications.
- (c) Work specified elsewhere:
  - (1) 061000 - Rough Carpentry.
  - (2) 062000 - Finish Carpentry.
  - (3) 087000 - Door Hardware.
  - (4) 099100 - Painting.

2. DELIVERY AND STORAGE

- (a) Schedule deliveries to avoid delays and to prevent greater accumulation than can be suitably stored at site.
- (b) Do not bring doors into building until receiving and storage spaces are thoroughly dry.
- (c) Store and handle doors to prevent damage. Protect finished surfaces from soiling and staining. Repair or replace damaged work.

3. PRE-HUNG INTERIOR DOORS

- (a) Interior paneled wood doors shall be 1-3/8" thick "Logan" smooth 2 panel door as manufactured by Masonite. Doors shall be hollow core construction. Size as shown on drawings.
- (b) All interior wood doors shall be installed in wood frames at the factory prior to shipping, and shall include 1-1/2 pair butts (US10B).
- (c) Wood frames shall be finger-joint (FJ) paint grade, and shall be of standard dimensions matching wall thickness shown on the drawings.
- (d) All interior door frames shall be manufacturer's standard with applied stops.
- (e) Install all door units plumb and true using proper shims as required. Warped or otherwise damaged units will not be accepted.

END OF SECTION

Project Number 20-003

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all specialty doors and related items necessary to complete the work indicated on drawings in specifications.
- (c) Work specified elsewhere:
  - (1) 061000 - Rough carpentry
  - (2) 092900 – Gypsum Board.
  - (3) 099100 – Painting.

2. SUBMITTALS

- (a) Submit manufacturer's product data sheets along with shop drawings showing coordination with actual field conditions and various materials and assemblies.
- (b) Refer to Section 013323 - Shop Drawings, Product Data, and Samples for additional requirements affecting this section.

3. COMMUNITY BUILDING ACCESS DOOR

- (a) Provide and install insulated attic access door in gypsum board ceilings where indicated on the drawings.
- (b) Insulated attic access doors shall be Model 22x30 (R-42), triple-gasketed door as manufactured by Battic Door Energy Conservation Products.
- (c) Door and frame construction shall meet the following minimums:
  - 1. Door: White mineral board face, extruded polystyrene (EPS) R-42 core 10" thick, and fire rated rubber sealing gasket over top of EPS core. Door shall be pre-finished and painted satin white to match trim.
  - 2. Frame: Plywood construction, 12" tall at perimeter.
  - 3. Trim: Tapered wood trim, 2" wide, pre-secured to frame, and prefinished and painted to match door.
- (d) Install attic access doors in strict accordance with manufacturer's written instructions.

4. GARAGE ACCESS DOORS

- (a) Provide and install non-insulated attic access door in gypsum board ceilings where indicated on the drawings.
- (b) Non-insulated attic access doors shall be Model BA-AHD, 22” x30” door as manufactured by Best Access Doors.
- (c) Door shall be 16 gauge cold rolled steel with continuous piano hinge, screwdriver operated cam latch, and shall be furnished with white powder coat primer.
- (d) Install attic access doors in strict accordance with manufacturer’s written instructions.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all sectional doors and related items necessary to complete the work indicated on drawings in specifications.
- (c) Work specified elsewhere:
  - (1) 042000 – Unit Masonry.
  - (2) 061000 – Rough Carpentry.
  - (3) 092900 – Gypsum Board.
  - (4) 099100 – Painting.
  - (5) 260000 – Electrical Work.

2. SUBMITTALS

- (a) Submit manufacturer's product data sheets along with shop drawings showing coordination with actual field conditions and various materials and assemblies.
- (b) Refer to Section 013323 - Shop Drawings, Product Data, and Samples for additional requirements affecting this section.

3. SECTIONAL DOORS

- (a) Sectional Doors shall be model 450 (non-insulated) as manufactured by DoorLink Manufacturing, Inc.
- (b) Quality Assurance: Doors shall be steel sectional overhead type. Each door to be provided as one complete unit including sections, brackets, tracks, counterbalance mechanisms and hardware.
- (c) Materials and Construction: Sections to be 2” thick, prefinished 24 gauge galvanized steel. Section joints shall be tongue and groove design.
- (d) Tracks: 2” for both vertical and horizontal tracks.
- (e) Spring Counterbalance: Door assembly to be operated by a torsion spring counterbalance mechanism, with a helically wound, oil tempered torsion spring mounted on a galvanized steel tube or solid steel shaft as required. Cable drums to be cast aluminum with galvanized aircraft cable, minimum 7-1 safety factor.

3. SECTIONAL OVERHEAD DOORS (Cont'd)

- (f) Locking: Standard slide bolt locking device not required. Doors shall not be equipped with locking devices.
- (g) Bottom weather seal: Aluminum retainer with extruded vinyl seal.
- (h) Finishes: Factory finish utilizing .25 mil rust inhibitive primer and .75 mil baked on polyester paint finish coat. Color to be white. Doors shall be field painted in color as selected by Architect. Refer to Section 099100 - Painting.
- (i) DOOR OPERATORS / CONTROLS: LiftMaster Model 8365-267 electric operator. Units shall be furnished complete with one (1) multi-function control panel (882LMW) mounted on the interior of each Garage, two (2) 3-button controls (893LM), and one (1) wireless – keyless entry (877LM) mounted on the exterior of each Garage.
- (j) Installation of sectional overhead doors and operators shall be in strict accordance with manufacturer's written instructions.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) Furnish all labor and material necessary to complete all vinyl window work shown on the drawings and specified herein.
- (c) Work specified elsewhere:
  - (1) 042000 – Unit Masonry.
  - (2) 055000 – Metal Fabrications.
  - (3) 061000 – Rough Carpentry.
  - (4) 062000 – Finish Carpentry.
  - (5) 074600 – Siding.
  - (6) 079200 – Joint Sealants.
  - (7) 092900 – Gypsum Board.

2. SHOP DRAWINGS

- (a) Submit shop drawings to the Architect for approval in accordance with Section 013323 - Shop Drawings, Product Data, and Samples.

3. VINYL WINDOWS

- (a) Units shall be single hung and fixed windows in sizes as scheduled on the drawings, with a minimum U-Value of 0.30 and SHGC Value of 0.27. Windows manufactured by Harry G. Barr Company, Atrium Windows, and Ply Gem are considered acceptable manufacturers. Color to be “white”.
- (b) Provide manufacturer’s standard brickmould as required at brick installations.
- (c) Windows shall be weatherstripped to prevent infiltration of dust or rain.
- (d) Provide screens for all operable units complete with attachment hardware. Comply with AAMA Specifications. Provide manufacturer's standard interior cam locks.
- (e) Factory glaze all windows with Low E tempered and non-tempered insulating glass in standard configuration (1 over 1), refer to drawings for tempered glass locations. Windows shall be Energy Star compliant and shall meet current Arkansas Energy Efficiency Codes.

4. INSTALLATION

- (a) Install all components as hereinbefore specified, in a weathertight and workmanlike manner, fitting neatly to adjacent work. Use sealant to seal all perimeter joints. Fit sections neatly together and securely in place. Install in level planes, true to line.
- (b) All windows shall be set straight, plumb and level and securely anchored in place.
- (c) Coordinate the installation of the weather barrier flashing systems with window installations as specified in Sections 061000 – Rough Carpentry.
- (d) Adjust all windows at completion of the work so that all windows operate freely and close evenly.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all door hardware and related items necessary to complete the work indicated on drawings and described in specifications.
- (c) Should items of hardware not definitely specified be required for completion of the work, furnish such items of type and quality suitable to the service intended and of comparable quality as adjacent hardware.
- (d) Work specified elsewhere:
  - (1) Items of finish hardware definitely scheduled and specified under other sections of the specifications, such as residential casework hardware, specialty items and accessories.
  - (2) Installation of finish hardware is included under Section 061000 – Rough Carpentry.
  - (3) 081113 – Entry Doors.
  - (4) 081416 – Pre-Hung Interior Doors.

2. SUBMITTALS

- (a) Prior to delivery of hardware, the hardware contractor shall meet with the Owner and Architect and then prepare and submit to the Architect five (5) copies of a complete schedule of all finished hardware required. Schedule shall follow requirements of specifications and shall indicate type, hand, size, manufacturer's name and number, location and finish of each item required. Approval of schedule will not relieve contractor of responsibility or furnishing all necessary hardware.

3. MATERIALS

- (a) Hardware manufacturer, including lock and passage set series to be negotiated with the hardware supplier and shown on the schedule submitted for approval.
- (b) Finish of all hardware shall be as noted after each item.

4. PACKING AND MARKING

- (a) Package each item of hardware and each lock set separately in individual containers, complete with necessary screws, keys, instructions and installation templates. Mark each container with item number corresponding to number shown on contractor's hardware schedule.



5. GENERAL REQUIREMENTS

- (a) Furnish hardware to fit details as furnished. Furnish hardware with template and screws.
- (b) Latchsets: For all exterior and interior doors, basic hardware shall be standard duty cylindrical type. Furnish manufacturer's standard lip strike plate for each latchset.

6. KEYING

- (a) Key each Dwelling Unit separately. Entry doors for each Dwelling Unit shall be keyed alike. Provide four (4) change keys for each Dwelling Unit.
- (b) Key Laundry Room and Community Room separately from Dwelling Units.
- (c) All Dwelling Units, Laundry Room, and Community Room shall be Master Keyed to a new SFIC Master Key System. Provide ten (10) master keys.
- (d) All keys shall be stamped with a visual key control number as directed by the Owner. The Hardware Supplier shall schedule a meeting with the Owner and Architect to establish a key control schedule prior to stamping and delivery of change keys and master keys.
- (e) Deliver all permanent keys to:
  - Theil Road Properties, LP
  - 612 Canal Street
  - Paragould, Arkansas 72450
  - Attn: David Lange

Contractor shall check and confirm that all keys work as intended before delivery.

7. INSTALLATION

- (a) Comply with manufacturer's written instructions and recommendations for installation of system components.
- (b) Check and adjust operation of lock units in place to ensure proper latching and locking.
- (c) Replace units if any are not fully functional as received.

8. HARDWARE SETS

**SET #1**

**SINGLE ENTRY DOORS TYPE 'A' TO LIVING**

**EACH DOOR TO HAVE:**

- PEN 1 EACH BUTTS 3-1/2" X 3-1/2" X 5/8" RADII X US10B
- PEN 2 EACH SPRING HINGES 3-1/2" X 3-1/2" X 5/8" RADII X US10BD
- SCH 1 EACH INTERCONNECT LOCKSET #QCI231 x US10B with 6-PIN CORE
- DS 1 EACH HINGE STOP DOOR SAVER II X US10B
- END 1 EACH ADA THRESHOLD (INSWING) x MILL FINISH
- BHP 1 DOOR VIEWER #490SN X US10B  
(mount at Living Room Doors Type A only – provide 2 at Accessible Units)
- 1 SET WEATHERSTRIP FURNISHED BY DOOR SUPPLIER

**SET #2**

**SINGLE ENTRY DOORS TYPE 'A' FR GARAGE**

**EACH DOOR TO HAVE:**

- PEN 3 EACH BUTTS 3-1/2" X 3-1/2" X 5/8" RADII X US10B
- ARR 1 EACH LOCKSET #RL11 x US10B with 6-PIN CORE
- SCH 1 EACH DEADBOLT #QDB 281 626 x US10B with 6-PIN CORE
- DS 1 EACH HINGE STOP DOOR SAVER II X US10B
- END 1 EACH FLAT ADA THRESHOLD x MILL FINISH
- 1 SET WEATHERSTRIP FURNISHED BY DOOR SUPPLIER

8. HARDWARE SETS (Cont'd)

**SET #3**

**SINGLE ENTRY DOORS TYPE 'A' FR STORAGE**

**EACH DOOR TO HAVE:**

- PEN 3 EACH BUTTS 3-1/2" X 3-1/2" X 5/8" RADII X US10B
- ARR 1 EACH ENTRY LOCK #RL12 x XUS10B with 6-PIN CORE
- DS 1 EACH HINGE STOP DOOR SAVER II X US10B
- END 1 EACH FLAT SADDLE THRESHOLD #ZHC15002T X MILL FINISH
- 1 SET WEATHERSTRIP FURNISHED BY DOOR SUPPLIER

**SET #4**

**SINGLE INTERIOR DOORS TYPE 'C' TO BEDROOMS**  
**SINGLE INTERIOR DOORS TYPE 'C' TO BATH**  
**SINGLE INTERIOR DOORS TYPE 'C' FR MASTER BATH**

**EACH DOOR TO HAVE:**

- 3 EACH BUTTS FURNISHED BY DOOR SUPPLIER
- ARR 1 EACH PRIVACY SET #RL02 x US10B
- DS 1 EACH HINGE STOP DOOR SAVER II X US10B

**SET #5**

**SINGLE INTERIOR DOORS TYPE 'C' FR CLOSET**  
**SINGLE INTERIOR DOORS TYPE 'D' FR CLOSET**

**EACH DOOR TO HAVE:**

- 3 EACH BUTTS FURNISHED BY DOOR SUPPLIER
- ARR 1 EACH PASSAGE SET #RL01 x US10B
- DS 1 EACH HINGE STOP DOOR SAVER II X US10B

8. HARDWARE SETS (Cont'd)

**SET #6**

**PAIR INTERIOR DOORS TYPE 'E' FR LAUNDRY**

**EACH PAIR TO HAVE:**

	6	EACH BUTTS FURNISHED BY DOOR SUPPLIER
ARR	2	EACH DUMMY SETS #RL08 x US10B
BHP	2	EACH BALL CATCH 434SN X US10B
DS	2	EACH HINGE STOP DOOR SAVER II X US10B

**SET #7**

**SINGLE INTERIOR DOORS TYPE 'C' FR MECHANICAL**

**EACH DOOR TO HAVE:**

	3	EACH BUTTS FURNISHED BY DOOR SUPPLIER
ARR	1	EACH DEADBOLT #QDB 218 x US10B
IVES	1	EACH FLUSH BOLT #FB358 x US10B
DS	1	EACH HINGE STOP DOOR SAVER II X US10B

9. MANUFACTURER ABBREVIATIONS

<b>BHP</b>	<b>BETTER HOME PRODUCTS</b>
<b>PEN</b>	<b>PENROD</b>
<b>DS</b>	<b>DOOR SAVER</b>
<b>GMS</b>	<b>GMS LOCK CYLINDERS</b>
<b>SCH</b>	<b>STANLEY COMMERCIAL HARDWARE</b>
<b>ARR</b>	<b>ARROW LOCK &amp; DOOR HARDWARE</b>
<b>END</b>	<b>ENDURA DOOR COMPONENTS</b>
<b>IVES</b>	<b>IVES ARCHITECTURAL HARDWARE PRODUCTS</b>

END OF SECTION

Project Number 20-003

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) Furnish and install all mirrors hereinafter specified and as scheduled on the drawings.
- (c) Work specified elsewhere:
  - (1) 061000 – Rough Carpentry.
  - (2) 092900 – Gypsum Board.
  - (3) 102800 – Toilet, Bath and Closet Specialties.
  - (4) 123530 – Residential Casework.
  - (5) 260000 – Electrical.

2. SUBMITTALS

- (a) Submit manufacturer's product data on all glass products. Coordinate with submittals required by other sections to show locations for each type of glass. Refer to Section 013323 - Shop Drawings, Product Data, and Samples for additional requirements affecting this section.

3. MATERIALS

- (a) UNFRAMED MIRRORS: FORD 1/4" polished square-edge plate glass with backs silvered, copper electroplated and primed. Sizes as shown on drawings.

4. MIRRORS

- (a) Secure mirrors to walls. Install mirror at locations as noted on the drawings, centered over lavatory bowls or lavatory millwork as shown.
- (b) Mirrors shall be set true, square and securely. Replace any cracked broken or chipped mirrors and clean thoroughly upon completion.
- (c) Furnish and install unframed 1/4" polished plate glass mirrors of sizes shown on drawings. Edges ground and polished; set using concealed fastenings.

END OF SECTION

**DIVISION 09 FINISHES**

092900 Gypsum Board

096516 Resilient Sheet Flooring

099100 Painting

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) Furnish all labor and material necessary to complete all gypsum board work shown on the drawings and specified herein.
- (c) Work specified elsewhere:
  - (1) 061000 - Rough Carpentry.
  - (2) 062000 – Finish Carpentry.
  - (3) 072100 – Thermal Insulation.
  - (4) 078413 - Penetration Firestopping.
  - (5) 079200 - Joint Sealants.
  - (6) 099100 - Painting.

2. SUBMITTALS

- (a) Submit manufacturer's product data sheet on all gypsum board and accessories.
- (b) Refer to Section 013323 - Shop Drawings, Product Data, and Samples for additional requirements affecting this section.

3. MATERIALS

- (a) Gypsum wallboard: Units meeting the requirements of ASTM C 36, of types, edge configuration and thickness indicated below, in maximum lengths available to minimize end-to-end butt joints. Tapered edges.
  - Type: 1/2" Type "R" (Regular) for interior non-fire rated walls, ceilings, and other locations as noted on the drawings.
  - Type: 1/2" Type "MR" (Moisture Resistant) for interior non-fire rated "wet" walls, in Bathrooms, Kitchens, and Laundry Rooms; and at all interior and exterior walls and ceilings in Laundry Room at the Community Building.
  - Type: 5/8" Type "X" (Fire Core) for all tenant separation walls in Dwelling Units.
- (b) Screws for securing gypsum board to studs shall be 1-1/4" Type W bugle head drywall screws spaced 12" o.c. Stagger joints.

3. MATERIALS (Cont'd)

- (c) Trim Accessories: Install metal casing beads at edges of gypsum wallboard abutting any dissimilar material; install metal corner beads at all external corners and other miscellaneous accessories as required by detailed drawings or job conditions.
- (d) Joint Compound: Provide chemical-hardening type for bedding and filling; ready-mix vinyl type or vinyl-type powder type for topping. Provide special drywall tapes and joint compounds for special drywall products specified hereinbefore as may be required or recommended by the product manufacturer. Install in strict accord with manufacturer's written instructions.

4. INSTALLATION

- (a) Apply gypsum board face out and long edges perpendicular to stud framing. Ends and edges shall occur over supports. Space screws 12" o.c. in the field of the panels and 8" o.c. along edges. Apply joint reinforcement tape and accessories in accord with manufacturer's specifications. Reinforce all corners, tape and float all joints of exposed gypsum board; finish in accord with manufacturer's specifications.
- (b) Recessed edges shall be butted snugly together. Cut edges and mill ends shall be sanded down to provide a smooth joining. Screws shall be spaced not less than 3/8" from edge of gypsum board and shall be driven home with head dimpled slightly below surface.
- (c) All butted joints of gypsum board shall be perf-a-tape system as manufactured by the United State Gypsum Co., or equal. All internal and external corners shall be reinforced with perf-a-tape joint system and finished as per manufacturer's instructions.
- (d) Between applications of joint compound, rough spots or areas shall be sanded smooth wherever necessary. When thoroughly dry, the finish coat shall be sanded wherever necessary to leave all joints and nail spots flush and smooth and wall suitable for finishing.
- (e) Apply gypsum board ceilings with long dimension at right angles to supports with end joints located over supports. Use maximum practical length boards to minimize end joints. Stagger end joints in alternate courses of boards and locate as far away from center of ceiling as possible. Fasten gypsum wallboard with screws Space screws 12" o.c. in the field of the panels and 8" o.c. along edges.

END OF SECTION



1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) Furnish all labor and material necessary to complete all resilient sheet flooring work shown on the drawings and specified herein.
- (c) Work specified elsewhere:
  - (1) 033000 - Cast-In-Place Concrete.
  - (2) 062000 - Finish Carpentry.

2. SUBMITTALS

- (a) Submit manufacturer's product data on all resilient flooring proposed as substitutes to the product specified.
- (b) Refer to Section 013323 - Shop Drawings, Product Data, and Samples for additional requirements affecting this section.

3. MATERIALS

- (a) SHEET VINYL PLANK FLOORING: Artistek AMERICAN Plank (6" x 36" x 2.0mm gauge), with a 6 mil (0.15mm) wear layer. Color and pattern to be as selected by Owner from manufacturer's standard color chart.
- (b) ADHESIVE: Adhesives as recommended by manufacturer.

4. INSTALLATION – GENERAL

- (a) Clean all concrete floor surfaces to receive resilient sheet flooring.
- (b) Level all floor areas that are warped or depressed, and fill any holes and cracks using "Floorstone" concrete fill.
- (c) Buckled or marred flooring and open joint work will not be accepted.

5. RESILIENT FLOORING INSTALLATION

- (a) Maintain a constant 70 degree minimum temperature for 24 hours before and during time of laying resilient sheet flooring materials and store all sheet flooring materials at this temperature 24 hours before laying.
- (b) Lay resilient sheet flooring neatly and square, cutting to fit and scribe to all surfaces. Installation shall be in strict accord with manufacturer's written installation instructions utilizing manufacturer's recommended adhesives for substrates installed.

6. CLEANING

- (a) Upon completion of resilient sheet flooring, remove all excessive adhesives and blemishes off of flooring. Sweep and vacuum thoroughly, then damp mop to remove marks and soil.
- (b) After resilient sheet flooring has been thoroughly cleaned, protect finished product from mars, marks, indentions, and other damage from construction operations and placement of equipment and fixtures.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work includes all field painting and related work necessary to complete the work indicated on the drawings and described in specifications.
- (c) Prime coats not required on items delivered with prime or shop coats already applied. Refer to other sections for factory applied prime coats. Include field touch-up painting for these items.
- (d) Work specified elsewhere:
  - (1) 055000 - Metal Fabrications.
  - (2) 062000 – Finish Carpentry.
  - (3) 081113 – Entry Doors.
  - (4) 081416 – Pre-Hung Interior Doors.
  - (5) 083613 – Sectional Doors.
  - (6) 092900 – Gypsum Board.

2. SUBMITTALS

- (a) Submit manufacturer's product data sheets including application instructions for all paint products.
- (b) Manufacturer's color charts are not required as a part of the original submittal, however they may be requested by the Architect if necessary after approval of the original submittal.
- (c) Refer to Section 013323 - Shop Drawings, Product Data, and Samples for additional requirements affecting this section.

3. PAINT MATERIALS

- (a) Paint, varnish, stains and fillers, shall be of type and brands specified under "Schedule of Painting". Basic painting materials such as linseed oil, shellac, turpentine, thinners, driers, shall be of highest quality and have identifying labels on containers.
- (b) All paint shall be delivered to site in manufacturer's sealed containers. Thinning shall be done only in accordance with directions of manufacturer. Job mixing or job tinting may be done when approved by the Architect and for sample colors.

4. COLORS

- (a) The Architect will furnish the Contractor with a schedule of finish colors selected for the work.

5. GENERAL

- (a) The Contractor shall store paints properly to avoid damage.
- (b) Top and bottom of all wood doors shall be finished with two coats of paint as used for finished coat.

6. PREPARATION OF SURFACES

- (a) WOOD: Sandpaper to smooth and even surface and then dust off. After priming coat has been applied, thoroughly fill holes and cracks.
- (b) STEEL AND IRON: Remove grease, rust, scale and dust and touch up any chipped or abraded places on items that have been shop coated.
- (c) GYPSUM BOARD: Taped, cemented and sanded. Level 4 Finish.
- (d) GENERAL: Finishing work shall not proceed until all prepared surfaces have been inspected by the Architect. Remove hardware, accessories, plates, lighting fixtures and similar items or provide ample protection before performing painting work. Remove doors to paint bottom edges.

7. APPLICATION

- (a) Do not apply exterior paint in damp cold weather (below 50 deg. F.).
- (b) Surface to be painted shall be clean dry and smooth. Each coat shall be applied smoothly, worked out evenly and allowed to dry before the subsequent coat is applied.
- (c) Apply all painting materials and finishes in strict accordance with the manufacturer's specifications.
- (d) Finished work shall be uniform and shall completely cover, be smooth and free from runs, sags, or excessive flooding. Make edges of paint adjoining other materials or colors sharp and clean without overlapping. Where high gloss enamel is used, lightly sand undercoats to obtain a smooth finish coat.
- (e) Minimum Coating Thickness:
  - (1) Provide a total dry film thickness of not less than 3.5 mils for the entire coating system of prime and finish coat for 2-coat work.

7. APPLICATION (Cont'd)

- (f) Apply additional coats when undercoats, stains or other conditions show through the final coat of paint, until the paint film is of uniform finish, color and appearance.
- (g) At completion, touch up and restore finish where damaged and leave in good condition. Remove all spots, stains and oil attributable to work under this contract from walls, ceilings, trim, floors, glass, hardware, fixtures, cabinets, etc. and leave in good condition upon completion of work.

8. SCHEDULE OF PAINTING

For ease of scheduling, products listed are Sherwin Williams; however, products of Kelly-Moore, ICI, Benjamin Moore and PPG are acceptable.

(a) Exterior Ferrous Metal

Apply this finish to all exterior ferrous metals, including Metal Doors and Frames, Sectional Doors, and Loose Angle Lintels:

First Coat: B66W00310 – Pro Industrial Pro-Cry Universal Acrylic Primer (Off White).  
Second Coat: B66W01151 – Pro Industrial DTM Acrylic Semi-Gloss.  
Third Coat: B66W01151 – Pro Industrial DTM Acrylic Semi-Gloss.

Note: First coat is not required on items delivered with shop coat applied.

(b) Interior Textured Gypsum Board

All interior gypsum board walls and ceilings (except inside mechanical closets, sprinkler riser rooms, and date rooms) shall receive an integral level 4 finish and texture. Texture material shall be USG Imperial QT Texture, spray finish. Texture may be applied with the primer coats specified if allowable by the paint manufacturer. Provide textures as follows:

Walls: Medium Knock-Down Finish.  
Ceilings: Medium Knock-Down Finish.

(c) Interior Gypsum Board (Typical)

Apply this finish to all interior gypsum board scheduled to receive paint finish.

First Coat: B28W08601 – High Build Interior Latex Primer.  
Second Coat: PE3000051 – Painters Edge Interior Latex Flat.

8. SCHEDULE OF PAINTING (Cont'd)

(d) Interior Woodwork

Apply this finish throughout to all interior wood doors and wood trim as indicated on the drawings.

First Coat: B51W08670 – Quick Dry Interior / Exterior Stain Blocking Primer (White).

Second Coat: B75WT0100 – PMC Interior Latex Semi-Gloss

END OF SECTION

**DIVISION 10 SPECIALTIES**

102800 Toilet, Bath and Closet Specialties

104416 Fire Extinguishers

105500 Postal Specialties

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all toilet, bath and closet specialties necessary to complete the work indicated on the drawings and described in the specifications.
- (c) Include the complete installation of each item specified or indicated on the drawings, unless noted otherwise.
- (d) Work specified elsewhere:
  - (1) 061000 – Rough Carpentry.
  - (2) 088300 - Mirrors
  - (3) 092900 – Gypsum Board.

2. SHOP DRAWINGS

- (a) Submit shop drawings of each specialty item to the Architect in accordance with Section 013323 - Shop Drawings, Product Data, and Samples, and as indicated under each specialty item herein.

3. GENERAL

- (a) Mount all items in a secure manner. Use fasteners adaptable to item being mounted and of matching finish. Non-ferrous fasteners will be used where subject to corrosive action.
- (b) Each individual item shall be installed in accord with manufacturer's specifications and shall be complete with all necessary items for working operation.
- (c) Furnish and install concealed wood blocking in walls to receive accessory items and closet specialties.

4. ACCESSORY ITEMS

- (a) SINGEL ROLL SURFACE MOUNTED TOILET TISSUE HOLDERS: Single roll surface mounted toilet tissue holder shall be Baker Beach Collection Model 9609DB (dark bronze) as manufactured by Better Home Products.

Mount one (1) adjacent to each water closet in each Apartment Unit in the project, and water closet in the Community Building.



4. ACCESSORY ITEMS (Cont'd)

- (b) TOWEL RING: Towel ring shall be Baker Beach Collections Model 9604DB (dark bronze) as manufactured by Better Home Products.

Mount one (1) in Apartment Units in locations as shown on the drawings.

- (c) TOWEL BAR: Towel Bar shall be Baker Beach Collection Model 9624DB (dark bronze) as manufactured by Better Home Products.

Mount one (1) in Apartment Units in locations as shown on the drawings.

- (d) ROBE HOOK: Robe Hook be Baker Beach Collection Model 9601DB (dark bronze) as manufactured by Better Home Products.

Mount one (1) in Apartment Units in location as shown on the drawings.

- (e) SHOWER CURTAIN ROD: Shower curtain rod shall be Model 100DB (dark bronze) curved shower curtain rod as manufactured by Better Home Products.

Mount one (1) at each Bath / Shower and / or Shower Unit within project.

- (f) GRAB BARS: Furnish and install grab bars at toilets where shown on the drawings. Grab bars shall be 1-1/2" diameter, 18 gauge type 304 stainless steel with 3" diameter 14 gauge mounting flanges, as manufactured by Better Home Products.

Mount one (1) 42" BDHC Series on side wall of water closet in each Accessible Bathroom in the Accessible Dwelling Units, and at the water closet in the Community Building.

Mount one (1) 36" BDHC Series on back wall of water closet in each Accessible Bathroom in the Accessible Dwelling Units, and at the water closet in the Community Building.

Mount one (1) 18" BDHC Series vertically on side wall adjacent to and above the sidewall grab bar specified hereinbefore in each Accessible Bathroom in the Accessible Dwelling Units, and at the water closet in the Community Building.

- (g) STAINLESS STEEL FRAMED MIRRORS: Stainless steel framed mirror shall be Model B-165 1836 as manufactured by Bobrock Washroom Equipment Company.

Mount one (1) above lavatory using "lock tab design" at Public Toilet in Community Building. Mount at 40" A.F.F. to bottom of reflective surface of mirror.

5. CLOSET SPECIALTIES

(a) Furnish and install vinyl coated wire closet shelving products as manufactured by Closet Maid Corporation.

(b) Install shelving units in each Dwelling Unit generally as shown on the drawings, and as follows:

<b>Number of Shelves:</b>	<b>Shelf Depth/Type:</b>
1	12" (shelf with integral hanging rod) / Closet
1	16" (shelf with integral hanging rod) / Laundry

(c) Install shelving plumb, rigid, aligned and securely fastened. All wall and shelf supports to have blocking or be mounted directly through drywall into wall studs. Do not anchor to drywall only. Shelf supports are to be placed per the following minimum requirements:

1. Shelf Support (rear edge) 12" o.c.
2. Shelf Supports Brackets 24" o.c.
3. End Brackets at each end of shelving span.
4. Corner Support Brackets at each shelving intersection.
5. Shelf and rod end caps for exposed end conditions.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all fire extinguishers and related items necessary to complete the work indicated on the drawings and described in the specifications.
- (c) Include the complete installation of each item specified or indicated on the drawings, unless noted otherwise.
- (d) Work specified elsewhere:
  - (1) 123530 - Residential Casework.

2. SHOP DRAWINGS

- (a) Submit shop drawings of each fire extinguisher to the Architect in accordance with Section 013323 - Shop Drawings, Product Data, and Samples.

3. GENERAL

- (a) Mount all items in a secure manner. Use fasteners adaptable to item being mounted and of matching finish. Non-ferrous fasteners will be used where subject to corrosive action.
- (b) Each individual item shall be installed in accord with manufacturer's specifications and shall be complete with all necessary items for working operation.

4. FIRE EXTINGUISHERS AND BRACKETS

- (a) Furnish and install fire extinguishers as specified herein.
- (b) Provide one (1) Model Number RESSP, 2-1/2 lb. multi-purpose fire extinguisher with bracket as manufactured by Kidde. Install one (1) in Kitchen Sink Cabinet in each Dwelling Unit, and one (1) in Kitchen Sink Cabinet in Community Building.
- (c) All fire extinguishers shall be supplied fully charged, properly tagged and dated.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all postal specialty items and related items necessary to complete the work indicated on the drawings and described in the specifications.
- (c) Work specified elsewhere:
  - (1) 321313 – Concrete Paving.

2. SHOP DRAWINGS

- (a) Submit shop drawings of postal specialties to the Architect in accordance with Section 013323 - Shop Drawings, Product Data, and Samples.

3. GENERAL

- (a) Mount all items in a secure manner. Use fasteners adaptable to item being mounted. Non-ferrous fasteners will be used where subject to corrosive action.
- (b) Postal specialty items shall be installed in accord with manufacturer's written instructions and shall be complete with all necessary items for working operation.
- (c) Postal specialties shall be installed plumb and level in locations shown on the drawings.

4. CLUSTER MAILBOXES

- (a) Furnish and install Horizontal Front Loading MailBox Units as manufactured by Salsbury Industries, or approved equal. Mailboxes to be front loading type and shall be suitable for USPS mail distribution. Materials, sizes and construction shall comply with current USPS mailbox regulations. Color as selected by Owner.
- (b) Include standard self-adhesive identification system for each mailbox door, outgoing mail, and parcel locker for each Mailbox Unit.
- (c) Each mailbox door shall have a five (5) pin cylinder cam lock. All boxes to be keyed differently. Provide three (3) keys per lock.
- (d) Mailbox arrangement shall be configured as shown on the drawings. Provide the following:

#3711D-15 units (2 units total).  
#3711D-20 units (1 unit total).

END OF SECTION

Project Number 20-003

**DIVISION 11 EQUIPMENT**

113100 Residential Appliances

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of furnishing all labor and materials necessary to complete all residential appliance work indicated on the drawings and specified herein.
- (c) Work specified elsewhere:
  - (1) 123530 - Residential Casework.
  - (2) 220000 - Plumbing.
  - (3) 260000 - Electrical.

2. SHOP DRAWINGS

- (a) Submit manufacturers catalog cut and data sheets, complete parts list, operation and installation instructions for all equipment listed.
- (b) Submit shop drawings for all residential equipment in accordance with General Conditions and Section 013323 - Shop Drawings, Product Data, and Samples.

3. RESIDENTIAL APPLIANCES

- (a) All residential kitchen appliances shall be as follows:

1. **TYPICAL DWELLING UNITS** (provide the following for each Kitchen):

- Refrigerator: (1) GE Model #GTS18DTNRBB – Black with Model #IM4D Ice Maker.
- Range: (1) GE Model #JB625DKBB – Black.
- Dishwasher: (1) GE Model #GSD2100VBB – Black.
- Micro Hood: (1) GE Model #JVM3160DFBB – Non-vented - Black.
- Refrigerator: (1) GE Model #GTE17DTNRBB – Black with Model #IM4D Ice Maker.

2. **ACCESSIBLE DWELLING UNITS** (provide the following for each Accessible Kitchen):

- Range: (1) GE Model #JBS460DMBB – Black, up-front controls.
- Dishwasher: (1) GE Model #GDT226SGLBB – Black.
- Range Hood: (1) GE Model #JVX3300DJBB – Non-vented, 2-speed fan control, cooking light, with switches remotely located in base cabinet millwork as directed by Architect. Color to be Black.
- Microwave: (1) GE Model #PES7227DLBB – Black (Counter mounted).

3. RESIDENTIAL APPLIANCES Cont'd)

3. **COMMUNITY ROOM** (provide the following):

Refrigerator: (1) GE Model #GTE17DTNRBB – Black with Model #IM4D Ice Maker.

Dishwasher: (1) GE Model #GDT226SGLBB – Black.

Microwave: (1) GE Model #PES7227DLBB – Black (Counter mounted).

4. INSTALLATION

- (a) Furnish all residential appliances with required accessories for a complete installation. Install equipment in locations shown on the drawings and in strict accordance with manufacturers written installation instructions.
- (b) Clean all equipment after final connections have been made.

END OF SECTION

**DIVISION 12 FURNISHINGS**

122113      Horizontal Louver Blinds

123530      Residential Casework



1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of the furnishing and installation of all horizontal louver blinds, and related items necessary to complete the work indicated on drawings and specified herein.
- (c) Work specified elsewhere:
  - (1) 085313 - Vinyl Windows.
  - (2) 092900 - Gypsum drywall.
  - (3) 099100 - Painting.

2. SHOP DRAWINGS AND SAMPLES

- (a) Submit shop drawings and samples of window blinds to Architect in accordance with General Conditions and Section 013323 - Shop Drawings, Product Data, and Samples.

3. WINDOW BLINDS

- (a) Furnish and install window blinds at all exterior Apartment windows and Patio doors in the project.
- (b) Blinds to be Horizontal Alum-A-Like RD Blackout, with one inch wide PVC slats, as manufactured by J & L Blinds (1-800-779-6288). Color to be White. Install as recommended by manufacturer.
- (c) Window blinds shall be of the size required by the opening or door glazing and shall be field adjusted as required to properly fit opening.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all residential casework including related items necessary to complete the work indicated on drawings and described in specifications, including but not necessarily limited to the following:
  - (1) Countertop assemblies.
  - (2) Manufactured casework.
- (c) See drawings, schedules and details for location and quantity of residential casework required.
- (d) Work specified elsewhere:
  - (1) 061000 - Rough Carpentry.
  - (2) 079200 – Joint Sealants.
  - (3) 092900 - Gypsum Board.
  - (4) 096516 – Resilient Sheet Flooring.
  - (5) 220000 – Plumbing.

2. DETAILS AND SHOP DRAWINGS

- (a) All work shall be in strict accordance with details as shown on plans. The residential casework contractor shall submit shop drawings conforming to Architect’s details and show construction of all work, including trim members required to close casework to adjoining work. The work is not to be executed until shop drawings have been approved by the Architect.
- (b) The Contractor shall take accurate measurements at the building and make such adjustments as may be necessary for his work to be installed correctly.
- (c) Submit manufacturer’s product data sheets on plastic laminates. Color samples are not required as a part of the initial submittal but may be requested as an additional submittal by the Architect.
- (d) Submit manufacturer’s “cut sheets” on all residential casework hardware.
- (e) Refer to Section 013323 – Shop Drawings, Product Data, and Samples for additional requirements affecting this section.

3. STORAGE AND PROTECTION

- (a) Residential casework shall be protected against dampness during and after delivery. It shall be stored in well-ventilated buildings and where not exposed to extreme changes in temperature and/or humidity.
- (b) Millwork shall not be stored in any building until the building is dry and enclosed.

4. MATERIALS

- (a) PLASTIC LAMINATE SURFACING: High pressure laminated plastic sheets 1/16" thick, general purpose as manufactured by Wilsonart, Formica or Nevamar. Colors and patterns as selected by the Architect from the manufacturer's standard color charts.
- (b) Install all plastic laminate for countertops, backsplashes, etc. as required by drawings. Apply surfacing using waterproof contact cement, bonded thoroughly to backing. Butt joints and corners shall be neatly joined and fitted without raw edges.

5. ROUGH HARDWARE

- (a) Rough hardware needed for the proper installation of residential casework shall be provided. Nails, spikes, screws, bolts, and similar items shall be of proper types and ample sizes to fasten and hold the various members securely in place.

6. RESIDENTIAL CASEWORK

- (a) Furnish and install factory assembled maple cabinets, including shelving, doors, draws, hardware, factory finish, etc., as manufactured by Mid America Cabinets. Cabinet design and specification shall be Mid America Cabinets HUD Severe Use for all cabinet boxes / frames. Finish shall be as selected by Architect from Manufacturer's standard color chart. Cabinet construction and materials shall comply with ANSI / KCMA A 161.1-2000. Cabinet maker must provide written certification of compliance. Cabinets shall all have KCMA "seal" on backs. Wood cabinets shall be of design standard with the manufacturer, of sizes and including features called for by the drawings, approximately as detailed, and in substantial conformity with the following:
  - (1) Face Frame shall be 3/4" kiln-dried maple with corners glued and screwed.
  - (2) End Panels shall be 1/2" thick plywood veneered panels to match face frame finish. End panels shall be attached to face frame using tongue and groove jointing.
  - (3) Cabinet backs shall be 1/4" thick plywood. Wall cabinet backs shall be reinforced with 3/4" x 3 1/2" hardwood rails on top and bottom. Base cabinets shall be reinforced with 3/4" x 7" hardwood upper rail and 3/4" x 3 1/2" hardwood lower rail. Cabinet backs shall be retained by a groove in the end panels, and shall be glued and stapled to the tops and bottoms.
  - (4) Base Corner Braces shall be 1/2" x 2 1/2" plywood braces running full depth (front to back) of cabinets. Braces shall be dadoed into face frame and end panels.

7. RESIDENTIAL CASEWORK (Cont'd)

- (5) Wall cabinet tops and bottoms shall be ½” thick plywood dadoed into end panels and face frames, and interlocked into hanging rails.
  - (6) Base cabinet bottoms shall be ½” thick plywood dadoed into end panels and face frames.
  - (7) Cabinet backs shall be ¼” thick plywood. Wall cabinet backs shall be reinforced with ¾” x 3 ½” hardwood rails on top and bottom. Base cabinets shall be reinforced with ¾” x 7” hardwood upper rail and ¾” x 3 ½” hardwood lower rail. Cabinet backs shall be retained by a groove in the end panels, and shall be glued and stapled to the tops and bottoms.
  - (8) All wall cabinets 24” and higher shall have adjustable shelves made of ½” thick plywood with matching edge band. Cabinet sides shall be drilled for durable supports adjustable on 2-1/2” increments. Shelves shall be designed to support 15 lbs. per square foot. Not to exceed 50 lbs. per shelf.
  - (9) Cabinet doors shall be “Concord” style door constructed of ¾” thick plywood with matching edge band. The frame members shall be permanently joined with mortise and tenon construction and shall be 2” x ¾” thick solid wood. Doors shall have pliable rubber bumpers to dampen noise and #154SSMB pulls.
  - (10) Base cabinets shall be provided with toe kick 2 ½” deep x 3 ½” tall, constructed of ¾” thick pressure treated solid lumber on three sides of base cabinets. Toe base shall be veneered to match cabinet finish.
  - (11) Hinges shall have a lifetime guarantee. Doors shall be mounted on fully concealed, matte-black finished self-closing hinges and opening angle of 108 degrees. Hinges shall have vertical adjustments.
  - (12) Drawers shall be “Concord” style constructed of 11/16” solid hardwood sides and back with ¼” plywood bottom let into all four sides. Side shall be mortise and tenoned into front with back dadoed into sides. Install using 100 lb. rated epoxy-coated drawer guides and #154SSMB pulls.
  - (13) Cabinets shall be erected and securely anchored in plumb and level positions, using finishing moldings and filler pieces as necessary to fit the cabinets to the walls and ceilings. At completion, doors, drawers, etc. shall be adjusted to ensure smooth, trouble-free operation.
  - (14) Cabinet interiors shall be finished with wood grain melamine to match cabinet finish.
- (b) Install cabinets in strict accord with manufacturer’s written installation instructions, with no variations in flushness of adjoining surfaces. Where cabinets abut other finished work, scribe and cut to adjacent surfaces for accurate fit. Provide filler strips, scribe strips, and molding in finish to match cabinet.
  - (c) Install cabinets level and plumb to a tolerance of 1/8” in 8’-0”.
  - (d) Fasten cabinets to adjacent units and to walls using proper anchoring devices for complete and proper installation.

8. COUNTER TOP ASSEMBLIES

- (a) Furnish and install counter top assemblies for all base cabinets as shown on the drawings.
- (b) Counter top assemblies shall be constructed using ¾” thick, 45 lb density particle board furnished with waterproof backing sheet, meeting the requirements of ANSI A208.1, Grade M-2.
- (c) Counter top assemblies shall be complete with square front edge (1-1/2” thickness), and 4” tall backsplash.
- (d) Plastic laminate for counter tops shall be as hereinbefore specified, and shall be bonded to particle board using waterproof contact cement. Plastic laminate color and pattern to be selected by Architect.
- (e) Furnish and install plastic laminate covered end splashes at all locations shown on the drawings. Plastic laminate color shall match counter top assembly.
- (f) Fasten counter top assemblies to cabinet bases by screwing through corner blocks of base cabinets into underside of counter top.
- (g) Provide cutouts for sinks and lavatories. Seal edges of cutouts using varnish or waterproof sealants.

9. ADJUSTING AND CLEANING

- (a) Upon completion of installation of cabinets and counter top assemblies, adjust all cabinet drawers and doors for smooth operation.
- (b) Clean all surfaces upon completion of work, touch up all scratches and marred areas of factory finish, and restore damaged and / or soiled areas to original factory condition.

END OF SECTION

**DIVISION 22 PLUMBING**

220000 Plumbing Specifications

1. SCOPE

- (a) The Contractor shall be responsible for all work, materials, and labor to satisfy a complete working system whether specified or implied. The higher level of work shall prevail if there is a conflict between the plans and specifications.
- (b) All Work shall be performed in strict compliance with the current edition of the 2006 Arkansas Plumbing Code, the Arkansas Energy Conservation Code, and all local codes and other regulations governing Work of this Nature.
- (c) The Contractor shall, before submitting any proposal, examine the existing site, plans and specifications, and shall determine for himself the conditions that may affect the Work. No allowance shall be made if the Contractor fails to make such examinations.
- (d) Refer to Plumbing Plans for additional information pertaining to Plumbing Materials required for the project.

2. PERMITS

- (a) The Contractor shall secure all permits or applications, and shall pay any and all fees associated with permits and applications.

3. SHOP DRAWINGS

- (a) Submit shop drawings in accordance with requirements described in General Conditions and Specification Section 013323 – Shop Drawings, Product Data, and Samples. Obtain acceptance of drawings prior to fabricating any material or proceeding with the Work.

4. DOMESTIC WATER SUPPLY PIPING

- (a) All domestic water supply piping materials shall be a follows:

Water Service Pipe: Water service pipe shall conform to NSF 61 and shall be Type “K” copper piping and fittings, or PEX conforming to the standards listed in Table 605.3 of the International Plumbing Code.

Water Distribution Pipe: Water distribution pipe shall conform to NSF 61 and shall be Type “K” copper piping and fittings, or PEX conforming to the standards listed in Table 605.3 of the International Plumbing Code

All domestic hot water piping that is not PEX must be insulated with ½” elastomeric insulation.

All domestic cold water piping above ground that is not PEX must be insulated with ½” elastomeric insulation.

## 5. SANITARY/STORM DRAINAGE AND VENT PIPING

(a) All sanitary drainage and vent piping materials shall be as follows:

Above Ground (2" and below):	Schedule 40 galvanized steel pipe with screwed Ends, or Schedule 40 PVC with solvent joints, or DWV copper with solder joints. All solder to be "NO LEAD" type.
Above Ground (3" and above):	Service weight cast iron with no-hub or bell and spigot joints, or Schedule 40 PVC with solvent joints.
Below Grade:	Schedule 40 PVC with solvent joints.

(b) PVC piping shall not be used in air plenum ceilings and shall not cross fire rated walls, ceilings, or floors unless properly wrapped with fire proofing material approved by NFPA.

(c) Drainage piping shall be run as straight as possible and shall have long turn fittings.

(d) Drainage piping 3" size and smaller shall run at a uniform grade of at least 1/4" per foot, and piping larger than 3" size shall run at a grade of not less than 1/8" per foot.

(e) All vent piping shall be sloped to drain back to fixtures.

(f) Contractor shall be responsible for the proper flashing of the vent piping run through the roof.

## 6. STUB-INS AND/OR SLAB OR WALL PENETRATIONS

(a) All stub-ins, slab, or wall penetrations to be per the current editions of the Arkansas Plumbing Code, Arkansas Fuel Gas Code, and City of Paragould Plumbing and Gas Code Ordinances. All piping penetrations through building foundations or footings shall be sleeved.

## 7. PIPE SUPPORTS

(a) Piping supports shall be as follows:

Above Grade:	All pipes shall be supported from the building structure in a neat and workmanlike manner, and in strict conformance with manufacturer's written installation instructions.
Below Grade:	Earth shall be excavated to the minimum depths required with an even surface to insure solid bearing of pipe for its entire length.
Interior:	The pipe shall be installed (unless otherwise specified) a minimum of 4" below the bottom of the slab and shall not be in any direct contact with the concrete at any point.
Exterior:	The water pipe and sanitary sewer waste pipe shall have a minimum cover as required by Code and local Ordinances.



8. MISCELLANEOUS

- (a) Coordinate the installation of all roof flashings at roof penetrations.
- (b) Do no scale drawings for dimensions. Refer all dimensional questions to Architect or Engineer. Verify conditions and dimensions at the job site.
- (c) The Plumbing Plans are intended to be diagrammatic and are based on one Manufacturer's equipment. The drawings are not intended to show every item in its exact location, the exact dimension, or all the details of the equipment. The Contractor shall verify the actual dimensions of the equipment proposed to ensure that the equipment will fit in the available space.

9. TESTING

- (a) Plumbing system shall be flow and pressure tested in accordance with the Standard Practice and the current edition of the Arkansas Plumbing Code and City of Paragould Plumbing Ordinances.

10. GUARANTEE

- (a) Materials, equipment and installation shall be guaranteed for a period of one year from the date of final acceptance by the Owner, as identified in the Permission to Occupy (HUD Form 92485) issued by the Architect. Defects which appear during that period shall be corrected at this Contractor's expense.
- (b) For the same period, the Plumbing Contractor shall be responsible for any damage to premises caused by defects in workmanship or in the Work or equipment furnished and / or installed by him.

END OF SECTION

**DIVISION 23 HVAC**

230000 Heating, Ventilating, and Air Conditioning  
(HVAC) Specifications

1. SCOPE

- (a) The Contractor shall be responsible for all labor, materials and equipment necessary for the installation of complete and operating systems. In the case of conflict between the plans and specifications, the higher standard prevails. Refer all questions to the engineer of record through the architect of record.
- (b) The drawings indicate diagrammatically the extent, general character and location of the Work included. Offsets and / or changes in elevation of piping and ductwork due to structural or other interferences shall be provided without extra cost.
- (c) All Work shall be performed in strict compliance with the 2010 Arkansas Mechanical Code with local City of Searcy Amendments, Arkansas Energy Conservation Code, ASME, ASTM, ANSI, ASHRAE 90.1, SMACNA, NFPA and all local codes and other regulations governing Work of this Nature.
- (d) The Contractor shall, before submitting any proposal, examine the existing site, plans and specifications, and shall determine for himself the condition that may affect the Work. No allowance shall be made if the Contractor fails to make such examinations.
- (e) Refer to Mechanical Drawings for additional information pertaining to Mechanical Materials required for the project.

2. PERMITS

- (a) The Contractor shall secure all permits or applications, and shall pay any and all fees associated with permits and applications.

3. SHOP DRAWINGS

- (a) Submit shop drawings in accordance with requirements described in General Conditions and Specification Section 013323 – Shop Drawings, Product Data, and Samples. Obtain acceptance of drawings prior to fabricating any material or proceeding with the Work.

4. MECHANICAL EQUIPMENT AND PIPING IDENTIFICATION

- (a) Provide identification of all pipes valves and equipment.
- (b) Identification devices to be used shall include the following:
  - (1) Plastic pipe markers.
  - (2) Valve tags and equipment tags.
  - (3) Valve schedule.
- (c) Identification materials manufacturer by one of the follows:
  - (1) Seton Namplate Corporation.
  - (2) Allen System, Incorporated.
  - (3) Brady Company.

5. REFRIGERANT PIPING

- (a) Pipe: Refer to Mechanical Piping and Insulation Schedule for material type for all service pipe. Use wrought copper fitting and brazed jointing. Install refrigerant piping in accordance with manufacturer recommendations and ASHRAE Standard 90.1-2007. Protect refrigerant piping insulation and materials from the weather using PVC wrap. Zip-tie thermostat wiring to refrigerant piping where exposed.

6. INSULATION

- (a) All insulation shall have a flame spread rating of 25 or less and a smoke development rating of 50 or less in accordance with ASTM E84 and NFPA 90A.
  - (1) Ductwork Insulation: Refer to Mechanical Ductwork and Insulation Schedule for insulation types for all services of duct. Insulate the back side of all diffusers and air devices themselves.
  - (2) Refrigerant Piping Insulation: Refer to Piping and Insulation Schedule for insulation type and thickness. Coat with water based latex enamel coating recommended by manufacturer.

7. SUPPORTS AND ANCHORS

- (a) Manufacturers: Grinnell, B-Line, O.Z. Gedney, Michigan Hanger, Berger / Carpenter, and Patterson.
- (b) Use materials compatible with piping systems avoiding electrolytic action and conform to ANSI/ ASME B31, NFPA, MSS SP-58, 69, and 89.7.
- (c) Install condensing units on 4” thick concrete pad which extends 4” beyond the condensing unit in each dimension. Bevel all top edges. Extend the concrete apron from the edge of the building to the condensing unit pad (using the full width of the CU pad) so there is no gap between the building and the pad.

8. TESTING AND BALANCING

- (a) The Contractor shall provide all labor and equipment required to balance all air and hydronic systems in accordance with quantities shown on the drawings.
- (b) Report shall be provided on AABC type forms.

9. AIR DISTRIBUTION SYSTEMS

- (a) Air Terminals: Refer to Air Device Schedule for model, size, finish, mounting, and required accessories for all diffusers, registers and grilles. Fully insulate the back portion of all air devices.

9. AIR DISTRIBUTION SYSTEMS (Cont'd)

(b) Sheet Metal Work:

- (1) Except as otherwise shown or noted, all ductwork and other sheet metal work shall be galvanized sheet steel and shall be installed in accordance with Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) duct construction standards. Duct system to be <2” pressure class.
- (2) All duct dimensions indicated on the plans are sheet metal dimensions. Allowances have been made for interior duct line where applicable.
- (3) Rectangular supply ductwork to be hemmed “S” longitudinal seams and Ductmate traverse joints.
- (4) Round exhaust ductwork elbows to be long radius type.

10. GUARANTEE

- (a) Materials, equipment and installation shall be guaranteed for a period of one year from the date of final acceptance by the Owner, as identified in the Permission to Occupy (HUD Form 92485) issued by the Architect. Defects which appear during that period shall be corrected at this Contractor's expense.
- (b) For the same period, the Mechanical Contractor shall be responsible for any damage to premises caused by defects in workmanship or in the Work or equipment furnished and / or installed by him.

END OF SECTION

**DIVISION 26 ELECTRICAL**

260000 Electrical Specifications

## 1. SCOPE

- (a) The Contractor shall be responsible for all labor, materials and equipment necessary for the installation of a complete and operating systems. In the case of conflict between the plans and specifications, the higher standard prevails. Refer all questions to the engineer of record through the architect of record.
- (b) The drawings indicate diagrammatically the extent, general character and location of the Work included. Offsets and / or changes in elevation of piping and ductwork due to structural or other interferences shall be provided without extra cost.
- (c) All Work shall be performed in strict compliance with the 2011 National Electrical Code with City of Paragould amendments, and all applicable NFPA and other regulations governing Work of this Nature.
- (d) The Contractor shall, before submitting any proposal, examine the proposed site and shall determine for himself the condition that may affect the Work. No allowance shall be made if the Contractor fails to make such examinations.
- (e) Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for the proper performance of the work of this Section.
- (f) All work shall be of the highest quality in conformance with the best practices of the trade and in compliance with all governing codes.

## 2. PERMITS

- (a) All work shall be carried out in conformity with the rules and regulations of the 2014 National Electrical Code with local amendments, and of the various local agencies having jurisdiction.
- (b) The Contractor shall give all necessary notices, obtain all permits and pay all local and governmental taxes, fees, deposits and other costs in connection with his work; file all necessary plans, prepare all documents and obtain necessary approvals of all agencies having jurisdiction; obtain all required Certificates of Inspection and approvals for his work and deliver same to the Architect before request for acceptance and final payment for the work.

## 3. SHOP DRAWINGS

- (a) Submit manufacturer's technical product data literature for all materials specified herein. Indicate and high light on the submittals details of all items to indicate correct interpretation of the Contract Documents. Include submittals for the following:
  - (1) Smoke Detectors
  - (2) Lighting fixtures (include emergency and egress lighting)
  - (3) Wiring devices
  - (4) Panelboards
  - (5) Meterbanks

#### 4. CONFLICTIONS

- (a) Any contradictions between the written specifications and drawings shall be considered ambiguous, and will be the responsibility of the Bidder to secure clarification prior to Bidding. If a conflict exists between the plans and specifications, the higher level of work shall prevail. In all cases of conflict between the plans/specifications and NEC, the NEC (and local AHJ) shall prevail.

#### 5. PRODUCTS

- (a) All material, equipment, and installations shall conform to the requirements of the following codes:
  - (1) National Electrical Code – 2014 Edition with local amendments
  - (2) OSHA
  - (3) Local Jurisdictional Codes
- (b) Panelboards
  - (1) Install new Square D, or approved equal Panelboards as detailed on the drawings complete with required circuit breakers.
  - (2) Circuit breakers shall be quick make, quick break, thermal magnetic, trip indicating. AIC rating, ampacity, size, and details of panelboards and branch circuit-Circuit breakers shall be as indicated on the drawing panel schedules.
- (c) Lighting Fixtures and Lamps
  - (1) The Contractor shall provide all lighting fixtures, poles, and luminaires in conformance with the fixture schedule on the drawings.
  - (2) Provide lamps in all lighting fixtures and devices in accordance with the lighting fixture schedule.
  - (3) Lamps shall be as indicated on fixture schedule.
- (d) Wiring Devices
  - (1) Furnish and install quality devices bearing UL label for the service and electrical rating where used.
    - a. Switches shall be 20 ampere, 120/277 volt A.C. rated as scheduled in legend.
    - b. GFCI devices shall be 20 ampere duplex w/U ground pin.
    - c. Final color of cover plates and devices to be selected by Architect in writing.
- (e) Outlet and Junction Boxes
  - (1) Outlet boxes for ceiling fixtures shall be 4" octagonal rigid plastic boxes not less than 1-1/2" deep provided with 3/8" galvanized malleable iron fixture stud.
  - (2) Concealed outlet boxes for wall brackets, switches, and receptacles shall be a 2"x 4" or 4" square rigid plastic box with raised cover of sufficient depth to accommodate wall surface material.
- (f) Wires and Cables
  - a. Provide and install all wiring and cable as required to connect all electrical equipment and devices indicated on the plans.
  - b. All wires #10 gauge and smaller shall be solid copper 75 degree C, and 600 volt insulation.
  - c. All wires #8 gauge and larger shall be stranded copper, 75 degree C, and 600 volt insulation.



5. PRODUCTS (Cont'd)

- d. Fixture wires shall not be less than #14 gauge, and shall be type SFF-2.
- e. Unless indicated otherwise all light and power conductors shall be #12 gauge minimum.

6. WORKMANSHIP

- (a) All work shall be installed in a neat workmanlike manner by competent mechanics thoroughly skilled in their respective trades and in strict accordance with code requirements and the respective manufacturers written instructions.
- (b) All work shall be fully tested as proved in good working condition prior to issuance of the Permission to Occupy (HUD Form 92485).

7. TEMPORARY POWER AND LIGHT

- (a) Furnish and install temporary Light & Power as may be required by all Trades.

8. SUPPORTS

- (a) Provide all materials and labor required to adequately support, brace and strengthen equipment and materials furnished as part of this work.
- (b) All raceways, boxes, etc., shall be supported directly from the structure, independent of duct, piping or other work.
- (c) All conduits shall be securely and independently supported so that no strain will be transmitted to outlet box and pull box supports, etc.

9. BRANCH CIRCUITS

- (a) Provide all conduits, outlets, boxes, conductors, grounding wiring, switches, receptacles, etc., for a complete electrical system as shown on the drawings.
- (b) Contractor shall carefully check the Mechanical drawings and specifications to establish the extent of power and control wiring to be provided. Control wiring shall be the responsibility of others.

10. GROUNDING AND BONDING

- (a) The electrical systems shall be completely and effectively grounded as required by the National Electrical Code, and local City Ordinances. All ground systems and connections shall be mechanically secure and electrically continuous.

## 11. LOCATION OF OUTLETS AND EQUIPMENT

- (a) The plans show conditions as accurately as possible but do not necessarily show all the fittings, etc., necessary to suit building conditions. Locations of outlets, appliances, etc., are approximate and the Contractor shall be responsible for the proper locations in order to make them fit with the architectural details and instructions from the Architects representative on the job site.
- (b) Before installation of wiring for switches, receptacles, ceiling lights or motors, the Owner and Architect reserve the right to move each outlet location to better adapt them for usage, prior to installation, within a distance of three feet as presently indicated, at no additional cost to the Owner.
- (c) Unless indicated otherwise on the drawings, all devices shall be mounted at a height to conform to applicable ANSI and American's With Disability Act (ADA).
- (d) The Contractor shall carefully check with other Contractors to coordinate the location of electrical equipment with work of other trades.
- (e) Verify all door swings before roughing in for switches.
- (f) All electrical installations in area of new construction must be flush mounted. With the exception of surface mounted lighting fixtures, electrical equipment is not to be surface mounted without prior approval of the Engineer or Architect.

## 12. JOBSITE CLEANING

- (a) Contractor shall at all times keep the premises free of all waste, surplus materials, rubbish or debris which is caused by his employees or resulting from his work.
- (b) After all equipment and devices have been installed, remove all labels, stickers, stains, temporary covers, etc. Identification plates on all equipment.

## 13. GUARANTEE

- (a) Materials, equipment and installation shall be guaranteed for a period of one year from the date of final acceptance by the Owner, as identified in the Permission to Occupy (HUD Form 92485) issued by the Architect. Defects which appear during that period shall be corrected at this Contractor's expense.
- (b) For the same period, the Electrical Contractor (and any of his subcontractors) shall be responsible for any damage to premises caused by defects in workmanship or in the Work or equipment furnished and / or installed by him.

END OF SECTION

**DIVISION 31 EARTHWORK**

312200      Grading

312800      Erosion and Sedimentation Control

313116      Termite Control

## 1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) In general, the items of work to be performed shall include but is not limited to: Procurement and installation of engineered fill material at building pads and foundation locations (as required by existing conditions and called for in the Geotechnical Investigation Report), excavation for building foundations, backfilling, filling, fill compaction, and finish grading.
- (c) Provide and place additional fill material as required to produce the rough sub-grades and building pad elevations required. Fill must be approved before placing.
- (d) Work specified elsewhere:
  - (1) 033000 - Cast-In-Place Concrete.
  - (2) 312800 – Erosion and Sedimentation Control.
  - (3) 313116 - Termite Control.
  - (4) 321313 - Concrete Paving.
  - (5) 329200 - Turf and Grasses.
  - (6) 329300 - Plants.

## 2. SITE PLAN

- (a) The site plan as indicated on the drawings is deemed to be substantially accurate. However the Contractor shall inspect the existing site and shall assure himself of the existing conditions in which the work of this Contract shall be completed. Extra payments will not be authorized for work that could have been determined by an examination of the site and prevailing conditions.
- (c) Generally, the existing material at the site has been deemed suitable for building construction in accordance with the Geotechnical Investigation Report. However, the Contractor shall inspect the existing site, including site grading plans and shall assure himself of the existing conditions in which the work of this Contract shall be completed. Extra payments will not be authorized for work that could have been determined by an examination of the site and prevailing conditions.

## 3. SUBSURFACE SOIL DATA

- (a) Subsurface soil investigations have been made in anticipation of this project, and the full report is included in Section 023200 – Geotechnical Investigations. Boring results are not to be made a part of the contract, but are for general information only to the contractor. The Contractor shall examine the site and the record of investigations, and then determine for themselves the character of materials to be encountered. The Owner and/or Architect will not assume responsibility for sub-soil conditions at locations other than the actual boring locations at the actual boring depths.

4. TESTING/QUALITY CONTROL

- (a) The Contractor shall provide inspection and quality control by using a third party geotechnical inspector not associated with the Contractor or Architect.
- (b) The Contractor shall submit any required off-site fill for testing by the third party testing agency. A sufficient amount of material shall be provided so that testing can be performed to insure that the fill material meets the requirements of this specification. Testing of fill shall be paid for by the Contractor. Submit test results to Architect prior to placement of fill material.
- (b) The Contractor shall provide all of his own staking under the supervision of a registered land surveyor.

5. SITE PROTECTION

- (a) The Owner has developed a Storm Water Pollution Prevention Plan (SWPPP). A copy of the plan is on file in the Owner's Office. The Owner will provide the Contractor with a complete copy of the final "approved" SWPPP which the Contractor shall keep on site as required by the State of Arkansas. The Contractor shall be responsible for maintaining the Best Management Practices (BMP's) required in the SWPPP for his work. The BMP's are to be considered as minimums.
- (b) The Contractor shall control any grading operations on the site to prevent water from entering excavated areas and to prevent ponding. Pumping shall be provided as required to keep excavated areas free of water.
- (c) The Contractor shall take the necessary precautions to maintain banks of excavations safe from caving and to protect any existing utility lines. The Contractor shall be responsible for having existing utilities located or their absences confirmed.
- (d) Maintain surface drainage at the site to prevent drainage of top soil, sediment, trash, etc. off of the property. Sediment and run-off beyond the property lines shall be properly cleaned up and disposed of by the Contractor as it occurs.

6. PRELIMINARY WORK

- (a) Strip topsoil from building pads, driveways, parking areas, roadways, and improvement areas and stockpile for use in final grading. Proof roll the existing soils at building pads, driveways, parking areas, and roadways to identify any soft soils. Soft soils encountered shall be reported to the Architect and measurements taken. If such soft soils are required to be removed, the contract price shall be adjusted by means of a unit price. Removal and replacement of soft soils will not be allowed until a Change Order or Construction Change Directive has been approved by the Owner.

7. DISPOSITION OF UTILITIES

- (a) Rules and regulations governing the respective utilities shall be observed in executing all work under this section.

7. DISPOSITION OF UTILITIES (Cont'd)

- (b) Protect active utilities (existing utilities and new utilities installed under separate contract) from damage. Where active utilities are encountered but are not shown on the drawings, the Architect shall be advised; protect, support or relocate as directed by the Architect.

8. EXCAVATION FOR DRIVEWAYS, FOUNDATIONS AND BUILDING SLABS

- (a) Excavate for footings, walls, etc. as required by detailed drawings. Allow additional space as required for construction operations and for inspecting foundations.
- (b) Excavations should be performed with equipment capable of providing a clean bearing surface.
- (c) All footings where indicated shall bear on firm material capable of supporting building loads. Concrete shall be placed immediately after excavations are complete.
- (d) Fill required to raise grade to slab sub-base elevation shall be as hereinafter specified.
- (e) Shore, and brace excavations as required to maintain them secure; remove shoring as the backfilling progresses, but only when banks are safe against caving or collapse. All shoring shall conform to OSHA excavation criteria.
- (f) Control the grading around buildings to prevent water from running into the excavated areas or damaging the structures. Maintain all pits and trenches free of water at all times. Provide all pumping required to keep excavated spaces clear of water during construction. Should any springs or running water be encountered in the excavation, the Architect shall be notified and the Contractor shall provide free discharge of it by trenches and drain to an appropriate point of disposal as directed.
- (g) Do not place footings or slabs on frozen ground. When freezing temperature may be expected, do not excavate to the full depth indicated unless the footings or slabs can be placed immediately after the excavation has been completed. Protect the bottoms so excavated from frost if placing of concrete is delayed.

9. FILL FOR ROADWAYS, DRIVEWAYS AND BUILDING PADS

- (a) Fill required to raise the sub-grade for roadways, driveways and floor slabs to the elevations indicated on drawings shall be of approved earth or gravel, placed and compacted as specified.
- (b) Off-site fill material required to raise the subgrade elevation to required depths shall be free of organics, have a maximum particle size of three inches and a PI value of 8 to 15, and shall meeting the requirements as outlined in the Geotechnical Engineering Report. Fill shall be placed in 8 inch loose horizontal lifts, moisture content adjusted to plus or minus three percent of optimum and then compacted to 95 percent of Standard laboratory density (ASTM D-698).

9. FILL FOR ROADWAYS, DRIVEWAYS AND BUILDING PADS (Cont'd)

- (c) Field density tests will be taken on each completed lift of fill to verify its compaction. When the tests indicate that the density of any area or lift is below the required density or beyond the specified moisture contents, the failing portion should be reworked and then retested until results are within the specifications. The field density and moisture content tests should be spaced such that each test represents approximately 5,000 square feet per lift and with not less than 3 tests per 5,000 square feet of fill material. Testing services shall be contracted separately and paid for by the Contractor.
- (d) Drainage Fill: Provide four (4) inches of compacted, crushed stone drainage fill under all new building slabs on grade. Drainage fill shall meet same standards of quality and gradation as specified for coarse aggregate for concrete. No sand will be accepted.

10. SITE GRADING

- (a) Coordinate finish grading of disturbed areas with Finish Floor Elevations shown on the drawings. Provide smooth and even grades between Finish Floor Elevations and other site improvements.
- (b) Refer to Site Grading Plans and Landscape Plans for finish grading operations. Provide finish grading in accordance with Site Grading Plans avoiding ponding water and abrupt slopes.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of the installation or temporary and permanent erosion and sedimentation control system, installation of temporary and permanent slope protection systems, and Storm Water Pollution Prevention Plan (SWPPP).
- (c) Work specified elsewhere:
  - (1) 312200 - Grading.
  - (2) 329200 – Turf and Grasses.
  - (3) 329300 - Plants.

2. ENVIRONMENTAL REQUIREMENTS

- (a) Protect adjacent properties, any identified endangered or threatened species or critical habitat, any identified cultural or historic resources, and receiving water resources from erosion and sediment damage until final stabilization.

3. PREPARATION

- (a) Review the drawings and Storm Water Pollution Prevention Plan.
- (b) Revise SWPPP as necessary to address potential pollution from site identified after issuance of the SWPPP at no additional cost to owner.
- (c) Conduct storm water pre-construction meeting with Site Contractor, all ground-disturbing Sub-Contractors, site engineer of record or someone from their office familiar with the site and SWPPP, and state or local agency personnel in accordance with requirements of the special conditions.

4. EROSION and SEDIMENTATION CONTROL and SLOPE PROTECTION IMPLEMENTATION

- (a) Place erosion and sedimentation control systems in accordance with the drawing and Storm Water Pollution Prevention Plan or as may be dictated by site conditions in order to maintain the intent of the specifications and permits.
- (b) Deficiencies or changes on the drawings or Storm Water Pollution Prevention Plan shall be corrected or implemented as site conditions change. Changes during construction shall be noted in the Storm Water Pollution Prevention Plan and posted on the drawings (Site Maps).
- (c) Owner has authority to limit surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and embankment operations and to direct Contractor to provide immediate permanent or temporary pollution control measures.



4. EROSION and SEDIMENTATION CONTROL and SLOPE PROTECTION IMPLEMENTATION  
(Cont'd)
- (d) Maintain temporary erosion and sedimentation control systems as dictated by site conditions, indicated in the construction documents, or as directed by governing authorities or Owner to control sediment until final stabilization. Contractor shall respond to maintenance or additional work ordered by Owner or governing authorities immediately, but in no case, within not more than 48 hours if required at no additional cost to the Owner.
  - (e) Contractor shall incorporate permanent erosion control features, paving, permanent slope stabilization, and vegetation into project at earliest practical time to minimize need for temporary controls.
  - (f) Permanently seed and mulch cut slopes as excavation proceeds to extent considered desirable and practical.
  - (g) Unless required within a shorter timeframe by the applicable General Permit for Storm Water Discharges Associated with Construction Activity, slopes that erode easily or that will not be graded for a period of 14 days or more, shall be temporarily stabilized as work progresses with vegetation or other acceptable means in accordance with Section 329300 unless otherwise specified in the Contract Documents. In the event it is not practical to seed areas, slopes must be stabilized with mulch and tackifier, bonded fiber matrix, netting, blankets or other means to reduce the erosive potential of the area.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of termite treatment of soils at building pads with termiticide.
- (c) Work specified elsewhere:
  - (1) 312200 - Grading.
  - (2) 033000 - Cast-In-Place Concrete.
- (d) Submit EPA Registered label and product certificates signed by product manufacturer. Refer to Section 013323 – Shop Drawing, Product Data, and Samples for additional requirements affecting this section.

2. PERFORMANCE REQUIREMENTS

- (a) Service life of soil treatment by use of a termiticide that is effective for not less than five (5) years against infestation of subterranean termites.

3. QUALITY ASSURANCE

- (a) Installer shall be licensed according to regulations of the authority having jurisdiction to apply termite control treatment and products in the State of Arkansas.
- (b) Obtain termite control products from a single source manufacturer.

4. WARRANTY

- (a) Provide manufacturer's standard form, signed by the Applicator and Contractor certifying that the termite control work, consisting of applied soil termiticide treatment will prevent infestation of subterranean termites for a period on five (5) years from the date of application. If subterranean termite activity or damage is discovered during the warranty period, re-treatment of soil and repair or replace damage caused by the termite infestation shall be completed at no cost to the Owner.
- (b) Provide annually renewable warranty after warranty period, at Owner's option.

5. TERMITE CONTROL WORK

- (a) Termiticide shall be an EPA registered termiticide complying with the requirements of the authorities having jurisdiction, and in an aqueous solution formulated to prevent termite infestation. Provide quantity required for application at the label volume and rate for the maximum termiticide concentration allowed for each specific use.

5. TERMITE CONTROL WORK (Cont'd)

- (b) Apply termite soil protection at perimeter of all building pads and to all soil used in filling and backfilling operations. Application shall be in strict accordance with the manufacturer's written instructions, and in accordance with applicable authorities having jurisdiction.

END OF SECTION

**DIVISION 32 EXTERIOR IMPROVEMENTS**

321312 Concrete Paving

329200 Turf and Grasses

329300 Plants

## 1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) Furnish all labor and material necessary for the construction of surface improvements including concrete sidewalks, concrete driveways, and related items necessary to complete the work shown on the drawings and specified herein.
- (c) Work specified elsewhere:
  - (1) 033000 – Cast-In-Place Concrete.
  - (2) 312200 - Grading.

## 2. MATERIALS

- (a) PORTLAND CEMENT: ASTM C175, Type 1A (air entrained).
- (b) SAND: Clean hard natural material meeting the requirements of the Standard Specifications of the Arkansas Department of Transportation.
- (c) COARSE AGGREGATE: Coarse aggregate shall meet the requirements of ASTM C-33. Size shall be 1-1/4" down for all concrete.
- (d) MIXING WATER: Pure city water of drinkable quality.
- (e) METAL REINFORCEMENT: ASTM A 497 Steel wire spot-welded at intersections and of size indicated. Where size is not noted it shall be 6 by 6 inch mesh, W1.4 x W1.4. Use wire reinforcing only where indicated. Fabric shall be domestic and shall be supplied in "flat" sheets. Rolls will not be accepted.
- (f) EXPANSION JOINT FILLERS: Premolded cork ASTM D 1751. Joint fillers shall extend full depth of slab or joint and be 1/2" thick for exterior joints, 1/4" thick for interior joints unless noted otherwise on drawings.
- (g) FORMS: Clean, straight lumber or moisture resistant plywood in good condition conforming to U.S. Product Standard PS-1 B-B Concrete form, class 1, exterior grade.
- (h) AIR-ENTRAINING ADMIXTURE: Approved brand to meet the requirements of ASTM 260-74.

## 3. CONCRETE

- (a) All concrete used for sidewalk work shall be ready-mixed or job-mixed at the Contractor's option, and shall have a minimum strength of 3,500 psi @ 28 days, shall be mixed using either air-entraining Portland cement Type 1A (C175) or using air-entrainment admixtures (C260) and shall contain a water-reducing admixture. The maximum water-cement ratio shall be 0.45. Air entrainment shall be 5% (+/- 1%) by volume.

3. CONCRETE (Cont'd)

- (b) Concrete shall be placed on an evenly graded, well compacted and moistened sub-grade, with the tops of forms set at exact finished grades. Forms shall be true to line and of sufficient strength to resist the pressure of the concrete without springing. Concrete shall be well spaded along forms (including joint fillers) and shall be tamped and screeded to a dense surface. If machine finishing is used, forms shall be metal, otherwise wood may be used.

4. FORMS

- (a) Construct forms of clean, straight lumber or plywood, plumb and straight and sufficiently tight to prevent leakage in accordance with ACI 347, Recommended Practice for Concrete Formwork.
- (b) Brace and shore forms securely to prevent displacement during and after concrete pouring and to safely support construction loads.
- (c) Forms, completely assembled and erected, shall be approved before concrete pour is started.

5. REMOVAL OF FORMS

- (a) Remove forms in accordance with requirements of the ACI Building Code Requirements for Reinforced Concrete No. 318, Chapter 6, without damage to concrete and in manner to insure complete safety of the structure.
- (b) Upon removal of forms, notify the Architect in order that an inspection of the newly stripped surfaces may be made prior to patching.
- (c) Freshly stripped surfaces shall not be pointed up or touched in any manner before having been inspected by the Architect.

6. METAL REINFORCING

- (a) Place metal reinforcing accurately in position shown, securely fasten and support to prevent displacement before or during pouring. Cleaning, bending, placing and splicing of metal reinforcement shall be done in accordance with requirements of the 2015 International Building Code, ACI Manual of Standard Practice 315, (latest edition), and accepted shop drawings.
- (b) Furnish and support bars or accessories as necessary to provide the designated reinforcement to be placed in the location shown or specified.
- (c) Place reinforcing for a minimum of one day's pour, or for a full pour between joints before concrete is ordered.
- (d) Reinforcing steel and mesh, in place, shall be inspected before placing of concrete is started.

7. JOINTS

- (a) Edged joints shall be rounded with an edger having a radius of not larger than 1/8".
- (b) Control joints may be of either the sawed, formed dummy groove, premolded strip or keyed construction type. Sawed joints will not be allowed for control jointing in walks. Install control joints in concrete sidewalks to form square flags evenly spaced between expansion joints, but in no case more than 6'-0" o.c. maximum.
- (c) Expansion joints shall be of joint filler material as hereinbefore specified, shall be 1/2" in thickness, and depth shall be at least equal to the full thickness of the slab at the joint. Install expansion joints at junctions with other sidewalks, driveways, where walks abutt buildings and other fixed structures, and elsewhere as shown. Joint fillers shall be 30 ft. on center, maximum.
- (d) Sealing material for expansion and/or dummy joints shall be hot poured asphaltic-mineral type compound (M89). Joints shall be filled to be flush with the finished surfaces. Joints shall be clean, dry, ready to receive compound.

8. CONCRETE SIDEWALKS AND DRIVEWAYS

- (a) Sub-grade, curing, concrete content and joint filler shall be as hereinbefore specified. Refer to detailed drawings for joint type and locations, finish grades and thicknesses.
- (b) Thickness of concrete sidewalks and driveways shall be 4" or as indicated on drawings.
- (c) Tamp and screed concrete true to grade and section, bring sufficient mortar to surface for finishing. Round all edges, including those at joint fillers, 1/8" radius.
- (d) The final surface of concrete sidewalks and driveways shall have a uniform gritty texture free from excessive harshness and true to the grades and cross sections as required for proper drainage. The Architect may require changes in the final finishing procedure of belting, brooming or burlap drag as required to produce the desired final surface texture.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all materials, equipment and labor necessary for procurement and installation of topsoil, soil amendments for topsoil, finish grading, sodding, guarantee and replacement; and related items required to complete the work indicated on drawings and/or described in specifications, unless specifically excluded.
- (c) Work specified elsewhere:
  - (1) 329300 - Plants.

2. DESCRIPTION

- (a) Provide topsoil, soil amendments, and sodded lawns as shown and specified. The work includes:
  - (1) Placement of topsoil.
  - (2) Soil preparation.
  - (2) Sodding lawns.
  - (3) Maintenance.

3. QUALITY CONTROL

- (a) Provide and pay for materials testing. Testing agency shall be acceptable to the Owner. Provide the following data about the topsoil.
  - (1) pH factor
  - (2) Mechanical analysis.
  - (3) Percentage of organic content.
  - (4) Recommendations on type of quantity of additives required to establish satisfactory pH factor and supply of nutrients to bring topsoil to satisfactory level for planting.
- (b) Sod: Comply with American Sod Producers Association (ASPA) classes of sod materials.
- (c) Installer qualifications: Minimum of 5 years experience installing sod.



#### 4. SUBMITTALS

- (a) Submit the following in accordance with Section 013323 - Shop Drawings, Product Data, and Samples:
  - (1) Certificates of inspections as required by governmental authorities.
  - (2) Manufacturer's or vendors certified analysis for soil amendment and fertilizer materials.
  - (3) Sod grower's certification of grass species. Identify source location.
- (b) After lawn acceptance, submit type written instructions recommending procedures to be established by Owner for maintenance of sodded lawns for one full year.

#### 5. DELIVERY, STORAGE and HANDLING

- (a) Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery, and while stored at the site.
- (b) Time delivery of sod so that sod will be placed within 24 hours after stripping. Protect sod against drying and breaking of rolled strips.
- (c) Do not harvest or transport sod when moisture content may adversely affect sod survival.
- (d) Do not tear, stretch or drop sod during handling and installation.

#### 6. JOB CONDITIONS

- (a) Landscaper shall inspect the site and shall coordinate topsoil placement and sod work with all new and existing underground utilities on the site. Hand excavate as required to avoid possible damage of underground utilities. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned.
- (b) Work notification: Notify Owner at least 3 working days before sodding operations begin.
- (c) Protect existing utilities, paving, and other facilities from damage resulting from topsoil and sodding operations.
- (d) Restrict traffic from lawn areas until grass is established.
- (e) Provide hose and lawn-watering equipment during and after installation, and maintain until landscaping has been accepted by Owner.

#### 7. SEQUENCING AND SCHEDULING

- (a) Proceed with, and complete topsoil and sod work as rapidly as portions of site become available, working within seasonal limitations of the sod.

7. SEQUENCING AND SCHEDULING (Cont'd)

- (b) Perform sodding work only after plantings, and other work affecting ground surface has been completed. If planting of trees and shrubs occurs after lawn work, protect lawn areas and promptly repair damage to lawns resulting from planting operations

8. SOIL AMENDMENTS

- (a) Fertilizer: Granular in form, having neutral, non-burning character, not less than 50% organic, and guaranteed analysis as professional fertilizer.
  - (1) Top Dressing Fertilizer with formula in accordance with approved laboratory soil test report(s) at time of application.
  - (2) If not timely for fertilization due to seasonal changes, fertilize as required for that season. Include maintenance instructions to Owner for later fertilization in growing season.
- (b) Lime: Natural dolomitic limestone containing not less than 85 percent of calcium carbonates by weight. It shall be ground so that at least 50% will pass in a 10-mesh sieve and 90% will pass through a 20-mesh sieve. The application of limestone shall be in accordance with approved laboratory soil test report(s).

9. TOPSOIL

- (a) The top soil for all sod areas shall be fertile, friable, natural, of loamy character, without admixture of subsoil material, obtained from a well-drained arable site, reasonably free from clay, lumps, coarse sands, stones, plants, roots, sticks, and other foreign materials, with acidity between pH 6.0 and 6.8.
- (b) Identify source location of topsoil proposed for use on the project.
- (c) Topsoil provided shall be free of substances harmful to plants that will be grown in the soil.
- (d) Place and compact top soil to a compacted depth of 2" at lawn / sod areas and 8" at planting beds to prevent wash or settlement below the finished grade lines, but not too dense to discourage growth of sod. Form surface to true grades, smooth and even in all planes. Rake to true surface, and remove any stones larger than 1-1/4 inches. Maintain the surface against all wash and other displacement until completion and acceptance of sod.
- (e) Mix specified soil amendments and fertilizers with topsoil at rates specified. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.
- (f) Mix limestone at rate determined by soil test(s) into the soil prior to mixing fertilizer.

9. TOPSOIL (Cont'd)

- (h) Apply fertilizer at the approved rates. Apply fertilizer by mechanical rotary or drop type distributor, thoroughly and evenly incorporated with the soil depth of 2" by disking or other approved methods. Fertilize areas inaccessible to power equipment with hand tools and incorporate it into the soil thoroughly.
- (i) Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.
- (j) Restore lawn areas to specified condition, if eroded or otherwise disturbed, after fine grading and prior to sodding.

10. SOD MATERIALS

- (a) Certified nursery grade *Cynodon dactylon*. Also known as, Common Bermuda Grass.
- (b) Provide strongly rooted sod, not less than 2 years old, free of weeds, undesirable native grasses, nematodes, soil born insects, stones, thatch, roots, and extraneous material. Sod shall be uniform in color, texture, density, and capable of growth and development when planted.
- (c) Machine cut sod to pad thickness of 1 inch and not more than 42" in width with clean cut edges. Mow sod before stripping.
- (d) Provide sod of uniform pad sizes with maximum 5 percent deviation in either length or width. Broken pads or pads with uneven ends will not be acceptable. Sod pads incapable of supporting their own weight when suspended vertically with a firm grasp on upper 10 percent of pad will be rejected.

11. PREPARATION-GENERAL

- (a) Examine site and existing grading. Do not start topsoil or sodding work until unsatisfactory conditions are corrected.
- (b) Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.
- (c) Restore lawn areas to specified condition, if eroded or otherwise disturbed, after fine grading and prior to sodding.

12. SOD INSTALLATION

- (a) Lay sod within 24 hours from time of stripping. Do not plant sod if ground is muddy or frozen.
- (b) Install sod from existing curb line to back property line, and from side property line to side property line completely covering entire building lots and project site.

12. SOD INSTALLATION (Cont'd)

- (c) Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap edges. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Tamp or roll sod lightly to ensure contact with subgrade. Work sifted soil into minor cracks between pieces of sod; remove excess to avoid smothering of adjacent grass.
- (d) Provide sod pad top 1 inch below adjacent curbs, sidewalks, and flush with drains.
- (e) Where sod is installed adjacent to existing lawn areas, new sod shall be recessed so that a level and flush condition exists between existing and new lawn areas.
- (f) Install initial row of sod in a straight line, beginning at the bottom of slopes, perpendicular to the direction of the sloped area. Place subsequent rows parallel to and lightly against previously installed row.
- (g) Water sod thoroughly with a fine spray immediately after planting.

13. MAINTENANCE

- (a) Maintain lawns for not less than the period stated below, and longer as required to establish an acceptable lawn.
  - (1) Not less than 30 days after date of substantial completion of the entire project.
- (b) Maintain lawns by watering, spot weeding, fertilizing, weeding, mowing, trimming, application of herbicides, fungicides, insecticides, resodding and other operations as required to establish a smooth, acceptable lawn, free of eroded or bare areas, diseases, insects, undesirable grass species.
  - (1) Water sod every 2 or 3 days, to establish proper rooting.
  - (2) Repair, rework and resod all areas that have washed out or have eroded. Replace undesirable or dead areas with new sod.
  - (3) Mow lawn areas as soon as lawn top growth reaches a 4 inch height. Cut back to 3 inch height. Repeat mowing as required to maintain specified height. Not more than 40% of grass leaf shall be removed at any single mowing.
  - (4) Apply Top fertilizer to lawns approximately 30 days after sodding at recommended rate in soil test report(s). Apply evenly with a mechanical rotary drop type distributor. Thoroughly water into soil.
  - (5) Apply herbicides to control weed growth or undesirable grass species.
  - (6) Apply fungicides and insecticides to control diseases and insects.

14. CLEANUP AND PROTECTION

- (a) During topsoil placement and sodding work, keep pavements clean and work area in an orderly condition.
- (b) Upon completion of work, clear grounds of debris, superfluous materials and all equipment. Remove from site to satisfaction of Owner.
- (d) Protect sodding work and materials from damage due to landscape operations, operations by other contractors and trades and trespassers. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged sodding work as directed, at no additional cost to the Owner.

15. INSPECTION AND ACCEPTANCE

- (a) When sodding work is completed, including maintenance, Owner will, upon request, make an inspection to determine acceptability. The contractor shall provide notification to the Owner at least 5 working days before the requested inspection date.
  - (1) Sodded areas will be acceptable provided all requirements, including maintenance, have been complied with, and a healthy, even-colored viable lawn is established, free of weeds, undesirable grass species, disease and insects.
  - (2) If the date of substantial completion occurs in the dormant season, lawn areas will be reviewed at the beginning of the next growing season for compliance with this specification.
- (b) When inspected sodding work does not comply with requirements, replace rejected work and continue specified maintenance until reinspected and accepted by the Owner. Remove rejected sod and materials promptly from project site.
- (c) Upon substantial completion, acceptance of sodded areas, and at the end of the Contractor's maintenance period, the Owner will assume lawn maintenance.

16. WARRANTY

- (a) Warranty lawns after acceptance by the Owner for a period of one year against defects including death and unsatisfactory growth, except for defects resulting from neglect by Owner, abuse or damage by others, or unusual phenomena or incidents which are beyond Landscape Installer's control.
- (b) Replace in accordance with the drawings and specifications, all sod that is dead or, as determined by the Owner, in an unhealthy or unsightly condition. The cost of such replacement(s) is at the Contractor's expense. Warrant all replacement sod for 1 year after installation of such.
- (c) Warranty shall not include damage or loss of sodding caused by fires, floods, freezing rains, lightning storms, or winds over 75 miles per hour, winter kill caused by extreme, cold and severe winter conditions not typical of planting area; acts of vandalism or negligence on the part of the owner.

16. WARRANTY (Cont'd)

- (d) Replacements are subject to all requirements stated in this specification and subject to inspection and acceptance by the Owner.
- (e) Repair grades, lawn areas, paving, and any other damage resulting from replacement sodding operations, at no additional cost to the Owner.
- (f) Inspect job site monthly during warranty period to determine what changes, if any, should be made in the maintenance program. Submit all recommended changes in writing to the Owner.

END OF SECTION

1. SCOPE

- (a) The GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS as bound in the specification preamble apply to all work under this section.
- (b) This work consists of all materials, equipment and labor necessary for tree procurement and installation; shrub procurement and installation; groundcover procurement and installation; guarantee and replacement; and related items required to complete the work indicated on drawings and/or described in specifications, unless specifically excluded.
- (c) Work specified elsewhere:
  - (1) 329200 - Turf and Grasses.

2. QUALITY CONTROL

- (a) Installer Qualifications: The landscape contracting firm shall have a minimum of five years experience in the installation of planting projects of comparable size and quality. Workmanship shall be of the highest quality.
- (b) Standards:
  - (1) Plant names indicated comply with “Standardized Plant Names” as adopted by the latest edition of the American Joint Committee of Horticultural Nomenclature. Names of varieties not listed conform generally with names accepted by the nursery trade. Provide stock true botanical name and legibly tagged.
  - (2) Characteristics of individual plant species shall be as described in “Hortis Third”. The character of individual plant varieties not listed shall be as defined in current horticultural literature and practice.
  - (3) Comply with sizing and grading standards of the latest version of “American Standard for Nursery Stock”. A plant shall be dimensioned as it stands in its natural position.
- (c) All plants shall be nursery grown under climatic conditions similar to those in the locality of the project for a minimum of two years.
- (d) Provide trees, shrubs, and plants of quantity, size, genus, species, and variety shown and scheduled for landscape work and complying with recommendations and requirements of ANSI Z60.1 “American Standard for Nursery Stock”. Provide healthy, vigorous stock, grown in recognized nursery in accordance with good horticultural practice and free of disease, insects, eggs, larvae, and defects such as knots, sun-scald, injuries, abrasions or disfigurements.
- (e) Do not make substitutions. If specified landscape materials are not obtainable, submit proof of non-availability to Owner, together with proposal for use of equivalent material. For proof of non-availability, submit a written statement from a minimum of 6 reliable nursery sources (American Nurserymen’s Association Members) that the plant in question is not obtainable.

2. QUALITY CONTROL (Cont'd)

- (f) Stock furnished shall be at least the minimum size indicated. Larger stock is acceptable, if approved by Owner, at no additional cost, and providing that the larger plants will not be cut back to size indicated.
- (g) Plants may be inspected and approved at the place of growth, for compliance with specification requirements for quality, size, and variety. Such approval shall not impair the right of inspection and rejection upon delivery at the site or during the progress of work.
- (h) Label at least one tree and one shrub of each variety with a securely attached waterproof tag bearing legible designation of botanical and common name.
- (i) Where formal arrangements or consecutive order of trees or shrubs are shown, select stock for uniform height and spread, and label with number to assure symmetry in planting.

3. SUBMITTALS

- (a) Submit Certification with the following materials:
  - (1) Peat Moss
  - (2) Soil Conditioner
  - (3) Plant Fertilizer
- (b) Submit proposed planting schedule, indicating dates for each type of landscape work during normal seasons for such work in area of site. Correlation with specified maintenance periods to provide maintenance from date of substantial completion.
- (c) Planting Substitutions: Submit within 10 days following the award of contract a request for plant substitutions. Substitutions will not be considered after this date.
- (d) Upon completion of the installation, submit type written instructions recommending procedures to be established by Owner for maintenance of landscape work for one full year.
- (e) Approval: Obtain approval from Owner in writing for all submittals prior to beginning of work.

4. DELIVERY, STORAGE and HANDLING

- (a) Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery, and while stored at the site.
- (b) Shipment and Delivery:
  - (1) Promptly notify the Owner in advance, when the plant material is to be delivered and the manner of shipment.
  - (2) Furnish therewith an itemized list of the actual quantity and sizes of plant material.



4. DELIVERY, STORAGE and HANDLING (Cont'd)

- (3) Deliver the necessary inspection certificates to accompany each plant or shipment prior to acceptance and planting.
  - (4) When shipment is made by truck, pack all plant material to provide adequate protection against climate and breakage during transit and tie to prevent whipping.
  - (5) Cover the top of plant material with tarpaulin to minimize wind whipping and drying, or spray adequately with anti-transparent.
  - (6) Do not bend or bind-tie trees or shrubs in such a manner as to damage bark, break branches, or destroy natural shape.
  - (7) Use care at all times during delivery, handling, and on site storage to prevent damage to bark, branches, and root system.
  - (8) Employ a suitable method of handling to insure the careful nature of delivery of heavy balled and burlapped plants to prevent cracked plant balls. No balled plant shall be planted if the ball is cracked or broken either before or during the planting operation.
- (c) Deliver trees and shrubs after preparations for planting have been completed and plant immediately. If planting is delayed more than 6 hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture.
  - (d) Do not remove container grown stock from container until planting time.
  - (e) Do not remove labels attached to plant material until directed to do so by the Owner.

5. JOB CONDITIONS

- (a) Contractor shall inspect the site and shall coordinate plantings with all new and existing underground utilities on the site. Hand excavate as required to avoid possible damage of underground utilities. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned. All damage to utilities resulting from work covered in these specifications shall be repaired at the Contractor's expense.
- (b) Notify Owner at least three working days prior to installation of plant material.
- (c) When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions; notify Owner before commencing with planting.

6. SEQUENCING AND SCHEDULING

- (a) Proceed with, and complete landscape work as rapidly as portions of site become available, working within seasonal limitations for each kind of landscape work required. Schedule delivery of plant materials to closely coincide with installation to minimize stored plant materials.

6. SEQUENCING AND SCHEDULING (Cont'd)

- (1) Plant or install materials during normal planting seasons for each type of plant material required.
  - (2) Plant or install materials during suitable weather conditions.
  - (3) Correlate planting with specified maintenance periods to provide maintenance from date of substantial completion.
- (b) Plant trees and shrubs after final grades are established and prior to planting of lawns, unless otherwise acceptable to the Owner. If planting of trees and shrubs occurs after lawn work, protect lawn areas and promptly repair damage to lawns resulting from planting operations.
- (c) A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the Drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.

7. SOIL AMENDMENTS

- (a) Peat Moss: Brown to black in color, weed and seed free. Finely divided peat, so completely decomposed and free of fibers that its biological identity is lost. Provide in granular form, free of hard lumps and with pH range suitable for intended use.
- (b) Fertilizer: Commercial grade complete fertilizer of neutral character or suggested Grade by soil reports with some elements derived from organic sources and containing following percentages of available plant nutrients:
- (1) For trees and shrubs, provide fertilizer with not less than 5 percent total nitrogen, 10 percent available phosphoric acid and 5 percent soluble potash.
  - (2) If not timely for fertilization due to seasonal changes, fertilize for that season. Include maintenance instructions for later fertilization in growing season for Owner.
  - (3) Fertilizers must have guaranteed chemical analysis of contents marked on containers or sacks.
- (c) Soil Conditioners: Any of the following soil conditioners can be used, but must be used in accordance to the manufacturer's specifications. The same soil conditioner must be used throughout the installation.
- (1) Perlite: Conforming to National Bureau of Standards PS 23.
  - (2) Vermiculite: Horticultural grade, free of toxic substances.
  - (3) Manure: Well rotted, unleached stable or cattle manure containing not more than 25 percent by volume of straw, sawdust or other bedding materials and containing no chemicals or ingredients harmful to plants.

7. SOIL AMENDMENTS (Cont'd)

(4) Bonemeal: Commercial, raw, finely ground; 4 percent nitrogen and 20 percent phosphoric acid.

(d) Superphosphate: Soluble mixture of treated minerals; 20 percent available phosphoric acid.

8. PLANT MATERIALS- GENERAL

(a) Provide trees, shrubs, and other plants of size, genus, species, and variety shown and scheduled for landscape work and complying with recommendations and requirements of ANSI Z60.1 "American Standard for Nursery Stock".

(b) Plants shall have a habit of growth that is normal for a well maintained specimen of the species and shall be sound, healthy, vigorous and free from insect pests, plant diseases, and injuries. Plants to be selected for specific branching habit where a range of habit occurs within a species shall be furnished thickly branches as noted on the plant list. All plants shall be equal or exceed the measurements specifies in the plant list, which are minimum acceptable sizes. They shall be measured before pruning with branches in normal position. Pruning shall be done at the discretion of or as directed by the Owner, but in no case shall the plants supplied under this contract be pruned back to such an extent that they no longer meet specifications. Requirements of plants in the plant list generally follow the code of standards currently recommended by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock.

(c) There shall be no collected plant material. All plants shall be nursery grown.

(d) Plants furnished shall be at least the minimum size indicated. Larger stock is acceptable, at no additional cost, and providing that the larger plants will not be cut back to size indicated. Provide plants indicated by two measurements so that only a maximum of 25 % are of the minimum indicated and 75% are of the maximum size indicated.

(e) Furnish plants to match as closely as possible whenever symmetry is used.

(f) All plants balled and burlapped shall have firm natural balls of soil in sizes as set forth In the "American Standard for Nursery Stock" and shall be:

(1) Wrapped firmly with burlap or approved material

(2) Bound carefully with twine, cord, or wire mesh, in a manner so as not to damage bark, break branches, or destroy natural shape.

(3) Covered with moist soil, mulch, or other protection from drying if not planted immediately. Cracked or mushroomed balls are not acceptable.

9. PLANT MATERIALS - TREES

- (a) Provide trees of height and caliper scheduled or shown and with branching configuration recommended by ANSI Z60.1 for type and species required. Provide single stem trees except where special forms are shown or listed.
  - (1) Provide balled and burlapped (B&B) deciduous trees.
- (b) Determining dimensions for trees are caliper, height and spread. Caliper taken 6 inches above ground up to and including 4 inch caliper. Trees over 4 inch caliper measure 12 inches above ground. Height and spread dimensions specified refer to the main body of the plant and not from branch tip to tip. Take measurements with branches in normal position.
- (c) Provide evergreens of sizes shown or listed. Dimensions indicate minimum spread for spreading and semi-spreading type evergreens and height for other types, such as globe, dwarf, cone, pyramidal, broad upright, and columnar. Provide normal quality evergreens with well balanced form complying with requirements for other size relationships to the primary dimension shown.
  - (1) Provide balled and burlapped (B&B) evergreens.
- (d) No pruning wounds shall be present with a diameter of more than 1 inch and such wounds must show vigorous bark on all edges.
- (e) Plants planted in rows shall be matched in form.

10. PLANT MATERIALS - SHRUBS

- (a) The measurements for height shall be taken from the ground level to the average height of the top of the plant and not the longest branch. Single stemmed or thin plants will not be accepted.
- (b) Side branches shall be generous, well twigged, and the plant as a whole well bushed to the ground.
- (c) Provide shrubs of the height shown or listed and with not less than minimum number of canes required by ANSI Z60.1 for type and height of shrub required.
  - (1) Provide bare root deciduous shrubs, except where shown as "B&B", provide balled and burlapped shrubs.
  - (2) Container grown deciduous shrubs will be acceptable in lieu of balled and burlapped deciduous shrubs. Container plants shall not be loose in the containers.
- (d) Plants planted in rows shall be matched in form.

11. GROUND COVER

- (a) Provide plants established and well rooted in removable containers or integral peat pots and with not less than minimum number and length of runners required by ANSI Z60.1 for the pot size shown or listed.

12. MISCELLANEOUS LANDSCAPE MATERIALS

- (a) Steel Edging: Commercial steel edging 3/16" thick fabricated in sections with loops pressed from or welded to face of sections at 2' - 6" o.c. to receive stakes. Provide tapered steel stakes 16 inches long. Finish edging sections and stakes with manufacturer's standard green-black paint.
- (b) Anti-Erosion Mulch: Provide clean, seed-free salt hay or threshed straw of wheat, rye, oats, or barley.
- (c) Anti-Desiccant: Emulsion type, film-forming agent designed to permit transpiration, but retard excessive loss of moisture from plants. Deliver in manufacturer's fully identified containers and mix in accordance with manufacturer's instructions.
- (d) Burlap: Biodegradable jute mesh not less than 7.2 oz. per square yard.
- (e) Filtration/Separation Fabric: Water permeable filtration fabric of fiberglass or polypropylene fabric.
- (f) Wrapping: Tree-wrap tape not less than 4 inches wide, designed to prevent borer damage and winter freezing.
- (g) Stakes and Guys: Provide stakes and deadmen of sound new hardwood, treated softwood, or metal "T" posts. Stakes shall be 2x2 and vary in length from 18 inches to 42 inches. Provide wire ties and guys of 2-strand, twisted, pliable galvanized steel wire, not lighter than 10 ga.
- (h) Hose: Provide not less than ½ inch diameter rubber or plastic hose, cut to required lengths and of uniform color (black or dark green), material, and size to protect tree trunks from damage by wires. Used hoses are acceptable.
- (i) Water Transportation is the sole responsibility of the Contractor.
- (j) Mulch: Six month old, well rotted, organic hardwood bark free from deleterious materials and suitable for top dressing of trees, shrubs, or plants. Mulch shall not be larger than 4 inches in length and 2 inches in width and be free of wood chips and sawdust.
- (k) Pre-Emergence Herbicide: Shall be "Ronstar", or "Casaron". Apply at rates, times and manner recommended by the manufacturer.

13. PREPARATION-GENERAL

- (a) Contractor shall examine conditions under which planting is to be installed. Review site and drawings, and be familiar with alignment of underground utilities before digging.
- (b) Planting operations are to be performed at such times of the year as specified herein, with the stipulation that the Contractor guarantees the plant material as specified herein. Plant only during periods when weather conditions are suitable.
- (c) Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations and outline areas and secure Owner's acceptance before start of excavation for planting work. Make minor adjustments as may be required.

13. PREPARATION-GENERAL (Cont'd)

- (d) Notify Owner before planting in writing of adverse subsurface drainage or soil conditions. Obtain approval for method of correction prior to continuing work in the affected area. In the event that alternate locations are selected, the Contractor will prepare such areas at no additional expense to the Owner.
- (e) Planting shall be performed only by experienced workmen familiar with planting procedures under the supervision of a qualified supervisor.

14. PREPARATION OF PLANTING SOIL

- (a) Before mixing, clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth.
- (b) Mix specified soil amendments and fertilizers with topsoil at rates specified. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.
- (c) For pit and trench type backfill, mix planting soil prior to backfilling, and stockpile at site.
- (d) For plantings beds and lawns, mix planting soil either prior to planting or apply on surface of topsoil and mix thoroughly before planting.
  - (1) Mix lime with dry soil prior to mixing of fertilizer.
  - (2) Prevent lime from contacting roots of acid-loving plants.
  - (3) Apply phosphoric acid fertilizer (other than that constituting a portion of complete fertilizers) directly to subgrade before applying planting soil and tilling.

15. PREPARATION OF PLANTING BEDS

- (a) Locate planting beds as shown on the drawings.
- (b) All beds shall be thoroughly tilled and ripped to a minimum depth of 8 inches deep and mixed with specified soil amendments and fertilizers.
- (c) If excessive moisture or evidence of poor drainage is encountered in tree pits or planting beds, Contractor shall notify Owner before proceeding with work.
- (d) All shrub and groundcover plants shall be installed in prepared, continuous beds using specified planting mixture. Bed dimensions shall be at least 6 inches wider and 6 inches deeper than root system, except where indicated.
- (e) Fine grade surface of planting bed to assure positive drainage out of bed, and not to impede drainage from building, walks, curbs, or any hardscape that could cause fixture drainage problems.

16. EXCAVATION FOR TREES AND SHRUBS

- (a) Excavate pits, beds, and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage. Loosen hard subsoil in bottom of excavation.
  - (1) For bare root trees and shrubs, make excavations at least 12 inches wider than root spread and deep enough to allow for 9 inch setting layer of planting soil mixture on a layer of compacted backfill and with collar set at same grade level as in nursery, but 1 inch below finished grade at site.
  - (2) For balled and burlapped (B&B trees and shrubs), make excavations at least half again as wide as the ball diameter and equal to the ball depth, plus 6 inch thick setting layer of planting soil mixture for setting of ball on a layer of compacted backfill.
  - (3) For container grown stock, excavate as specified for balled and burlapped stock, adjusted to size of container width and depth.
- (b) Loosen hardpan and moisture barrier to a depth of 2 feet below the bottom of the tree pit or until hardpan has been broken and moisture is allowing to drain freely. For shrub pits, loose hardpan 8" below bottom of excavation or until hardpan has been broken and moisture is allowed to drain freely.
- (c) Dispose of subsoil removed from planting excavations. Do not mix with planting soil or use as backfill.
- (d) Fill excavations for trees and shrubs with water and allow water to percolate out prior to planting.

17. PLANTING TREES AND SHRUBS

- (a) Set balled and burlapped (B&B) stock on layer of compacted planting soil mixture, plumb and in center of pit or trench with top of ball at same elevation as adjacent finished landscape grades. Remove burlap from sides of balls; retain on bottoms. When set, place additional backfill around base and sides of ball, and work each layer to settle backfill and eliminate voids and air pockets. When excavation is approximately 2/3 full, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing final layer of backfill.
- (b) Set bare root stock on cushion of planting soil mixture. Spread roots and carefully work backfill around roots by hand and puddle with water until backfill layers are completely saturated. Plumb before backfilling and maintain plumb while working backfill around roots and placing layers of soil mixture above roots. Set collar 1 inch below adjacent finish landscape grades. Spread out roots without tangling or turning up to surface. Cut injured roots clean; do not break.
- (c) Set container grown stock, as specified, for balled burlapped stock, except cut cans on 2 sides with an approved can cutter; remove bottoms of wood boxes after partial backfilling so as not to damage root balls.
- (d) Create shallow saucers to the finish grade around edge of tree pits (approx. 4 to 6 inches). Create saucer by placing mound of topsoil around the edge of filled in pits. After the ground settles, additional solid shall be filled in to meet the level of finished grade.

17. PLANTING TREES AND SHRUBS (Cont'd)

- (e) Mulch pits, trenches, and planted areas. Provide not less than 3 inches thickness of mulch, and work into top of backfill and finish level with adjacent finish grades. Heavily water mulched areas. After watering, rake mulch to provide a uniform finished surface.
- (f) Apply anti-desiccant, using power spray, to provide an adequate film over trunks, branches, stems twigs and foliage.
  - (1) If deciduous trees or shrubs are moved when in fullleaf, spray with anti-desiccant at nursery before moving and spray again 2 weeks after planting.
- (g) Prune, thin out, and shape trees and shrubs in accordance with standard horticultural practice. Prune trees to retain required height and spread. Unless otherwise directed by Owner, do not cut tree leaders, and remove only injured or dead branches from flowering trees, if any. Prune shrubs to retain natural character and shape. Trees in areas of pedestrian traffic shall be limbed up as required to prevent any hazards or obstructions.
- (h) Remove and replace excessively pruned or misformed stock resulting from improper pruning.
- (i) Wrap tree trunks of 2 inches caliper and larger. Start at ground and cover trunk to height of first branches and securely attach. Inspect tree trunks for injury, improper pruning and insect infestation and take corrective measures before wrapping.
- (j) Guy and stake trees immediately after planting, as indicated. Plants shall be plumb after staking or guying. Maintain stakes, wires and guys until acceptance of the work in total.
  - (1) Staking trees of 1"-3" caliper: Drive stakes securely into ground and fasten to tree with wire and tie. Use hose around wire to is not in contact with plant.
  - (2) Staking trees of 1" caliper and under 4' height: Use single stake with rubber hose and wire loop around trunk.
- (k) Guy deciduous trees over 3" to 5" caliper and evergreen trees 4' to 8' tall as described and detailed. Position guys around trunk at approximately two-fifths the height of the tree. Anchor guys in ground either to steel rods driven securely into the ground with hose end 3" below finish grade or steel anchors securely screwed into ground with top at or below finished grade. Use hose wire to prevent wire from coming in contact with tree.

18. MISCELLANEOUS LANDSCAPE WORK

- (a) Install steel edging at perimeter of landscape beds. Anchor with steel stakes spaced not more than 3 feet o.c., and driven at least 1 inch below top elevation of edging. Provide tapered steel stakes 16 inches long. Finish edging sections and stakes with manufacturer's standard green-black paint. Edging shall extend 2 inch above lawn. Areas where groundcover or planting bed edge is adjacent to curb, concrete sidewalks, or building walls, there shall be no edging. Chamfer edging to be flush with finish grade adjacent to paving or curbs.



19. MAINTENANCE

- (a) Begin maintenance immediately after planting.
- (b) Maintain trees, shrubs, and other plants until final acceptance, but in no case, less than following period:
  - (1) 30 days after substantial completion of planting.
- (c) Maintain trees, shrubs, and other plants by pruning, cultivating, and weeding for healthy growth. Restore planting saucers. Tighten and repair stake and guy supports and reset trees and shrubs to proper grades or vertical position as required. Restore or replace damaged wrappings. Spray to keep trees and shrubs free of insects and disease.

20. CLEANUP AND PROTECTION

- (a) During landscape work, keep pavements clean and work area in an orderly condition.
- (b) Protect landscape work and materials from damage due to landscape operations, operations by other contractors and trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed.
- (c) Upon completion of work, clear grounds of debris, superfluous materials and all equipment. Remove from site to satisfaction of the Owner.

21. INSPECTION AND ACCEPTANCE

- (a) When landscape work is completed, including maintenance, the Owner will, upon request, make an inspection to determine acceptability. The contractor shall provide notification to the Owner at least 5 working days before the requested inspection date.
  - (1) Landscape work may be inspected for acceptance in portions as agreeable to Owner, provided each portion of work offered for inspection is complete, including maintenance.
- (b) When inspected landscape work does not comply with requirements, replace rejected work and continue specified maintenance until reinspected by Owner and found to be acceptable. Remove rejected plants and materials promptly from project site.
- (d) Upon substantial completion, acceptance of landscaped areas, and at the end of the Contractor's maintenance period, the Owner will assume maintenance.

22. WARRANTY

- (a) Warranty trees and shrubs, for a period of one year after date of acceptance, against defects including death and unsatisfactory growth, except for defects resulting from neglect by Owner, abuse or damage by others, or unusual phenomena or incidents which are beyond Contractor's control.

22. WARRANTY (Cont'd)

- (b) Remove and replace trees, shrubs, or other plants found to be dead or in unhealthy condition during warranty period. Make replacements during growth season following end of warranty period. All replacements shall be in accordance with drawing and specifications. The cost of such replacement(s) shall be at the Contractor's expense. Warrant all replacement plants for one year after installation.
- (c) Warranty shall not include damage or loss of trees, shrubs, or groundcovers caused by fires, floods, freezing rains, lightning storms, or winds over 75 miles per hour, winter kill cause by extreme, cold and severe winter conditions not typical of planting area; acts of vandalism or negligence on the part of the Owner.
- (d) Remove and immediately replace all plants, as determined by the Owner, to be unsatisfactory during the initial planting installation and one year warranty period.
- (e) Match adjacent specimens of same species. Replacements are subject to all requirements stated in this specification and subject to inspection by the Owner.
- (f) Repair grades, lawn areas, paving, and any other damage resulting from replacement planting operations, at no additional cost to the Owner.
- (g) Inspect job site monthly during warrant period to determine what changes, if any, should be made in the maintenance. In the absence of monthly written reports from the Contractor, it shall be assumed that the Contractor is satisfied with the Owner's maintenance operations and procedures and waives any and all claims for damages against the Owner with respect to the warranty requirements of this specification.
- (h) At the close of the warranty period, one year after acceptance of the work, notify the Owner in writing of the date for warranty inspection. Make any repairs or replacements identified by the Owner in the Warranty inspection.

END OF SECTION

**OWNER**

**THEIL ROAD PROPERTIES, LP**

612 E. Canal Street, Paragould, Arkansas 72450 PHONE (870) 239-8084

\_\_\_\_\_  
*(OWNER'S SIGNATURE)*

\_\_\_\_\_  
*(DATE)*

**ARCHITECT**

**STUDIO 6 ARCHITECTS**

1120 Garrison Avenue, Suite 1A, Fort Smith, Arkansas 72901 PHONE (479) 782-4085

\_\_\_\_\_  
*(ARCHITECT'S SIGNATURE)*

\_\_\_\_\_  
*(DATE)*

**GENERAL CONTRACTOR**

**CRAIG CUSTOM CONSTRUCTION, LLC**

13200 W. Markham Street, Suite 104, Little Rock, Arkansas 72211 PHONE (501) 255-6688

\_\_\_\_\_  
*(CONTRACTOR'S SIGNATURE)*

\_\_\_\_\_  
*(DATE)*

**CONTRACTOR'S BONDING COMPANY**

**NORTH AMERICAN SPECIALTY INSURANCE COMPANY**

1200 Main Street, Suite 800, Kansas City, Missouri 64105-2478

\_\_\_\_\_  
*(CONTRACTOR'S BONDING COMPANYSIGNATURE)*

\_\_\_\_\_  
*(DATE)*

**MORTGAGE COMPANY**

**PRUDENTIAL HUNTOON PAIGE**

6805 Morrison Blvd, Suite 385, Charlotte, North Carolina 28211

\_\_\_\_\_  
*(MORTGAGE COMPANY'S SIGNATURE)*

\_\_\_\_\_  
*(DATE)*

END OF SIGNATURE PAGE

January 29, 2021

# STORMWATER POLLUTION PREVENTION PLAN

Prepared for:

CB/DB PROPERTIES, LLLP

## HILLSIDE MANOR

Submitted to:

City of Paragould

301 West Court St.

Paragould, AR 72450

**CT JOB NO.** 20804700



**Crafton Tull**

Prepared by:  **Crafton Tull**

10825 Financial Centre Parkway, Suite 300 | Little Rock, AR 72211 | 501-664-3245 | [www.craftontull.com](http://www.craftontull.com)



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**AR150000 LARGE SITE SWPPP**

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**AR150000 LARGE SITE  
SWPPP**

Stormwater Pollution Prevention Plan (SWPPP) for Construction Activity  
for Large Construction Sites

National Pollutant Discharge Elimination System (NPDES)  
General Permit # ARR150000

Prepared for:  
Hillside Manor-Paragould, AR

Date:  
December 22, 2020

Prepared by:  
Crafton, Tull & Associates, Inc.  
10825 Financial Center Parkway  
Suite 300  
Little Rock, AR 72211

Project Name and Location: Hillside Manor-Paragould, AR

Property Parcel Number (Optional): \_\_\_\_\_

Operator Name and Address:

Paragould Housing Authority  
612 Canal St.  
Paragould, AR 72450

A. Site Description

a. Project description, intended use after NOI is filed:

That part of the Southeast Quarter of the Southeast Quarter of Section 19, Township 17 North, Range 6 East, being more particularly described as follows: beginning at a found rebar marking the Southwest Corner of said SE1/4 SE1/4, run thence N 0° 14'40"E 330.30 feet to the South Line of a survey dated March 22, 1983 by Marvin Jernigan, run thence N 89°53'01"E along said 1983 Line 1299.83 feet to the West Right of Way of Rector Road, run thence S 0°33'31"W along said right of way 332.64 feet to the South Line of said SE1/4 SE1/4, run thence s 89°59'11"W 1297.99 feet to the true Point of Beginning, containing 9.88 acres, more or less, subject to any Utility Easements or Right Of Way of record.

b. Sequence of major activities which disturb soils:

Phase I

1. Install stabilized construction entrances/exits.
2. Prepare temporary parking and storage areas. Upon implementation and installation of the following: trailer, parking, lay down, porta-potty, wheel wash, concrete wash-out, mason's area, fuel and material storage containers, solid waste containers, etc., denote them on the site maps immediately and note any changes in the locations as they occur throughout the construction process.
3. Construct the silt fences on the site.
4. Construct the sedimentation and sediment trap basins.
5. Halt all activities and contact the civil engineer consultant to perform inspection of BMPs. General contractor shall schedule and conduct storm water pre-construction meeting with engineer and all ground-disturbing contractors before proceeding with construction.
6. Clear and grub the site.
7. Start construction of the building pad and structures.



8. Begin grading the site.

Phase II

1. Temporarily seed denuded areas.
2. Install utilities, underdrains, storm sewers, curbs and gutters.
3. Install rip-rap around out structures.
4. Install inlet protection around all storm sewer structures.
5. Prepare site for paving.
6. Pave site.
7. Install inlet protection devices.
8. Complete grading and install permanent seeding and planting.
9. Remove all temporary erosion and sediment control devices if site is stabilized.

c. Total Area<sup>1</sup>: 9.88 acres Disturbed Area<sup>2</sup>: 9.88 acres

d. Soils Information:

- i. Runoff Coefficient Pre-Construction (See Appendix A) : 0.60
- ii. Runoff Coefficient Post-Construction (See Appendix A) : 0.60
- iii. Describe the soil or the quality of any discharge from the site: Loring silt loam with 1% to 3% slopes on the western 2/3<sup>rd</sup> of the site and 3% to 8% slopes to the eastern 1/3<sup>rd</sup> portion.

B. Responsible Parties

*Be sure to assign all SWPPP related activities to an individual or position; even if the specific individual is not yet known (i.e. contractor has not been chosen).*

Individual/Company	Phone Number	Service Provided for SWPPP (i.e., Inspector, SWPPP revisions, Stabilization Activities, BMP Maintenance, etc.)
Hillside Manor of Paragould GP, Inc.		Owner
Crafton, Tulll & Associates, Inc.	501-664-3245	Engineer

C. Receiving Waters

- a. The following waterbody (or waterbodies) receives stormwater from this construction site: \_\_\_\_\_
- b. Is the project located within the jurisdiction of an MS4?  Yes  No
  - i. If yes, Name of MS4: The City of Paragould

c. Ultimate Receiving Water:

- |   |   |
|---|---|
| <input type="checkbox"/> Red River      | <input type="checkbox"/> White River                  |
| <input type="checkbox"/> Ouachita River | <input checked="" type="checkbox"/> St. Francis River |
| <input type="checkbox"/> Arkansas River | <input type="checkbox"/> Mississippi River            |

<sup>1</sup>Increases in total acreage require an additional acreage request, an updated SWPPP and a \$200 modification fee to be submitted to ADEQ.

<sup>2</sup>Increases in only disturbed acreage require an additional acreage request and an updated SWPPP to be submitted to ADEQ.

D. Documentation of Permit Eligibility Related to the 303(d) list and Total Maximum Daily Loads (TMDL) (<https://www.adeg.state.ar.us/water/planning/>)

a. Does the stormwater enter a waterbody on the 303(d) list or with an approved TMDL?  Yes  No

b. If yes:

- i. Waterbody identified on 303(d) list: N/A
- ii. Pollutant addressed on 303(d) list or TMDL: N/A
- iii. This specific project, or generally construction activity i.e. surface erosion, is identified on 303(d) list or associated assumptions and allocations identified in the TMDL for the discharge:  Yes  No
- iv. Additional controls implemented: N/A

E. Attainment of Water Quality Standards After Authorization

a. The permittee must select, install, implement, and maintain BMPs at the construction site that minimize pollutants in the discharge as necessary to meet applicable water quality standards. In general, except in situations explained below, the SWPPP developed, implemented, and updated to be considered as stringent as necessary to ensure that the discharges do not cause or contribute to an excursion above any applicable water quality standard.

b. At any time after authorization, the Department may determine that the stormwater discharges may cause, have reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. If such a determination is made, the Department will require the permittee to:

- i. Develop a supplemental BMP action plan describing SWPPP modifications to address adequately the identified water quality concerns and submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or
- ii. Cease discharges of pollutants from construction activity and submit an individual permit application.

I understand and agree to follow the above text regarding the attainment of water quality standards after authorization. Yes No

F. Site Map Requirements (Attach Site Map):

- a. Pre-construction topographic view;
- b. Direction of stormwater flow (i.e., use arrows to show which direction stormwater will flow) and approximate slopes anticipated after grading activities;
- c. Delineate on the site map areas of soil disturbance and areas that will not be disturbed under the coverage of this permit;
- d. Location of major structural and nonstructural controls identified in the plan;
- e. Location of main construction entrance and exit;
- f. Location where stabilization practices are expected to occur;
- g. Locations of off-site materials, waste, borrow area, or equipment storage area;
- h. Location of areas used for concrete wash-out;
- i. Location of all surface water bodies (including wetlands) with associated natural buffer boundary lines. Identify floodplain and floodway boundaries, if available;
- j. Locations where stormwater is discharged to a surface water and/or municipal separate storm sewer system if applicable,
- k. Locations where stormwater is discharged off-site (should be continuously updated);
- l. Areas where final stabilization has been accomplished and no further construction phase permit requirements apply;
- m. A legend that identifies any erosion and sediment control measure symbols/labels used in the site map and/or detail sheet; and
- n. Locations of any storm drain inlets on the site and in the immediate vicinity of the site.

G. Stormwater Controls

- a. Initial Site Stabilization, Erosion and Sediment Controls, and Best Management Practices:
  - i. Initial Site Stabilization: For larger common plans, only streets, drainage, utility areas, areas needed for initial construction of streets and areas needed for storm water structures may be disturbed initially. Upon stabilization of the initial areas, additional areas may be disturbed. In particular, the areas required for construction of the new residential lots will be disturbed.

- ii. Erosion and Sediment Controls: The construction-phase erosion (such as site stabilization) and sediment controls (such as check dams) shall be constructed to retain sediment on-site. All sediment and erosion controls are shown on the Phase I and II Erosion Control Plans. Specifically, silt fence, and inlet protection will be used to retain sediment on site.
- iii. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the operator will replace or modify the control for site situations: Yes No  
If No, explain: \_\_\_\_\_  
\_\_\_\_\_
- iv. Off-site accumulations of sediment will be removed at a frequency sufficient to minimize off-site impacts: Yes No  
If No, explain: \_\_\_\_\_  
\_\_\_\_\_
- v. Sediment will be removed from sediment traps or sedimentation ponds when design capacity has been reduced by 50%: Yes No  
If No, explain: \_\_\_\_\_  
\_\_\_\_\_
- vi. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges: Yes No  
If No, explain: \_\_\_\_\_  
\_\_\_\_\_
- vii. Off-site material storage areas used solely by the permitted project are being covered by this SWPPP: Yes No  
If Yes, explain additional BMPs implemented at off-site material storage area: \_\_\_\_\_  
\_\_\_\_\_

b. Stabilization Practices

i. Description and Schedule:

1. Temporary Seeding or Stabilization – Areas may be stabilized temporarily with the use of fast-germinating annual grass/grain varieties, straw/hay mulch, wood cellulose fibers, tackifiers, netting or blankets.
2. Permanent Seeding or Sodding – All areas at final grade must be seeded or sodded within 14 days after completion of work in any area. The entire site must have permanent vegetative cover established in all areas not covered by hardscape at the completion of all soil disturbing activities on site. Except for small

level spots, seeded areas should generally be protected with mulch or a rolled erosion control product. All areas to be seeded will have topsoil and other soil amendments.

ii. Are buffer areas required? Yes No

If Yes, are buffer areas being used? Yes No

If Yes, describe natural buffer areas: \_\_\_\_\_  
\_\_\_\_\_

If No, explain why not: \_\_\_\_\_  
\_\_\_\_\_

iii. A record of the dates when grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included with the plan.

Yes No

If No, explain: \_\_\_\_\_  
\_\_\_\_\_

iv. Deadlines for stabilization:

1. Stabilization procedures will be initiated 14 days after construction activity temporarily ceases on a portion of the site.
2. Stabilization procedures will be initiated immediately in portions of the site where construction activities have permanently ceased.

c. Structural Practices

i. Describe any structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site: Check dams, silt fence, erosion control blankets, sediment basins, and silt dikes will be used to divert flows from exposed soils. Alternative means may be required throughout the course of construction.

ii. Describe Velocity Dissipation Devices: Curb inlet gravel sediment filters and silt fence placed at the top of slopes.

iii. Sediment Basins:

Are 10 or more acres draining to a common point? Yes No

Is a sediment basin included in the project? Yes No

If Yes, what is the designed capacity for the storage?

3600 cubic feet per acre = : \_\_\_\_\_

or

10 year, 24 hour storm = : \_\_\_\_\_

Other criteria were used to design basin: The 25-year frequency storm runoff was utilized to design the shape and depth of the sediment basin for the off-site and on-site drainage basins.

If No, explain why no sedimentation basin was included and describe required natural buffer areas and other controls implemented instead: \_\_\_\_\_  
\_\_\_\_\_

#### H. Other Controls

a. Solid materials, including building materials, shall be prevented from being discharged to Waters of the State:  Yes  No

b. Off-site vehicle tracking of sediments and the generation of dust shall be minimized through the use of:

A stabilized construction entrance and exit

Vehicle tire washing

Other controls, describe: \_\_\_\_\_  
\_\_\_\_\_

a. Temporary Sanitary Facilities: All personnel involved with construction activities must comply with state and local sanitary or septic system regulations. Temporary sanitary facilities will be provided at the site throughout the construction phase. They must be utilized by all construction personnel and will be serviced by a commercial operator.

c. Concrete Waste Area Provided:

Yes

No. Concrete is used on the site, but no concrete washout is provided.

Explain why: \_\_\_\_\_  
\_\_\_\_\_

N/A, no concrete will be used with this project

d. Fuel Storage Areas, Hazardous Waste Storage, and Truck Wash Areas: Temporary on-site fuel tanks for construction vehicles shall meet all state and federal regulations. Any hazardous or potentially hazardous material that is brought onto the construction site will be handled properly in order to reduce the potential for storm water pollution. All materials used on this construction site will be properly stored, handled, dispensed, and disposed of following all applicable label directions. A concrete washout area will be provided on site.

I. Non-Stormwater Discharges

a. The following allowable non-stormwater discharges comingled with stormwater are present or anticipated at the site:

- Fire-fighting activities;
- Fire hydrant flushings;
- Water used to wash vehicles (where detergents or other chemicals are not used) or control dust in accordance with Part II.A.4.H.2;
- Potable water sources including uncontaminated waterline flushings;
- Landscape Irrigation;
- Routine external building wash down which does not use detergents or other chemicals;
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents or other chemicals are not used;
- Uncontaminated air conditioning, compressor condensate (See Part I.B.13.C of the permit);
- Uncontaminated springs, excavation dewatering and groundwater (See Part I.B.13.C of the permit);
- Foundation or footing drains where flows are not contaminated with process materials such as solvents (See Part I.B.13.C of the permit);

b. Describe any controls associated with non-stormwater discharges present at the site: \_\_\_\_\_  
\_\_\_\_\_

J. Permanent Controls for Post-Construction Stormwater Management:

Describe measures installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed: In the event of non-stormwater discharges listed above, the resulting flow will be routed to structural control devices listed in Section C to include silt fences, erosion control blankets, sediment basins, sediment filters, and check dams. Alternative means may be required throughout the course of construction.

K. Applicable State or Local Programs: The SWPPP will be updated as necessary to reflect any revisions to applicable federal, state, or local requirements that affect the stormwater controls implemented at the site.  Yes  No

L. Inspections

a. Inspection frequency:

Every 7 calendar days

or

At least once every 14 calendar days and within 24 hours of the end of a storm even 0.25 inches or greater (a rain gauge must be maintained on-site)

b. Inspections:

Completed inspection forms will be kept with the SWPPP.

ADEQ's inspection form will be used (See Appendix B)

or

A form other than ADEQ's inspection form will be used and is attached  
(See inspection form requirements Part II.A.4.L.2)

c. Inspection records will be retained as part of the SWPPP for at least 3 years from the date of termination.

d. It is understood that the following sections describe waivers of site inspection requirements. All applicable documentation requirements will be followed in accordance with the referenced sections.

i. Winter Conditions (Part II.A.4.L.4)

ii. Adverse Weather Conditions (Part II.A.4.L.5)

M. Maintenance:

The following procedures to maintain vegetation, erosion and sediment control measures and other protective measures in good, effective operating condition will be followed: Seeding will be irrigated to ensure the survival of ground cover. Sediment will be removed from silt fences and check dams when they are 50% infilled. Other maintenance issues could be realized during the construction process and will be handled at that time.

Any necessary repairs will be completed, when practicable, before the next storm event, but not to exceed a period of 3 business days of discovery, or as otherwise directed by state or local officials.

N. Employee Training:

The following is a description of the training plan for personnel (including contractors and subcontractors) on this project: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*\*Note, Formal training classes given by Universities or other third-party organizations are not required, but recommended for qualified trainers; the permittee is responsible for the content of the training being adequate for personnel to implement the requirements of the permit.



Certification

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible or Cognizant Official: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**APPENDIX A:  
NOTICE OF INTENT (NOI)**



ARKANSAS  
Department of Environmental Quality

1

**NOTICE OF INTENT  
FOR DISCHARGES OF STORMWATER  
ASSOCIATED WITH LARGE CONSTRUCTION ACTIVITY  
AUTHORIZED UNDER NPDES GENERAL PERMIT ARR150000**

The enclosed form may be used to obtain coverage under NPDES general permit ARR150000 for discharges of stormwater associated with large construction activity at any site or common plan of development or sale that will result in the disturbance of five (5) or more acres of total land area.

Return the completed form to:

Arkansas Department of Environmental Quality  
Permit Branch, Office of Water Quality  
5301 Northshore Drive  
North Little Rock, AR 72118

Unless notified by the Director to the contrary, dischargers who submit a complete Notice of Intent in accordance with the requirements of this permit are authorized to discharge stormwater from construction sites under the terms and conditions of this permit two weeks after the date the NOI is postmarked.

As required by ADEQ Regulation No. 9, an initial permit fee of \$200.00 must be submitted with this NOI. Subsequent annual fees of \$200.00 per year will be billed by the Department. Failure to remit the required permit fee may be grounds for the Director to deny coverage under this general permit, and to require the owner or operator to apply for an individual NPDES permit.

**NOTE: A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE PREPARED PRIOR TO SUBMITTAL OF THIS NOI PER PART II.A OF THE GENERAL PERMIT. THE SWPPP MUST BE SUBMITTED FOR REVIEW ALONG WITH THIS NOI FOR LARGE CONSTRUCTION SITES PER PART I.B.6.B OF THE GENERAL PERMIT.**

For additional information please contact:

Stormwater Runoff Engineer  
Ph.: (501) 682-0623  
Fax: (501) 682-0880  
website: [www.adeq.state.ar.us](http://www.adeq.state.ar.us)

## INSTRUCTIONS

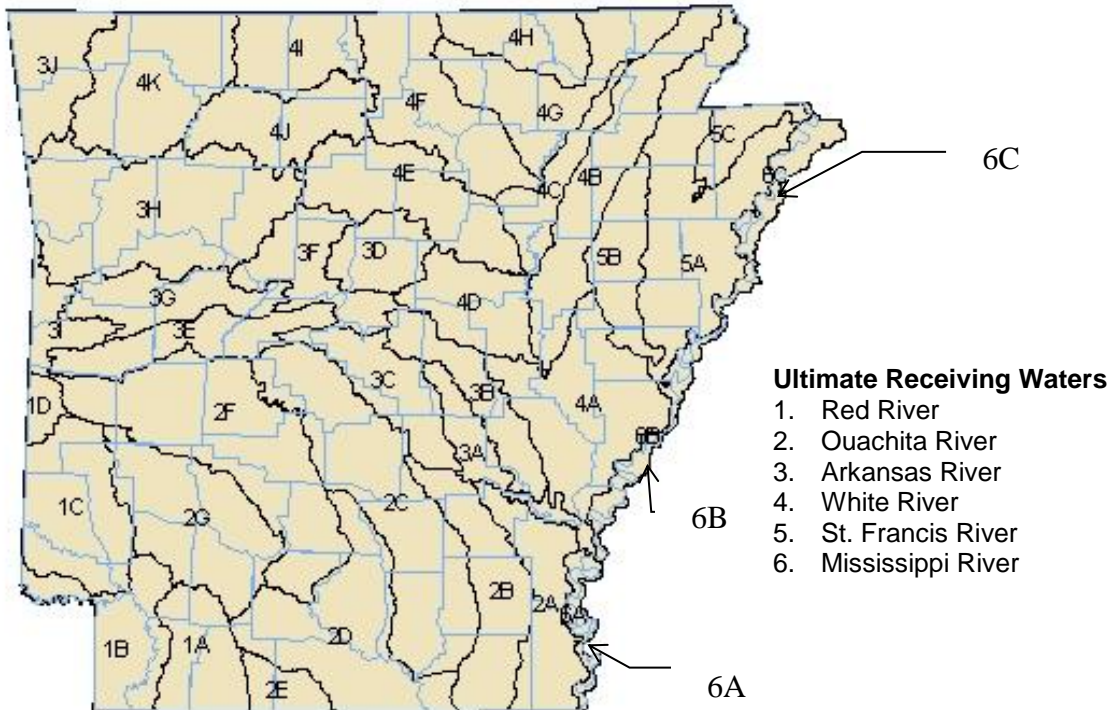
### I. How to Determine Latitude and Longitude:

1. If a physical address is known go to [www.teraserver-usa.com](http://www.teraserver-usa.com).
2. Select Advanced Find
3. Select Address
4. Input address
5. Click on Aerial Photo
6. Click on the Info link at the top of the page
7. Note the Latitude and Longitude are in Decimal Coordinates.
8. Go to [www.geology.enr.state.nc.us/gis/latlon.html](http://www.geology.enr.state.nc.us/gis/latlon.html) to convert coordinates to Degrees, Minutes, and Seconds.

NOTE: If a physical address does not exist you may find the coordinates in the Legal Description of the property.

## II. How to Determine your Ultimate Receiving Waters:

1. Locate the county of your project.
2. Find the numbered segment overlaying the county. For example 2C overlays most of Saline County.
3. Match the number from the segment to the one of the numbered Ultimate Receiving Waters. For example: A project located in Western Saline County is in segment 2C. The “2” determines that the Ultimate Receiving Water for the project is the Ouachita River.



## III. How to determine if the receiving stream is on the approved Arkansas 303(d) List:

1. Go to [www.epa.gov/owow/tmdl](http://www.epa.gov/owow/tmdl)
2. Using the map of the United States, click on Arkansas.
3. Using the “Waters Listed by Waterbody Type” links search for your receiving stream.
4. If your receiving stream is not listed, than your receiving stream is not on the approved Arkansas 303(d) List.
5. If your receiving stream is listed, then click on the links for that receiving stream to determine the pollutants causing the impairment. If the receiving stream is listed as an impaired for any pollutant, you must incorporate into the SWPPP any additional BMPs needed to sufficiently protect water quality. The Department may require additional BMPs.
6. Once a determination is made that your receiving stream is on the approved Arkansas 303(d) List, than you must determine if the receiving stream has an approved TMDL by using the “Approved TMDLs by Pollutant since January 1, 1996” links toward the bottom of the webpage.
  - i. If the approved TMDL has established a specific numeric allocation that would apply to a project’s discharges, you will be required to incorporate the allocation into your SWPPP and implement steps to meet the allocation.
  - ii. If the approved TMDL has assigned to the facility, quarterly monitoring must be submitted to the Department demonstrating compliance with the assigned Waste Load Allocation.

## IV. How to obtain information in regard to Endangered Species:

Contact the U.S. Fish and Wildlife Service at (501) 513-4470 or [www.fws.gov/arkansas-es](http://www.fws.gov/arkansas-es).

Arkansas Department of Environmental Quality  
Permits Branch, Office of Water Quality  
5301 Northshore Drive  
North Little Rock, AR 72118  
(501) 682-0623

NOTICE OF INTENT  
FOR DISCHARGERS OF STORMWATER RUNOFF  
ASSOCIATED WITH LARGE CONSTRUCTION ACTIVITY  
AUTHORIZED UNDER NPDES GENERAL PERMIT ARR150000

Application Type: New  Renewal  (Permit Tracking Number ARR(150000))

I. PERMITTEE/OPERATOR INFORMATION

Permittee (Legal Name): Hillside Manor of Paragould GP, Inc Operator Type:  
Permittee Mailing Address: 612 East Cannel Street  STATE  PARTNERSHIP  
Permittee City: Paragould  FEDERAL  CORPORATION\*  
Permittee State: AR Zip: 72450  SOLE PROPRIETORSHIP  
Permittee Telephone Number: \_\_\_\_\_  PUBLIC  OTHER  
Permittee Fax Number \_\_\_\_\_  
Permittee E-mail Address \_\_\_\_\_ \*State of Incorporation: AR

\* The legal name of the Permittee must be identical to the name listed with the Arkansas Secretary of State.

II. INVOICE MAILING INFORMATION

Invoice Contact Person: David Lange City: Paragould  
Invoice Mailing Company: Hillside Manor of Paragould GP, Inc. State: AR Zip: 72450  
Invoice Mailing Address: 612 East Canal Street Telephone: \_\_\_\_\_

III. FACILITY/PROJECT CONSTRUCTION SITE INFORMATION

1 acre = 43,560 square feet

Project Name: Hillside Manor Contact Person: \_\_\_\_\_  
Project County: Greene Project Physical Address: 2002 Rector Rd.  
Directions to the Project: West of the interesection of Project City: Paragould Zip: \_\_\_\_\_  
S. New Friendship Rd. and Goldsmith Rd. Telephone Number: \_\_\_\_\_  
Project Estimated Start Date: February 2021 Total amount of soil to be disturbed  
(estimate to nearest 1/2 acre): 10.00  
Project Estimated End Date: February 2022 Total Project Acreage  
(Estimate to nearest 1/2 acre): 10.00  
Project Latitude: \_\_\_\_\_ 36 degrees \_\_\_\_\_ 04 minutes \_\_\_\_\_ 56.33 seconds  
Project Longitude: \_\_\_\_\_ -90 degrees \_\_\_\_\_ 28 minutes \_\_\_\_\_ 34.75 seconds  
Type of Project: Subdivision  School  Other: Two-Family Dwellings  
Facility SIC Code(s): \_\_\_\_\_ NAICS Code (s): \_\_\_\_\_  
Is the Project part of a larger common plan of development or sale? Yes  No   
Linear Project Starting Coordinates (if applicable): \_\_\_\_\_ Linear Project Ending Coordinates (if applicable): \_\_\_\_\_  
Latitude: \_\_\_\_\_° \_\_\_\_\_' \_\_\_\_\_" Longitude: \_\_\_\_\_° \_\_\_\_\_' \_\_\_\_\_" Latitude: \_\_\_\_\_° \_\_\_\_\_' \_\_\_\_\_" Longitude: \_\_\_\_\_° \_\_\_\_\_' \_\_\_\_\_"

**Arkansas Department of Environmental Quality  
Permits Branch, Office of Water Quality  
5301 Northshore Drive  
North Little Rock, AR 72118  
(501) 682-0623**

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**IV. DISCHARGE INFORMATION**

Name of Receiving Stream (i.e. an unnamed tributary of Mill Creek, thence into Mill Creek; thence into Arkansas River):

An unnamed tributary of unnamed creek, thence into St. Francis River

Choose Your Ultimate Receiving Stream: Red River  Ouachita River  Arkansas River   
White River  St. Francis River  Mississippi River

Name of Receiving Municipal Storm Sewer System (If applicable): The City of Paragould

Will you be conducting any in-stream or wetted area activities (i.e. re-routing, trenching, stabilizing, sloping, etc.)? \_\_Yes XNo

If yes, have you obtained an approval for a Short Term Activity Authorization (STAA) from the Department? \_\_Yes \_\_No

Is the stream or wetted area considered "Waters of the United States"? \_\_Yes \_\_No

If yes, have you obtained a 404 permit from the U.S. Army Corps of Engineers? \_\_Yes \_\_No

For information regarding what constitutes "Waters of the United States" please contact the U.S. Army Corps of Engineers, Regulatory Division in the District in which the activity is to take place. Below is the contact information for the three U.S. Army Corps of Engineers Districts in the State:

Little Rock District Ph: (501) 324-5295, [CESWL-Regulatory@usace.army.mil](mailto:CESWL-Regulatory@usace.army.mil)  
Vicksburg District: Ph: (601) 631-7071, [regulatory@usace.army.mil](mailto:regulatory@usace.army.mil)  
Memphis District: Ph: (901) 544-3471, [MemphisPAO@usace.army.mil](mailto:MemphisPAO@usace.army.mil)

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**V. FACILITY/SITE PERMIT INFORMATION**

NPDES Individual Permit Number (If Applicable): AR00

NPDES General Permit Number (If Applicable): ARG

NPDES General Industrial Stormwater Permit Number (If Applicable): ARR00

NPDES General Construction Stormwater Permit Number (If Applicable): ARR15

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**VI. OTHER INFORMATION:**

Location of SWPPP on the

Construction Site: On-site mailbox

Consultant Company: \_\_\_\_\_

Consultant Contact Name: \_\_\_\_\_

Consultant Email Address: \_\_\_\_\_

Consultant Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Consultant Phone Number: \_\_\_\_\_ Consultant Fax Number: \_\_\_\_\_

**Arkansas Department of Environmental Quality  
Permits Branch, Office of Water Quality  
5301 Northshore Drive  
North Little Rock, AR 72118  
(501) 682-0623**

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**VII. CERTIFICATION OF OPERATOR**

“I certify that, if this facility is a corporation, it is registered with the Secretary of State of Arkansas. Please provide the full name of corporation if different than that listed in Section I above.”

“I certify that as a whole the stormwater discharge(s), and the construction and implementation of Best Management Practices (BMP’s) to control stormwater runoff, are not likely to adversely affect species of critical habitat for a listed species.”

“I certify that a stormwater pollution prevention plan has been prepared for this facility in accordance with Part II.A of this permit, which provides for, or will provide for, compliance with local sediment and erosion plans, local stormwater permits or stormwater management plans, in accordance with Part II.A.4.c of this permit.”

“I certify that the cognizant official designated in Part VIII of this Notice of Intent is qualified to act as a duly authorized representative under the provisions of 40 CFR 122.22(b). If no cognizant official has been designated, I understand that the Department will accept reports signed by the applicant”

“I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Responsible Official Printed Name: David Lange Title: Treasurer  
Responsible Official Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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**VIII. COGNIZANT OFFICIAL**

Cognizant Official Printed Name: David Lange Title: Treasurer  
Cognizant Official Signature: \_\_\_\_\_ Telephone: \_\_\_\_\_

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**IX. PERMIT REQUIREMENT VERIFICATION**

Please check the following to verify completion of permit requirements.

	Yes	No*
Submittal of Complete NOI?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Submittal of Required Permit Fee?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Check Number: _____		
Complete SWPPP?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**\* If you answer No to any of the above questions, then a permit can not be issued!**

# APPENDIX B: INSPECTION FORM



**ARR150000 Inspection Form**

Appendix B

Inspector Name: \_\_\_\_\_

Date of Inspection: \_\_\_\_\_

Inspector Title: \_\_\_\_\_

Date of Rainfall: \_\_\_\_\_

Duration of Rainfall: \_\_\_\_\_

Days Since Last Rain Event: \_\_\_\_\_ days

Rainfall Since Last Rain Event: \_\_\_\_\_ inches

Description of any Discharges During Inspection: \_\_\_\_\_

Location of Discharges of Sediment/Other Pollutant (specify pollutant & location): \_\_\_\_\_

Locations in Need of Additional BMPs: \_\_\_\_\_

**Information on Location of Construction Activities**

Location	Activity Begin Date	Activity Occuring Now (y/n)?	Activity Ceased Date	Stabilization Initiated Date	Stabilization Complete Date

**Information on BMPs in Need of Maintenance**

Location	In Working Order?	Maintenance Scheduled Date	Maintenance Completed Date	Maintenance to be Performed By

Changes required to the SWPPP: \_\_\_\_\_

Reasons for changes: \_\_\_\_\_

SWPPP changes completed (date): \_\_\_\_\_

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible or Cognizant Official: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

# APPENDIX C: GENERAL PERMIT

**AUTHORIZATION TO DISCHARGE STORMWATER UNDER  
THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM AND THE  
ARKANSAS WATER AND AIR POLLUTION CONTROL ACT**

In accordance with the provisions of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. 1251 et seq.), an

**Operator of Facilities with Stormwater Discharges Associated with Construction Activity**

is authorized to discharge to all receiving waters except as stated in Part I.B.11 (Exclusions).

For facilities that are eligible for coverage under this General Permit (GP), the Department sends a cover letter (Notice of Coverage with tracking permit number which starts with ARR15) and a copy of the permit to the facility. The cover letter includes the Department's determination that a facility is covered under the GP and may specify alternate requirements outlined in the permit.

Effective Date: November 1, 2016

Expiration Date: October 31, 2021



\_\_\_\_\_  
Caleb J. Osborne  
Associate Director, Office of Water Quality  
Arkansas Department of Environmental Quality



\_\_\_\_\_  
Issue Date

## **PART I PERMIT REQUIREMENTS**

Information in **Part I** is organized as follows:

**Section A:** Definitions with Included Commentary

**Section B:** Coverage Under this Permit:

1. Permitted Area
2. Eligibility
3. Responsibilities of the Operator
4. Where to Submit
5. Requirements for Qualifying Local Program (QLP)
6. Requirements for Coverage
7. Notice of Intent (NOI) Requirements
8. Posting Notice of Coverage (NOC)
9. Applicable Federal, State or Local Requirements
10. Allowable Non-Stormwater Discharges
11. Limitations on Coverage (Exclusions)
12. Short Term Activity Authorization (STAA)
13. Effluent Limitation Guidelines (ELG)
14. Natural Buffer Zones
15. Waivers from Permit Coverage
16. Notice of Termination (NOT)
17. Responsibilities of the Operator of a Larger Common Plan of Development for a Subdivision
18. Change in Operator
19. Late Notifications
20. Failure to Notify
21. Maintenance
22. Releases in Excess of Reportable Quantities
23. Attainment of Water Quality Standards
24. Requiring an Individual Permit

## SECTION A: DEFINITIONS WITH INCLUDED COMMENTARY

1. "**ADEQ**" or "**Department**" is referencing the Arkansas Department of Environmental Quality. The Department is the governing authority for the National Pollutant Discharge Elimination System program in the state of Arkansas.
2. "**Arkansas Pollution Control and Ecology Commission**" shall be referred to as APCEC throughout this permit.
3. "**Automatic Coverage**" is for those sites that are defined as a small construction site.
4. "**Best Management Practices (BMPs)**" schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to Waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control construction site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. According to the EPA BMP manual, the use of hay-bales in concentrated flow areas is not recommended as a best management practice.
5. "**Cognizant Official**" a duly authorized representative, as defined in Part II.B.9.B.
6. "**Commencement of Construction**" the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction-related activities.
7. "**Contaminated**" means a substance the entry of which into the MS4, Waters of the State, or Waters of the United States may cause or contribute to a violation of Arkansas water quality standards.
8. "**Control Measure**" as used in this permit, refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to Waters of the State.
9. "**Construction Site**" an area upon which one or more land disturbing construction activities occur that in total will disturb one acre or more of land, including areas that are part of a larger common plan of development or sale where multiple separate and distinct land disturbing construction activities may be taking place at different times on different schedules but under one plan such that the total disturbed area is one acre or more.
10. "**CWA**" the Clean Water Act or the Federal Water Pollution Control Act.
11. "**Dedicated Portable Asphalt Plant**" a portable asphalt plant that is located on or contiguous to a construction site that provides asphalt only to the construction site on which the plant is located or adjacent to. The term does not include facilities that are subject to the asphalt emulsion effluent guideline limitations at 40 CFR Part 443.
12. "**Dedicated Portable Concrete Plant**" a portable concrete plant that is located on or contiguous to a construction site and that provides concrete only to the construction site on which the plant is located on or adjacent to.
13. "**Detention Basin**" a detention basin is an area where excess stormwater is stored or held temporarily and then slowly drains when water levels in the receiving channel recede. In essence, the water in a detention basin is temporarily detained until additional room becomes available in the receiving channel.
14. "**Director**" the Director, Arkansas Department of Environmental Quality, or a designated representative.
15. "**Discharge**" when used without qualification means the "discharge of a pollutant".

**16. "Discharge of Stormwater Associated with Construction Activity"** as used in this permit, refers to a discharge of pollutants in stormwater runoff from areas where soil disturbing activities (e.g., clearing, grading, or excavation), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck washout, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located.

**17. "Discharge-Related Activities"** as used in this permit, include: activities that cause, contribute to, or result in stormwater point source pollutant discharges, including but not limited to: excavation, site development, grading and other surface disturbance activities; management of solid waste and debris; and measures to control stormwater including the construction and operation of BMPs to control, reduce or prevent stormwater pollution.

**18. "Disturbed area"** the total area of the site where any construction activity is expected to disturb the ground surface. This includes any activity that could increase the rate of erosion, including, but not limited to, clearing, grubbing, grading, excavation, demolition activities, haul roads, and areas used for staging. Also included are stockpiles of topsoil, fill material and any other stockpiles with a potential to create additional runoff.

**19. "Drainageway"** an open linear depression, whether constructed or natural, that functions for the collection and drainage of surface water.

**20. "Duly Authorized Representative"** a representative of the Responsible Official meeting the requirements specified in Part II.B.9.B.

**21. "Eligible"** qualified for authorization to discharge stormwater under this general permit.

**22. "Erosion"** the process by which the land's surface is worn away by the action of wind, water, ice or gravity.

**23. "ERW"** Extraordinary Resource Water, in accordance with Regulation 2.

**24. "ESW"** Ecologically Sensitive Waterbodies, in accordance with Regulation 2.

**25. "Facility" or "Activity"** any NPDES "point source" or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

**26. "Final Stabilization"**:

A. All soil disturbing activities at the site have been completed and either of the two following criteria are met:

- 1) A uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 80% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or
- 2) Equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

B. When background native vegetation will cover less than 100% of the ground (e.g., arid areas, beaches), the 80% coverage criteria is adjusted as follows: if the native vegetation covers 50% of the ground, 80% of 50% ( $0.80 \times 0.50 = 0.40$ ) would require 40% total cover for final stabilization. On a beach with no natural vegetation, no stabilization is required.

C. For individual lots in residential construction, final stabilization means that either:

- 1) The homebuilder has completed final stabilization as specified above, or
- 2) The homebuilder has established temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for, and benefits of, final stabilization.

D. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land, staging areas for highway construction, etc.), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to "Waters of the State", and areas which are not being returned to their pre-construction agricultural use shall meet the final stabilization criteria in A, B, or C above.

**27. "Grading Activities"** as used in this permit are those actions that disturb the surface layer of the ground to change the contouring, surface drainage pattern, or any other slope characteristics of the land without significantly adding or removing on-site rock, soil, and other materials. This can include demolition, excavation, and filling.

**28. "Infrastructure"** streets, drainage, curbs, utilities, etc.

**29. "Impaired Water"** a waterbody listed in the current, approved Arkansas 303(d) list.

**30. "Landscaping"** improving the natural beauty of a piece of land (i.e. entrance of subdivision) through plantings or altering the contours of the ground.

**31. "Large and Medium Municipal Separate Storm Sewer System"** all municipal separate storm sewer systems that are either:

- A. Located in an incorporated place with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census: or
- B. Located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal, separate storm sewers that are located in the incorporated places, townships or towns within such counties; or
- C. Owned or operated by a municipality other than those described in paragraphs A or B and that are designated by the Director as part of the large or medium municipal separate storm sewer system.

**32. "Large Construction Site"** construction activity including clearing, grading and excavation, **except** operations that result in the disturbance of less than five acres of total land area. Construction activity also includes the disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres. (Please see Part I.B.15 for partial waivers.)

**33. "Larger Common Plan of Development"** a contiguous (sharing a boundary or edge; adjacent; touching) area where multiple and distinct construction activities may be taking place at different times on different schedules under one plan. Such a plan might consist of many small projects (e.g. a common plan of development for a residential subdivision might lay out the streets, house lots, and areas for parks, schools and commercial development that the developer plans to build or sell to others for development). All these areas would remain part of the common plan of development or sale. The following items can be used as guidance for deciding what might or might not be considered a "Common Plan of Development or Sale." The "plan" in a common plan of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot. The applicant shall still meet the definition of operator in order to be required to get permit coverage,

regardless of the acreage that is personally disturbed.

If a smaller project (i.e., less than 1 acre) is part of a large common plan of development or sale (e.g., you are building a residential home on a ½ acre lot in a 40 acre subdivision or are putting in a fast food restaurant on a ¾ acre pad that is part of a 20 acre retail center), permit coverage is required. Under 40 CFR 122.26(b)(2)(vi), smaller parts of a larger common plan of development are automatically authorized under this general permit and should follow the conditions of a site with automatic coverage set forth in this permit (see Part I.B.6.A).

**34. "Natural Buffer"** for purposes of this permit, an area of undisturbed natural cover surrounding surface waters. Natural cover includes vegetation, exposed rock, or barren ground that exists prior to commencement of construction activities at the site.

**35. "NOC"** Notice of Coverage.

**36. "NOI"** Notice of Intent to be covered by this permit.

**37. "NOT"** Notice of Termination.

**38. "NSW"** Natural and Scenic Waterways, in accordance with Regulation 2.

**39. "Operator"/ "Permittee"** for the purpose of this permit and in the context of stormwater associated with construction activity, means any person (an individual, association, partnership, corporation, municipality, state or federal agency) who has the primary management and ultimate decision-making responsibility over the operation of a facility or activity. The operator is responsible for ensuring compliance with all applicable environmental regulations and conditions.

In addition, for purposes of this permit and determining who is an operator, "owner" refers to the party that owns the structure being built. Ownership of the land where construction is occurring does not necessarily imply the property owner is an operator (e.g., a landowner whose property is being disturbed by construction of a gas pipeline or a landowner who allows a mining company to remove dirt, shale, clay, sand, gravel, etc. from a portion of his property). Likewise, if the erection of a structure has been contracted for, but possession of the title or lease to the land or structure is not to occur until after construction, the would-be owner may not be considered an operator (e.g., having a house built by a residential homebuilder).

**40. "Outfall"** a point source where stormwater leaves the construction site.

**41. "Owner"** the owner or operator of any "facility or activity" subject to regulation under the NPDES program. In addition, for purposes of this permit and determining who is an operator, "owner" refers to the party that owns the structure being built. Ownership of the land where construction is occurring does not necessarily imply the property owner is an operator (e.g., a landowner whose property is being disturbed by construction of a gas pipeline). Likewise, if the erection of a structure has been contracted for, but possession of the title or lease to the land or structure is not to occur until after construction, the would-be owner may not be considered an operator (e.g. having a house built by a residential homebuilder).

**42. "Physically Interconnected"** means that one municipal separate storm sewer system is connected to a second municipal separate storm sewer system in such a way that it allows for direct discharges into the second system.

**43. "Point Source"** any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.



44. "**Qualified Local Program**" is a municipal program for stormwater discharges associated with construction sites that has been formally approved by the Department.

45. "**Qualified personnel**" a person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact stormwater quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of stormwater discharges from the construction activity.

46. "**Regulated Small Municipal Separate Storm Sewer System**" all municipal separate storm sewer systems that are either:

- A. Located within the boundaries of an "urbanized area" with a population of 50,000 or more as determined by the latest Decennial Census by the Bureau of Census; or
- B. Owned or operated by a municipality other than those described in paragraph A and that serve a jurisdiction with a population of at least 10,000 and a population density of at least 1,000 people per square mile; or
- C. Owned or operated by a municipality other than those described in paragraphs A and B and that contributes substantially to the pollutant loadings of a "physically interconnected" municipal separate storm sewer system.

47. "**Retention Basin**" a basin that is designed to hold the stormwater from a rain event and allow the water to infiltrate through the bottom of the basin. A retention basin also stores stormwater, but the storage of the stormwater would be on a more permanent basis. In fact, water often remains in a retention basin indefinitely, with the exception of the volume lost to evaporation and the volume absorbed into the soils. This differs greatly from a detention basin, which typically drains after the peak of the storm flow has passed, sometimes while it is still raining.

48. "**Runoff Coefficient**" the fraction of total rainfall that will appear at the conveyance as runoff.

49. "**Sediment**" material that settles to the bottom of a liquid.

50. "**Sediment Basin**" a basin that is designed to maintain a 10 year-24 hour storm event for a minimum of 24-hours in order to allow sediment to settle out of the water.

51. "**Small Construction Site**" construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five acres. Small construction activity does not include routine maintenance.

52. "**Stormwater**" stormwater runoff from rainfall, snow melt runoff, and surface runoff and drainage.

53. "**Stormwater Associated with Construction Activity**" the discharge from any conveyance which is used for collecting and conveying stormwater and which is directly related to construction activity.

54. "**Stormwater Pollution Prevention Plan (SWPPP or SWP3)**" a plan that includes site map(s), an identification of construction/contractor, activities that could cause pollutants in the stormwater, and a description of measures or practices to control these pollutants (BMPs).

55. "**Temporary Sediment Controls**" controls that are installed to control sediment runoff from the site. These could be silt fencing, rock check dams, etc.

**56. "Total Maximum Daily Load" or "TMDL"** the sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for non-point sources and natural background. If the receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any non-point sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of mass per time, toxicity, or other appropriate measure.

**57. "Uncontaminated"** cannot exceed the water quality standards as set forth in APCEC Regulation 2.

**58. "Urbanized Area"** the areas of urban population density delineated by the Bureau of the Census for statistical purposes and generally consisting of the land area comprising one or more central place(s) and the adjacent densely settled surrounding area that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile as determined by the latest Decennial Census by the Bureau of Census.

**59. "Waters of the State"** Waters of the State means all streams, lakes, marshes, ponds, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion of the state.

## **SECTION B: COVERAGE UNDER THIS PERMIT**

### **Introduction**

This Construction General Permit (CGP) authorizes stormwater discharges from large and small construction activities that result in a total land disturbance of equal to or greater than one acre. This GP also authorizes discharges from construction activities that result in a total land disturbance of less than five acres where the construction activity is included in a larger common plan, where those discharges enter surface Waters of the State or a Municipal Separate Storm Sewer System (MS4) leading to surface Waters of the State subject to the conditions set forth in this permit. This permit also authorizes stormwater discharges from any other construction activity designated by ADEQ where ADEQ makes that designation based on the potential for contribution to an excursion of a water quality standard or for significant contribution of pollutants to Waters of the State. This permit replaces the permit issued in 2011. The goal of this permit is to minimize the discharge of stormwater pollutants from construction activity. The Operator should make sure to read and understand the conditions of the permit. A copy of the General Stormwater Construction Permit is available on the ADEQ web site at <https://www.adeq.state.ar.us/water/permits/npdes/stormwater/>. You may also obtain a hard copy by contacting the ADEQ's General Permits Section at (501) 682-0623.

1. **Permitted Area.** If a large or small construction activity is located within the State of Arkansas, the operator may be eligible to obtain coverage under this permit.
2. **Eligibility.** Permit eligibility is limited to discharges from “large” and “small” construction activity, or as otherwise designated by ADEQ. This general permit contains eligibility restrictions, as well as permit conditions and requirements. Operators may have to take certain actions to be eligible for coverage under this permit. In such cases, operators shall continue to satisfy those eligibility provisions to maintain permit authorization. If operators do not meet the requirements that are a pre-condition to eligibility, then resulting discharges constitute unpermitted discharges. By contrast, if operators are eligible for coverage under this permit and do not comply with the requirements of the general permit, they may be in violation of the general permit for otherwise eligible discharges.
  - A. This general permit authorizes discharges from construction activities as defined in 40 CFR 122.26(a), 40 CFR 122.26(b)(14)(x), 40 CFR 122.26(b)(15)(i) and 40 CFR Part 450.
  - B. This permit also authorizes stormwater discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, materials storage areas, excavated material disposal areas, borrow areas) provided:
    - 1) The support activity is directly related to a specific construction site that is required to have NPDES permit coverage for discharges of stormwater associated with the construction activity;
    - 2) The support activity is not a commercial operation serving multiple unrelated construction projects by different operators, and does not operate beyond the completion of the construction activity at the last construction project it supports;
    - 3) Pollutant discharges from support activity areas are minimized in compliance with conditions of this permit; and
    - 4) Discharges from the support activity areas shall be identified in a Stormwater Pollution Prevention Plan (SWPPP) stating appropriate controls and measures for the area.
  - C. Other activities may be considered for this permit at the discretion of the Director as defined in 40 CFR 122.26(b)(15)(ii).
3. **Responsibilities of the Operator.** Permittees with operational control are responsible for compliance with all applicable

terms and conditions of this permit as it relates to their activities on the construction site, including protection of endangered species and implementation of BMPs and other controls required by the SWPPP. Receipt of this general permit does not relieve any operator of the responsibility to comply with any other applicable federal, state or local statute, ordinance or regulation.

4. **Where to Submit.** The operator shall submit a complete and signed Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and application fee to the Department at the following address:

Arkansas Department of Environmental Quality  
Discharge Permits Section  
5301 Northshore Drive  
North Little Rock, AR 72118-5317

Or by electronic mail (Complete documents (NOI and SWPPP) must be submitted in PDF format) to:

[Water-permit-application@adeq.state.ar.us](mailto:Water-permit-application@adeq.state.ar.us) ;

Or through the ADEQ ePortal site which can be found at the following link:

<https://eportal.adeq.state.ar.us/>

NOTE: Notice of Coverage (NOC) will **NOT** be issued until payment has been received by ADEQ.

5. **Requirements for Qualifying Local Program (QLP).** The Department reviews and approves the QLPs to ensure that they meet or supersede both state and federal requirements outlined in this permit and 40 CFR 122.44(s). ADEQ will review the QLP at least every 5 years for recertification. If the Department approves a QLP, then the QLP requirements shall at the minimum meet the Department's requirements. This would include all templates and forms. This permit may be modified to add new QLPs or modify existing QLPs at the Department's discretion. All public notice and other applicable costs incurred by the modification of the permit for the addition or modification of a QLP will be paid by the QLP.

If a small construction site is within the jurisdiction of a QLP, the operator of the small construction site is authorized to discharge stormwater associated with construction activity under QLP permit requirements only.

At the time of issuance of this permit, only the City of Hot Springs is meeting the ADEQ minimum requirements.

6. **Requirements for Coverage.**

- A. **Small Construction Sites.** An operator of a small construction site will be considered to have automatic coverage under this general permit and may discharge without submitting to the Department a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP) or fee if the following conditions are met:

- 1) A completed Notice of Coverage (NOC) must be posted at the site prior to commencing construction;
- 2) A Stormwater Pollution Prevention Plan must be prepared in accordance with good engineering practice as described in Reg.6.203(B), and a copy must be maintained at the construction site;
- 3) All permit conditions set forth in this general permit must be followed; and
- 4) The operator is responsible for ensuring that the site is in compliance with any changes or updates of this general permit, by either contacting ADEQ or reviewing the ADEQ website:

<https://www.adeg.state.ar.us/water/permits/npdes/stormwater/>

- B. *Large Construction Sites.* An operator of a large construction site discharging under this general permit shall submit the following items at least 10 business days prior to the commencement of construction:
- 1) An NOI in accordance with the requirements of Part I.B.7 of this permit.
  - 2) A complete SWPPP in accordance with the requirements of Part II.A of this permit.
  - 3) An initial permit fee shall accompany the NOI under the provisions of APCEC Regulation No. 9. Subsequent annual fees will be billed by the Department until the operator has requested a termination of coverage by submitting a Notice of Termination (NOT). Failure to remit the required initial permit fee shall be grounds for the Director to deny coverage under this general permit. Failure to remit the required annual fees shall be grounds for the Director to revoke coverage under this permit.
- C. *Modification of Permit Coverage to Include Additional Acreage.* Any request to increase the total acreage of a construction site shall be accompanied by a \$200 permit modification fee and an updated SWPPP. Any request to only increase the disturbed acreage without changing the total acreage shall be accompanied by an updated SWPPP. A \$200 permit modification fee is not required with an increase in disturbed acreage. The Additional Acreage Request Form can be found at the following link:

<https://www.adeg.state.ar.us/water/permits/npdes/stormwater/>

## **7. Notice of Intent (NOI) Requirements.**

- A. *NOI Form.* Large construction site operators who intend to seek coverage for a stormwater discharge under this general permit shall submit a complete and accurate ADEQ NOI form to the Department (through hard copy, electronic mail at [Water-permit-application@adeq.state.ar.us](mailto:Water-permit-application@adeq.state.ar.us), or the ADEQ ePortal system at <https://eportal.adeg.state.ar.us/>) at least 10 business days prior to the date coverage under this permit is desired. The NOI form **must** be the current version obtained from the stormwater webpage indicated above in Part I.B.

If the NOI is deemed incomplete, the Department will notify the applicant with regard to the deficiencies by a letter, email, or phone within ten (10) business days of the receipt of the NOI. If the operator does not receive a notification of deficiencies from ADEQ's receipt of the NOI, the NOI is deemed complete. If the applicant does not provide the Department with the requested deficiencies within the deadline set by the Department, then the Department will return the NOI, fee and SWPPP back to the applicant.

- B. *Contents of the NOI.* The NOI form contains, at a minimum, the following information:
- 1) Operator (Permittee) information (name, address, telephone and fax numbers, E-mail address)
  - 2) Whether the operator is a federal, state, private, public, corporation, or other entity
  - 3) Application Type: New or renewal
  - 4) Invoice mailing information (name, address, and telephone and fax numbers)
  - 5) Project Construction site information (name, county, address, contact person, directions to the site, latitude and longitude for the entrance of the site or the endpoints for linear project (in degrees, minutes, and seconds), estimated construction start date and completion date through site final stabilization, estimate of the total project acreage and the acreage to be disturbed by the operator submitting the NOI, type of the project (subdivision, school, etc), whether the project is part of a larger common plan of development.)

- 6) Discharge information (name of the receiving stream, ultimate receiving stream, name of municipal storm sewer system)
- 7) List of current permits
- 8) The Certification statement and signature of a qualified signatory person in accordance with 40 CFR 122.22, as adopted by reference in APCEC Regulation No. 6
- 9) The certification of the facility corporation
- 10) Other information (location of the SWPPP)
- 11) And the SIC Code.

C. Notice of Coverage (NOC). Unless notified by the Director to the contrary, dischargers who submit a complete NOI and SWPPP in accordance with the requirements of this permit are authorized to discharge stormwater from construction sites under the terms and conditions of this permit 10 business days after the date the NOI is deemed complete (which may not be the original submission date if revisions or additions were necessary) by ADEQ. If the NOC has not been received by the permittee 10 business days after the date the NOI is deemed complete by ADEQ, the NOI should be posted until the NOC is received. Upon review of the NOI and other available information, the Director may deny coverage under this permit and require submittal of an application for an individual NPDES permit.

**8. Posting Notice of Coverage (NOC).**

A. Automatic Coverage Sites. The NOC for small sites, as defined in Part I.A.51, can be obtained from the Water Division's Stormwater webpage at:

<https://www.adeg.state.ar.us/water/permits/npdes/stormwater/>.

The NOC must be posted at the site prior to commencing construction. In addition, a copy of the SWPPP must be available at the construction site in accordance with Part II.A.2.B and D prior to commencing construction.

B. Large Sites: NOC Posting for Large Construction Sites. The posting for large construction sites shall be obtained from the Department only after the permittee has submitted the required NOI, permit fee and complete SWPPP to the Department for the coverage.

C. Linear Projects. If the construction project is a linear construction project (e.g., pipeline, highway, etc.), the notice shall be placed in a publicly accessible location near where construction is actively underway and moved as necessary.

Please note, this permit does not provide the public with any right to trespass on a construction site for any reason, including inspection of a site; nor does this permit require that the permittee allow members of the public access to a construction site.

**9. Applicable Federal, State or Local Requirements**. The operator shall ensure that the stormwater controls implemented at the site are consistent with all applicable federal, state, or local requirements. Additionally, an operator who is operating under approved local erosion and sediment plans, grading plans, local stormwater permits, or stormwater management plans shall submit signed copies of the Notice of Intent (NOI) to the local agency (or authority) upon the local agency's request.

**10. Allowable Non-Stormwater Discharges**.

A. The following non-stormwater discharges as part of the construction permit activity may be authorized by this permit through appropriate controls. Non-stormwater discharges shall be addressed in the stormwater pollution prevention plan and measures to minimize or eliminate non-stormwater discharge should be taken if reasonably possible.

- 1) Fire fighting activities;
- 2) Fire hydrant flushings;

- 3) Water used to wash vehicles (where detergents or other chemicals are not used) or to control dust in accordance with Part II.A.4.H.2;
- 4) Potable water sources including uncontaminated waterline flushings;
- 5) Landscape Irrigation;
- 6) Routine external building wash down which does not use detergents or other chemicals;
- 7) Pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents or other chemicals are not used;
- 8) Uncontaminated air conditioning compressor condensate (See Part I.B.13.C of this permit);
- 9) Uncontaminated springs, excavation dewatering and groundwater (See Part I.B.13.C of this permit);
- 10) Foundation or footing drains where flows are not contaminated with process materials such as solvents (See Part I.B.13.C of this permit).

**11. Limitations on Coverage (Exclusions).** The following stormwater discharges associated with construction activity are not covered by this permit:

- A. Post Construction Discharge. Stormwater discharges associated with construction activities that originate from the site after construction activities have been completed, the site has undergone final stabilization, and the permit has been terminated.
- B. Discharges Mixed with Non-Stormwater. Stormwater discharges that are mixed with sources of non-stormwater other than those identified in Part I.B.10.
- C. Discharges Covered by another Permit. Stormwater discharges associated with construction activity that are covered under an individual or an alternative general permit may be authorized by this permit after an existing permit expires, provided the expired permit did not establish numeric effluent limitations for such discharges.
- D. Discharges into Receiving Waters with an Approved TMDL. Discharges from a site into receiving waters for which there is an established total maximum daily load (TMDL) allocation (<https://www.adeg.state.ar.us/water/planning/integrated/tmdl/>) are not eligible for coverage under this permit unless the permittee develops and certifies a stormwater pollution prevention plan (SWPPP) that is consistent with the assumptions and requirements in the approved TMDL. To be eligible for coverage under this general permit, operators shall incorporate into their SWPPP any conditions applicable to their discharges necessary for consistency with the assumptions and requirements of the TMDL within any timeframes established in the TMDL. If a specific numeric allocation has been established that would apply to the project's discharges, the operator shall incorporate that allocation into its SWPPP and implement necessary steps to meet that allocation. If a numeric limit has been assigned to the facility, quarterly monitoring shall be submitted to the Department demonstrating compliance with the assigned Waste Load Allocation established in the TMDL. Please note that the Department will be reviewing this information. If it is determined that the project will discharge into a receiving stream with a TMDL, then the Department may require additional BMPs.
- E. Discharges into Impaired Receiving Waters (303(d) List). If stormwater discharges from a site enter a receiving water listed as impaired under Section 303(d) of the Clean Water Act (<https://www.adeg.state.ar.us/water/planning/integrated/>), the permittee shall incorporate into the SWPPP any additional BMPs needed to sufficiently protect water quality. Please note that the Department will be reviewing this information. If it is determined that the project will discharge to an impaired water body, then the Department may require additional BMPs.
- F. Discharges into an Extraordinary Resource Water (ERW), Natural and Scenic Waterway (NSW), or Ecologically Sensitive Waterbody (ESW). Discharges from a construction site located within the watershed of any water body or

waterway designated as an Outstanding Resource Water as defined in the APC&EC Regulation No. 2.203, including ERWs, NSWs, or ESWs are not eligible for coverage under this permit unless the permittee develops and certifies a SWPPP that includes additional BMPs needed to prevent to the maximum extent possible exposure to stormwater of pollutants that could potentially impact water quality. For the purposes of this permit, the watershed of an Outstanding Resource Water will be identified by the United States Geological Survey's twelve (12) digit Hydrological Unit Code (HUC). Please note that the Department will be reviewing this information. If the site will discharge to an ERW, NSW, or ESW, then the Department may determine that additional requirements are necessary.

- 12. Short Term Activity Authorization (STAA).** Any work being conducted in Waters of the State will require a Short Term Activity Authorization (STAA) from ADEQ in accordance with Regulation 2.305. An STAA is necessary for any in-stream activity that has the potential to exceed the water quality standards, including, but not limited to: gravel removal, bridge or crossing repair/maintenance, bank stabilization, debris removal, culvert replacement, flood control projects, and stream relocation. Any work being conducted in Waters of the United States may require a Section 404 permit from the U.S. Army Corps of Engineers. This permit does not authorize any activity under an STAA or Section 404 permit. The necessary forms to apply for coverage under an STAA can be found at the following link:

<https://www.adeg.state.ar.us/water/planning/instream/>

The SWPPP shall be updated to include a copy of the Short Term Activity Authorization letter upon receipt. Re-submittal of the SWPPP is not required unless specifically requested by the Department.

- 13. Effluent Limitation Guidelines (ELG).** All permittees shall comply with the following effluent limits:

- A. *Erosion and Sediment Controls.* Design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls shall be designed, installed and maintained to:
- 1) Control stormwater volume and velocity to minimize soil erosion in order to minimize pollutant discharges;
  - 2) Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points;
  - 3) Minimize the amount of soil exposed during construction activity;
  - 4) Minimize the disturbance of steep slopes;
  - 5) Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls shall address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
  - 6) Provide and maintain natural buffers around Waters of the State, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, unless infeasible;
  - 7) Minimize soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted; and
  - 8) Unless infeasible, preserve topsoil. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed.
- B. *Soil Stabilization.* Stabilization of disturbed areas must, at a minimum, be initiated immediately (unless weather conditions do not allow immediate initiation) whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed as specified by the permitting authority. Stabilization must be completed within a period of time determined by the



permitting authority. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed.

- C. Dewatering. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. There shall be no turbid discharges to Waters of the State resulting from dewatering activities. If trench or ground waters contain sediment, it shall pass through a sediment settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag, or comparable practice. Ground water dewatering which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care shall be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.
- D. Pollution Prevention Measures. Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures shall be designed, installed, implemented and maintained to:
- 1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters shall be treated in a sediment basin or BMP control that provides equivalent or better treatment prior to discharge;
  - 2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use); and
  - 3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.
- E. Prohibited discharges. The following discharges are prohibited:
- 1) Wastewater from washout of concrete, unless managed by an appropriate control;
  - 2) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
  - 3) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
  - 4) Soaps or solvents used in vehicle and equipment washing.
- F. Surface Outlets. When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible.

**14. Natural Buffer Zones.** A natural buffer zone as stated below shall be maintained at all times. Exceptions from this requirement for areas such as water crossings, limited water access, and restoration of the buffer are allowed if the permittee fully documents in the SWPPP the circumstances and reasons for the buffer zone encroachment. Additionally, this requirement is not intended to interfere with any other ordinance, rule or regulation, statute or other provision of law.

- A. For construction projects where clearing and grading activities will occur, the SWPPP shall provide at least twenty-five (25) feet of natural buffer zone, as measured horizontally from the top of the bank to the disturbed area, from any Waters of the State.
- B. The Department may also require up to fifty (50) feet of natural buffer zone, as measured from the top of the bank to the disturbed area, from established TMDL water bodies, streams listed on the 303(d) list, an Extraordinary Resource

Water (ERW), Ecologically Sensitive Waterbody (ESW), Natural and Scenic Waterway (NSW), or any other uses at the discretion of the Director.

C. Linear projects will be evaluated individually by the Department to determine natural buffer zone setbacks.

**15. Waivers from Permit Coverage.** The Director may waive the otherwise applicable requirements of this general permit for stormwater discharges from construction activities under the terms and conditions described in this section.

A. Waiver Applicability and Coverage. Based upon 40 CFR 122.26.b.15.i.A, operators of small construction activities may apply for and receive a waiver from the requirements to obtain this permit.

B. No Stormwater Leaving the Site. If all of the stormwater from the construction activity is captured on-site under any size storm event and allowed to evaporate, soak into the ground on-site, or is used for irrigation, a permit is not needed.

C. TMDL Waivers. This waiver is available for sites with automatic coverage if the ADEQ has established or approved a TMDL that addresses the pollutant(s) of concern and has determined that controls on stormwater discharges from small construction activity are not needed to protect water quality. The pollutant(s) of concern include sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. Information on TMDLs that have been established or approved by ADEQ is available from ADEQ online at

<https://www.adeg.state.ar.us/water/planning/integrated/tmdl/>.

**16. Notice of Termination (NOT).** When all construction activities that disturbed soil are complete, the site has reached final stabilization (100% stabilization with 80% density, or as defined in Part I.A.26.B for sites where background native vegetation will cover less than 100% of the ground), all stormwater discharges from construction activities authorized by this permit are eliminated and all temporary sediment controls are removed and properly disposed, the operator of the facility may submit a complete Notice of Termination (NOT) to the Director. Along with the NOT, pictures that represent the entire site should be submitted for review. Final stabilization is not required if the land is returned to its pre-construction agriculture use. Operators of small construction sites are not required to submit NOTs for their construction sites. However, final stabilization is required on all sites. If a Notice of Termination is not submitted when the project is completed, the operator will be responsible for annual fees.

**17. Responsibilities of the Operator of a Larger Common Plan of Development for a Subdivision.**

A. The operator is ultimately responsible for the runoff from the perimeter of the entire development. Regardless of the reason for the runoff, the operator is responsible for ensuring sufficient overall controls of the development.

B. The operator shall not terminate the permit coverage until the following conditions have been met:

- 1) After all construction including landscaping and lot development has been completed; and
- 2) All lots are sold and developed.

The following exceptions to this requirement can apply:

- a. less than 100% sold and developed at the discretion of the Director, or
- b. Separation of the larger common plan if twenty-four (24) months have passed with no construction activity, or
- c. All lots are developed and there are no temporary common controls for subdivision outfalls, i.e. sediment

basins, large sediment traps, check dams, etc.

- 3) If lots are sold and then re-sold to a third party, permit coverage should be obtained by each of the operators while they have ownership of the lots. The second owner is responsible for obtaining the same certification from the third owner, i.e. the certification shall pass from owner to owner.

C. The operator shall not terminate permit coverage until the operators of all of the individual lots within the larger common plan are notified of their permitting requirements under this general permit. In this case, the signed certification statements from each operator of individual lots shall be maintained in the stormwater pollution prevention plan for the large common plan. A copy of the signed certifications shall be submitted to ADEQ with the NOT. The certification shall be as follows:

“I, \_\_\_\_\_, operator of an individual lot #\_\_\_\_\_, block #\_\_\_\_\_ of \_\_\_\_\_ subdivision, certify under penalty of law that I was notified by the operator of the larger common plan of the stormwater permitting requirements for my construction site(s). I understand prior to commencement of any construction activity I have to prepare and comply with a SWPPP and post the Construction Site Notice. I understand that prior to the sale of this lot to another party; I must notify the new owner of ADEQ requirements and obtain this certification from the new owner.”

Signature \_\_\_\_\_

D. The following examples are provided as clarification:

- 1) If a small portion of the original common plan of development remains undeveloped and there has been a period of time (i.e., more than 24 months) where there are no ongoing construction activities (i.e., all areas are either undisturbed or have been finally stabilized), operators may re-evaluate the original project based on the acreage remaining from the original “common plan.” If less than five but more than one acre remains to build out the original “common plan”, coverage under the large permit may not be required. However, operators will need to comply with the terms and conditions for Small Construction Sites in the Construction General Permit. If less than one acre remains of the original common plan, the individual project may be treated as a part of a less than one acre development and no permit would be required.
- 2) If operators have a long-range master plan of development where some portions of the master plan are conceptual rather than a specific plan of future development and the future construction activities would, if they occur at all, happen over an extended period of time (i.e., more than 24 months), operators may consider the “conceptual” phases of development to be separate “common plans” provided the periods of construction for the physically interconnected phases will not overlap.
- 3) Where discrete construction projects within a larger common plan of development or sale are located ¼ mile or more apart and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed. For example, an interconnecting access road or pipeline were under construction at the same time, they would generally be considered as a part of a single “common plan” for permitting purposes.
- 4) If the operator sells all the lots in the subdivision to one or more multi-lot homebuilder(s), provisions shall be made to obtain stormwater permit coverage by one of the following options:
  - a. The permit may be transferred from the first “operator” to the new/second “operator”.
  - b. A new, separate permit may be obtained by the second “operator”.NOTE: If a new permit is to be obtained, then it shall be obtained before the first/original permit is terminated.
- 5) If the operator retains ownership of any lots in the subdivision, the operator shall maintain permit coverage for those lots under the original permit. The operator shall modify the Stormwater Pollution Prevention Plan (SWPPP)

by stating which lots are owned and marking the lots on the site map. If there are one (1) or two (2) lots remaining and the total acreage is less than five (5) acres, the original permit could be terminated and those lots could be covered as a small site.

- 18. Change in Operator.** For stormwater discharges from large construction sites where the operator changes, including instances where an operator is added after the initial NOI has been submitted, the new operator shall ensure that a permit transfer form is received by the Department at least two (2) weeks prior to the operator beginning work at the site.
- 19. Late Notifications.** A discharger is not precluded from submitting an NOI in accordance with the requirements of this part after the dates provided in Part I.B.7 of this permit. In such instances, the Director may bring an enforcement action for failure to submit an NOI in a timely manner or for any unauthorized discharges of stormwater associated with construction activity that have occurred on or after the dates specified in this permit.
- 20. Failure to Notify.** The operator of a construction site who fails to notify the Director of their intent to be covered under this permit, and who potentially discharges pollutants (sediment, debris, etc.) to Waters of the State without an NPDES permit, is in violation of the Arkansas Water and Air Pollution Control Act.
- 21. Maintenance.** Determination of the acreage of disturbance does not typically include disturbance for routine maintenance activities on existing roads where the line and grade of the road is not being altered, nor does it include the paving of existing roads. Maintenance activities (returning to original conditions) are not regulated under this permit unless one or more acres of underlying or surrounding soil are cleared, graded, or excavated as part of the operation.
- 22. Releases in Excess of Reportable Quantities.**
  - A. The discharge of hazardous substances or oil in the stormwater discharge(s) from a facility shall be prevented or minimized in accordance with the applicable stormwater pollution prevention plan for the facility. This permit does not relieve the operator of the reporting requirements of 40 CFR Parts 110, 117 and 302. Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reporting quantity established under either 40 CFR 110, 40 CFR 117, or 40 CFR 302, occurs during a 24-hour period, the following action shall be taken:
    - 1) Any person in charge of the facility is required to notify the National Response Center (NRC) (800-424-8802) in accordance with the requirements of 40 CFR 110, 40 CFR 117, or 40 CFR 302 as soon as he/she has knowledge of the discharge;
    - 2) The operator shall submit within five (5) calendar days of knowledge of the release a written description of the release (including the type and estimate of the amount of material released), the date that such release occurred, and the circumstances leading to the release, and steps to be taken in accordance with Part II.B.13 of this permit to the ADEQ.
    - 3) The Stormwater Pollution Prevention Plan (SWPPP) described in Part II.A of this permit shall be modified within fourteen (14) calendar days of knowledge of the release to:
      - a. Provide a description of the release and the circumstances leading to the release; and
      - b. The date of the release;
    - 4) Additionally, the SWPPP shall be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan shall be modified where appropriate.
  - B. Spills. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

**23. Attainment of Water Quality Standards.**

The operator shall select, install, implement and maintain control measures at the construction site that minimize the discharge of pollutants for which a stream is impaired at the discretion of the Director as necessary to protect water quality. In general, except in situations explained in below, the stormwater controls developed, implemented, and updated to be considered stringent enough to ensure that discharges do not cause or contribute to an excursion above any applicable water quality standard.

At any time after authorization, the ADEQ may determine that the stormwater discharges may cause, have reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. If such a determination is made, ADEQ will require the permittee to:

- A. Develop a supplemental BMP action plan describing SWPPP modifications to address adequately the identified water quality concerns and submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or
- B. Cease discharges of pollutants from construction activity and submit an individual permit application.

All written responses required under this part shall include a signed certification consistent with Part II.B.9.

**24. Requiring an Individual Permit**

The Director may require any person eligible for coverage under the general permit to apply for and obtain an individual permit. In addition, any interested person(s) may submit an application for an individual permit. The Director may consider the issuance of individual permits according to the criteria in 40 CFR 122.28(b)(3).

Coverage of the facility under this general permit is automatically terminated when: (1) the operator fails to submit the required individual NPDES permit application within the defined time frame; or (2) the individual NPDES permit is issued by ADEQ and effective.

Any operator covered under this general permit may request to be excluded from the coverage of this permit by applying for an APC&EC Regulation 6 individual permit. The operator shall submit an application for an individual permit with the reasons supporting the application to ADEQ. If a final, individual NPDES permit is issued to an operator otherwise subject to this general permit, the applicability of this general permit to the facility is automatically terminated on the effective date of the individual NPDES permit. Otherwise, the applicability of this general permit to the facility remains in full force and effect.

## **PART II**

### **STANDARD CONDITIONS**

Information in **Part II** is organized as follows:

**Section A:** Stormwater Pollution Prevention Plans (SWPPP):

1. Deadlines for Plan Preparation and Compliance
2. Signature, SWPPP, Inspection Reports, and Notice of Coverage (NOC)
3. Keeping SWPPP Current
4. Contents of the Stormwater Pollution Prevention Plan
5. Plan Certification

**Section B:** Standard Permit Conditions:

1. Retention of Records
2. Duty to Comply
3. Penalties for Violations of Permit Conditions
4. Continuance of the General Permit
5. Need to Halt or Reduce Activity Not a Defense
6. Duty to Mitigate
7. Duty to Provide Information
8. Other Information
9. Signatory Requirements
10. Certification
11. Penalties for Falsification of Reports
12. Penalties for Tampering
13. Oil and Hazardous Substance Liability
14. Property Rights
15. Severability
16. Transfers
17. Proper Operation and Maintenance
18. Inspection and Entry
19. Permit Actions
20. Re-Opener Clause
21. Local Requirements
22. Applicable Federal, State Requirements

## **SECTION A: STORMWATER POLLUTION PREVENTION PLANS (SWPPP)**

The operator shall prepare a Stormwater Pollution Prevention Plan (the plan/SWPPP) before permit coverage. At least one SWPPP shall be developed for each construction project or site covered by this permit. The SWPPP shall follow the order outlined in Part II.A.4 & 5 below. This basic ADEQ format is available through the Department's website <https://www.adeg.state.ar.us/water/permits/npdes/stormwater/>. Other formats may be used at the discretion of the Director if the format has been approved by the Department prior to use. The operator shall implement the SWPPP as written from initial commencement of construction activity until final stabilization is complete, with changes being made as deemed necessary by the permittee, local, state or federal officials. The plan shall be prepared in accordance with good engineering practices, by qualified personnel and shall:

- Identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges from the construction;
- Identify, describe and ensure the implementation of Best Management Practices (BMPs), with emphasis on initial site stabilization, which are to be used to reduce pollutants in stormwater discharges from the construction site;
- Be site specific to what is taking place on a particular construction site;
- Ensure compliance with the terms and conditions of this permit; and
- Identify the responsible party for on-site SWPPP implementation.

### **1. Deadlines for Plan Preparation and Compliance.**

#### *A. Automatic Coverage Sites.*

The plan shall be completed prior to the commencement of construction activities and updated as appropriate. Submittal of the NOI, permit fee and SWPPP is not required. All conditions set forth in Part II.A must be followed, and the NOC must be posted at the site prior to commencing construction. In addition, a copy of the SWPPP must be available at the construction site in accordance with Part II.2.B and D prior to commencing construction.

#### *B. Large Construction Sites.*

The plan shall be completed and submitted for review, along with an NOI and initial permit fee 14 business days prior to the commencement of construction activities. Submittals of updates to the plan during the construction process are required only if requested by the Director.

#### *C. Existing Permittees.*

Existing permittees that were permitted prior to the issuance of this renewal permit are required to update their plan as appropriate to come into compliance with the requirements contained in Part II.A.4 by the effective date of this permit.

### **2. Signature, Stormwater Pollution Prevention Plan (SWPPP), Inspection Reports and Notice of Coverage (NOC).**

- A. The SWPPP and inspection reports shall be signed by the operator (or cognizant official) in accordance with Part II.B.9 and be retained at the construction site during normal business hours (8:00 A.M. – 5:00 P.M.).
- B. The operator shall make SWPPP and inspection reports available, upon request, to the Director, the EPA, or a State or local agency reviewing sediment and erosion plans, grading plans, or stormwater management plans, or, in the case of a stormwater discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the municipal operator of the system.
- C. The Director, or authorized representative, may notify the operator at any time that the plan does not meet one or more of the minimum requirements of this Part. Within seven (7) business days of such notification from the Director (or as otherwise provided by the Director) or authorized representative, the operator shall make the required changes to the

plan and submit to the Director a written certification that the requested changes have been made. The Department may request re-submittal of the SWPPP to confirm that all deficiencies have been adequately addressed. The Department may also take appropriate enforcement action for the period of time the operator was operating under SWPPP that did not meet the minimum requirements of this permit.

D. The operator shall post the NOC near the main entrance of the construction site and visible to the public. The NOC will indicate the location of the SWPPP. If the SWPPP location is changed from the initial location, the NOC shall be updated to reflect the correct location of the SWPPP.

3. **Keeping SWPPP Current.** The operator shall amend the SWPPP within seven (7) business days or whenever there is a change in design, construction, operation, or maintenance at the construction site which has or could have a significant effect on the potential for the discharge of pollutants to the Waters of the State that has not been previously addressed in the SWPPP. The SWPPP should also be modified if a determination has been made through inspections, monitoring (if required), *or* investigation by the operator, local, state, or federal officials that the discharges are causing or contributing to water quality violation or the plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified in stormwater discharges from the construction site.

4. **Contents of the Stormwater Pollution Prevention Plan (SWPPP).** The SWPPP shall include the following items:

A. **Site Description.** SWPPP shall provide a description of the following:

- 1) A description of the nature of the construction activity and its intended use after the Notice of Intent (NOI) is filed (i.e., residential subdivision, shopping mall, etc.);
- 2) A description of the intended sequence of major activities which disturb soils for major portions of the site (e.g. grubbing, excavation, grading, infrastructure installation, etc.);
- 3) Estimates of the total area of the site (including off-site borrow and fill areas) and the total area of the site that is expected to be disturbed by excavation, grading or other activities; and
- 4) An estimate of the runoff coefficient of the site for pre- and post-construction activities and existing data describing the soil or the quality of any discharge from the site.

B. **Responsible Parties.** The SWPPP shall identify (as soon as this information is known) all parties (i.e., General Contractors, Landscapers, Project Designers, and Inspectors) responsible for particular services they provide to the operator to comply with the requirements of the SWPPP for the project site, and areas over which each party has control. If these parties change over the life of the permit, or new parties are added, the SWPPP should be updated to reflect these changes.

C. **Receiving Waters.** The SWPPP shall include a clear description of the nearest receiving water(s), or if the discharge is to a municipal separate storm sewer, the name of the operator of the municipal system, and the ultimate receiving water(s).

D. **Documentation of Permit Eligibility Related to the 303(d) list and Total Maximum Daily Loads (TMDL).** The SWPPP should include information on whether or not the stormwater discharges from the site enter a water body that is on the most recent 303(d) list or with an approved TMDL. If the stormwater discharge does enter a water body that is on the most recent 303(d) list or with an approved TMDL, then the SWPPP should address the following items:

- 1) Identification of the pollutants that the 303(d) list or TMDL addresses, specifically whether the 303(d) list or TMDL addresses sediment or a parameter that addresses sediment (such as total suspended solids, turbidity, or siltation);
- 2) Identification of whether the operator's discharge is identified, either specifically or generally, on the 303(d) list or any associated assumptions and allocations identified in the TMDL for the discharge; and
- 3) Measures taken by the operator to ensure that its discharge of pollutants from the site is consistent with the assumptions and allocations of the TMDL.



If the Department determines during the review process that the proposed project will be discharging to a receiving water that is on the most recent 303(d) list or with an approved TMDL, then the Department will notify the applicant to include additional Best Management Practices in the SWPPP.

E. Attainment of Water Quality Standards After Authorization.

- 1) The permittee shall select, install, implement, and maintain BMPs at the construction site that minimize pollutants in the discharge as necessary to meet applicable water quality standards. In general, except in situations explained below, the SWPPP shall be developed, implemented, and updated to be considered as stringent as necessary to ensure that the discharges do not cause or contribute to an excursion above any applicable water quality standard.
- 2) At any time after authorization, the Department may determine that the stormwater discharges may cause, have reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. If such a determination is made, the Department will require the permittee to:
  - a. Develop a supplemental BMP action plan describing SWPPP modifications to adequately address the identified water quality concerns and submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or
  - b. Cease discharges of pollutants from construction activity and submit an individual permit application.
- 3) All written responses required under this part shall include a signed certification (Part II.B.9)

F. Site Map. The SWPPP shall contain a legible site map (or multiple maps, if necessary) complete to scale, showing the entire site, that identifies, at a minimum, the following:

- 1) Pre-construction topographic view;
- 2) Direction of stormwater flow (i.e., use arrows to show which direction stormwater will flow) and approximate slopes anticipated after grading activities;
- 3) Delineate on the site map areas of soil disturbance and areas that will not be disturbed under the coverage of this permit;
- 4) Location of major structural and nonstructural controls identified in the plan;
- 5) Location of main construction entrance and exit;
- 6) Location where stabilization practices are expected to occur;
- 7) Locations of off-site materials, waste, borrow area, or equipment storage area;
- 8) Location of areas used for concrete wash-out;
- 9) Location of all Waters of the State with associated natural buffer boundary lines. Identify floodplain and floodway boundaries, if available;
- 10) Locations where stormwater is discharged to Waters of the State or a municipal separate storm sewer system if applicable,
- 11) Locations where stormwater is discharged off-site (should be continuously updated);
- 12) Areas where final stabilization has been accomplished and no further construction phase permit requirements apply;
- 13) A legend that clearly specifies any erosion and sediment control measure symbols/labels used in the site map and/or detail sheet; and
- 14) Locations of any storm drain inlets on the site and in the immediate vicinity of the site.

G. Stormwater Controls. Each plan shall include a description of appropriate controls and measures that will be implemented at the construction site. The plan will clearly describe for each activity identified in the project description control measures associated with the activity and the schedule during the construction process that the measures will be implemented. Perimeter controls for the site shall be installed after the clearing and grubbing necessary for installation of the measure, but before the clearing and grubbing for the remaining portions of the site. Perimeter controls shall be actively maintained until final stabilization of those portions of the site upward of the

perimeter control. Temporary controls shall be removed after final stabilization and properly disposed. The description and implementation of controls shall address the following minimum components:

- 1) Initial Site Stabilization, Erosion, and Sediment Controls and Best Management Practices. Design, install, implement and maintain effective erosion and sediment controls to minimize the discharge of pollutants. At a minimum the following controls and Best Management Practices (BMPs) shall be designed, installed, implemented and maintained. Therefore, the SWPPP shall address, at a minimum, the following:
  - a. For larger common plans, only streets, drainage, utility areas, areas needed for initial construction of streets (e.g., borrow pits, parking areas, etc.) and areas needed for stormwater structures may be disturbed initially. Upon stabilization of the initial areas, additional areas may be disturbed.
  - b. The construction-phase erosion (such as site stabilization) and sediment controls (such as check dams) should be designed to retain sediment on-site to the extent practicable.
  - c. All control measures shall be properly selected, installed, and maintained in accordance with the manufacturer's specifications, good engineering, and construction practices. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee shall replace or modify the control for site situations.
  - d. If sediment escapes the construction site, off-site accumulations of sediment shall be removed at a frequency sufficient to minimize off-site impacts (e.g., fugitive sediment in a street could be washed into storm sewers by the next rain or pose a safety hazard to users of public streets). This permit does not give the authority to trespass onto other property; therefore this condition should be carried out along with the permission of neighboring land owners to remove sediment.
  - e. Sediment shall be removed from sediment traps (if used, please specify what type) or sedimentation ponds when design capacity has been reduced by 50%.
  - f. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls picked up daily).
  - g. Off-site material storage areas (also including overburden and stockpiles of dirt, borrow areas, etc.) used solely by the permitted project are considered a part of the project and shall be addressed in the SWPPP.
  
- 2) Stabilization practices. The SWPPP shall include, at a minimum, the following information:
  - a. Description and Schedule: A description of initial, interim, and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans should ensure that existing vegetation is preserved where attainable and that disturbed areas are stabilized. Stabilization practices may include: mulching, temporary seeding, permanent seeding, geotextiles, sod stabilization, natural buffer strips, protection of trees, and preservation of mature vegetation and other appropriate measures.
  - b. Description of natural buffer areas: The Department requires that a natural buffer zone be established between the top of stream bank and the disturbed area. The SWPPP shall contain a description of how the site will maintain natural buffer zones. For construction projects where clearing and grading activities will occur, SWPPP shall provide at least twenty-five (25) feet of natural buffer zone from any named or unnamed streams, creeks, rivers, lakes or other water bodies. The plan shall also provide at least fifty (50) feet of natural buffer zone from established TMDL water bodies, streams listed on the 303(d) list, an Extraordinary Resource Water (ERW), Ecologically Sensitive Waterbody (ESW), Natural and Scenic Waterway (NSW), or other uses at the discretion of the Director. If the site will be disturbed within the recommended buffer zone, then the buffer zone area shall be stabilized as soon as possible. Exceptions from this requirement for areas such as water crossings, limited water access, and restoration of the buffer are allowed if the permittee fully documents in the SWPPP the circumstances and reasons for the buffer zone encroachment. Additionally, this requirement is not intended to interfere with any other ordinance, rule or regulation, statute or other provision of law. Please note that above-grade clearing that does not disturb the soil in the buffer zone area does not have to comply with buffer zone requirements.
  - c. Records of Stabilization: A record of the dates when grading activities occur, when construction activities

temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included in the plan.

- d. **Deadlines for Stabilization After Construction Activity Temporarily Ceases:** Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily ceased, but in no case more than fourteen (14) days after the construction activity in that portion of the site has temporarily ceased, except:

(1) Where the initiation of stabilization measures by the fourteenth (14<sup>th</sup>) day after construction activity temporarily ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.

(2) In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures shall be employed as specified by the permitting authority.

- e. **Deadline for Stabilization After Construction Activity Permanently Ceases:** Stabilization measures shall be initiated immediately in portions of the site where construction activities have permanently ceased, except:

(1) Where the initiation of stabilization measures immediately after construction activity permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.

(2) In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures shall be employed as specified by the permitting authority.

- 3) **Structural Practices.** A description of structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable. Structural practices should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the Clean Water Act. Such practices may include but are not limited to:

- silt fences (installed and maintained)
- earthen dikes to prevent run-on
- drainage swales to prevent run-on
- check dams
- subsurface drains
- pipe slope drains
- storm drain inlet protection
- rock outlet protection
- sediment traps
- reinforced soil retaining systems
- gabions
- temporary or permanent sediment basins.

A combination of erosion and sediment control measures is encouraged to achieve maximum pollutant removal. Adequate spillway cross-sectional area and re-enforcement shall be provided for check dams, sediment traps, and sediment basins.

- a. **Sediment Basins:**

(1) For common drainage locations that serve an area with ten (10) or more acres (including run-on from other areas) draining to a common point, a temporary or permanent sediment basin that provides storage based on either the smaller of 3600 cubic feet per acre, or a size based on the runoff volume of a 10 year, 24 hour storm, shall be provided where attainable (so as not to adversely impact water quality) until final stabilization of the site. In determining whether installing a sediment basin is attainable, the operator may

consider factors such as site soils, slope, available area on site, etc. Proper hydraulic design of the outlet is critical to achieving the desired performance of the basin. The outlet should be designed to drain the basin within twenty-four (24) to seventy-two (72) hours. (A rule of thumb is one square foot per acre for a spillway design.) The 24-hour limit is specified to provide adequate settling time; the seventy-two (72) hour limit is specified to mitigate vector control concerns. If a pipe outlet design is chosen for the outfall, then an emergency spillway is required. If “non-attainability” is claimed, then an explanation of non-attainability shall be included in the SWPPP. Where a sediment basin is not attainable, smaller sediment basins or sediment traps shall be used. Where a sediment basin is un-attainable, natural buffer strips or other suitable controls which are effective are required for all side slopes and down slope boundaries of the construction area. The plans for removal of the sediment basin should also be included with the description of the basin in the SWPPP.

- (2) For drainage locations serving an area less than ten (10) acres, sediment traps, silt fences, or equivalent sediment controls are required for all side slope and down slope boundaries of the construction area unless a sediment basin providing storage based on either the smaller of 3600 cubic feet per acre, or a size based on the run off volume of a 10 year, 24 hour storm is provided. (A rule of thumb is one square foot per acre for a spillway.) However, in order to protect the Waters of the State, the Director, at their discretion, may require a sediment basin for any drainage areas draining to a common point.

b. Velocity Dissipation Devices:

Velocity dissipation devices shall be placed at discharge locations, within concentrated flow areas serving two or more acres, and along the length of any outfall channel to provide a non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (i.e., no significant changes in the hydrological regime of the receiving water). Please note that the use of hay-bales is not recommended in areas of concentrated flow.

H. Other Controls.

- 1) No solid materials, including building materials, shall be discharged to Waters of the State or offsite.
  - 2) Off-site vehicle tracking of sediments and the generation of dust shall be minimized through the use of a stabilized construction entrance and exit or vehicle tire washing.
  - 3) For lots that are less than one (1) acre in size an alternative method may be used in addition to a stabilized construction entrance. An example of an alternative method could be daily street sweeping. This could allow for the shortening of the construction entrance.
  - 4) The plan shall ensure and demonstrate compliance with applicable State or local waste disposal, temporary and permanent sanitary sewer or septic system regulations.
  - 5) No liquid concrete waste shall be discharged to Waters of the State. Appropriate controls to prevent the discharge of concrete washout waters shall be implemented if concrete washout will occur on-site.
  - 6) No contaminants from fuel storage areas, hazardous waste storage and truck wash areas shall be discharged to waters of the State or offsite. Methods for protecting these areas shall be identified and implemented. These areas should not be located near a water body, if there is a water body on or near the project.
- I. Non-stormwater discharges. Sources of non-stormwater listed in Part I.B.10 of this permit that are combined with stormwater discharges associated with construction activity shall be identified in the plan. This list should be site specific non-stormwater discharges.
- J. Post-Construction Stormwater Management. The operator is required to provide a description of measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed. Structural measures should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 (Corps of Engineers) of the Clean Water Act. This permit only addresses the installation of stormwater management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed and the site has undergone final stabilization.

However, post-construction stormwater BMPs that discharge pollutants from a point source once construction is completed may need authorization under a separate ADEQ NPDES permit. Such practices may include but are not limited to:

- infiltration of runoff onsite
- flow attenuation by use of open vegetated swales and natural depressions
- stormwater retention structures
- stormwater detention structures (including wet ponds)
- sequential systems, which combine several practices

A goal of at least 80 % removal of total suspended solids from these flows which exceed predevelopment levels should be used in designing and installing stormwater management controls (where practicable). Where this goal is not met, the operator shall provide justification for rejecting each practice listed above based on site conditions.

- K. Applicable State or Local Programs. The SWPPP shall be updated as necessary to reflect any revisions to applicable federal, state, or local requirements that affect the stormwater controls implemented at the site.
- L. Inspections. Inspections should be conducted by qualified personnel (provided by the operator). Inspections shall include all areas of the site disturbed by construction activity and areas used for storage of materials that are exposed to precipitation. Inspectors shall look for evidence of, or the potential for, pollutants entering the stormwater conveyance system. Erosion and sedimentation control measures shall be observed to ensure proper operation. Discharge locations shall be inspected to determine whether erosion control measures are effective in preventing significant impacts to Waters of the State or offsite, where accessible. Where discharge locations are inaccessible, nearby downstream locations shall be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking. Inspections may not be required if the lot(s) within a larger common plan is/are sufficiently stabilized. In addition, inspections may not be required on a completed section of a linear project if that section has been sufficiently stabilized. Stabilized areas of the project should be indicated in the SWPPP and site map and show what date they were stabilized. The operator shall ensure that no sediment will leave the lot(s) that are stabilized. These lots shall be identified within the SWPPP and show what date they were stabilized. If the operator is unable to ensure this, then inspections shall continue.
- 1) Inspection Frequency. Inspections shall be conducted in accordance with one of the following schedules listed below. The schedule **must be specified** in the Stormwater Pollution Prevention Plan (SWPPP).
- a. At least once every 7 calendar days, or
  - b. At least once every 14 calendar days and within 24 hours of the end of a storm event of 0.25 inches or greater (a rain gauge must be maintained on-site).
- 2) Inspection Form. The ADEQ inspection form should be used for all inspections. The inspection form should include any erosion/sediment controls that are being used on the site. The form is available on the Department's website [www.adeg.state.ar.us](http://www.adeg.state.ar.us). If a different form is used, it shall at a minimum contain the following information:
- a. Inspector Name and Title
  - b. Date of Inspection
  - c. Amount of Rainfall and Days Since Last Rain Event (only applicable to Part II.A.4.L.1.b)
  - d. Approximate beginning and duration of the storm event
  - e. Description of any discharges during inspection
  - f. Locations of discharges of sediment/other pollutants
  - g. Locations of BMPs in need of maintenance or where maintenance was performed
  - h. If the BMPs are in working order and if maintenance is required (including when scheduled and completed)
  - i. Locations that are in need of additional controls
  - j. Location and Dates When Major Construction Activities Begin, Occur or Cease
  - k. Signature of qualified signatory official, in accordance with Part II.B.9

Additional information may be added to the inspection report at the permittee's discretion.

- 3) Inspection Records. The report shall be retained as part of the SWPPP for at least three (3) years from the date the site is finally stabilized. The report shall be signed and have a certification statement in accordance with the requirements of this permit.
  - 4) Winter Conditions. Inspections will not be required at construction sites where snow cover exists over the entire site for an extended period, and melting conditions do not exist. If there is any runoff from the site at any time during snow cover, melting conditions would be considered to be existent at the site and this inspection waiver would not apply. Regular inspections, as required by this permit, are required at all other times as specified in this permit. If winter conditions prevent compliance with the permit, documentation of the beginning and ending date of winter conditions should be included in the SWPPP.
  - 5) Adverse Weather Conditions. Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make inspections impractical, such as extended frozen conditions. When adverse weather conditions prevent the inspection of the site, an inspection should be completed as soon as is safe and feasible. If adverse weather conditions prevent compliance with the permit, documentation of the beginning and ending date of adverse weather conditions should be included in the SWPPP.
- M. Maintenance. A description of procedures to maintain vegetation, erosion and sediment control measures and other protective measures in good, effective operating condition shall be outlined in the plan. Any repairs that are needed based on an inspection shall be completed, when practicable, before the next storm event, but not to exceed a period of three (3) business days of discovery, or as otherwise directed by state or local officials. However, if conditions do not permit large equipment to be used, a longer time frame is allowed if the condition is thoroughly documented on the inspection form. Maintenance for manufactured controls shall be done at a minimum of the manufacturer's specifications. Maintenance for non-manufactured controls, i.e. check dams and sediment traps, shall be done upon 50% capacity.
- N. Employee Training. The permittee/operator is responsible for training personnel who are responsible for implementing activities identified in the SWPPP on the components and goals of the SWPPP and the requirements of the general permit. This includes contractors and subcontractors. Training should be given by a knowledgeable and qualified trainer. The SWPPP shall identify periodic dates for such training and records of training shall be maintained with the SWPPP. Training records that are maintained electronically (i.e. database, etc.) do not need to be maintained with the SWPPP, but shall be accessible upon request. Formal training classes given by Universities or other third-party organizations are not required but recommended for qualified trainers; the permittee is responsible for the content of the training being adequate for personnel to implement the requirements of the permit.
5. Plan Certification. The SWPPP Certification shall be signed by either the operator or the cognizant official identified on the Notice of Intent. All documents required by the permit and other information requested by the Director shall be signed by operator or by a duly authorized representative of the operator (Please see Part II.B.10 below for certification).

## SECTION B: STANDARD PERMIT CONDITIONS

### 1. Retention of Records.

- A. The operator shall retain records of all Stormwater Pollution Prevention Plans, all inspection reports required by this permit, and records of all data used to complete the Notice of Intent (NOI) to be covered by this permit for a period of at least three years from the date the Notice of Termination letter is signed by the Department. This period may be extended by request of the Director at any time.
- B. The operator shall retain a signed copy of the Stormwater Pollution Prevention Plan (SWPPP) and inspection reports required by this permit at the construction site from the date of project initiation to the date of final stabilization.

2. **Duty to Comply.** The operator shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Water Act and the Arkansas Water and Air Pollution Control Act and is grounds for: enforcement action; permit termination, revocation and re-issuance, or modification; or denial of a permit renewal application.

3. **Penalties for Violations of Permit Conditions.** The Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 et seq.) provides that any person who violates any provisions of a permit issued under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year, or a criminal penalty of not more than twenty five thousand dollars (\$25,000) or by both such fine and imprisonment for each day of such violation. Any person who violates any provision of a permit issued under the Act may also be subject to civil penalty in such amount as the court shall find appropriate, not to exceed ten thousand dollars (\$10,000) for each day of such violation. The fact that any such violation may constitute a misdemeanor shall not be a bar to the maintenance of such civil action.

4. **Continuance of the General Permit.** Permittees wishing to continue coverage under this general permit shall submit a Renewal NOI (see Part I.B.4 for where to submit documentation) up to 180 days prior to the expiration date, but no later than 30 days prior to the expiration date. No additional fee is required to be submitted along with the Renewal NOI.

An expired general permit continues in force and effect until a new general permit is issued. If this permit is not re-issued or replaced prior to the expiration date, it will be administratively continued in accordance with Ark. Code Ann. § 8-4-203(m) and remain in force and effect. If a permittee was granted permit coverage prior to the expiration date, the permittee will automatically remain covered by the continued permit until the earliest of:

- A. The effective date of the re-issuance or replacement of this permit and a timely submittal of a renewal NOI by the operator; or
- B. The operator's submittal of a Notice of Termination (NOT); or
- C. Issuance of an individual permit for the project's discharges (see Part I.B.24); or
- D. A formal permit decision by the ADEQ to not re-issue this general permit, at which time operators must seek coverage under an alternative permit (see Part I.B.24).

Small site operators are responsible for ensuring that the site is in compliance with any changes or updates of this general permit by reviewing the ADEQ website at:

<https://www.adeq.state.ar.us/water/permits/npdes/stormwater/>

5. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for an operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
6. **Duty to Mitigate.** The operator shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has reasonable likelihood of adversely affecting human health or the environment.
7. **Duty to Provide Information.** The operator shall furnish to the Director, an authorized representative of the Director, the EPA, a State or local agency reviewing sediment and erosion plans, grading plans, or stormwater management plans, or in the case of a stormwater discharge associated with industrial activity which discharges through a Municipal Separate Storm Sewer System (MS4) with an NPDES permit, to the municipal operator of the system, within a reasonable time, any information which is requested to determine compliance with this permit.
8. **Other Information.** When the operator becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the Director, he or she shall promptly submit such facts or information.
9. **Signatory Requirements.** All Notices of Intent (NOIs), reports, or information submitted to the Director shall be signed and certified by the operator.

A. All Notices of Intent shall be signed as follows:

- 1) **For a corporation:** by a responsible corporate officer. For purposes of this section, a responsible corporate officer means:
  - a. A president, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
  - b. The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to ensure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- 2) **For a partnership or sole proprietorship:** by a general partner or the proprietor, respectively;
- 3) **For a municipality, State, Federal or other public agency:** By either a principal executive or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
  - a. The chief executive officer of the agency; or
  - b. A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

B. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a **duly authorized** representative of that person. A person is a duly authorized representative only if:

- 1) The authorization is made in writing by a person described above and submitted to the Director;
- 2) The authorization specifies either an individual or a person having responsibility for the overall operation of the



regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility, or position of equivalent responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

- 3) Changes to authorization. If an authorization under this Part is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the above requirements shall be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

**10. Certification.** Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Note: For this permit only, "this document" refers to the Stormwater Pollution Prevention Plan, "attachments" refers to the site map and inspection forms, and "system" is referencing the project site.

**11. Penalties for Falsification of Reports.** The Arkansas Water and Air Pollution Control Act provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan or other document filed or required to be maintained under this permit shall be subject to civil penalties specified in Part II.B.3 of this permit and/or criminal penalties under the authority of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 et seq.).

**12. Penalties for Tampering.** The Arkansas Water and Air Pollution Control act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year or a fine of not more than twenty five thousand dollars (\$25,000) or by both such fine and imprisonment.

**13. Oil and Hazardous Substance Liability.** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the operator from any responsibilities, liabilities, or penalties to which the operator is or may be subject under Section 311 of the Clean Water Act or Section 106 of CERCLA.

**14. Property Rights.** The issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property, any invasion of personal rights, or any infringement of Federal, State, or local laws or regulations.

**15. Severability.** The provisions of this permit are severable. If any provisions of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provisions to other circumstances and the remainder of this permit shall not be affected thereby.

**16. Transfers.** This permit is not transferable to any person except after notice to the Director. A transfer form shall be submitted to the ADEQ as required by this permit.

**17. Proper Operation and Maintenance.** The operator shall at all times:

- A. Properly operate and maintain all systems of treatment and control (and related appurtenances) which are installed or used by the operator to achieve compliance with the conditions of this permit. This provision requires the operation of

backup or auxiliary facilities or similar systems which are installed by an operator only when the operation is necessary to achieve compliance with the conditions of the permit.

- B. Provide an adequate operating staff which is duly qualified to carry out operation, inspection, maintenance, and testing functions required to ensure compliance with the conditions of this permit.

**18. Inspection and Entry.** The operator shall allow the Director, the EPA, or an authorized representative, or, in the case of a construction site which discharges to a municipal separate storm sewer, an authorized representative of the municipal operator of the separate sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

- A. Enter upon the operator's premises where a regulated facility or activity is located or conducted, or where records shall be kept under the conditions of this permit;
- B. Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this permit;
- C. Inspect at reasonable times any facilities or equipment, including monitoring and control equipment and practices or operations regulated or required by the permit;
- D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location on the permitted property.

**19. Permit Actions.** This permit may be modified, revoked and reissued, or terminated for any cause including, but not limited to, the following;

- A. Violation of any terms or conditions of this permit;
- B. Obtaining this permit by misrepresentation or failure to fully disclose all relevant facts;
- C. A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge;
- D. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or
- E. Failure of the operator to comply with the provisions of ADEQ Regulation No. 9 (Fee Regulation). Failure to promptly remit all required fees shall be grounds for the Director to initiate action to terminate this permit under the provisions of 40 CFR 122.64 and 124.5(d), as adopted by reference in ADEQ Regulation No. 6, and the provisions of ADEQ Regulation No. 8.

**20. Re-Opener Clause.**

- A. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with industrial activity covered by this permit, the operator of such discharge may be required to obtain an individual permit or an alternative general permit in accordance with Part I.B.23 of this permit, or the permit may be modified to include different limitations and/or requirements.
- B. Permit modification or revocation will be conducted in accordance with the provisions of 40 CFR 122.62, 122.63, 122.64 and 124.5, as adopted by reference in ADEQ Regulation No. 6.

**21. Local Requirements.** All dischargers shall comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding any discharges of stormwater to storm drain systems or other water sources under their jurisdiction, including applicable requirements in municipal stormwater management programs developed to comply with the ADEQ permits. Dischargers shall comply with local stormwater management requirements, policies, or guidelines including erosion and sediment control.

**22. Applicable Federal, State Requirements.** Permittees are responsible for compliance with all applicable terms and conditions of this permit. Receipt of this permit does not relieve any operator of the responsibility to comply with any other applicable federal, state or local statute, ordinance policy, or regulation.

# APPENDIX D: SWPPP COMPLETION CHECKLIST

# SWPPP Completion Checklist

Yes = Complete

No = Incomplete/Deficient

N/A = Not applicable to project

Yes	No	N/A		Permit Section Citation
			<b>A. A site description, including:</b>	
			1. Project description, intended use after NOT	Part II.A.4.A.1
			2. Sequence of major activities	Part II.A.4.A.2
			3. Total & disturbed acreage	Part II.A.4.A.3
			4. Pre- and post-construction runoff coefficient OR soil/discharge data	Part II.A.4.A.4
			<b>B. Responsible Parties: All parties dealing with the SWPPP and the areas they are responsible for on-site.</b>	Part II.A.4.B
			<b>C. Receiving Water.</b>	Part II.A.4.C
			-MS4 Name	Part II.A.4.C
			-Ultimate Receiving Water	Part II.A.4.C
			<b>D. Documentation of permit eligibility related to Impaired Water Bodies and Total Maximum Daily Loads (TMDL)</b>	
			1. Identify pollutant on 303(d) list or TMDL	Part II.A.4.D.1
			2. Is construction activity or the specific site listed as cause?	Part II.A.4.D.2
			3. Measures taken to reduce pollutants from the site.	Part II.A.4.D.3
			<b>E. Attainment of Water Quality Standards After Authorization.</b>	Part II.A.4.E
			<b>F. Site Map --- See End of Evaluation Form</b>	Part II.A.4.F
			<b>G. Description of Controls:</b>	
			1. Erosion and sediment controls, including:	
			a. Initial site stabilization	Part II.A.4.G.1.a
			b. Erosion and sediment controls	Part II.A.4.G.1.b
			c. Replacement of inadequate controls	Part II.A.4.G.1.c
			d. Removal of off-site accumulations	Part II.A.4.G.1.d
			e. Maintenance of sediment traps/basins @ 50% capacity	Part II.A.4.G.1.e
			f. Litter, construction debris and chemicals properly handled	Part II.A.4.G.1.f
			g. Off-site storage areas and controls	Part II.A.4.G.1.g
			2. Stabilization practices:	
			a. Description and schedule for stabilization	Part II.A.4.G.2.a
			b. Description of buffer areas	Part II.A.4.G.2.b
			c. Records of stabilization	Part II.A.4.G.2.c
			d. Deadlines for stabilization	Part II.A.4.G.2.d
			3. Structural Practices:	
			-Describe structural practices to divert flows, store flows, or otherwise limit runoff	Part II.A.4.G.3
			a. Sediment basins	Part II.A.4.G.3.a.1
			-Are more than 10 acres draining to a common point? If so, are sediment basins included?	Part II.A.4.G.3.a.1
			-Sediment basin dimensions and capacity description and calculations	Part II.A.4.G.3.a.1
			-If a basin wasn't practicable, are other controls sufficient?	Part II.A.4.G.3.a.1
			b. Velocity dissipation devices concentrated flow from 2 or more acres	Part II.A.4.G.3.b
			<b>H. Other controls including:</b>	
			1. Solid waste control measures	Part II.A.4.H.1
			2. Vehicle off-site tracking controls	Part II.A.4.H.2
			3. Compliance with sanitary waste disposal	Part II.A.4.H.4
			4. Does the site have a concrete washout area controls?	Part II.A.4.H.5
			5. Does the site have fuel storage areas, hazardous waste storage and/or truck wash areas controls?	Part II.A.4.H.6

# SWPPP Completion Checklist

Yes No N/A

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>I. Identification of allowable non-storm water discharges</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-Appropriate controls for dewatering, if present

**Permit Section Citation**  
Part II.A.4.I  
Part I.B.12.C

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>J. Post construction stormwater management.</b>
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Part II.A.4.J

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>K. State or local requirements incorporated into the plan.</b>
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Part II.A.4.K

**L. Inspections**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Inspection frequency listed?
--------------------------	--------------------------	--------------------------	---------------------------------

Part II.A.4.L.1

2. Inspection form

Part II.A.4.L.2

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ours.

If not ours, does it contain the following items:

a. Inspector name and title

Part II.A.4.L.2.a

b. Date of inspection.

Part II.A.4.L.2.b

c. Amount of rainfall and days since last rain event (14 day only)

Part II.A.4.L.2.c

d. Approx beginning and duration of storm event

Part II.A.4.L.2.d

e. Description of any discharges during inspection

Part II.A.4.L.2.e

f. Locations of discharges of sediment/other pollutants

Part II.A.4.L.2.f

g. BMPs in need of maintenance

Part II.A.4.L.2.g

h. BMPs in working order, if maintenance needed (scheduled and completed)

Part II.A.4.L.2.h

i. Locations that are in need of additional controls

Part II.A.4.L.2.i

j. Location and dates when major construction activities begin, occur or cease

Part II.A.4.L.2.j

k. Signature of responsible/cognizant official

Part II.A.4.L.2.k

3. Inspection Records

Part II.A.4.L.3

4. Winter Conditions

Part II.A.4.L.4

5. Adverse Weather Conditions

Part II.A.4.L.5

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>M. Maintenance Procedures</b>
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Part II.A.4.M

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>N. Employee Training</b>
--------------------------	--------------------------	--------------------------	-----------------------------

Part II.A.4.N

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Signed Plan Certification</b>
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Part II.A.5. and Part II.B.10

**F. Site Map showing:**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Pre-construction topographic view
--------------------------	--------------------------	--------------------------	--------------------------------------

Part II.A.4.F.1

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Drainage flow
--------------------------	--------------------------	--------------------------	------------------

Part II.A.4.F.2

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Approximate slopes after grading activities
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Part II.A.4.F.2

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. Areas of soil disturbance and areas not disturbed
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Part II.A.4.F.3

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. Location of major structural and non-structural controls.
--------------------------	--------------------------	--------------------------	--

Part II.A.4.F.4

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. Location of main construction entrance and exit.
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Part II.A.4.F.5

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. Areas where stabilization practices are expected to occur.
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Part II.A.4.F.6

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. Locations of off-site materials, waste, borrow area or storage area.
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Part II.A.4.F.7

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. Locations of areas used for concrete wash-out.
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Part II.A.4.F.8

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. Locations of surface waters on site.
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Part II.A.4.F.9

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11. Locations where water is discharged to a surface water or MS4.
--------------------------	--------------------------	--------------------------	--

Part II.A.4.F.10

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12. Storm water discharge locations.
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Part II.A.4.F.11

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13. Areas where final stabilization has been accomplished.
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Part II.A.4.F.12

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14. Legend for symbols/labels used
--------------------------	--------------------------	--------------------------	------------------------------------

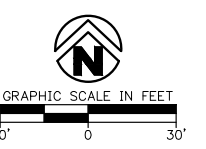
Part II.A.4.F.13

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15. Location of storm drain inlets on site or in immediate vicinity
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Part II.A.4.F.14

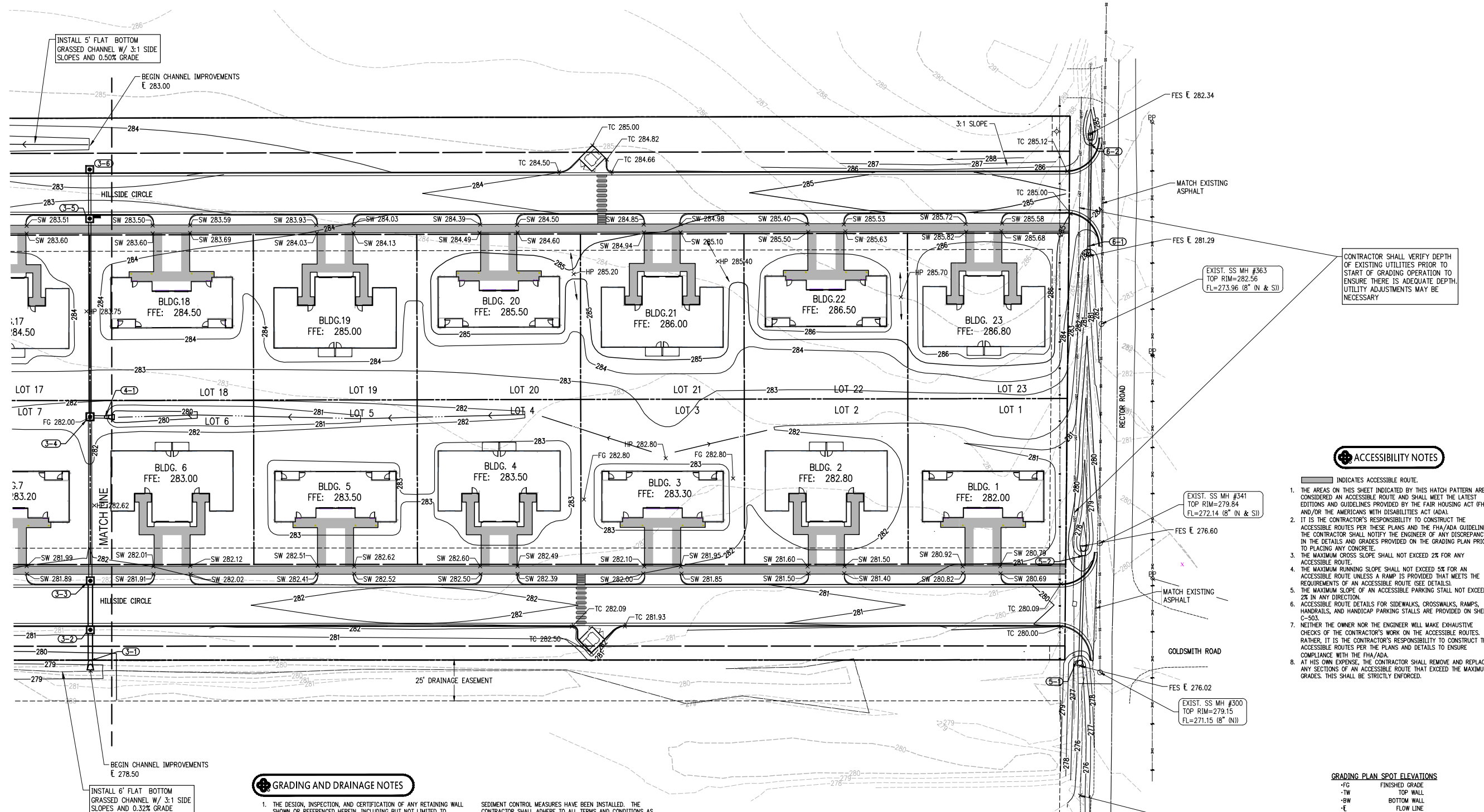
# APPENDIX E: SITE MAPS





# HILLSIDE MANOR 48 UNITS RESIDENTIAL DEVELOPMENT

PARAGOULD, ARKANSAS



### ACCESSIBILITY NOTES

- INDICATES ACCESSIBLE ROUTE.
- THE AREAS ON THIS SHEET INDICATED BY THIS HATCH PATTERN ARE CONSIDERED AN ACCESSIBLE ROUTE AND SHALL MEET THE LATEST EDITIONS AND GUIDELINES PROVIDED BY THE FAIR HOUSING ACT (FHA) AND/OR THE AMERICANS WITH DISABILITIES ACT (ADA).
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONSTRUCT THE ACCESSIBLE ROUTES PER THESE PLANS AND THE FHA/ADA GUIDELINES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY IN THE DETAILS AND GRADES PROVIDED ON THE GRADING PLAN PRIOR TO PLACING ANY CONCRETE.
- THE MAXIMUM CROSS SLOPE SHALL NOT EXCEED 2% FOR ANY ACCESSIBLE ROUTE.
- THE MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5% FOR AN ACCESSIBLE ROUTE UNLESS A RAMP IS PROVIDED THAT MEETS THE REQUIREMENTS OF AN ACCESSIBLE ROUTE (SEE DETAILS).
- THE MAXIMUM SLOPE OF AN ACCESSIBLE PARKING STALL NOT EXCEED 2% IN ANY DIRECTION.
- ACCESSIBLE ROUTE DETAILS FOR SIDEWALKS, CROSSWALKS, RAMPS, HANDRAILS, AND HANDICAP PARKING STALLS ARE PROVIDED ON SHEETS C-503.
- NEITHER THE OWNER NOR THE ENGINEER WILL MAKE EXHAUSTIVE CHECKS OF THE CONTRACTOR'S WORK ON THE ACCESSIBLE ROUTES. RATHER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONSTRUCT THE ACCESSIBLE ROUTES PER THE PLANS AND DETAILS TO ENSURE COMPLIANCE WITH THE FHA/ADA.
- AT HIS OWN EXPENSE, THE CONTRACTOR SHALL REMOVE AND REPLACE ANY SECTIONS OF AN ACCESSIBLE ROUTE THAT EXCEED THE MAXIMUM GRADES. THIS SHALL BE STRICTLY ENFORCED.

### GRADING PLAN SPOT ELEVATIONS

*FG	FINISHED GRADE
*TW	TOP WALL
*BW	BOTTOM WALL
*E	FLOW LINE
*TC	TOP CURB
*G	GUTTER
*SW	SIDEWALK
*TP	TOP PAVEMENT EXISTING GRADE

### GRADING AND DRAINAGE NOTES

- THE DESIGN, INSPECTION, AND CERTIFICATION OF ANY RETAINING WALL SHOWN OR REFERENCED HEREIN, INCLUDING BUT NOT LIMITED TO, SEGMENTAL RETAINING WALLS, MASS GRAVITY WALLS, GABION WALLS, ETC., GREATER THAN FORTY-EIGHT INCHES IN HEIGHT, SHALL BE BY OTHERS. ANY RETAINING WALL DATA SHOWN OR REFERENCED HEREIN SHALL BE FOR COORDINATION OF THE WALL LOCATION AND ELEVATIONS ONLY.
- THE OWNER/CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING AND PROVIDING SEPARATE AND INDEPENDENT RETAINING WALL DESIGNS, INSPECTIONS, AND CERTIFICATIONS BY A REGISTERED PROFESSIONAL ENGINEER OTHER THAN CRAFTON TULL. THIS SHALL ALSO APPLY TO ANY ASSOCIATED AND NECESSARY PUBLIC SAFETY DEVICES INCLUDING, BUT NOT LIMITED TO, PEDESTRIAN SAFETY RAILS.
- THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF EXISTING UTILITIES ON SITE OR IN RIGHT-OF-WAY. ALL UTILITIES MUST BE LOCATED PRIOR TO GRADING START.
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- ALL CUT OR FILL SLOPES SHALL BE A MAX 3:1 SLOPE OR FLATTER UNLESS OTHERWISE NOTED.
- IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
- ALL STORM SEWER PIPE CONNECTIONS TO STRUCTURES SHALL BE GROUDED TO ASSURE CONNECTION AT STRUCTURE IS WATER-TIGHT. ALL STORM SEWER STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.
- ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY WHEN IN PAVED AND TRAFFIC AREAS.
- ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH THE PAVEMENT AND SHALL HAVE TRAFFIC BEARING RINGS AND COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 1" ABOVE FINISH GRADE. LIDS SHALL BE LABELED PER JURISDICTIONAL SPECIFICATIONS.
- SITE GRADING SHALL NOT PROCEED UNTIL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE GENERAL NPDES PERMIT AND THE SWPPP FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- ALL UNSURFACED AREAS ASSURIED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL TO FINAL GRADE. REFER TO THE LANDSCAPE PLAN.
- TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON PLANS, CONTACT ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS THROUGHOUT ALL PHASES OF CONSTRUCTION.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS.
- THE EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL BUILDING PLANS AND SPECIFICATIONS.
- EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
- CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.
- IF WET AREAS ARE ENCOUNTERED ON-SITE THE CONTRACTOR SHALL COORDINATE WITH THE GEOTECHNICAL ENGINEER FOR THE DESIGN AND REPLACEMENT OF A FRENCH DRAIN SYSTEM.
- CRAFTON, TULL & ASSOCIATES, INC. (CTA) HAS NOT NECESSARILY ESTABLISHED MINIMUM FINISH FLOOR ELEVATIONS FOR EACH INDIVIDUAL BUILDING OR LOT IN THIS SUBDIVISION WHEN A MINIMUM BUILDING FLOOR ELEVATION IS NOT ESTABLISHED AND NOTED. THE ULTIMATE RESPONSIBILITY FOR THE PROPER GRADING OF EACH INDIVIDUAL LOT OR PARCEL SHALL REST WITH THE LOT'S OWNER. TYPICALLY, THE MINIMUM FINISH FIRST FLOOR ELEVATIONS SHOULD BE AT LEAST TWELVE INCHES (12") ABOVE THE FINISHED TOP OF STREET CURB ELEVATION ASSOCIATED WITH EACH INDIVIDUAL LOT OR PARCEL OR AS REQUIRED BY LOCAL AND STATE CODES.

NOTE:  
CONTRACTOR SHALL REFERENCE GEOTECHNICAL REPORT DATED OCTOBER 16, 2020 AND SUPPLEMENTAL #1, REVISION #1 DATED JANUARY 25, 2021 FOR GRADING REQUIREMENTS AND SUBGRADE PREPARATION BY TERRACON PROJECT #35205125.

Arkansas One Call  
**811**  
Know what's below.  
Call before you dig.

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 20804700  
ISSUE DATE: 1/29/2021  
CONTACT: JKELSO  
CHECKED BY:











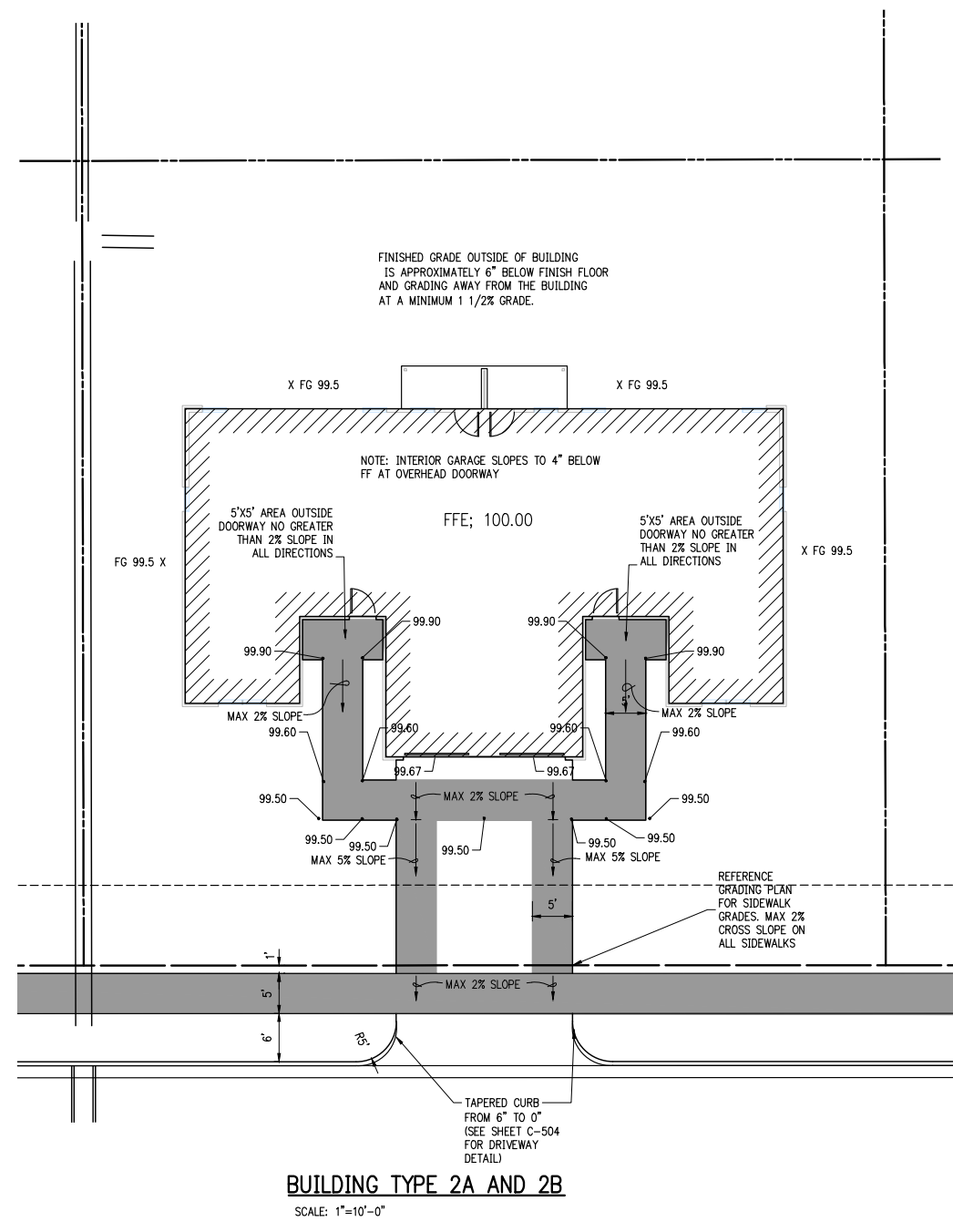
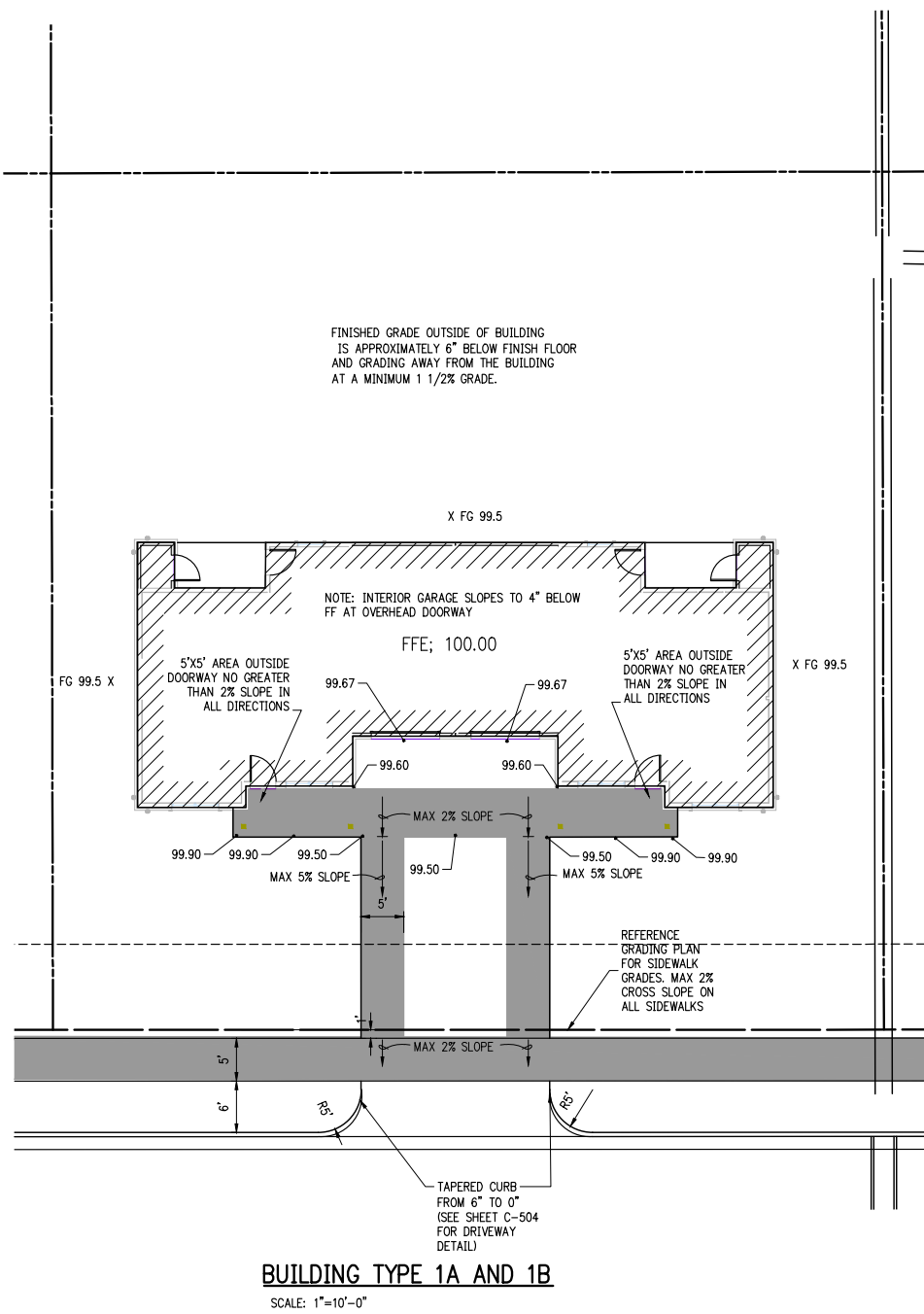


HILLSIDE MANOR  
48 UNITS  
RESIDENTIAL  
DEVELOPMENT  
PARAGOULD, ARKANSAS

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

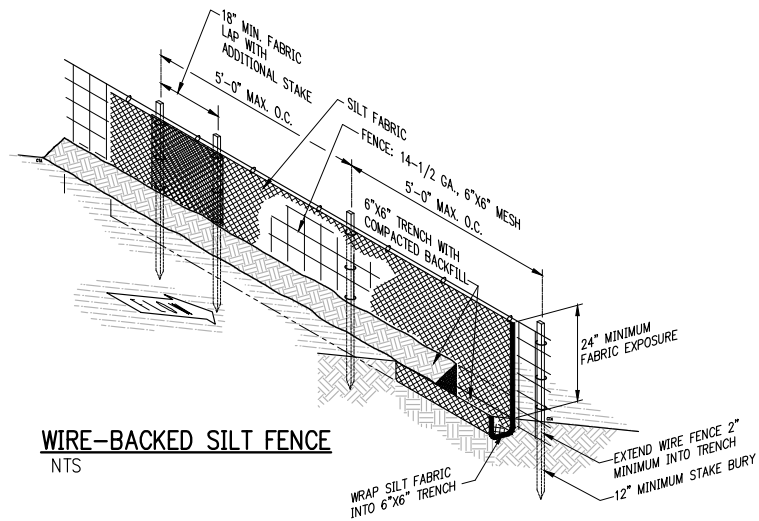
PROJECT NO: 20804700  
ISSUE DATE: 1/29/2021  
CONTACT: J. KELSEY  
CHECKED BY:  
© 2020 Crafton, Tull & Associates, Inc.



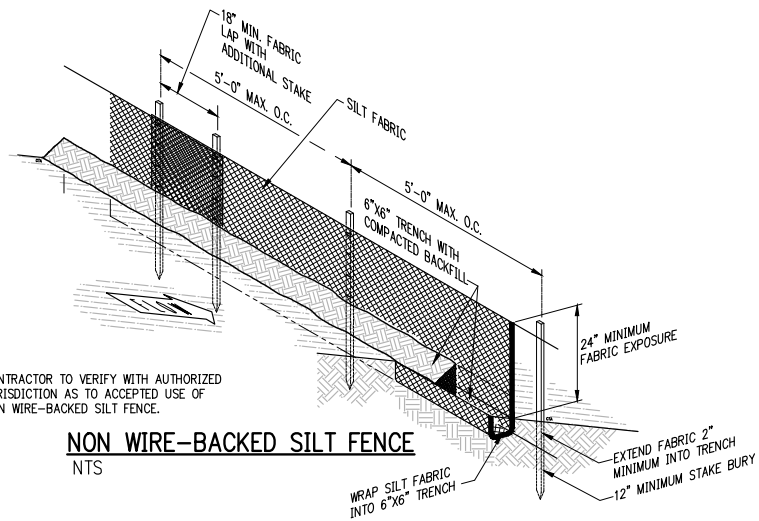
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  - 8. AT HIS OWN EXPENSE, THE CONTRACTOR SHALL REMOVE AND REPLACE ANY SECTIONS OF AN ACCESSIBLE ROUTE THAT EXCEED THE MAXIMUM GRADES. THIS SHALL BE STRICTLY ENFORCED.

TYPICAL GRADING AROUND EACH BUILDING.  
REFERENCE GRADING PLAN FOR ACTUAL FINISH  
FLOOR ELEVATIONS AND GRADES ALONG THE STREET.

DRAWING IS UNLIMITED BY ANY PREVIOUS EDITIONS OR REVISIONS. ANY CHANGES TO THIS DRAWING SHALL BE INDICATED BY A REVISION TABLE. CRAFTON TULL & ASSOCIATES, INC. IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED BY ANY OTHER SOURCE.

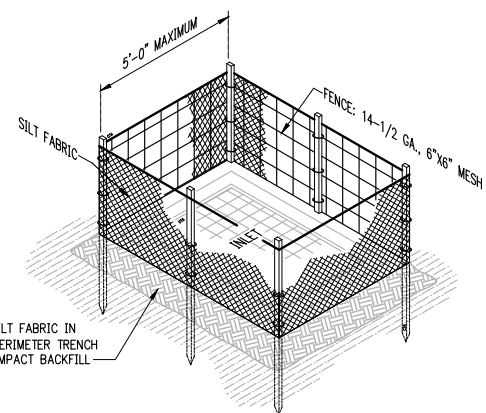


**WIRE-BACKED SILT FENCE**  
NTS



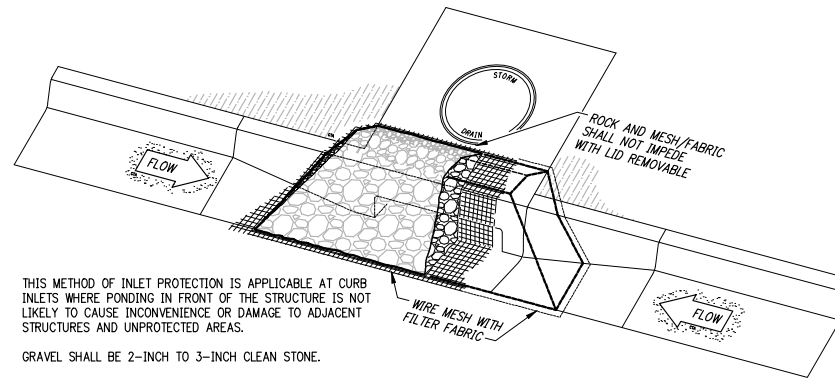
NOTE:  
1. CONTRACTOR TO VERIFY WITH AUTHORIZED JURISDICTION AS TO ACCEPTED USE OF NON WIRE-BACKED SILT FENCE.

**NON WIRE-BACKED SILT FENCE**  
NTS



SILT FABRIC SHALL BE SECURELY FASTENED TO WIRE FENCING.

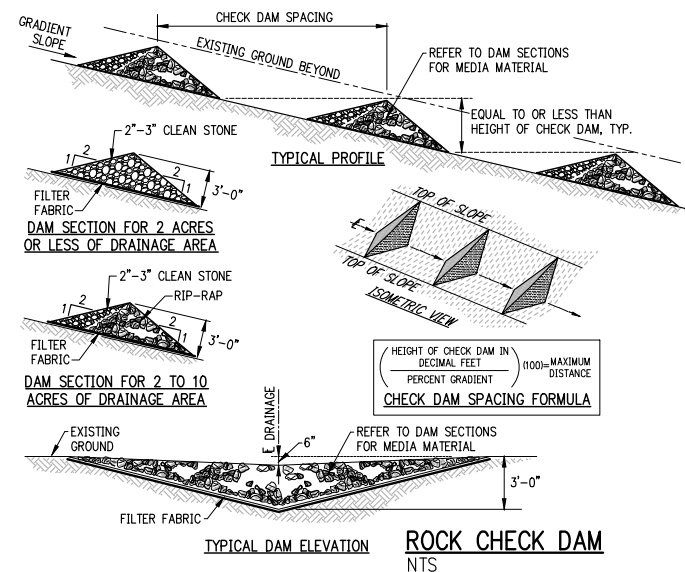
**IP4 SILT FENCE INLET PROTECTION**  
NTS



THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

GRAVEL SHALL BE 2-INCH TO 3-INCH CLEAN STONE.

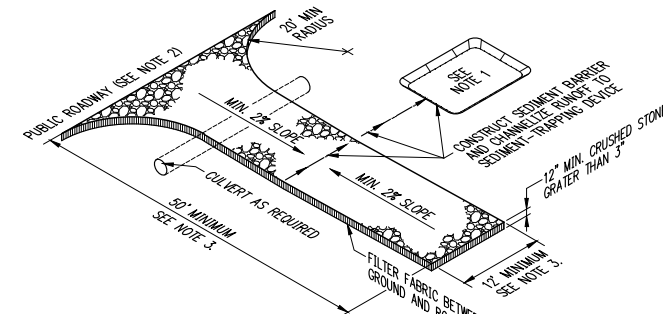
**IP2 CURB INLET GRAVEL SEDIMENT FILTER**  
NTS



HEIGHT OF CHECK DAM IN DECIMAL FEET  $\leq 100 \times$  MAXIMUM PERCENT GRADIENT DISTANCE

**CHECK DAM SPACING FORMULA**

**ROCK CHECK DAM**  
NTS



1. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCE/EXIT IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES EXIT ONTO THE PUBLIC ROADS. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF SITE.

2. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

3. LENGTH AND WIDTH TO SUIT SITE, CONSTRUCTION TRAFFIC AND EFFECTIVENESS.

**STABILIZED CONSTRUCTION EXIT (ENTRANCE)**  
NTS

CERTIFICATE OF AUTHORIZATION:

HILLSIDE MANOR  
48 UNITS  
RESIDENTIAL  
DEVELOPMENT  
PARAGOULD, ARKANSAS

Key Plan:

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 20804700  
ISSUE DATE: 1/29/2021  
CONTACT: J. KELSIO  
CHECKED BY:



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EROSION CONTROL DETAILS

C-502

The background of the page features a topographic map pattern with white contour lines on a grey background. A solid blue horizontal band is centered across the page, containing the title text in white.

# **APPENDIX F: USFW ENDANGERED SPECIES LIST**



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Arkansas Ecological Services Field Office  
110 South Amity Suite 300  
Conway, AR 72032-8975  
Phone: (501) 513-4470 Fax: (501) 513-4480  
<http://www.fws.gov/arkansas-es>

In Reply Refer To:  
Consultation Code: 04ER1000-2021-SLI-0359  
Event Code: 04ER1000-2021-E-00961  
Project Name: Hillside Manor-Paragould, AR

December 22, 2020

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies endangered, threatened, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). **This letter only provides an official species list and technical assistance; if you determine that listed species and/or designated critical habitat may be affected in any way by the proposed project, even if the effect is wholly beneficial, consultation with the Service will be necessary.**

**If you determine that this project will have no effect on listed species and their habitat in any way, then you have completed Section 7 consultation with the Service and may use this letter in your project file or application.**

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found on our website.

**Please visit our website at <http://www.fws.gov/arkansas-es/IPaC/home.html> for species-specific guidance to avoid and minimize adverse effects to federally endangered,**

**threatened, proposed, and candidate species.** Our web site also contains additional information on species life history and habitat requirements that may be useful in project planning.

**If your project involves in-stream construction activities, oil and natural gas infrastructure, road construction, transmission lines, or communication towers, please review our project specific guidance at <http://www.fws.gov/arkansas-es/IPaC/ProjSpec.html>.**

The karst region of Arkansas is a unique region that covers the **northern third of Arkansas** and we have specific guidance to conserve sensitive cave-obligate and bat species. **Please visit <http://www.fws.gov/arkansas-es/IPaC/Karst.html> to determine if your project occurs in the karst region and to view karst specific-guidance.** Proper implementation and maintenance of best management practices specified in these guidance documents is necessary to avoid adverse effects to federally protected species and often avoids the more lengthy formal consultation process.

**If your species list includes any mussels, Northern Long-eared Bat, Indiana Bat, Yellowcheek Darter, Red-cockaded Woodpecker, or American Burying Beetle, your project may require a presence/absence and/or habitat survey prior to commencing project activities.** Please check the appropriate species-specific guidance on our website to determine if your project requires a survey. We strongly recommend that you contact the appropriate staff species lead biologist (see office directory or species page) prior to conducting presence/absence surveys to ensure the appropriate level of effort and methodology.

**Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further.** Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

Through the consultation process, we will analyze information contained in a biological assessment that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a)(1)(B) of the ESA (also known as a habitat conservation plan) is necessary to harm or harass federally listed threatened or endangered fish or wildlife species. In either case, there is no mechanism for authorizing incidental take "after-the-fact." For more information regarding formal consultation and HCPs, please see the Service's Consultation Handbook and Habitat Conservation Plans at [www.fws.gov/endangered/esa-library/index.html#consultations](http://www.fws.gov/endangered/esa-library/index.html#consultations).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to



federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, **the accuracy of this species list should be verified after 90 days.** This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List
-

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Arkansas Ecological Services Field Office**

110 South Amity Suite 300

Conway, AR 72032-8975

(501) 513-4470

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## Project Summary

Consultation Code: 04ER1000-2021-SLI-0359

Event Code: 04ER1000-2021-E-00961

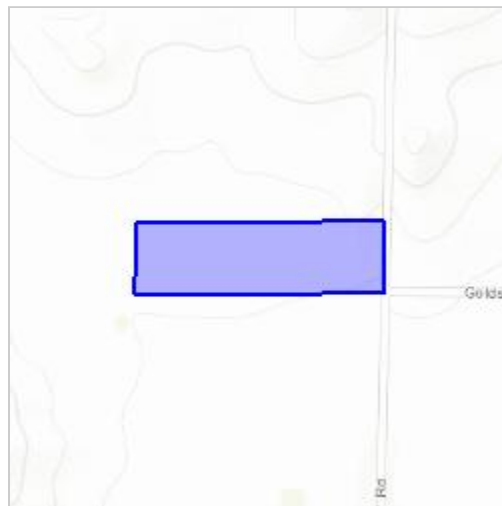
Project Name: Hillside Manor-Paragould, AR

Project Type: DEVELOPMENT

Project Description: The project consists of a new residential development on 9.88 acres of land in the rural community of Paragould, AR. The project is expected to start in February of 2021 and last for a period of 1 year.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/36.08234200719912N90.47723475948033W>



Counties: Greene, AR

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## Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered

### Birds

NAME	STATUS
Eastern Black Rail <i>Laterallus jamaicensis ssp. jamaicensis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10477">https://ecos.fws.gov/ecp/species/10477</a>	Threatened
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6039">https://ecos.fws.gov/ecp/species/6039</a>	Threatened
Red Knot <i>Calidris canutus rufa</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1864">https://ecos.fws.gov/ecp/species/1864</a>	Threatened

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## Flowering Plants

NAME	STATUS
Pondberry <i>Lindera melissifolia</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1279">https://ecos.fws.gov/ecp/species/1279</a>	Endangered

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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