

EXHIBIT "B"

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

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and

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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Engineer of Record* – The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
22. *General Requirements*— ~~Sections of Division 1 of the Specifications~~ The General Requirements pertain to all Sections of the specifications. (see SC-1.01.21)
23. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or

circumstances that may present a substantial danger to persons or property exposed thereto.

24. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
27. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
29. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
30. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
31. *PCBs*—Polychlorinated biphenyls.
32. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
33. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
34. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
35. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

36. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
37. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
38. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
39. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
40. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
41. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
42. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
43. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
44. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
45. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.
46. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.

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47. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
48. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
49. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
50. *Unit Price Work*—Work to be paid for on the basis of unit prices.
51. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
52. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.
53. *Surety*- The person, firm, or corporation which is bound by the contract bonds with and for Contractor (Principal); and which is held and firmly bound unto Owner for the conditions of obligations set forth in said bonds (see SC-1.01.52).

1.02 Terminology

- A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of

professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day:

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective:

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide:

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor up to ~~ten~~ five printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction. (see SC-2.02.A)

2.03 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules: Within 10 days after the Effective Date of the Agreement At the Preconstruction Conference* (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review (see SC-2.05.A):

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
2. a preliminary Schedule of Submittals; and
3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

B. Before any Work at the Site is started, Contractor shall deliver to the Owner, certificates of insurance that Contractor is required to purchase and maintain in accordance with Article 5. (see SC-2.05.B)

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

C. Owner may issue Notice to Proceed at the Preconstruction Conference. Contractor shall begin the Work within twenty-four (24) hours of the date given in the Notice to Proceed. If the Contractor does not start the Work within fourteen (14) calendar days after this date, Owner may, at his discretion, terminate Contractor in accordance with paragraph 15.02. (see SC-2.06.C)

2.07 *Initial Acceptance of Schedules*

A. ~~At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for~~

~~acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer. A schedule in accordance with Article 5 shall be submitted and accepted by the Owner and engineer within 30 days of NTP. Should a schedule not be accepted within 30 days of the NTP, it will be considered a breach of contract and reason for termination of the contract for cause in accordance with the General Conditions, Section 15.02. (see SC-2.07.A)~~

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or

Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict,

error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

- a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
- b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
 1. A Field Order;
 2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
 3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier shall not:
 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
 2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment. Contractor

shall obtain said land rights at his own expense and without liability to the Owner. Contractor shall not enter upon private property without first obtaining written permission from the rightful property owner (see SC-4.01.C)

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the “technical data” contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such “technical data” is identified in the Supplementary Conditions. Except for such reliance on such “technical data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor’s purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions, or information.

C. In the preparation of Drawings and Specifications, Engineer of Record or Engineer of Record’s Consultant relied upon the finding and recommendations included in the report(s) of explorations and tests of subsurface conditions (Geotechnical Report(s)) as included as part of the Contract Documents. (see SC-4.02.C)

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

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- c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, ~~neither Owner, or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors~~ and Engineer's Consultants shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court ~~or arbitration~~ or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project. (see SC-4.03.C.3)

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility

and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and

- procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such

deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. ~~All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on~~

~~Federal Bonds and as Acceptable Reinsuring Companies” as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney in fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney in fact signed each bond. All Bonds shall be in the form prescribed by the contract Documents or other form approved by Owner. All else notwithstanding, the terms of all Bonds shall be substantially in the form prescribed by Chapter 255, Florida Statutes. All Bonds shall be executed by Contractor and a corporate bonding company licensed to transact such business in the State of Florida and named on the current list of “Surety Companies Acceptable on Federal Bonds” as published in the Treasury Department Circular Number 570. Contractor will cause the Bonds to be recorded with the Clerk of the Circuit Court in the county in which the Work is to be performed. Failure to execute bonds in the form prescribed may constitute non-responsiveness on the part of the Contractor. The expense for all Bonds shall be the Contractor’s responsibility. (see SC-5.01.B)~~

- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions. Certificates of insurance shall be issued by a company with a Best’s rating of at least B+ authorized to do business in the State of Florida. Owner must approve non-rated insurers. If used, Owner shall be shown as Additional Insured and Certificate Holder, Engineer as Additional Insured and provide a 30-day cancellation notice.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. ~~Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence~~

~~of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain. Insurance policies written on a "Claims Made" form is not acceptable without Owner's approval. (see SC-5.03.B)~~

- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.
- F. Umbrella Liability insurance is preferred, but an Excess Liability equivalent is acceptable. Whichever type of coverage is provided, it shall not be more restrictive than the underlying insurance policy coverages, including, but not limited to the coverage Trigger, defense, notice of occurrence/accident/circumstances, notice of claim and extended reporting period. (see SC-5.03.F)
- G. No work shall commence under this contract until the required Certificate(s) have been provided. Work shall not continue after expiration (or cancellation) until new Certificate(s) have been provided. Non-continuance of work after expiration (or cancellation) of Certificate(s) will not constitute a delay beyond Contractor's control as defined in paragraph 12.03. (see SC-5.03.G)
- H. Contractor shall arrange for its insurers' policies to include, or be endorsed to include, a severability or interest/cross liability provision, so that Owner will be treated as if a separate policy were in existence, but without increasing the policy limits. (see SC-5.03.H)
- I. Contractor's deductibles/self-insured retentions shall be disclosed to Owner and may be disapproved by the latter. They shall be reduced or eliminated at the option of Owner. Contractor is responsible for the amount of any deductible or self-insured retention. (see SC-6.03.I)
- J. These insurance requirements shall not relieve or limit the liability of Contractor. Owner does not in any way represent that these types or amounts of insurance are sufficient or adequate to protect Contractor's interests or liabilities, but are merely minimums. (see SC-5.03.J)
- K. Insurance required of Contractor or any other insurance of Contractor shall be considered primary, and insurance or self-insurance of Owner shall be considered excess, as may be applicable to claims that arise out of this contract. (see SC-5.03.K)

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- L. Receipt of Certificates or other documentation of insurance or policies or copies of policies by Owner, or by any of its representatives, which indicate less coverage than required does not constitute a waiver of the Contractor's obligation to fulfill the insurance requirements herein. (see SC-5.03.L)
- M. The Contractor shall either (a) require each subcontractor to produce and maintain the same coverage as required of the Contractor, or (b) insure the activities of subcontractors in his own policy. (see SC-5.03.M)
- N. These insurance requirements are minimums and may not be adequate to cover Contractor exposures. (see SC-5.03.N)

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:

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1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.
- C. The limits of liability for the insurance required by paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
1. Workers compensation and related coverages under paragraphs 5.04.A.1 and A.2 of the General Conditions:
 - a. State Statutory

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- b. Applicable Federal (e.g. Longshoreman's) Statutory
 - c. Employer's Liability Each Employee \$1,000,000; Each Accident \$1,000,000; Disease Policy Limit \$1,000,000; Disease Each Employee \$1,000,000
2. Contractor's General Liability under paragraphs 5.04.A.3 through A.6 of the General Conditions, which shall also include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of the Contractor:
- a. General Aggregate (Except Products – Completed Operations) \$1,000,000 \$2,000,000
 - b. Products – Completed Operations Aggregate \$1,000,000
 - c. Each Occurrence (Bodily Injury and Property Damage) \$1,000,000
 - d. Property Damage liability insurance may be required to include Explosion, Collapse and Underground coverages where applicable
 - e. Excess or Umbrella Liability General Aggregate \$2,000,000; Each Occurrence \$1,000,000
3. Automobile Liability under paragraph 5.04.A.6 of the General Conditions: Combined Single Limit \$1,000,000

(see SC-5.04.C)

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. ~~Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:~~
 - 1. ~~include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and~~

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- subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
- ~~2. be written on a Builder's Risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.~~
 - ~~3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);~~
 - ~~4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;~~
 - ~~5. allow for partial utilization of the Work by Owner;~~
 - ~~6. include testing and startup; and~~
 - ~~7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.~~
- ~~B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.~~
- ~~C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.~~
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the
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Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

~~E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.~~

~~5.07—Waiver of Rights~~

~~A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.~~

~~B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:~~

- ~~1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and~~
- ~~2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property~~

~~insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.~~

- ~~C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.~~

~~5.08 Receipt and Application of Insurance Proceeds~~

- ~~A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.~~
- ~~B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.~~

~~5.09 Acceptance of Bonds and Insurance; Option to Replace~~

- ~~A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's~~

~~interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly. If Owner has any objection to the coverage afforded by or other provisions of Bonds or insurance required to be purchased and maintained by Contractor in accordance with Article 5 on the basis of non-conformance with the Contract Documents, Owner shall so notify Contractor in writing within ten days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. Contractor shall provide to Owner such additional information in respect of insurance provided as Owner may reasonably request. (see SC-5.09.A)~~

~~5.10 *Partial Utilization, Acknowledgment of Property Insurer*~~

- ~~A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.~~

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. Owner reserves the right to reject any means, methods, techniques, sequences or procedures proposed by Contractor which:

1. will constitute or create a hazard to the Work or to the persons or damage to property or existing utilities; or
2. will not produce finished work in accordance with the terms of the contract Documents.

Owner’s failure to exercise his right to reject such means, methods, techniques, sequences or procedures shall not relieve the Contractor of his obligation to accomplish the result intended in the Contract Documents nor shall the exercise of such right create a cause of action for damages. (see SC-6.01.A)

- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (~~which will not be unreasonably withheld~~) given after prior written notice to Engineer.
- C. Engineer shall record time and costs required by Engineer and Engineer's Consultants to provide inspection services due to Contractor's working beyond regular working hours as defined in the General Requirements. Owner's reimbursement for the charges shall be a deduction from Contractor's Partial Payment(s) in accordance with Section 01 11 00 Part 2.02. (see SC-6.02.C)

6.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

- 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
- 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
- 3) it has a proven record of performance and availability of responsive service.

b. Contractor certifies that, if approved and incorporated into the Work:

- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
- 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and

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- b) available engineering, sales, maintenance, repair, and replacement services; and
 - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
 - e. Each action mentioned above required for review of proposed substitute items of material or equipment shall be followed in the order given. Failure to do so shall be cause for rejection of the proposed substitution. (see SC-6.05.A.2.e)
 - f. Contractor shall reimburse Owner for the charges of Engineer or Engineer's Consultants for evaluation of substitutions. Owner's reimbursement for the charges shall be a deduction from the Contractor's Partial Payment(s). (see SC-6.05.A.2.f)
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

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- F. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection. Contractor shall not subcontract part(s) or the work, the aggregate cost of which is greater than 50 percent of the contract price, without prior written approval by Owner. Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work that bind Subcontractors to Contractor by the terms of the Contract Documents insofar as applicable to the work of Subcontractors and to give Contractor the same power as regards terminating any subcontract that Owner may exercise over Contractor under any provision of the Contract Documents. Nothing contained in the subcontract shall create any contractual relationship between Subcontractor and Owner. Each Subcontractor shall discharge all duties and responsibilities of Contractor to Owner covered by his subcontract. (see SC-6.06.A)
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work. Subcontractors and Suppliers shall be identified on the form provided in the Bidding Requirements. (see SC-6.06.B)
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor

2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees,

agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work. Permits, licenses, and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by Owner, unless otherwise specified. (see SC-6.08.A)

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations. Contractor shall also cause all Subcontractors to comply with all federal, state, county, and municipal laws, ordinances, rules, and regulations bearing on the conduct of the Work. (see SC-6.09.A)
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising

out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03. If Contractor observes that the Contract Documents are at variance with said laws, ordinances, rates, or regulations, Contractor shall promptly notify Engineer, Engineer of Record, and the County in writing, and any necessary changes shall be adjusted as provided in the Contract Documents. Contractor shall not proceed with the Work until so instructed by Owner. (see SC-6.09.B)

- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to

any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner. Annotations of record documents shall be legible, precise, and complete as determined by Engineer, Engineer of Record, and the County. (see SC-6.12.A)

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
 - C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
 - D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
 - E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
 - F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
 - G. Contractor shall be responsible at all times for precautions to achieve the protection of all persons, including employees and property. Contractor shall make special effort to detect hazardous conditions and shall take prompt action where necessary to avoid accident, injury, or property damage. OSHA and all other applicable safety laws and ordinances shall be followed as well as American National Standards Institute Safety Standards. All accidents, injuries, claims, or potential claims shall be reported promptly to Owner. (see SC-6.13.G)

6.14 Safety Representative

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 Hazard Communication Programs

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 Emergencies

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 Shop Drawings and Samples

- A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings:

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. Samples:

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may

require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

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2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall reimburse Owner for the charges of the County and the County's Consultants for costs generated as a result of more than two submittals of any one Shop Drawing or Sample being required for evaluation due to rejection for noncompliance of the original submittal or lack of information required by the Contract Documents. Owner's reimbursement for the charges shall be a deduction from Contractor's Partial Payment(s). (see SC-6.17.E.2)

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

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1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
 6. any inspection, test, or approval by others; or
 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or ~~arbitration~~ or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable . (see SC-6.20.A)
1. Five percent of the Contract Price is given as consideration for this indemnification. (see SC-6.20.A.1)

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- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.
- D. Neither Contractor nor Owner shall sell, transfer, assign, or otherwise dispose of the contract or any portion thereof, or any right, title, or interest therein, or any obligations thereunder, without written consent of the other party. (see SC-6.20.D)

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed 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 Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design

professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
1. written notice thereof will be given to Contractor prior to starting any such other work; and
 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other

work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
 - 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 - 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 - 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer ~~to whom Contractor makes no reasonable objection~~, whose status under the Contract Documents shall be that of the former Engineer. (see SC-8.02)

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION**9.01** *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

~~9.03 *Project Representative*~~

~~A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.~~

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.
- B. Contractor shall reimburse the Owner for the charges of Engineer and Engineer's Consultants for any additional field observations, engineering analysis, correspondence, meetings, or other work due to non-complying or defective construction, materials, or equipment performed or furnished by the Contractor, Subcontractors, or Suppliers. Owner's reimbursement for the charges shall be a deduction from the Contractor's Partial Payment(s). (see SC-9.05.B)

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create,

impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be

allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights

or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than ~~30~~ 15 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time). (see SC-10.05.B)
- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**11.01 *Cost of the Work***

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work. In no case shall rates exceed those published by the current edition of Data Quest Incorporated titled, Rental Rate Blue Book for Construction Equipment, and other procedures established by Florida Department of Transportation. (see SC-11.01.A.5.c)
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (~~except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D~~), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee. (see SC-11.01.A.5.f)

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- g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.
 - j. The cost of specific consideration for the indemnifications set forth in paragraph 6.20. (see SC-11.01.A.5.j)
 - k. The cost of compliance with current local, state and federal safety regulations. (see SC-11.01.A.5.k)

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 *Allowances*

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances:*

1. Contractor agrees that:

- a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
- b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. *Contingency Allowance:*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

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- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- ~~D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:~~
- ~~1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and~~
 - ~~2. there is no corresponding adjustment with respect to any other item of Work; and~~
 - ~~3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.~~
- E. If Owner objects to Contractor's quoted adjustment in Unit Price Work set forth in paragraph 11.03.D, Owner may assign such work to its own forces or another contractor. (SC 11.03.E)
- F. Owner reserves the right to delete any Unit Price Work without financial penalty incurred from Contractor. (SC 11.03.F)

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2,

on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

- C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

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- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.
- C. On the 21st of each month, or the next following business day, the Contractor shall submit to the Owner and Engineer a request for weather days. Failure to submit the request forfeits the right to claim weather days for that period and any previous period. The Owner will grant time extensions, on a day for day basis, for delays caused by the effects of rains or other inclement weather conditions or related adverse soil conditions that prevent the Contractor from productively performing controlling items of work resulting in:
- (1) The Contractor being unable to work at least 50% of the normal work day on pre-determined controlling work items due to adverse weather conditions.

No additional compensation will be made for delays caused by the effects of inclement weather. (see SC-12.02.C)

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

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- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 Tests and Inspections

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests. Contractor shall reimburse Owner for the charges of Engineer and Engineer's Consultants for all costs due to work not being ready for tests and/or inspections when the Contractor has notified Engineer that work is ready for tests and/or inspections. Contractor shall reimburse Owner for all failed tests and subsequent retests. Reimbursement for the charges shall be a deduction from the Contractor's Partial Payment(s). (see SC-13.03.A)
- ~~B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:~~
- ~~1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;~~

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- ~~2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and~~
- ~~3. as otherwise specifically provided in the Contract Documents.~~
- B. The Contractor shall obtain and employ an independent testing laboratory to provide the services specified herein and shall include all costs for these services in the contract price. The Contractor shall submit for approval by the Owner and Engineer, the independent testing laboratory, including qualifications.
- Copies of all testing agency invoices submitted to the Contractor for payment shall be forwarded with the Contractor's request for partial payment. Invoices shall be submitted routinely throughout the project and shall be pertinent to the partial payment period under consideration. Testing agency invoices in excess of sixty (60) days old shall not be considered for payment. Invoices shall clearly indicate type and amount of test performed, unit and total cost, and shall indicate if the invoiced testing cost is a result of retests required due to the Contractor's failure to achieve specified requirements. The cost of retesting due to test failure will be borne by the Contractor. Payment to Contractor for testing shall not be made without the required itemized invoicing. (see SC-13.03.B)
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
1. repair such defective land or areas; or
 2. correct such defective Work; or
 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court ~~or arbitration~~ or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner. (see SC-13.08.A)

13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court ~~or arbitration~~ or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate

decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work. (see SC-13.09.C)

- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
- ~~2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor certifying that Contractor has disbursed to all subcontractors and suppliers having an interest in the contract their pro rata share of the payment out of previous progress payments received by Contractor for all work completed and materials furnished in the previous work period, less a retainage withheld by~~

Contractor pursuant to an agreement with a subcontractor. Within 30 days of receipt for the final progress payment or any other payments received thereafter except the final payment, Contractor shall pay all subcontractors and suppliers having an interest in the contract their pro rata shares of the payment for all work completed and materials furnished. (see SC-14.02.A.2)

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application or direct Engineer to present the Application to Owner with Engineer's recommendation of partial payment. (see SC-14.02.B.1)
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules and the Contract Documents (see SC-14.02.B.2), that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
 - d. Contractor's other obligations under the Contract Documents have been fulfilled. (see SC-14.02.B.2.d)
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in

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- progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
- b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment:

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete

(except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:

- a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance:

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, ~~or whenever said failure occurs~~ from Contractor's continuing obligations under the Contract Documents; and (see SC-14.09.A.1)
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.
 3. The acceptance of final payment by Contractor designated and identified by Engineer as final payment shall be and shall operate as a release to Owner of all claims and all liability to Contractor other than claims in stated amounts as may be specifically excepted by Contractor for all things done or finished in connection with the Work and for every act of Owner and others relating to or arising out of the Work. Any payment, however, final or otherwise, shall not release Contractor or Contractor's Surety(ies) from any obligations under the Contract Documents or Bonds. (see SC-14.09.A.3)

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract

Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
1. Contractor's failure to start the work in accordance with the Notice to Proceed or Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04) (see SC-15.02.A.1);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer,

incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION**16.01 Methods and Procedures**

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or

2. agrees with the other party to submit the Claim to another dispute resolution process; or
 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.
- D. Venue for any mediation shall be in Nassau County, Florida. Venue for any litigation shall be in a State Court in Nassau County, Florida.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and

acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

EXHIBIT "C"

SECTION 00 73 15**SUPPLEMENTARY CONDITIONS**

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC C-700, 2007 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract have the meanings assigned to them in the General Conditions.

ARTICLE 1 DEFINITIONS AND TERMINOLOGY

Add the following new paragraph immediately after paragraph 1.01.19:

SC-1.01.20 Engineer of Record – The individual or entity named as such in the Agreement.

Add the following new paragraph immediately after paragraph 1.01.52:

SC-1 .01.53 SURETY – The person, firm, or corporation which is bound by the contract bonds with and for Contractor (Principal); and which is held and firmly bound unto Owner for the conditions of obligations set forth in said bonds.

ARTICLE 2 PRELIMINARY MATTERS

SC-2.02.A Amend the first sentence of paragraph 2.02.A of the General Conditions by changing “up to ten” to “five”.

SC-2.05.A Amend the first sentence of paragraph 2.05.A of the General Conditions by changing “Within 10 days after the Effective Date of the Agreement” to “At the Preconstruction Conference”.

Add the following new paragraph immediately after paragraph 2.05.A.3:

SC-2.05.B Before any Work at the Site is started, Contractor shall deliver to the Owner, certificates of insurance that Contractor is required to purchase and maintain in accordance with Article 5.

Add the following new paragraph immediately after paragraph 2.06.B:

SC-2.06.C Owner may issue Notice to Proceed at the Preconstruction Conference. Contractor shall begin the Work within twenty-four (24) hours of the date given in the Notice to Proceed. If the Contractor does not start the Work within fourteen (14) calendar days after this date, Owner may, at his discretion, terminate Contractor in accordance with paragraph 15.02.

Delete paragraph 2.07.A in its entirety and insert the following in its place:

SC-2.07.A All schedules as set forth in Article 2 shall be submitted and accepted by the Owner and Engineer within 30 days of NTP. Should any schedule not be accepted within 30 days of the NTP, it will be considered a breach of contract and reason for termination of the contract for cause in accordance with the General Conditions, Section 15.02.

ARTICLE 4 AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

Add the following to the end of paragraph 4.01.C:

SC-4.01.C Contractor shall obtain said land rights at his own expense and without liability to the Owner. Contractor shall not enter upon private property without first obtaining written permission from the rightful property owner.

Add the following new paragraph immediately after paragraph 4.02.B:

SC-4.02.C In the preparation of Drawings and Specifications, Engineer of Record or Engineer of Record's Consultant relied upon the finding and recommendations included in the report(s) of explorations and tests of subsurface conditions (Geotechnical Report(s)) as included as part of the Contract Documents.

Amend the last sentence in paragraph 4.03.C.3 to read:

SC-4.03.C.3 However, Owner, Engineer and Engineer's Consultants shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

ARTICLE 5 BONDS AND INSURANCE

Delete paragraph 5.01.B in its entirety and insert the following in its place:

SC-5.01.B All Bonds shall be in the form prescribed by the Contract Documents or other form approved by Owner. All else notwithstanding, the terms of all Bonds shall be substantially in the form prescribed by Chapter 255, Florida Statutes. All Bonds shall be executed by Contractor and a corporate bonding company licensed to transact such business in the State of Florida and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. Contractor will cause the Bonds to be recorded with the Clerk of the Circuit Court in the county in which the Work is to be performed. Failure to execute bonds in the form prescribed may constitute non-responsiveness on the part of the Contractor. The expense for all Bonds shall be the Contractor's responsibility.

Add the following to the end of paragraph 5.02.A:

SC-5.02.A Certificates of insurance shall be issued by a company with a Best's rating of at least B+ authorized to do business in the State of Florida. Owner must approve non-rated insurers. If used, Owner shall be shown as Additional Insured and Certificate Holder, Engineer as Additional Insured and provide a 30-day cancellation notice.

Delete paragraph 5.03.B in its entirety and insert the following in its place:

SC-5.03.B Insurance policies written on a "Claims Made" form is not acceptable without Owner's approval.

Add the following new paragraphs immediately after paragraph 5.03.B:

SC-5.03.C Umbrella Liability insurance is preferred, but an Excess Liability equivalent is acceptable. Whichever type of coverage is provided, it shall not be more restrictive than the underlying insurance policy coverages, including, but not limited to the coverage Trigger, defense, notice of occurrence/accident/circumstances, notice of claim and extended reporting period.

SC-5.03.D No work shall commence under this contract until the required Certificate(s) have been provided. Work shall not continue after expiration (or cancellation) until new Certificate(s) have been provided. Non-continuance of work after expiration (or cancellation) of Certificate(s) will not constitute a delay beyond Contractor's control as defined in paragraph 12.03.

SC-5.03.E Contractor shall arrange for its insurers' policies to include, or be endorsed to include, a severability or interest/cross liability provision, so that Owner will be

treated as if a separate policy were in existence, but without increasing the policy limits.

- SC-5.03.F Contractor's deductibles/self-insured retentions shall be disclosed to Owner and may be disapproved by the latter. They shall be reduced or eliminated at the option of Owner. Contractor is responsible for the amount of any deductible or self-insured retention.
- SC-5.03.G These insurance requirements shall not relieve or limit the liability of Contractor. Owner does not in any way represent that these types or amounts of insurance are sufficient or adequate to protect Contractor's interests or liabilities, but are merely minimums.
- SC-5.03.H Insurance required of Contractor or any other insurance of Contractor shall be considered primary, and insurance or self-insurance of Owner shall be considered excess, as may be applicable to claims that arise out of this contract.
- SC-5.03.I Receipt of Certificates or other documentation of insurance or policies or copies of policies by Owner, or by any of its representatives, which indicate less coverage than required does not constitute a waiver of the Contractor's obligation to fulfill the insurance requirements herein.
- SC-5.03.J The Contractor shall either (a) require each subcontractor to produce and maintain the same coverage as required of the Contractor, or (b) insure the activities of subcontractors in his own policy.
- SC-5.03.K These insurance requirements are minimums and may not be adequate to cover Contractor exposures.

Add the following new paragraphs immediately after paragraph 5.04.B:

- SC-5.04.C The limits of liability for the insurance required by paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
1. Workers compensation and related coverages under paragraphs 5.04.A.1 and A.2 of the General Conditions:
 - a. State Statutory
 - b. Applicable Federal (e.g. Longshoreman's) Statutory

Delete paragraphs 5.06 through 5.10 in their entirety except for paragraph 5.06.D and insert the following in place of 5.09.A:

SC-5.09.A If Owner has any objection to the coverage afforded by or other provisions of Bonds or insurance required to be purchased and maintained by Contractor in accordance with Article 5 on the basis of non-conformance with the Contract Documents, Owner shall so notify Contractor in writing within ten days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. Contractor shall provide to Owner such additional information in respect of insurance provided as Owner may reasonably request.

ARTICLE 6 CONTRACTOR'S RESPONSIBILITIES

Add the following to the end of paragraph 6.01.A:

SC-6.01.A Owner reserves the right to reject any means, methods, techniques, sequences or procedures proposed by Contractor which:

1. will constitute or create a hazard to the Work or to the persons or damage to property or existing utilities; or
2. will not produce finished work in accordance with the terms of the contract Documents.

Owner's failure to exercise his right to reject such means, methods, techniques, sequences or procedures shall not relieve the Contractor of his obligation to accomplish the result intended in the Contract Documents nor shall the exercise of such right create a cause of action for damages.

Add the following new paragraph immediately after paragraph 6.02.B:

SC-6.02.C Engineer shall record time and costs required by Engineer and Engineer's Consultants to provide inspection services due to Contractor's working beyond regular working hours as defined in the General Requirements. Owner's reimbursement for the charges shall be a deduction from Contractor's Partial Payment(s) in accordance with Section 01 11 00 Part 2.02.

Add the following new paragraphs immediately after paragraph 6.05.A.2.d:

SC-6.05.A.2.e Each action mentioned above required for review of proposed substitute items of material or equipment shall be followed in the order given. Failure to do so shall be cause for rejection of the proposed substitution.

SC-6.05.A.2.f Contractor shall reimburse Owner for the charges of Engineer or Engineer's Consultants for evaluation of substitutions. Owner's reimbursement for the charges shall be a deduction from the Contractor's Partial Payment(s).

Add the following to the end of paragraph 6.06.A:

SC -6.06.A Contractor shall not subcontract part(s) or the work, the aggregate cost of which is greater than 50 percent of the contract price, without prior written approval by Owner. Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work that bind Subcontractors to Contractor by the terms of the Contract Documents insofar as applicable to the work of Subcontractors and to give Contractor the same power as regards terminating any subcontract that Owner may exercise over Contractor under any provision of the Contract Documents. Nothing contained in the subcontract shall create any contractual relationship between Subcontractor and Owner. Each Subcontractor shall discharge all duties and responsibilities of Contractor to Owner covered by his subcontract.

Add the following to the end of paragraph 6.06.B:

SC-6.06.B Subcontractors and Suppliers shall be identified on the form provided in the Bidding Requirements.

Add the following to the end of paragraph 6.08.A:

SC-6.08.A Permits, licenses, and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by Owner, unless otherwise specified.

Add the following to the end of paragraph 6.09.A:

SC-6.09.A Contractor shall also cause all Subcontractors to comply with all federal, state, county, and municipal laws, ordinances, rules, and regulations bearing on the conduct of the Work.

Add the following to the end of paragraph 6.09.B:

SC-6.09.B If Contractor observes that the Contract Documents are at variance with said laws, ordinances, rates, or regulations, Contractor shall promptly notify Engineer of Record and the County in writing, and any necessary changes shall

be adjusted as provided in the Contract Documents. Contractor shall not proceed with the Work until so instructed by Owner.

Add the following to the end of paragraph 6.12.A:

SC-6.12.A Annotations of record documents shall be legible, precise, and complete as determined by Engineer of Record and the County.

Add the following new paragraph after paragraph 6.13.D:

SC-6.13.E Contractor shall be responsible at all times for precautions to achieve the protection of all persons, including employees and property. Contractor shall make special effort to detect hazardous conditions and shall take prompt action where necessary to avoid accident, injury, or property damage. OSHA and all other applicable safety laws and ordinances shall be followed as well as American National Standards Institute Safety Standards. All accidents, injuries, claims, or potential claims shall be reported promptly to Owner.

Add the following new paragraph immediately after paragraph 6.17.E.1:

SC-6.17.E.2 Contractor shall reimburse Owner for the charges of the County and the County's Consultants for costs generated as a result of more than two submittals of any one Shop Drawing or Sample being required for evaluation due to rejection for noncompliance of the original submittal or lack of information required by the Contract Documents. Owner's reimbursement for the charges shall be a deduction from Contractor's Partial Payment(s).

SC-6.20.A Amend the first paragraph of 6.20.A of the General Conditions by changing "(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court: or arbitration or other dispute resolution costs)" to "(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs)".

Add the following new paragraph immediately after paragraph 6.20.A.1:

SC-6.20.A.1 Five percent of the Contract Price is given as consideration for this indemnification.

Add the following new paragraph immediately after paragraph 6.20.C:

SC-6.20.D Neither Contractor nor Owner shall sell, transfer, assign, or otherwise dispose of the contract or any portion thereof, or any right, title, or interest therein, or any obligations thereunder, without written consent of the other party.

ARTICLE 8 OWNER'S RESPONSIBILITIES

SC-8.02 Amend paragraph 8.02 of the General Conditions by striking out the following words: "to whom Contractor makes no reasonable objection."

ARTICLE 9 ENGINEER'S STATUS DURING CONSTRUCTION

Delete paragraph 9.03.A in its entirety.

Add the following new paragraph immediately after paragraph 9.05.A:

SC-9.05.B Contractor shall reimburse the Owner for the charges of Engineer's Consultants for any additional field observations, engineering analysis, correspondence, meetings, or other work due to non-complying or defective construction, materials, or equipment performed or furnished by the Contractor, Subcontractors, or Suppliers. Owner's reimbursement for the charges shall be a deduction from the Contractor's Partial Payment(s).

ARTICLE 10 CHANGES IN THE WORK; CLAIMS

SC-10.05.B Amend the first sentence of paragraph 10.05.B of the General Conditions by changing "(but in no event later than 30 days)" to "(but in no event later than 15 days)".

ARTICLE 11 COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

Add the following to the end of paragraph 11.01.A.5.c:

SC-11.01.A.5.c In no case shall rates exceed those published by the current edition of Data Quest Incorporated titled, Rental Rate Blue Book for Construction Equipment, and other procedures established by Florida Department of Transportation.

SC-11.01.A.5.f Amend the first sentence of paragraph 11.01.A.5.f by striking out the following words: "(except losses and damages within the deductible amounts of property insurance established in accordance with paragraph 5.06.D)".

Add the following new paragraphs immediately after paragraph 11.01.A.5.i:

SC-11.01.A.5.j The cost of specific consideration for the indemnifications set forth in paragraph 6.20.

SC-11.01.A.5.k The cost of compliance with current local, state and federal safety regulations.

Delete paragraph 11.03.D in its entirety

Add the following new paragraphs immediately after paragraph 11.03.C:

SC-11.03.E If Owner objects to Contractor's quoted adjustment in Unit Price Work, Owner may assign such work to its own forces or another contractor.

SC-11.03.F Owner reserves the right to delete any Unit Price Work without financial penalty incurred from Contractor.

ARTICLE 12 CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

Add the following new paragraph immediately after paragraph 12.02.B:

SC-12.02.C On the 21st of each month, or the next following business day, the Contractor shall submit to the Owner and Engineer a request for weather days. Failure to submit the request forfeits the right to claim weather days for that period and any previous period. The Owner will grant time extensions, on a day for day basis, for delays caused by the effects of rains or other inclement weather conditions or related adverse soil conditions that prevent the Contractor from productively performing controlling items of work resulting in:

(1) The Contractor being unable to work at least 50% of the normal work day on pre-determined controlling work items due to adverse weather conditions.

No additional compensation will be made for delays caused by the effects of inclement weather.

ARTICLE 13 TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

Add the following to the end of paragraph 13.03.A:

SC-13.03.A Contractor shall reimburse Owner for the charges of Engineer and Engineer's Consultants for all costs due to work not being ready for tests and/or inspections when the Contractor has notified Engineer that work is ready for tests and/or inspections. Contractor shall reimburse Owner for all failed tests

and subsequent retests. Reimbursement for the charges shall be a deduction from the Contractor's Partial Payment(s).

Delete paragraph 13.03.B of the General Conditions and add the following in its place:

SC-13.03.B The Contractor shall obtain and employ an independent testing laboratory to provide the services specified herein and shall include all costs for these services in the contract price. The Contractor shall submit for approval by the Owner and Engineer, the independent testing laboratory, including qualifications.

Copies of all testing agency invoices submitted to the Contractor for payment shall be forwarded with the Contractor's request for partial payment. Invoices shall be submitted routinely throughout the project and shall be pertinent to the partial payment period under consideration. Testing agency invoices in excess of sixty (60) days old shall not be considered for payment, Invoices shall clearly indicate type and amount of test performed, unit and total cost, and shall indicate if the invoiced testing cost is a result of retests required due to the Contractor's failure to achieve specified requirements. The cost of retesting due to test failure will be borne by the Contractor. Payment to the Contractor for testing shall not be made without the required itemized invoicing.

SC-13.08.A Amend the first sentence of 13.08.A by changing “(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs)” to “(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs)”.

SC-13.09.C Amend the first sentence of 13.09.C by changing “(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs)” to “(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs)”.

ARTICLE 14 PAYMENTS TO CONTRACTOR AND COMPLETION

Delete paragraph 14.02.A.2 in its entirety and insert the following in its place:

SC-14.02.A.2 Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor certifying that Contractor has disbursed to all subcontractors and suppliers having an interest in the contract their pro rata shares of the payment out of previous progress payments received by Contractor for all work completed and materials furnished in the previous work

period, less a retainage withheld by Contractor pursuant to an agreement with a subcontractor. Within 30 days of receipt for the final progress payment or any other payments received thereafter except the final payment, Contractor shall pay all subcontractors and suppliers having an interest in the contract their pro rata shares of the payment for all work completed and materials furnished.

Add the following words to the end of paragraph 14.02.B.1:

“or direct Engineer to present the Application to Owner with Engineer's recommendation of partial payment.”

SC-14.02.B.2 After the word “schedules”, add the words “and the Contract Documents”.

Add the following new paragraph immediately after paragraph 14.02.B.2.c:

SC-14.02.B.2.d Contractor's other obligations under the Contract Documents have been fulfilled.

Amend paragraph 14.09.A.1 to read:

SC-14.09.A.1 A waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein whenever said failure occurs or from Contractor's continuing obligations under the Contractor Documents; and

Add the following new paragraph immediately after paragraph 14.09.A.2:

SC-14.09.A.3 The acceptance of final payment by Contractor designated and identified by Engineer as final payment shall be and shall operate as a release to Owner of all claims and all liability to Contractor other than claims in stated amounts as may be specifically excepted by Contractor for all things done or finished in connection with the Work and for every act of Owner and others relating to or arising out of the Work. Any payment, however, final or otherwise, shall not release Contractor or Contractor's Surety(ies) from any obligations under the Contract Documents or Bonds.

ARTICLE 15 SUSPENSION OF WORK AND TERMINATION

SC-15.02.A. 1 After the word “Contractor's”, add the words “failure to start the work in accordance with the Notice to Proceed or Contractor's”.

ARTICLE 16 DISPUTE RESOLUTION

Add the following new paragraph immediately after paragraph 16.01.C.3

SC-16.01.D Venue for any mediation shall be in Nassau County, Florida. Venue for any litigation shall be in state court in Nassau County, Florida.

EXHIBIT "D"

Geotechnical Report

FINAL Report of Roadway Soil Survey

For

**Crawford Road Phase 2
Callahan, Florida**

***MAE Project No. 0080-0002B
October 14, 2016***

Prepared for:

EltonAlan, Inc.
3653 Regent Boulevard, Suite 606
Jacksonville, Florida 32224

Prepared by:



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Jacksonville, Florida 32256
Phone (904) 519-6990
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October 14, 2016

Mr. Mike Holcomb, P.E.
EltonAlan, Inc.
3653 Regent Boulevard, Suite 606
Jacksonville, Florida 32224

Reference: **FINAL** Report of Roadway Soil Survey
Crawford Road Phase 2
Callahan, Florida
MAE Project No. 0080-0002B

P. Rodney Mank, State of Florida,
Professional Engineer, License No. 41986
This item has been electronically signed and
sealed by P. Rodney Mank, P.E. on 10/14/2016
using a Digital Signature. Printed copies of this
document are not considered signed and sealed
and the signature must be verified on any
electronic copies.

Dear Mr. Holcomb:

Meskel & Associates Engineering, PLLC has completed a geotechnical exploration and roadway soil survey for the subject project. Our work was performed in general accordance with our original Subcontractor Agreement dated April 22, 2014 and updated June 25, 2015. This final report includes comments following review of our draft report dated July 24, 2015, and it supersedes our draft report in its entirety.

This report presents our understanding of the proposed construction including the planned alignment of the proposed roadway and the location of the proposed structures and stormwater collection swales. This report describes the field exploration and laboratory testing programs, and presents the data obtained. Our field exploration was performed in general accordance with the project scope included in our Agreement. This scope generally followed FDOT procedures to evaluate the general subsurface conditions within the proposed roadway, structures, and stormwater areas.

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

Sincerely,

MESKEL & ASSOCIATES ENGINEERING, PLLC
MAE FL Certificate of Authorization No. 28142

P. Rodney Mank, P.E.
Principal Engineer
Licensed, Florida No. 31986

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Principal Engineer
Licensed, Florida No. 56999

Distribution: Mr. Mike Holcomb, P.E. – EltonAlan Inc.

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APPENDICES

Appendix A.	Field Exploration Procedures Laboratory Test Procedures Key to AASHTO Soil Classification
Appendix B.	Grain Size Distribution Curves
Appendix C.	DRI Test Summary Sheets DRI Test Procedures
Appendix D.	LBR Test Results FDOT 90% Method Design LBR LBR Test Procedures

1.0 PROJECT INFORMATION

1.1 Site Location and Description

The corridor for Phase 2 of the Crawford Road project begins at Old Alabama Trail (Sta. 173+75.00, BL Const.) and terminates approximately 5 miles east near Woods Lane (Sta. 445+51.47, BL Const.), located in Nassau County, Florida. The remainder of Phase 2 continues along the existing Crawford Road to US 301 but is outside our scope of work for this project. The general project location is shown on the *Site Vicinity/Topographic Map*, which is superimposed on the 2012 Baldwin, FL USGS 7.5" Topo and presented as Figure 1.

1.2 Project Description

Project information for the proposed roadway, culvert structure, and swale areas has been provided to us in discussions with you. We have been provided with CADD design files of the roadway alignment.

Based on our discussions and the provided project plans, we understand that Phase 2 of the project will consist of a new paved roadway, culvert structures, and stormwater swales between Sta. 173+75.00 and Sta. 445+51.47. Based on the most recent contract plans that have been provided to us by you, we understand the proposed construction will include a two-lane paved roadway following the general alignment of the existing dirt road. The proposed alignment for Phase 2 will include five culvert structures with stormwater swales on both sides of the roadway.

This report includes recommendations and field data obtained from Phase 2 only. Phase 1 starting near CR-121 and extending east to Old Alabama Trail was reported separately.

1.3 Purpose and Scope of Study

The purpose of this study was to explore the subsurface conditions within the proposed roadway, culvert structures, and swale areas. This exploration was performed to provide field data to guide design and construction of the project. We accomplished these purposes by:

1. Reviewing aerial photographs and published data such as USGS Quadrangle Maps and USDA Soil Survey Maps.
2. Performing Standard Penetration Test (SPT) and auger borings, obtaining soil samples and measuring groundwater levels encountered along the roadway alignment.
3. Performing Double Ring infiltrometer (DRI) tests to explore the soil infiltration characteristics within the proposed swale areas.
4. Classifying the recovered soil samples and performing tests in the laboratory on selected samples to aid in classification.
5. Performing corrosion series tests on selected soil samples to determine the environmental classification of the encountered soils within the culvert structure areas for corrosion potential properties.
6. Obtaining bulk samples of the near-surface soils within the existing dirt road areas for Limerock Bearing Ratio (LBR) testing.
7. Analyzing and interpreting the field and laboratory test data.

8. Performing engineering analyses to develop recommendations for site preparation, borrow suitability, and pavement support.

1.4 USDA Soil Survey Data

A review of the 1998 USDA Natural Resources Conservation Service (USDA-NRCS) Soil Survey of Nassau County showed that the proposed roadway crosses several poorly to very poorly drained fine sand soil map units, as shown on the USDA-NRCS *Soil Survey Map* on Figure 2. The soil types, hydrology, the hydrologic group and estimated seasonal high groundwater levels reported in the Soil Survey are as follows:

Soil No.	Map Unit	Hydrology	Hydrologic Group	Estimated Seasonal High Groundwater Depth ⁽¹⁾ (feet)
9	Leon fine sand	Poorly Drained	A/D	0.5 – 1.5
14	Rutledge mucky fine sand	Very Poorly Drained	A/D	0.0 – 0.5
24	Kingsferry Fine Sand	Very Poorly Drained	B/D	0.0
36	Boulogne fine sand	Poorly Drained	B/D	0.5 – 1.5
39	Evergreen-Leon mucks, depressional	Very Poorly Drained	B/D	0.0
51	Albany fine sand, 0 to 5 percent slopes	Very Poorly Drained	A/D	1.0 – 2.0
54	Sapelo Fine Sand	Poorly Drained	B/D	0.5 – 1.5

(1) Feet below existing grade at time of survey.

2.0 FIELD EXPLORATION

2.1 General

Our field exploration program consisted of performing soil borings within the proposed roadway, culvert structure, and swale areas. Prior to our field exploration, the borings were located in the field by the project surveyor. Once located, the surveyor provided us with station, offset, and ground surface elevation of each boring location. This information is shown on the *Generalized Soil Profiles* sheets (Figures 4 through 9) and should be considered accurate only to the degree implied by the method of layout used.

The stationing for the boring locations, provided by the project surveyor, reference centerline of construction (CL). This is different than the project stationing provided by you, which reference the baseline of construction. All references to stationing in this report refer to that provided by the surveyor.

2.2 Auger Borings

We performed 41 auger borings to explore the subsurface conditions within the proposed roadway alignment. The auger borings were located approximately every 500 feet along the alignment, and were advanced to a depth of 6 feet below existing grade.

The auger borings were performed in general accordance with the methodology outlined in ASTM

D-1452. The borings were drilled manually with a hand-held bucket auger. During drilling, the recovered soil samples were visually described in the field by our field crew. Representative portions of the soil samples were returned to our laboratory for classification and testing under the direction of a geotechnical engineer. A summary of the field procedures used for the auger borings is included in Appendix A. The results of the auger borings are presented on the *Generalized Soil Profiles*, Figures 4 and 9.

2.3 SPT Borings

We performed 14 SPT to explore the deeper subsurface conditions along the proposed roadway alignment, and to explore the subsurface conditions at the 5 planned box culvert locations. The SPT borings were performed in general accordance with the methodology outlined in ASTM D 1586. Split-spoon soil samples recovered during performance of the borings were described in the field by the field crew, and representative portions of the samples were transported to our laboratory for classification and further evaluation. A summary of the field procedures used for the SPT borings is included in Appendix A. The results of the SPT borings are presented on the *Generalized Soil Profiles*, Figures 4 through 9.

2.4 Double-Ring Infiltrometer (DRI) Tests

Four DRI tests were performed within the proposed stormwater swales proposed on both sides of the new roadway. The DRI tests were performed at a depth of approximately 18 and 24 inches below the existing ground surface, in general accordance with the methodology outlined in ASTM D 3385. A hand auger boring was advanced to a depth of 6 feet at the DRI test location to explore the subgrade soils. The soil samples recovered during performance of the boring were described in the field by the field crew. Representative portions of the samples were transported to our laboratory for classification and testing. Summaries of the DRI test procedure and results are included in Appendix C.

2.5 Bulk Soil Sampling

Nine bulk samples of the current road surface soils were collected for LBR testing. Three, 50-pound bulk samples were collected at each LBR test location to a depth of about 12 inches below the existing roadway surface. These samples were transported to our laboratory for classification and testing. The LBR test results and the LBR test procedure are included in Appendix D.

3.0 LABORATORY TESTING

3.1 Visual Classification

Representative soil samples obtained during our field exploration were packaged and transferred to our laboratory for classification using the AASHTO Soil Classification System in general accordance with ASTM D 3282. A summary of the resulting soil descriptions is shown on the *Roadway Soil Survey* (Figure 3).

3.2 Index Tests

The laboratory testing was performed to better define the composition of the soils encountered, and to help determine their suitability for use as roadway subgrade material. The laboratory testing determined the Atterberg limits, percent fines, natural moisture and organic material contents of the selected soil samples. Grain size (sieve) distribution analysis was also performed on

selected samples. The results of the laboratory testing are presented on the *Summary of Laboratory Index Tests for Roadway* (Table 1). The laboratory test results are also summarized on the *Roadway Soil Survey* sheet, Figure 3. The grain size curves from the Grain Size Analysis tests are included in Appendix B. The laboratory test procedures used in the laboratory testing program are included in Appendix A.

3.3 LBR Tests

Nine bulk samples of the existing dirt roadway surface soils were selected for determination of the bearing value of the in-place soils as roadway stabilized subgrade material. The *Florida Method of Test for Limerock Bearing Ratio* (FM 5-515) was used to determine the maximum LBR value and corresponding Maximum Dry Density and Optimum Moisture Content of each sample. The test results are discussed in Section 5.3.2 below and are included in Appendix D.

3.4 Corrosion Tests

Four composite soil samples from the SPT culvert structure borings were selected for corrosion property testing. The corrosion potential tests were performed by Terracon Consultants, Inc. The testing included the determination of soil pH, resistivity, and chloride and sulfate contents. The test results are discussed in Section 5.4.4 below.

4.0 GENERAL SUBSURFACE CONDITIONS

4.1 General

Stratification of the explored soils is based on observation of the recovered soil samples in the field, laboratory classification and testing, and interpretation of the field boring logs by a geotechnical engineer. Stratification lines represent approximate boundaries between soil types; however, the actual transition between layers may be gradual. The results of the stratification are summarized on the *Roadway Soil Survey* sheet (Figure 3). The station, offset, and elevation information shown at each boring location was provided by the project surveyor.

4.2 General Soil Profiles

4.2.1 Roadway Areas

The soil borings located within the proposed roadway alignment and box culvert structure areas generally encountered relatively uniform subsurface conditions. The borings predominantly encountered fine sands and fine sands with silt (A-3), silty fine sands (A-2-4), and clayey fine sands (A-2-6) to the full depth explored. The soil types encountered during this exploration are generalized on the *Roadway Soil Survey* sheet, Figure 3, and are presented in the following table:

Stratum No.	Description	AASHTO Classification
1	Fine sand to fine sand with silt; occasionally with traces of roots and limerock fragments	A-3
2	Silty fine sand	A-2-4
3	Fine sand with silt to silty fine sand, trace cemented sands (Hardpan)	A-3/A-2-4
4	Clayey Fine Sand	A-2-6

4.3 Measured Groundwater Levels

Groundwater levels were measured along the roadway alignment and within the proposed structure areas. It should be anticipated that the groundwater level will fluctuate due to seasonal climatic variations, surface water runoff patterns, construction operations adjacent to the site, and other interrelated factors. It should also be anticipated that stormwater may perch for an extended period of time above the existing ground surface, due to current site grading and limited infiltration through the near-surface soils, after periods of heavy or prolonged rainfall. As such, we recommend that the water table be verified prior to construction.

The depth to the groundwater level measured at each boring location and the estimated seasonal high ground water level are shown on the *Generalized Soil Profiles*, Figures 4 through 9.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Soil Suitability for Roadway

Our geotechnical engineering evaluation of the subsurface conditions along the roadway corridor and our recommendations as presented below are based on site observations, the field and laboratory test data obtained, and our understanding of the project information provided including the contract plans. If this information is incorrect, or if the alignment of the roadway is changed, please contact us so that we can review our recommendations. The discovery of any site or subsurface conditions encountered during construction which deviates from the data obtained during this geotechnical exploration should be reported to us for our evaluation.

It is our opinion that the soil conditions encountered at the boring locations, as presented on Figures 4 through 9, are adaptable for support of the proposed roadway and box culvert structures. However, if plastic (P), highly plastic (H), and organic (M) soils are encountered during construction these soils will require removal and replacement with compacted select soil fill as discussed below.

5.2 Roadway Construction Considerations

Roadway construction should be performed in accordance with the appropriate sections of the current editions of the Nassau County Land Development Code and the FDOT *Standard Specifications for Road and Bridge Construction*. Approximately 3 to 6 inches of topsoil and surficial organic materials were encountered in areas outside of the existing unpaved roadway. These materials should be removed in general accordance with the above standards.

All suitable backfill and embankment fill, as defined by Nassau County and FOT Specifications, should be placed in compacted lifts per Nassau County or FDOT Standard Specifications.

5.2.1 Estimated Seasonal High Groundwater Level

In estimating seasonal high groundwater levels, a number of factors are taken into consideration including antecedent rainfall, soil redoximorphic features (i.e., soil mottling), stratigraphy (including presence of hydraulically restrictive layers), vegetative indicators, effects of development, and relief points such as drainage ditches, low-lying areas, etc.

Based on our interpretation of the site conditions at the time of the drilling operations, including the boring logs, measured groundwater levels and the Nassau County Web Soil Survey, we have

preliminarily estimated the seasonal high groundwater levels as shown on the *Generalized Soil Profiles*, Figures 4 through 9. The seasonal high levels shown on the figures are based on the revised seasonal high groundwater levels included in a June 17, 2016 email to you.

It is possible that groundwater levels may exceed the estimated seasonal high groundwater level as a result of significant or prolonged rains. Therefore, we recommend that design drawings and specifications account for the possibility of groundwater level variations, and construction planning should be based on the assumption that such variations will occur.

5.3 Pavement Considerations

Based on the results of our exploration, we consider the subsurface conditions at the site favorable for support of a flexible pavement section when constructed on properly prepared subgrade soils as outlined in this section of the report. Design and construction of the proposed roadway should follow the requirements in the Nassau County Land Development Code for the corresponding roadway classification. If requested, we can prepare a project-specific pavement design if specific traffic data is provided.

5.3.1 Design LBR

As discussed earlier, 9 bulk soil samples were obtained of the existing subgrade soils to determine their LBR. The modified Proctor and LBR curves from each of the 9 samples obtained in Phase 2 are included in Appendix D, as is a summary of the LBR test procedure. The table below shows the maximum LBR value at each location and includes the location and maximum LBR values for the 3 LBR samples from Phase 1 (Samples 1 through 3):

Sample No.	Location	Maximum LBR
1	Sta. 25+99.86, LT	42
2	Sta. 51+02.13, RT	37
3	Sta. 76+02.23, LT	35
4	Sta. 100+02.23, RT	56
5	Sta. 126+02.05, LT	47
6	Sta. 151+02.10, RT	31
7	Sta. 151+02.10, LT	42
8	Sta. 201+02.14, RT	34
9	Sta. 229+41.52, LT	50
10	Sta. 256+02.07, RT	31
11	Sta. 281+02.02, LT	65
12	Sta. 316+02.04, RT	39

We understand that the pavement design for Phase 1 and Phase 2 will be similar. Therefore, we have evaluated all of the LBR results for Phases 1 and 2 to obtain the design LBR for the new roadway. The FDOT 90 Percent Design LBR procedure was used to obtain the design LBR. The LBR's were ranked in ascending order beginning with the lowest value up to the highest. The design LBR is that which occurs at the 90th Percentile, or the value where 90 percent of the set of

values are higher. Based on this procedure, we recommend a design LBR of 32 be used for design. The design LBR result is presented in Appendix D.

5.3.2 Surface Course

The surface course should consist of Florida Department of Transportation (FDOT) Type S-I or Type S-III asphaltic concrete having a minimum Marshall Stability of 1,500 lbs. Specific requirements for Type S asphaltic concrete wearing surface are outlined in the latest edition of the *Florida Department of Transportation, Standard Specifications for Road and Bridge Construction*. After placement and field compaction, the surface course should be cored to verify material thickness and to perform laboratory densities. The cores should be obtained at frequencies of at least one core per 200 linear feet staggered to the left, right, and on the centerline of the roadway, or a minimum of two cores per roadway section.

5.3.3 Limerock Base Course

Nassau County requires that the limerock base course should have a minimum Limerock Bearing Ratio (LBR) of 100. We recommend that the base course be compacted to 98 percent of the modified Proctor Maximum Dry Density (AASHTO T-180) value. Compaction testing should be located every 300 feet at left, center, and right of the roadway centerline.

5.3.4 Stabilized Subgrade

According to Nassau County requirements, the stabilized subgrade material should have a minimum LBR of 40. Samples of the stabilized subgrade for the required LBR should be obtained every 500 feet, staggered left, right, and on the centerline. The stabilized subgrade should be compacted to 98 percent of the modified Proctor Maximum Dry Density (AASHTO T-180) value. Compaction testing should be located every 300 feet at left, center, and right of the roadway centerline.

5.3.5 Groundwater and Pavement Base Material Separation

Base clearance above the seasonal high groundwater level is critical for satisfactory pavement life and performance, and is necessary to achieve the required compaction during construction activities. Based on our findings, we estimate that a minimum 2-foot separation between the estimated normal seasonal high groundwater level and the roadway base material should be achieved with adequate amounts of fill above existing grade. Once the final pavement grade elevations and fill amounts have been determined, we should review the contact plans to determine if an underdrain system will be necessary.

5.4 Box Culvert Structures Support Recommendations

Based on the results of the borings, we consider the subsurface conditions at the proposed box culvert locations suitable for support of the proposed structures when constructed upon properly prepared subgrade soils. The culvert and wing walls should be constructed in accordance with the current edition of the FDOT *Standard Specifications for Road and Bridge Construction*. Removal of any organic or deleterious soils before placement of the proposed box culverts should be in accordance with the current FDOT index 500 & 505. The need for dewatering should be anticipated for construction of the structures footings in-the-dry. Dewatering design and methods should be performed in accordance with the current FDOT specifications.

5.4.1 Allowable Soil Bearing Capacity Design Parameters

For culverts supported on the existing subgrade soils or suitable fill soils, the culvert structures can be designed for the following maximum allowable net soil bearing capacities:

- 1,500 psf on undisturbed natural granular soils
- 2,500 psf on compacted natural or backfilled subgrade; this value assumes compaction to 100 percent of the standard Proctor maximum dry density (ASTM D-698, AASHTO T-99) for a depth of 2 feet below the structure

Net bearing pressure is defined as the soil bearing pressure at the foundation bearing level in excess of the natural overburden pressure at that level. The foundations should be designed based on the maximum load that could be imposed by all loading conditions. The following soil parameter may be used for design of box culverts structures where compacted fill will be placed behind walls:

- Modulus of Subgrade Reaction – 200 pci
- Angle of Internal Friction – 30 degrees
- Moist Unit Weight – 110 pcf

5.4.2 Lateral Pressure and Resisting Design Parameters

The box culvert structures should be designed to resist lateral pressures from soil and groundwater based on the following equivalent fluid unit weights:

Above Water Table -Equivalent Fluid Density	55 lb/ft ³
Below Water Table - Equivalent Fluid Density	90 lb/ft ³

We recommend that the groundwater level be assumed to be at the backfill surface above the top of the culvert structure. Lateral pressure distributions in accordance with the above do not take into account forces from construction equipment, wheel loads or other surcharge loads. To account for this loading, a pressure equal to 0.5 times the anticipated surface surcharge should be applied over the full height of all walls.

Horizontal forces which act on box culvert structures, can be resisted to some extent by the earth pressures that develop in contact with the buried perpendicular face of the structure, and by shearing resistance mobilized along the block structures base and subgrade interface. Allowable passive earth pressure resistance may be determined using the following equivalent fluid densities:

Above Water Table - Equivalent Fluid Density	100 lb/ft ³
Below Water Table - Equivalent Fluid Density	60 lb/ft ³

A factor of safety of 3 was used for these values. It is assumed the culvert structures are surrounded by well compacted sand backfill extending at least 5 feet horizontally beyond the vertical bearing face. In addition, it is presumed that the box culvert structure can withstand horizontal movements on the order of 0.5-inch before mobilizing full passive resistance.

The allowable sliding shearing resistance mobilized along the base of the block structure may be determined by the following formula:

$$P = \frac{1}{3}V \tan \left(\frac{2}{3} \phi \right)$$

Where: P = Allowable shearing resistance force

V = Net vertical force (total weight of block and soil overlying the structure minus hydrostatic uplift forces)

ϕ = Angle of internal friction = 30°

The following unit weights can be used to calculate the weight of the overburden soil:

Compacted Moist Soil	110 lb/ft ³
Saturated Soil	120 lb/ft ³

Wing walls constructed at the ends of the box culvert structure are generally backfilled to the top of the wall or higher, only on one side of the wall. Therefore, they are subject to active earth pressures that tend to cause rotation of the top of the wall. The following active earth pressures should be considered for design.

Above Water Table - Equivalent Fluid Density	35 lb/ft ³
Below Water Table - Equivalent Fluid Density	85 lb/ft ³

5.4.3 Hydrostatic Uplift Resistance

It is anticipated that the buried structures will exert little or no net downward pressure on the soils; rather, the structures may be subject to hydrostatic uplift pressure when empty. Below grade structures should be designed to resist hydrostatic uplift pressures appropriate for their depth below existing grade and the normal seasonal high groundwater table. Hydrostatic uplift forces can be resisted in several ways including:

1. Addition of dead weight to the structure.
2. Mobilizing the dead weight of the soil surrounding the structure through extension of footings outside the perimeter of the structure.

A soil unit weight of 115 lb/ft³ may be used in designing structures to resist buoyancy.

5.4.4 Environmental Classification

Four soil corrosion series tests were performed on soil samples obtained at borings performed at the proposed box culvert locations to determine the environmental classification of the soils. The samples were classified in accordance with FDOT procedures contained in the most recent FDOT Structures Design Guidelines. Based on the results of these tests, the soils are considered extremely aggressive for both concrete and steel. These results are generally due to the measured pH value. Sample locations and test results are shown in the *Corrosion Series Test Results – Culvert Structures* (Table 2) and on the *Roadway Soil Survey* sheet (Figure 3).

5.5 Stormwater Management

The results of the DRI tests are shown in Appendix C. A factor of safety of at least 2 should be applied to the design infiltration rate of the swale to account for differences in subsurface conditions along the length of the swale, differences in soil density that will affect permeability, and other factors. DRI-3 encountered sands with traces of clay (Stratum 2) beginning at a depth of about 3.5 feet below existing grade. Areas underlain with these soils will generally have reduced infiltration volume, and mounding of groundwater levels may occur during intense and prolonged rainfall events.

For the anticipated dry bottom swales, it is common to place sod on the swale bottom and sides.

Use of muck grown sod is not recommended for use as topsoil in the swales. If used, this topsoil layer will significantly reduce the infiltration rates, preventing the swales to work as designed.

The soils encountered in the auger borings located in the swale areas (Borings A-18, A-26, A-34, and A-43) encountered fine sands and fine sands with silt to depths of about 3 feet below existing grade. These soils are generally suitable for reuse as embankment fill and should be placed and compacted in accordance with Nassau County specifications.

6.0 REPORT LIMITATIONS

This report has been prepared for the exclusive use of EltonAlan, Inc. for specific application to the design and construction of the Crawford Road Phase 1 roadway project. Our work for this project was performed in accordance with generally accepted geotechnical engineering practice. No warranty, express or implied, is made.

The analyses and recommendations contained in this report are based on the data obtained from the borings performed at this site for this project. This testing indicates subsurface conditions only at the specific location and time, and only to the depth explored. These results do not reflect subsurface variations that may exist away from the boring location and/or at depths below the boring termination depth. Subsurface conditions and water levels at other locations may differ from conditions occurring at the tested location. In addition, it should be understood that the passage of time may result in a change in the conditions at the tested location. If variations in subsurface conditions from those described in this report are observed during construction, the recommendations in this report must be re-evaluated.

The scope of our services did not include any environmental assessment or testing for the presence or absence of hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the subject site. Any statements made in this report, and/or notations made on the generalized soil profiles or boring logs, regarding odors or other potential environmental concerns are based on observations made during execution of our scope of services and as such are strictly for the information of our client. No opinion of any environmental concern of such observations is made or implied. Unless complete environmental information regarding the site is already available, an environmental assessment is recommended.

If changes in the design or location of the roadway and/or ponds occur, the conclusions and recommendations contained in this report may need to be modified. We recommend that these changes be provided to us for our consideration. MAE is not responsible for conclusions, interpretations, opinions or recommendations made by others based on the data contained in this report.

Tables

TABLE 1
Summary of Laboratory Index Tests for Roadway
Crawford Road Phase 2
Nassau County, Florida
MAE Project No.: 0080-0002A

Station ⁽¹⁾	Offset (ft)	Boring No.	Depth ⁽²⁾ (ft)	Stratum No.	Gradation Test, % Passing							Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	AASHTO Classification
					No. 10	No. 20	No. 40	No. 60	No. 100	No. 200						
195+88.97	7.05 LT	B-10	4	1	100	100	100	98	72	4	13	----	----	----	A-3	
136+02.06	18.99 LT	A-19	1.0	1	100	100	100	98	72	4	15	----	----	----	A-3	
226+02.01	18.99 LT	A-32	1	1	100	100	99	97	61	3	16	----	----	----	A-3	
251+01.92	15.42 LT	B-13	6	1	100	100	100	96	44	4	21	----	----	----	A-3	
291+02.11	9.48 LT	B-15	0.50	1	100	100	100	96	44	4	4	----	----	----	A-3	
306+02.00	19.04 LT	A-44	1.5	1	100	100	100	96	44	4	13	----	----	----	A-3	
331+02.04	9.57 LT	B-17	8	1	100	100	100	97	40	3	32	----	----	----	A-3	
351+02.16	1.00 RT	A-51	2	1	100	100	100	97	40	5	12	----	----	----	A-3	
116+02.17	18.99 LT	A-16	4	2	100	100	100	95	43	13	17	NP	NP	NP	A-2-4	
206+01.97	19.08 LT	A-29	4	2	100	100	100	97	63	20	22	----	----	----	A-2-4	
261+02.04	1.02 RT	A-37	3.75	2	100	100	100	96	39	12	19	----	----	----	A-2-4	
321+02.00	1.02 RT	A-46	1.5	3	100	99	99	97	64	16	10	----	----	----	A-2-4	
131+02.06	15.31 LT	B-6	4.25	4	100	100	100	99	83	30	21	32	18	14	A-2-6	
156+02.31	19.02 LT	A-22	4.5	4	100	100	100	99	83	30	21	36	16	20	A-2-6	
170+02.16	1.00 RT	A-24	5	4	100	100	100	99	77	23	16	----	----	----	A-2-6	

(1) Station and Offset were measured from the provided plans and should be considered approximate.

(2) Feet below the existing ground surface.



TABLE 2
Corrosion Series Test Results - Culvert Structures
Crawford Road Phase 2
Nassau County, Florida
MAE Project No.: 0080-0002A

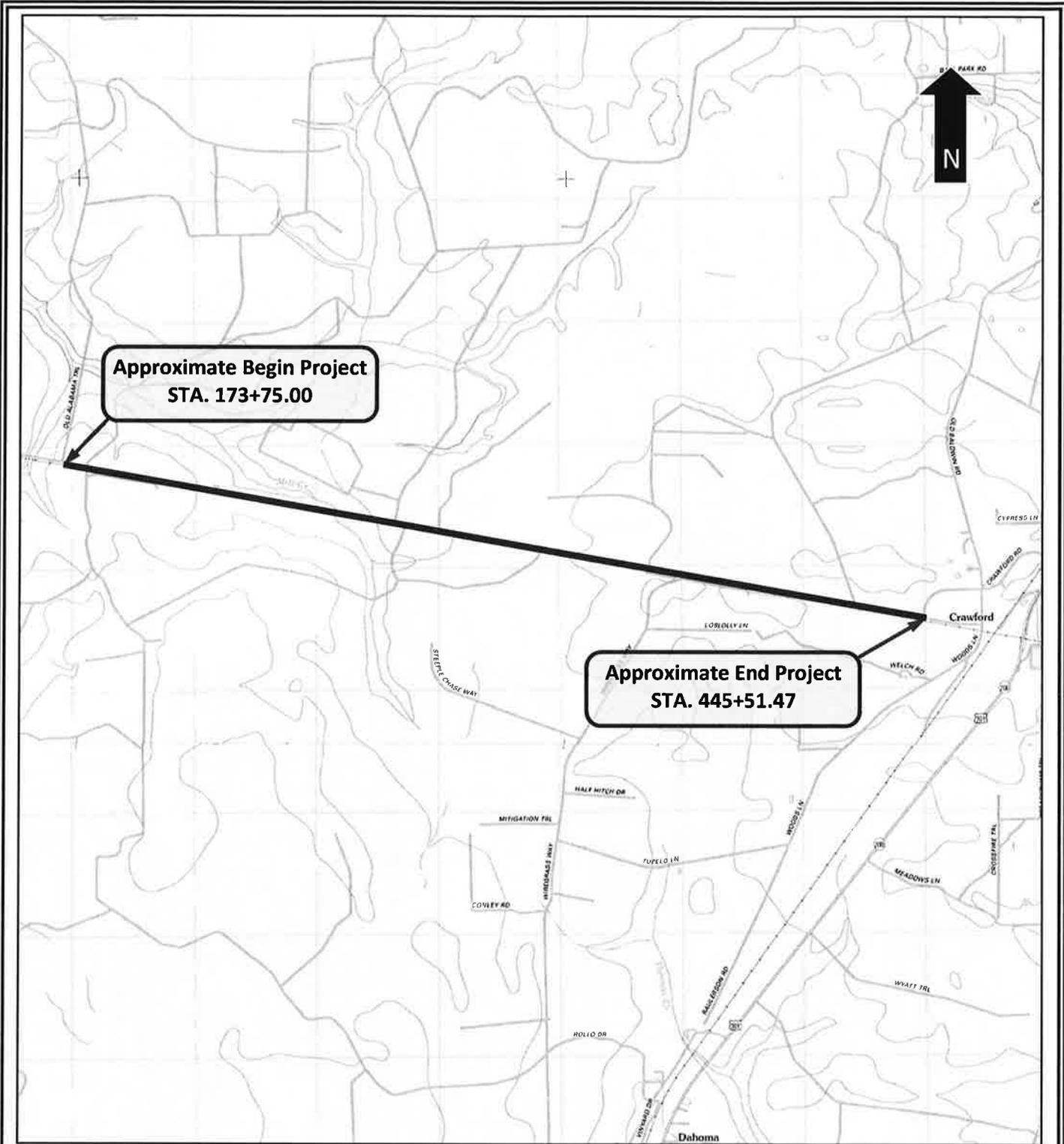
Station ⁽¹⁾	Offset ⁽¹⁾	Boring No. / Sample	Approximate Test Depth ⁽²⁾ (ft)	Soil Classification	pH	Resistivity (ohm-cm)	Chlorides (ppm)	Sulfates (ppm)	Environmental Classification	
									Concrete Substructure	Steel Substructure
151+02.10	8.24 LT	B-7	2.25 - 6.0	A-3/A-2-4	3.3	42,000	120	52	Extremely Aggressive	Extremely Aggressive
216+02.10	10.95 LT	B-11	3.0 - 6.0	A-2-4	3.5	32,000	120	42	Extremely Aggressive	Extremely Aggressive
271+01.97	11.11 LT	B-14	3.0 - 6.0	A-3	2.9	27,000	60	50	Extremely Aggressive	Extremely Aggressive
331+02.04	9.57 LT	B-17	4.5 - 8.0	A-3	3.5	46,000	120	34	Extremely Aggressive	Extremely Aggressive

(1) Stationing and Offsets are based on information received from the project surveyor.

(2) Feet below existing ground surface.

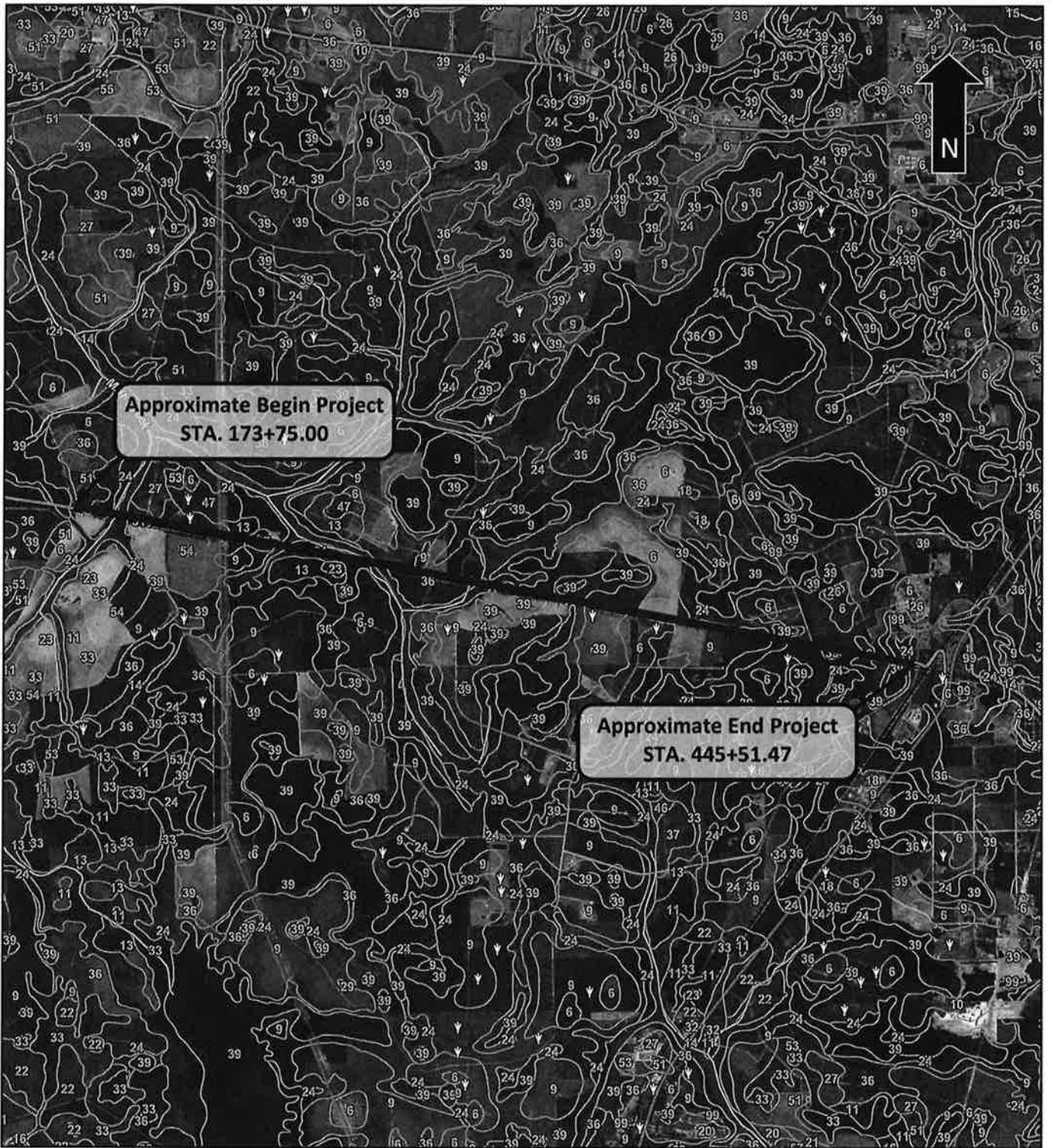


Figures



Site Vicinity / Topographic Map

PREPARED BY	PROJECT NAME	
<p>Meskel & Associates Engineering, PLLC FL Certificate of Authorization No. 28142 8936 Western Way, Suite 12, Jacksonville, FL 32256</p>	<p>Crawford Road Phase II From Old Alabama Trail to Crawford Road Nassau County, Florida</p>	
PREPARED FOR	REFERENCE	SCALE
<p>EltonAlan</p>	<p>USGS 7.5" Hilliard SW, FL Quadrangle</p>	<p>NTS</p>
	MAE PROJECT NO.	FIGURE NO.
	<p>0080-0002B</p>	<p>1</p>



Soil Survey Map

PREPARED BY	PROJECT NAME	
<p>Meskel & Associates Engineering, PLLC FL Certificate of Authorization No. 28142 8936 Western Way, Suite 12, Jacksonville, FL 32256</p>	<p>Crawford Road Phase II From Old Alabama Trail to Crawford Road Nassau County, Florida</p>	
PREPARED FOR	REFERENCE	SCALE
<p>EltonAlan</p>	<p>NRCSS MAE PROJECT NO. 0080-0002B</p>	<p>NTS FIGURE NO. 2</p>

DATE OF SURVEY: JUNE 2015
 SURVEY MADE BY: MESKEL & ASSOCIATES
 ENGINEERING, PLLC
 SUBMITTED BY: P. RODNEY MANK, P.E.

STATE OF FLORIDA
 DEPARTMENT OF TRANSPORTATION
 MATERIALS AND RESEARCH

DISTRICT: 2
 ROAD NO.: CRAWFORD
 COUNTY: NASSAU

PROJECT NO.: 004.0012
 PROJECT NAME: CRAWFORD ROAD PHASE II - FROM OLD ALABAMA TRAIL TO CRAWFORD ROAD
 CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADWAY

SURVEY BEGINS STA : 173+75.00 SURVEY ENDS STA : 445+51.47
 REFERENCE : 8 CONSTRUCTION

REPORT OF TESTS

STRATUM NO.	PERCENT MOISTURE	NO. OF TESTS	MOISTURE CONTENT	SIEVE ANALYSIS RESULTS					ATTERBERG LIMITS (%)			L.B.R. TEST	MARKING GROUP	DESCRIPTION	CORROSION DATA			SUBSTRUCTURE ENVIRONMENTAL CLASSIFICATION			
				NO. OF TESTS	40 MESH	60 MESH	100 MESH	20 MESH	40 MESH	LIQUID LIMIT	PLASTIC INDEX				NO. OF TESTS	PH	RESISTIVITY OHM-CM		CHLORIDES ppm	SULFATES ppm	STEEL	CONCRETE
1	8	4-32	8	100	100	96-98	40-72	3-10	-	-	-	-	A-3	GRAY-BROWN, LIGHT BROWN TO BROWN, BROWN TO DARK BROWN, GRAY TO DARK GRAY-BROWN, DARK TO VERY DARK GRAY-BROWN FINE SAND TO FINE SAND WITH SILT; OCCASIONALLY WITH TRACE TO FEW ROOTS. GRAVEL (ROCK FRAGMENTS) & ORGANIC FINES.	2	2.9-3.5	27,000-46,000	60-120	34-50	EXTREMELY AGGRESSIVE	
2	3	17-22	3	100	100	95-97	36-63	12-20	1	NP	NP	-	A-2-4	BROWN TO DARK GRAY-BROWN, GRAY TO GRAY-BROWN, LIGHT BROWN TO YELLOWISH GRAY-BROWN, REDDISH GRAY-BROWN TO DARK GRAY-BROWN TO FINE SAND; OCCASIONALLY WITH TRACE TO FEW CLAY AND FINE ROOTS.	2	3.3-3.5	32,000-42,000	120	42-57	EXTREMELY AGGRESSIVE	
3	1	10	1	100	99	97	64	16	-	-	-	-	A-3/A-2-4	DARK GRAY-BROWN TO DARK REDDISH BROWN TO DARK BROWN; SILTY SAND TO SILTY SAND WITH SILT; OCCASIONALLY WITH TRACE TO FEW ORGANIC FINES AND CEMENTED SANDS (HARDPAK).	-	-	-	-	-	-	-
4	3	16-21	3	100	100	99	77-83	23-30	2	32-36	14-20	-	A-2-6	YELLOWISH GRAY-BROWN, LIGHT GRAY-BROWN TO BROWN TO GRAY-BROWN CLAYEY FINE SAND.	-	-	-	-	-	-	-

- NOTES:
- Stratum boundaries are approximate and represent soil strata encountered at each boring location only. Any stratum connecting lines shown are for estimating earthwork only and do not indicate actual stratum limits.
 - The symbol "-" represents an unmeasured soil parameter.
 - The materials from Strata Nos. 1, 2 and 3 are Select (S) in accordance with Index 505. However, certain types of A-2-4 material are likely to retain excess moisture and may be difficult to dry and compact. They should be used in the embankment above the water table existing at time of construction. A-2-4 material placed below the existing water level must be nonplastic and contain less than 15% passing the No. 200 U.S. Standard sieve.
 - The materials from Stratum No. 4 shall be treated as Plastic Material (P) in accordance with Index 505.
 - Plastic (P) soils may be placed above the existing water level (at the time of construction) to within 4 feet of the proposed base. It should be placed uniformly in the lower portion of the embankment for some distance along the project; either than full depth for short distances.

EMBANKMENT AND SUBGRADE MATERIAL STRATA BOUNDARIES ARE APPROXIMATE. FINAL CHECK AFTER GRADING.

- WATER TABLE ENCOUNTERED AT TIME OF DRILLING
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- A.A.S.H.T.O. SOIL CLASSIFICATION GROUP SYMBOL AS DETERMINED BY LABORATORY TESTING AND/OR VISUAL EXAMINATION
- AUGER BORING TERMINATION DEPTH
- SPT BORING TERMINATION DEPTH
- STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT
- INDICATES 50 HAMMER BLOWS DROVE SPLIT SPOON SAMPLER 5 INCHES

NOTE: ALL OFFSETS REFERENCED TO CRAWFORD ROAD CENTERLINE OF CONSTRUCTION PROVIDED BY PROJECT SURVEYOR

SPT TABLE: RELATIVE DENSITY & CONSISTENCY

CONSISTENCY (FINE-GRAINED SOILS)	AUTOMATIC HAMMER SPT N-VALUE (BLOW/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1 - 3
FIRM	3 - 6
STIFF	6 - 12
VERY STIFF	12 - 24
HARD	GREATER THAN 24
RELATIVE DENSITY (COARSE-GRAINED SOILS)	AUTOMATIC HAMMER SPT N-VALUE (BLOW/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3 - 8
MEDIUM DENSE	8 - 24
DENSE	24 - 40
VERY DENSE	GREATER THAN 40

DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

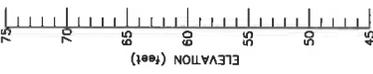
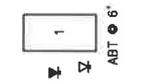
P. RODNEY MANK, P.E.
 FLORIDA PE NO. 41996
 MESKEL & ASSOCIATES ENGINEERING, PLLC
 892 W. W. BERRY RD.
 JACKSONVILLE, FL 32256
 CERTIFICATE OF AUTHORIZATION NO. 28142

PROPOSED IMPROVEMENTS FOR CRAWFORD ROAD
 NASSAU COUNTY, FLORIDA

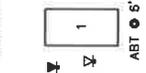
ROADWAY SOIL SURVEY

SHEET NO

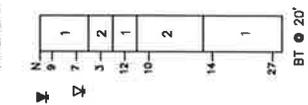
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 ELEV. 73.61'
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



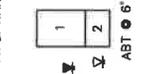
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 ELEV. 73.61'
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



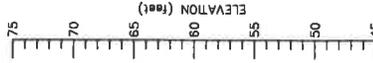
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 ELEV. 72.49'
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: SPT



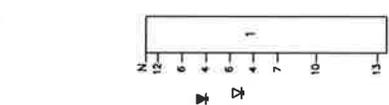
BOR. # A-14
 STA. 190+00.00
 OFF. 18.10' RT
 ELEV. 72.84'
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR. # A-15
 STA. 196+00.00
 OFF. 2.00' LT
 ELEV. 67.22'
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



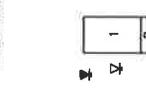
BOR. # B-5
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 ELEV. 63.58'
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: SPT



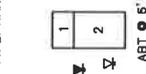
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 OFF. 2.00' LT
 ELEV. 64.47'
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



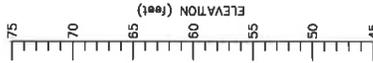
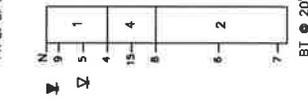
BOR. # A-17
 STA. 211+00.00
 OFF. 15.40' RT
 ELEV. 68.87'
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR. # A-18
 STA. 216+00.00
 OFF. 2.00' LT
 ELEV. 71.50'
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR. # B-6
 STA. 221+00.00
 OFF. 1.70' RT
 ELEV. 72.04'
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: SPT



NOTE: STATION, OFFSET AND ELEVATION (NAVD 88) INFORMATION WAS PROVIDED BY THE PROJECT SURVEYOR.

DATE	DESCRIPTION	DATE	DESCRIPTION

P. RODNEY HANK, P.E.
 FLORIDA PROFESSIONAL ENGINEER
 MESSENGER & ASSOCIATES ENGINEERING, PLLC
 8895 WESTERN WAY, SUITE 12,
 JACKSONVILLE, FL 32256
 CERTIFICATE OF AUTHORIZATION NO. 28142

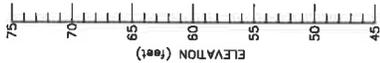
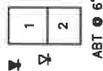
PROPOSED IMPROVEMENTS FOR CRAWFORD ROAD
 NASSAU COUNTY, FLORIDA

SHEET NO

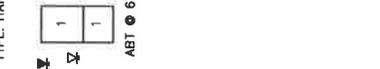
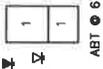
GENERALIZED SOIL PROFILES

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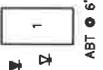
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 OFF. 2.00' LT
 ELEV. 72.4
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



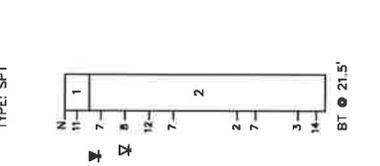
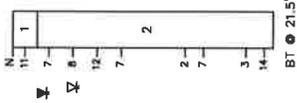
BOR. # A-20
 STA. 231+00.00
 OFF. 18.10' RT
 ELEV. 72.73
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



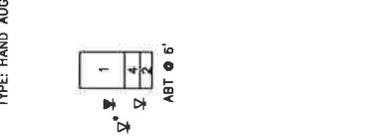
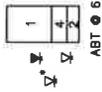
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 OFF. 2.00' LT
 ELEV. 73.24
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



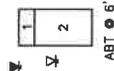
BOR. # B-7
 STA. 241+00.00
 OFF. 8.40' RT
 ELEV. 70.95
 DATE: 6/29/2015
 DRILLER: P.R. YOUNG
 TYPE: SPT



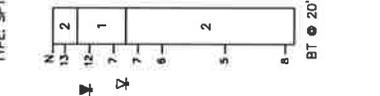
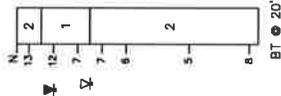
BOR. # A-22
 STA. 246+00.00
 OFF. 2.00' LT
 ELEV. 69.83
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



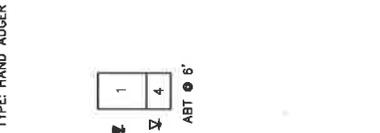
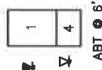
BOR. # A-23
 STA. 251+00.00
 OFF. 17.90' RT
 ELEV. 65.27
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



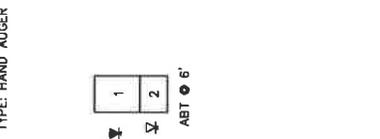
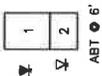
BOR. # B-8
 STA. 254+56.59
 OFF. 11.30' RT
 ELEV. 66.83
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: SPT



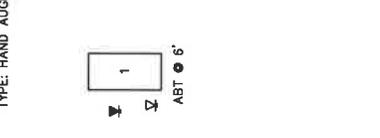
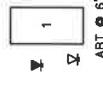
BOR. # A-24
 STA. 260+00.00
 OFF. 18.00' RT
 ELEV. 63.22
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR. # A-25
 STA. 266+00.00
 OFF. 2.00' LT
 ELEV. 63.56
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR. # A-26
 STA. 271+00.00
 OFF. 18.00' RT
 ELEV. 64.15
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



NOTE: STATION, OFFSET AND ELEVATION (NAVD 88) INFORMATION WAS PROVIDED BY THE PROJECT SURVEYOR.

REVISIONS	
DATE	DESCRIPTION

P. RODNEY HANK, P.E.
 FLORIDA P.E. NO. 41896
 SOG MATICS ENGINEERING, PLLC
 8936 WESTERN BLVD., SUITE 12,
 JACKSONVILLE, FL 32256
 CERTIFICATE OF AUTHORIZATION NO. 28142

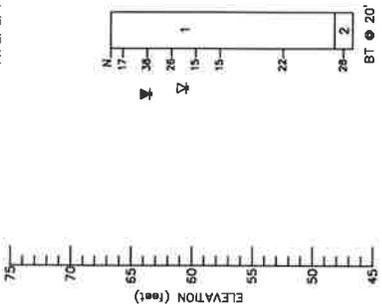
PROPOSED IMPROVEMENTS FOR CRAWFORD ROAD
 NASSAU COUNTY, FLORIDA

GENERALIZED SOIL PROFILES

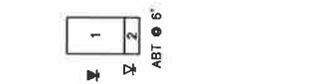
SHEET NO.

FIGURE: 05

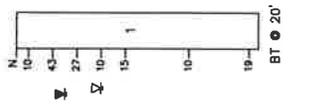
BOR. # B-9
 STA. 274+09.54
 OFF. 5.00' RT
 ELEV. 66.72
 DATE: 6/4/2015
 DRILLER: P.R. YOUNG
 TYPE: SPT



BOR. # A-27
 STA. 280+00.00
 OFF. 18.00' RT
 ELEV. 65.12
 DATE: 6/2/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR. # B-10
 STA. 286+00.00
 OFF. 10.00' RT
 ELEV. 69.39
 DATE: 6/25/2015
 DRILLER: P.R. YOUNG
 TYPE: SPT



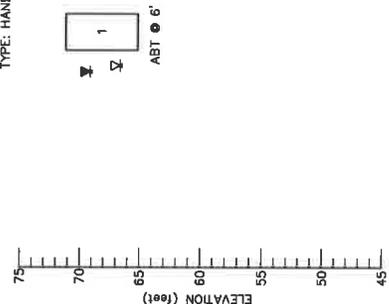
BOR. # A-28
 STA. 291+00.00
 OFF. 18.00' RT
 ELEV. 66.74
 DATE: 6/4/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



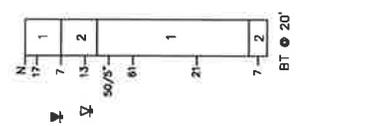
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 STA. 296+00.00
 OFF. 2.00' LT
 ELEV. 71.09
 DATE: 6/4/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR. # A-30
 STA. 301+00.00
 OFF. 18.00' RT
 ELEV. 71.12
 DATE: 6/4/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR. # B-11
 STA. 306+00.00
 OFF. 6.00' RT
 ELEV. 72.64
 DATE: 6/25/2015
 DRILLER: P.R. YOUNG
 TYPE: SPT



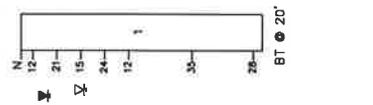
BOR. # A-31
 STA. 311+00.00
 OFF. 18.00' RT
 ELEV. 72.35
 DATE: 6/4/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR. # A-32
 STA. 364+00.00
 OFF. 2.00' LT
 ELEV. 71.87
 DATE: 6/4/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR. # B-12
 STA. 367+18.37
 OFF. 5.91' RT
 ELEV. 73.95
 DATE: 6/25/2015
 DRILLER: P.R. YOUNG
 TYPE: SPT



NOTE: STATION, OFFSET AND ELEVATION (NAVD 88) INFORMATION WAS PROVIDED BY THE PROJECT SURVEYOR.

DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

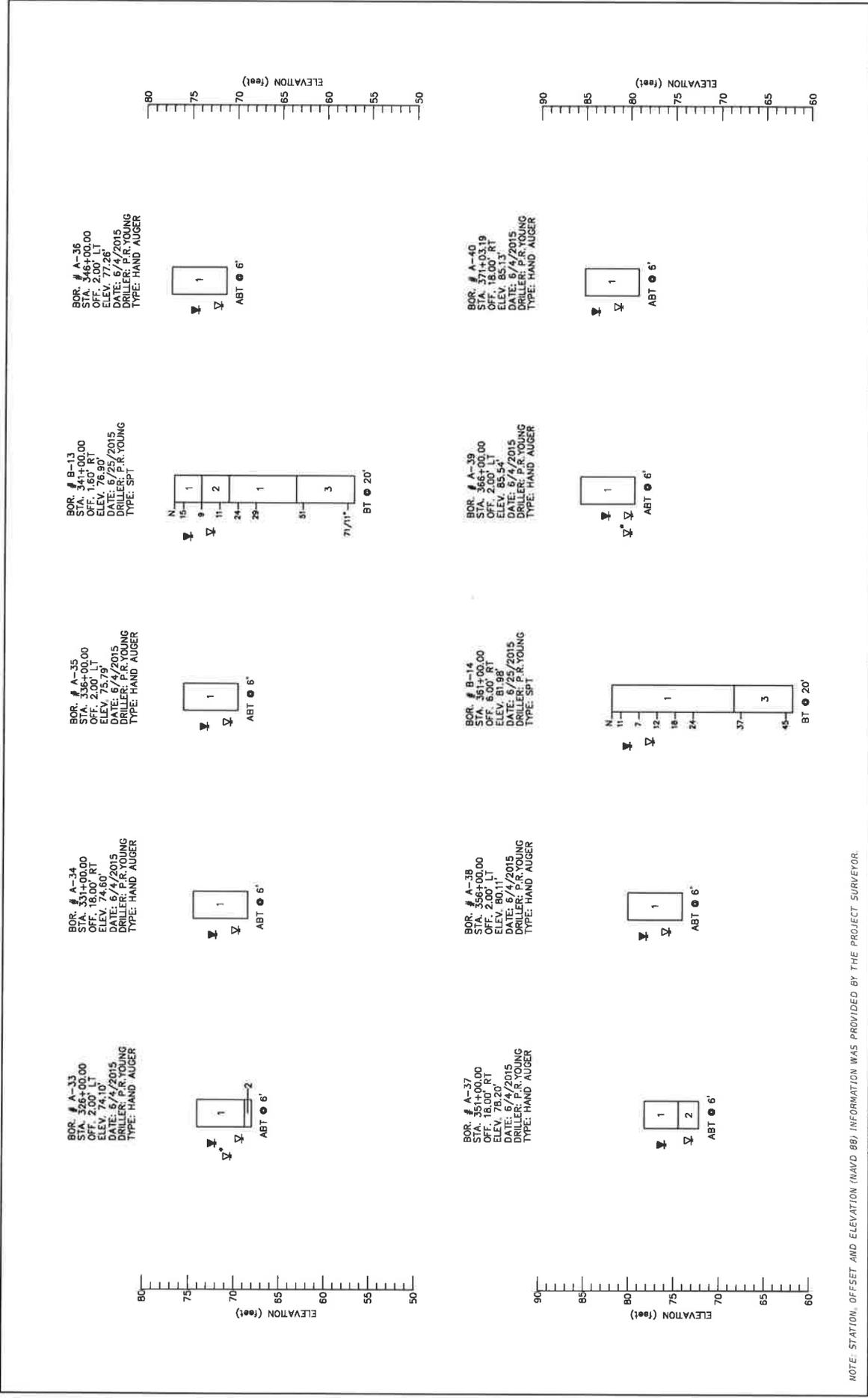
P. RODNEY MANK, P.E.
 FLORIDA PE NO. 41996
 MESKEL & ASSOCIATES ENGINEERING, PLLC
 8955 WESTERN WAY, SUITE 12,
 JACKSONVILLE, FL 32236
 CERTIFICATE OF AUTHORIZATION NO. 28142

PROPOSED IMPROVEMENTS FOR CRAWFORD ROAD
 NASSAU COUNTY, FLORIDA

GENERALIZED SOIL PROFILES

SHEET NO.

FIGURE: 6



NOTE: STATION, OFFSET AND ELEVATION (NAVD BBJ) INFORMATION WAS PROVIDED BY THE PROJECT SURVEYOR.

DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

P. RODNEY MANK, P.E.
 FLORIDA PE NO. 41896
 MESKEL & ASSOCIATES ENGINEERING, PLLC
 8926 WESTERN WAY, SUITE 12,
 JACKSONVILLE, FL 32226
 CERTIFICATE OF AUTHORIZATION NO. 28142

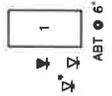
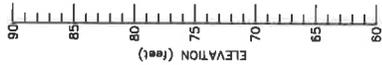
PROPOSED IMPROVEMENTS FOR CRAWFORD ROAD
 NASSAU COUNTY, FLORIDA

GENERALIZED SOIL PROFILES

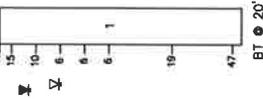
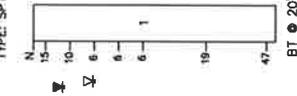
SHEET NO.

FIGURE: 7

BOR # A-41
 STA. 376+00.00
 OFF. 2.00' LT
 ELEV. 87.96'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



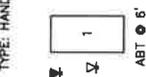
BOR # B-15
 STA. 381+00.00
 OFF. 7.60' RT
 ELEV. 88.54'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: SPT



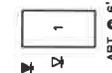
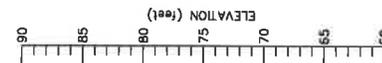
BOR # A-42
 STA. 396+00.00
 OFF. 2.00' LT
 ELEV. 86.83'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



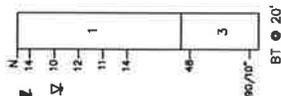
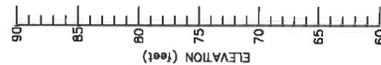
BOR # A-43
 STA. 391+00.00
 OFF. 18.00' RT
 ELEV. 87.38'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



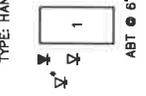
BOR # A-44
 STA. 396+00.00
 OFF. 2.00' LT
 ELEV. 87.06'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



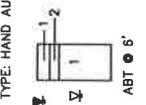
BOR # B-16
 STA. 401+00.00
 OFF. 5.00' RT
 ELEV. 87.76'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: SPT



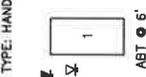
BOR # A-45
 STA. 406+00.00
 OFF. 2.00' LT
 ELEV. 88.22'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



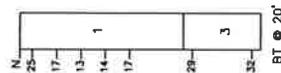
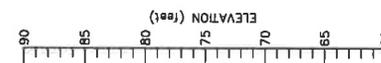
BOR # A-46
 STA. 411+00.00
 OFF. 18.00' RT
 ELEV. 88.54'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR # A-47
 STA. 416+00.00
 OFF. 2.00' LT
 ELEV. 87.96'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR # B-17
 STA. 421+00.00
 OFF. 7.50' RT
 ELEV. 87.96'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: SPT



NOTE: STATION, OFFSET AND ELEVATION (NAVD 88) INFORMATION WAS PROVIDED BY THE PROJECT SURVEYOR.

DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

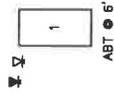
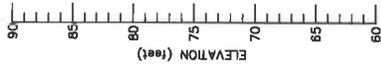
P. RODNEY MANK, P.E.
 FLORIDA PE NO. 41896
 RESKEL & ASSOCIATES ENGINEERING, PLLC
 8400 W. BAYVIEW BLVD., SUITE 12,
 JACKSONVILLE, FL 32256
 CERTIFICATE OF AUTHORIZATION NO. 28142

PROPOSED IMPROVEMENTS FOR CRAWFORD ROAD
 NASSAU COUNTY, FLORIDA

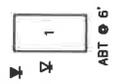
GENERALIZED SOIL PROFILES

SHEET NO.

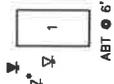
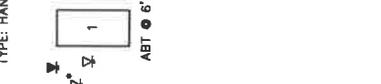
BOR. # A-48
 STA. 426+00.00
 OFF. 2.00' LT
 ELEV. 88.79'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



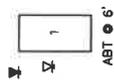
BOR. # A-49
 STA. 431+00.00
 OFF. 18.00' RT
 ELEV. 88.79'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



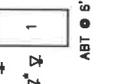
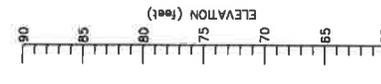
BOR. # A-50
 STA. 438+00.00
 OFF. 2.00' LT
 ELEV. 88.79'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR. # A-51
 STA. 441+00.00
 OFF. 18.00' RT
 ELEV. 88.79'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



BOR. # A-52
 STA. 446+00.00
 OFF. 2.00' LT
 ELEV. 88.79'
 DATE: 6/5/2015
 DRILLER: P.R. YOUNG
 TYPE: HAND AUGER



NOTE: STATION, OFFSET AND ELEVATION (NAVD 88) INFORMATION WAS PROVIDED BY THE PROJECT SURVEYOR.

REVISIONS	
DATE	DESCRIPTION

P. RODNEY MARK, P.E.
 FLORIDA PROFESSIONAL ENGINEER
 MESKEL & ASSOCIATES ENGINEERING, PLLC
 8936 WESTERN WAY, SUITE 12,
 JACKSONVILLE, FL 32256
 CERTIFICATE OF AUTHORIZATION NO. 28142

PROPOSED IMPROVEMENTS FOR CRAWFORD ROAD
 NASSAU COUNTY, FLORIDA

GENERALIZED SOIL PROFILES

Appendix A

FIELD EXPLORATION PROCEDURES

Standard Penetration Test (SPT) Borings

The Standard Penetration Test (SPT) boring(s) were performed in general accordance with the latest revision of ASTM D 1586, "Penetration Test and Split-Barrel Sampling of Soils." The borings were advanced by rotary drilling techniques. A split-barrel sampler was inserted to the borehole bottom and driven 18 to 24 inches into the soil using a 140 pound hammer falling an average of 30 inches per hammer blow. The number of hammer blows for the final 12 inches of penetration (18" sample) or for the sum of the middle 12 inches of penetration (24" sample) is termed the "penetration resistance, blow count, or N-value." This value is an index to several in-situ geotechnical properties of the material tested, such as relative density and Young's Modulus.

After driving the sampler, it was retrieved from the borehole and representative samples of the material within the split-barrel were containerized and sealed. After completing the drilling operations, the samples for each boring were transported to the laboratory where they were examined by our engineer in order to verify the field classification.

Hand Auger Boring

The auger boring(s) were performed manually by the use of a hand auger and in general accordance with the latest revision of ASTM D 1452, "Soil Investigation and Sampling by Auger Borings." Representative samples of the soils brought to the ground surface by the augering process were placed in sealed containers and transported to our laboratory where they were examined by our engineer to verify the driller's field classification.

LABORATORY TEST PROCEDURES

Percent Fines Content

The percent fines or material passing the No. 200 mesh sieve of the sample tested was determined in general accordance with the latest revision of ASTM D 1140. The percent fines are the soil particles in the silt and clay size range.

Natural Moisture Content

The water content of the tested sample was determined in general accordance with the latest revision of ASTM D 2216. The water content is defined as the ratio of “pore” or “free” water in a given mass of material to the mass of solid material particles.

Atterberg Limits

The Atterberg Limits consist of the Liquid Limit (LL) and the Plastic Limit (PL). The LL and PL were determined in general accordance with the latest revision of ASTM D 4318. The LL is the water content of the material denoting the boundary between the liquid and plastic states. The PL is the water content denoting the boundary between the plastic and semi-solid states. The Plasticity Index (PI) is the range of water content over which a soil behaves plastically and is denoted numerically by the difference between the LL and the PL. The water content of the sample tested was determined in general accordance with the latest revision of ASTM D 2216. The water content is defined as the ration of “pore” or “free” water in a given mass of material to the mass of solid material particles.

Organic Loss on Ignition (Percent Organics)

The organic loss on ignition or percent organic material in the sample tested was determined in general accordance with ASTM D 2974. The percent organics is the material, expressed as a percentage, which is burned off in a muffle furnace at 455 ± 10 degrees Celsius.

Gradation

The particle size analysis or gradation of the sample tested was determined in general accordance with latest revision of ASTM D 422. This test procedure determines the grain size distribution of the tested sample by passing the sample through a standard set of nested sieves.

AASHTO Soil Classification System

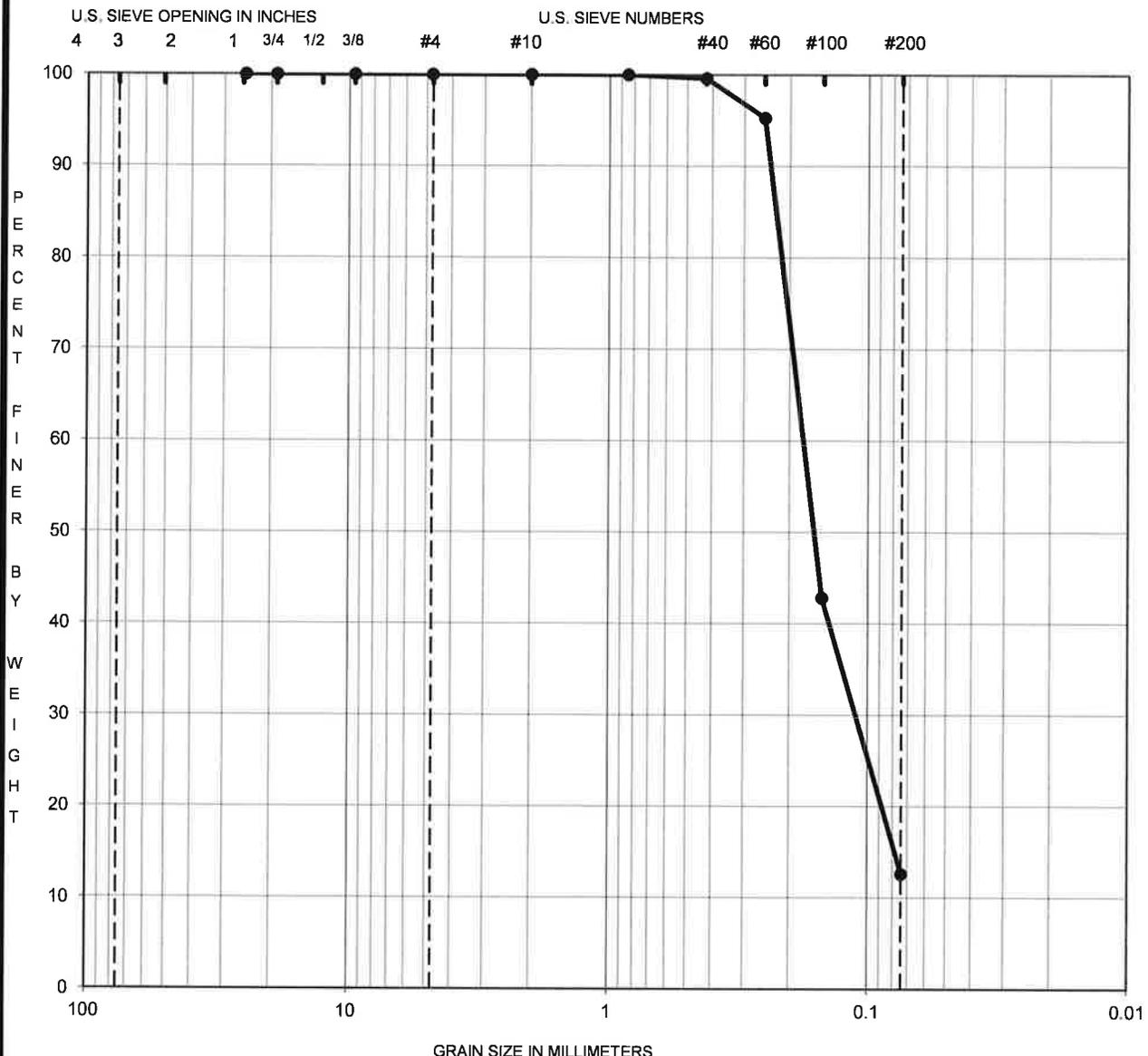
(from AASHTO M 145 or ASTM D 3282)

General Classification	Granular Materials <small>(35% or less passing the 0.075 mm sieve)</small>							Silt-Clay Materials <small>(>35% passing the 0.075 mm sieve)</small>			
Group Classification	A-1		A-3	A-2				A-4	A-5	A-6	A-7
	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7				A-7-5* A-7-6*
Sieve Analysis, % passing:											
2.00 mm (No. 10)	50 max	...	...	...	...	...	...	...	...	...	...
0.425 (No. 40)	30 max	50 max	51 min	...	...	...	...	...	...	...	...
0.075 (No. 200)	15 max	25 max	10 max	35 max	35 max	35 max	35 max	36 min	36 min	36 min	36 min
Characteristics of fraction passing 0.425 mm (No. 40):											
Liquid Limit	...	...	40 max	41 min	40 max	41 min	40 max	41 min	40 max	41 min	41 min
Plasticity Index	6 max	N.P.	10 max	10 max	11 min	11 min	10 max	10 max	11 min	11 min	11 min
Usual types of significant constituent materials	stone fragments, gravel and sand		fine sand	silty or clayey gravel and sand				silty soils		clayey soils	
General <i>local</i> ** rating as a subgrade	excellent to good			fair to poor							

* Plasticity index of A-7-5 subgroup is equal to or less than the LL - 30. Plasticity index of A-7-6 subgroup is greater than LL - 30

** Northeast Florida

Appendix B



GRAVEL		SAND			FINE
coarse	fine	coarse	medium	fine	

Specimen	Description	MC%	LL	PL	PI	Cc	Cu
A-16	Silty Fine Sand (A-2-4)	17%	NP		NP	1.1	2.7
# 4							
Depth (feet):	4						

D90 (mm)	D60 (mm)	D50 (mm)	D30 (mm)	D10 (mm)	%Gravel	%Sand	%Fine
0.24	0.18	0.16	0.11		0	87	13

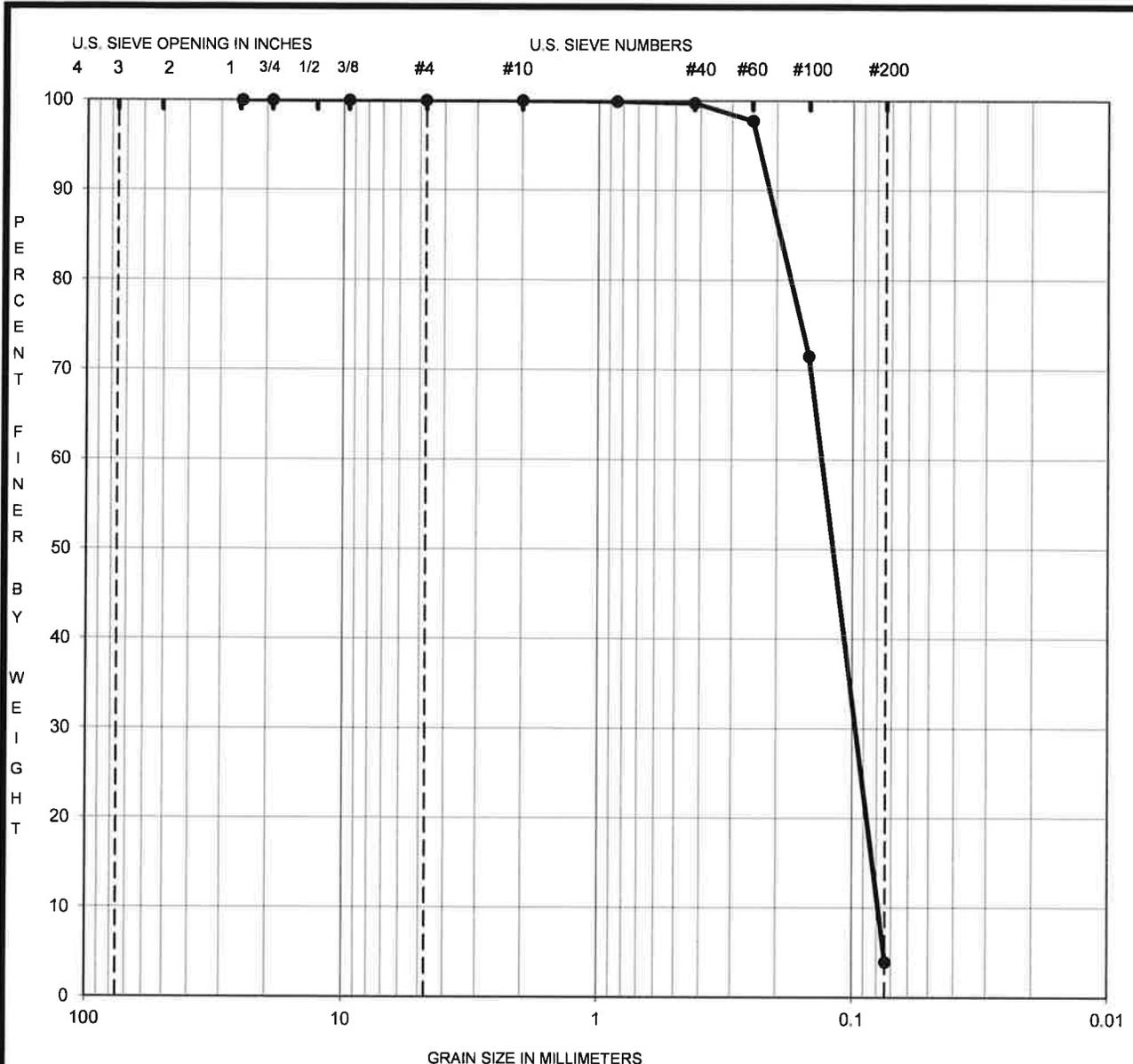
Organics (%)

PROJECT: Crawford Road - Phase 2

JOB NO. 0080-0002B

GRAIN SIZE DISTRIBUTION CURVES

Meskel & Associates Engineering, PLLC



GRAVEL		SAND			FINE
coarse	fine	coarse	medium	fine	

Specimen	Description	MC%	LL	PL	PI	Cc	Cu
A-19	Fine Sand (A-3)	15%				0.9	1.7
# 1							
Depth (feet): 1.0							

D90 (mm)	D60 (mm)	D50 (mm)	D30 (mm)	D10 (mm)	%Gravel	%Sand	%Fine
0.21	0.13	0.12	0.10	0.08	0	96	4

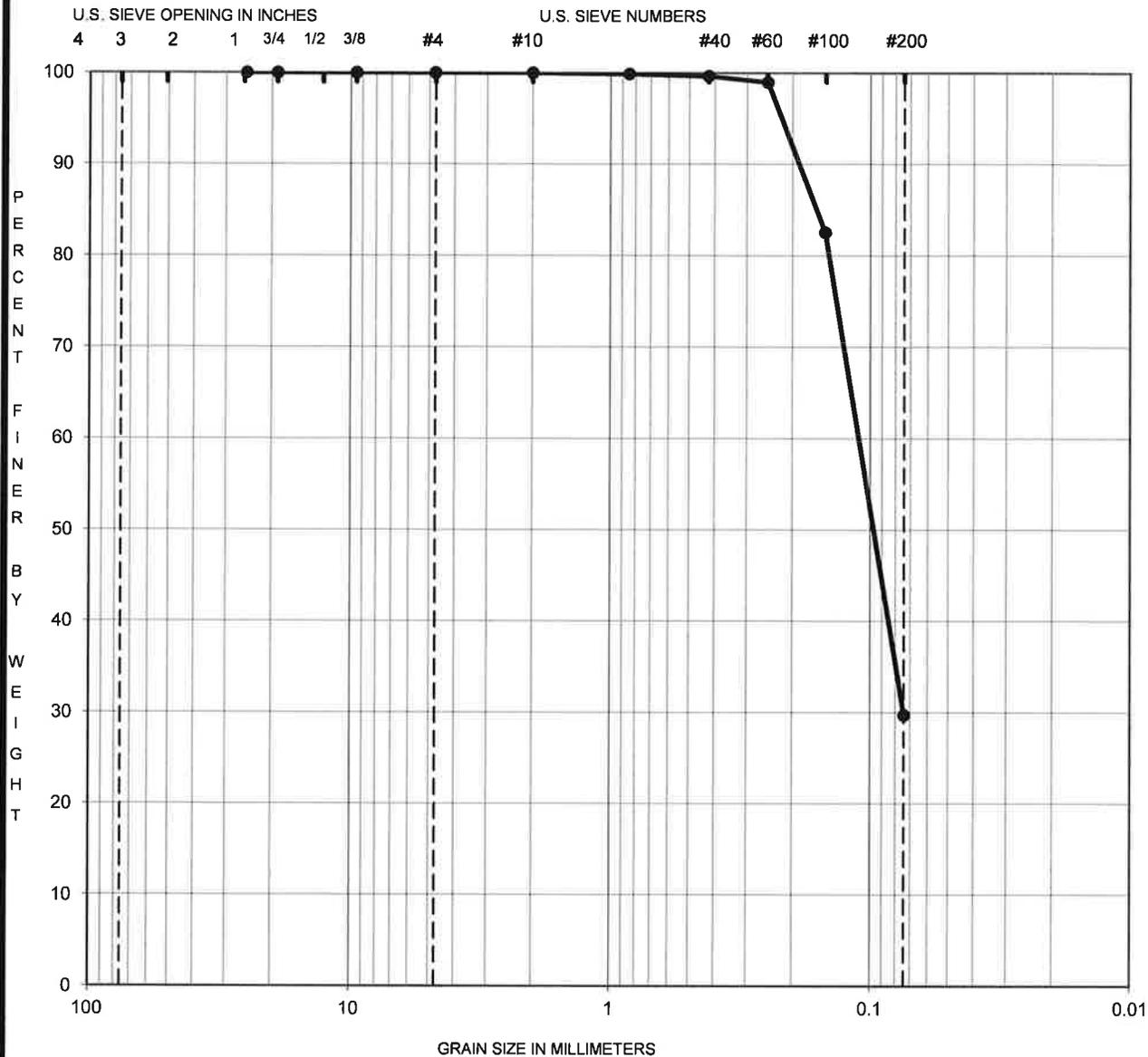
Organics (%)

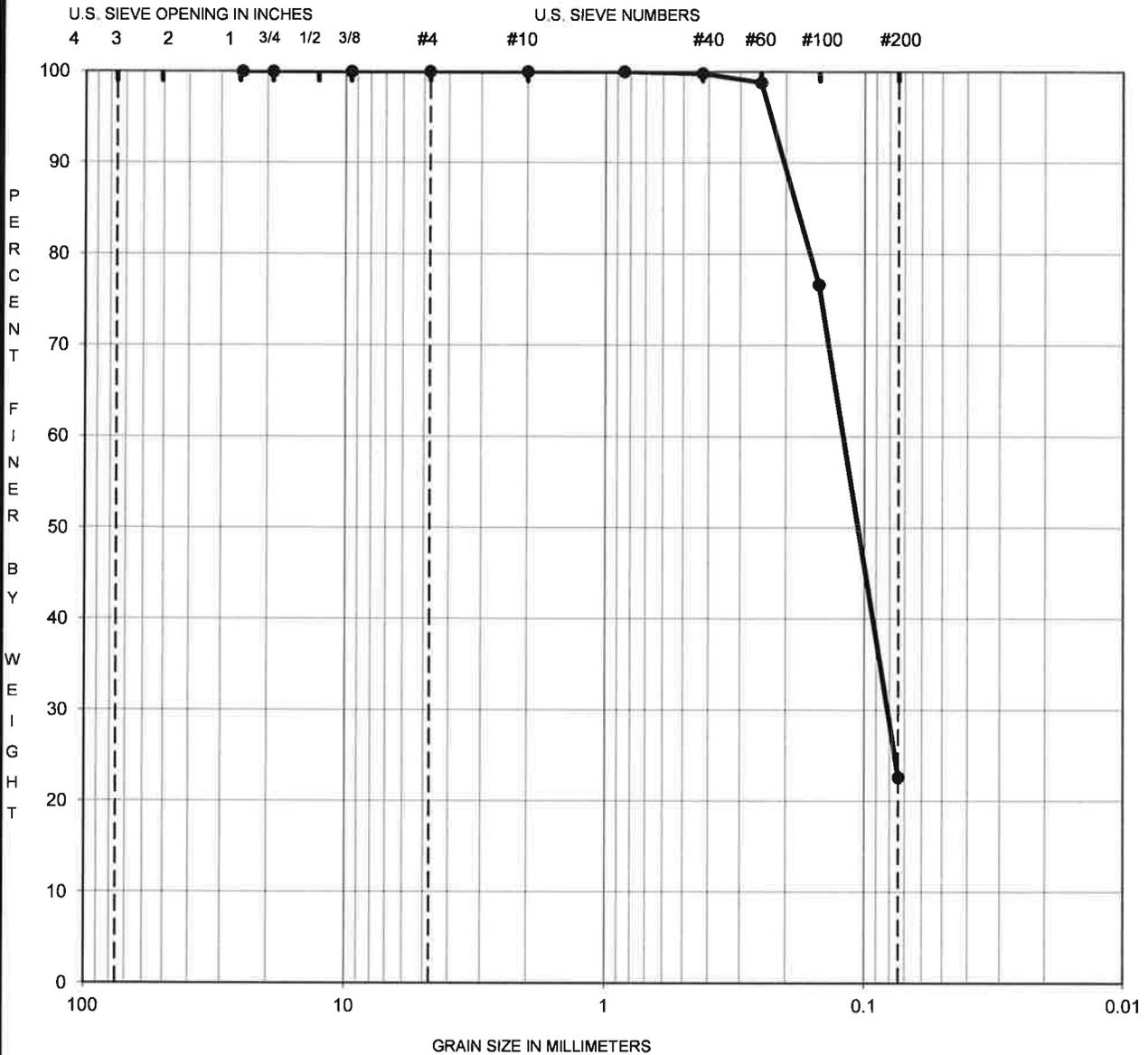
PROJECT: Crawford Road - Phase 2

JOB NO. 0080-0002B

GRAIN SIZE DISTRIBUTION CURVES

Meskel & Associates Engineering, PLLC





GRAVEL		SAND			FINE
coarse	fine	coarse	medium	fine	

Specimen	Description	MC%	LL	PL	PI	Cc	Cu
A-24	Clayey Fine Sand (A-2-6)	16%				1.0	2.3
# 4							
Depth (feet): 5							

D90 (mm)	D60 (mm)	D50 (mm)	D30 (mm)	D10 (mm)	%Gravel	%Sand	%Fine
0.20	0.12	0.11	0.08		0	77	23

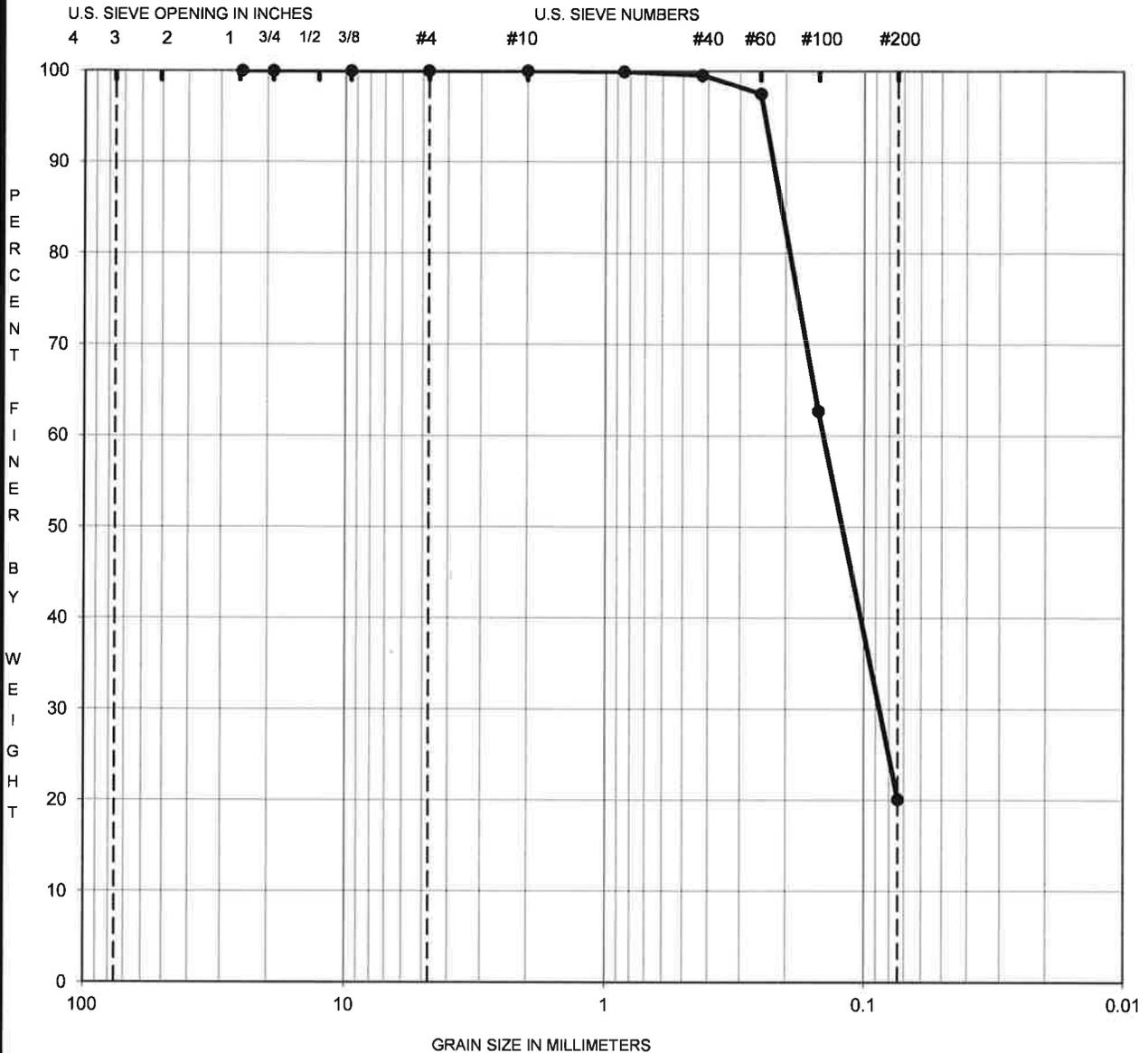
Organics (%)

PROJECT: Crawford Road - Phase 2

JOB NO. 0080-0002B

GRAIN SIZE DISTRIBUTION CURVES

Meskel & Associates Engineering, PLLC



GRAVEL		SAND			FINE
coarse	fine	coarse	medium	fine	

Specimen	Description	MC%	LL	PL	PI	Cc	Cu
A-29	Silty Fine Sand (A-2-4)	22%				1.0	2.6
# 3							
Depth (feet): 4							

D90 (mm)	D60 (mm)	D50 (mm)	D30 (mm)	D10 (mm)	%Gravel	%Sand	%Fine
0.22	0.14	0.12	0.09		0	80	20

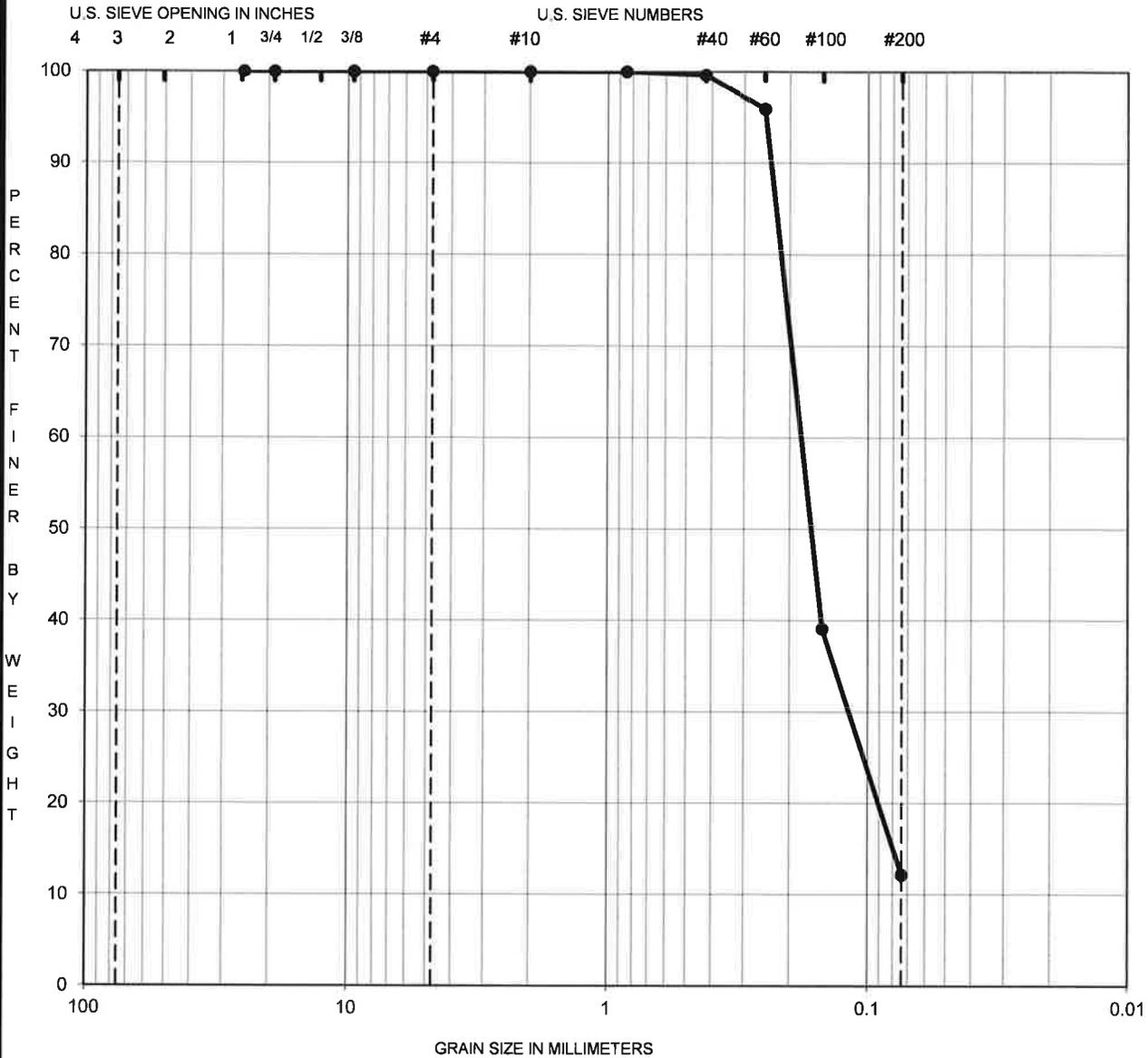
Organics (%)

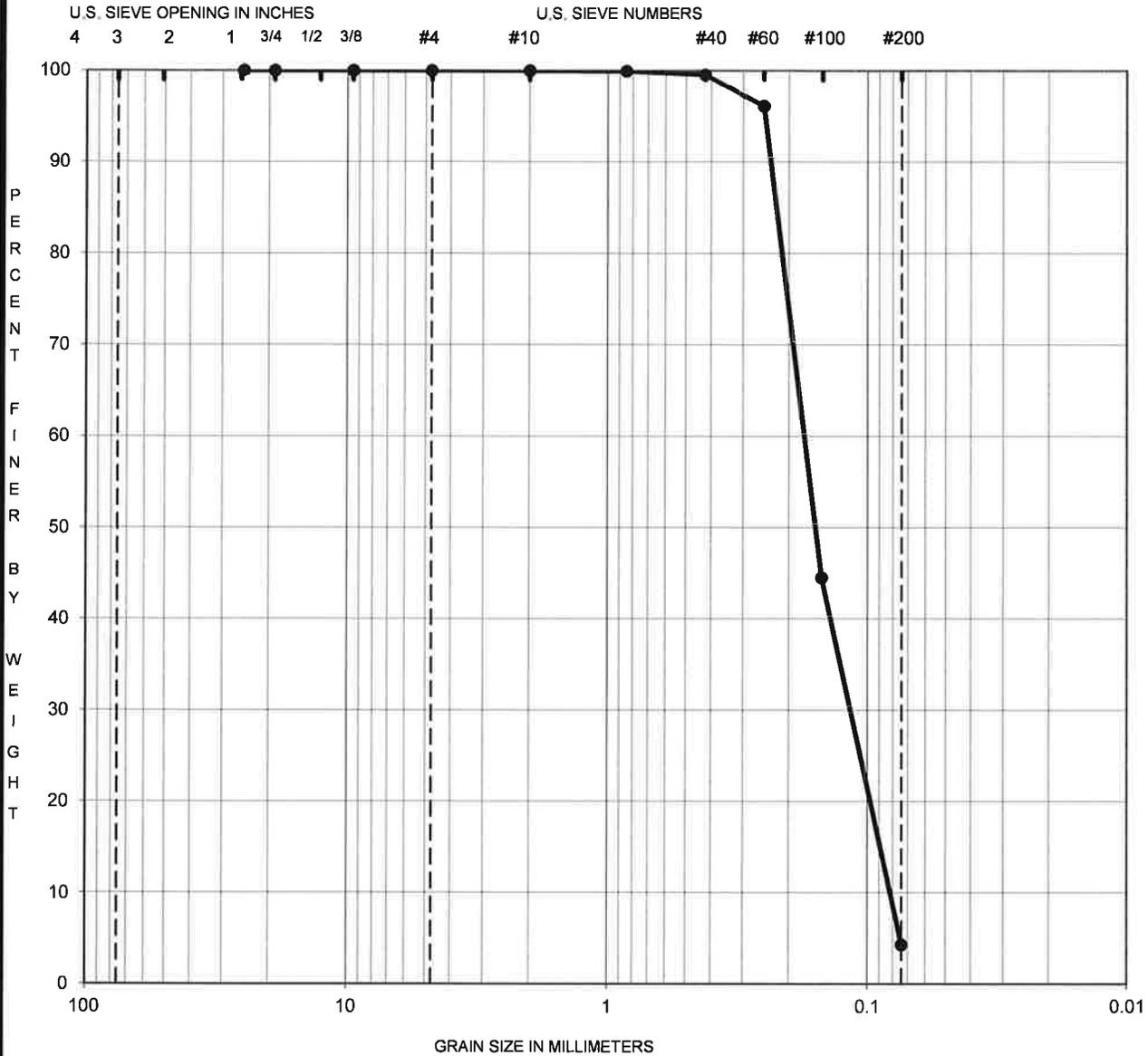
PROJECT: Crawford Road - Phase 2

JOB NO. 0080-0002B

GRAIN SIZE DISTRIBUTION CURVES

Meskel & Associates Engineering, PLLC





GRAVEL		SAND			FINE
coarse	fine	coarse	medium	fine	

Specimen	Description	MC%	LL	PL	PI	Cc	Cu
A-44	Fine Sand (A-3)	13%				0.9	2.1
# 1							
Depth (feet): 1.5							

D90 (mm)	D60 (mm)	D50 (mm)	D30 (mm)	D10 (mm)	%Gravel	%Sand	%Fine
0.24	0.17	0.16	0.12	0.08	0	96	4

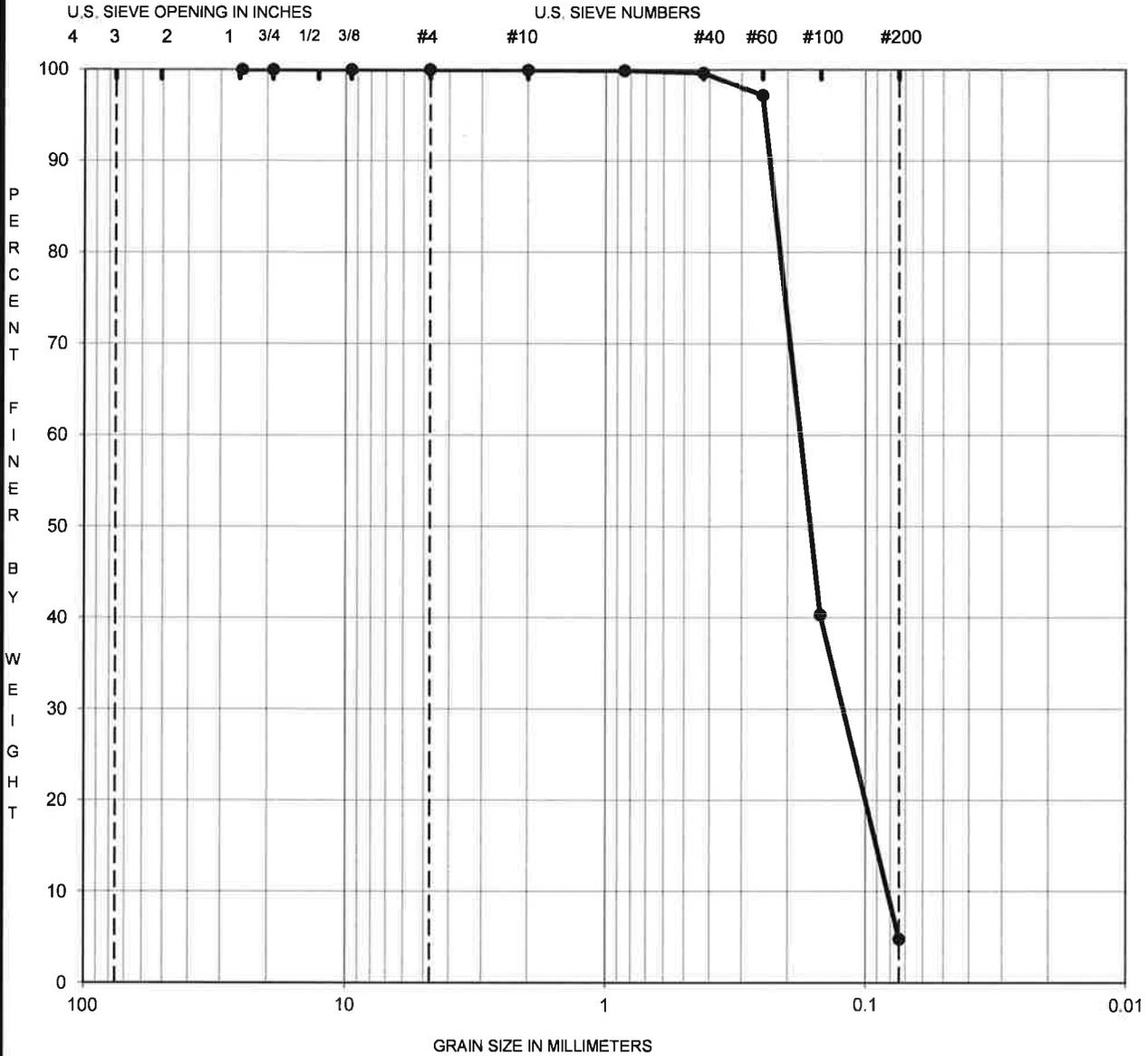
Organics (%)

PROJECT: Crawford Road - Phase 2

JOB NO. 0080-0002B

GRAIN SIZE DISTRIBUTION CURVES

Meskel & Associates Engineering, PLLC



GRAVEL		SAND			FINE
coarse	fine	coarse	medium	fine	

Specimen	Description	MC%	LL	PL	PI	Cc	Cu
A-51	Fine Sand with Silt (A-3)	12%				1.0	2.2
# 2							
Depth (feet): 2							

D90 (mm)	D60 (mm)	D50 (mm)	D30 (mm)	D10 (mm)	%Gravel	%Sand	%Fine
0.23	0.18	0.16	0.12	0.08	0	95	5

Organics (%)

PROJECT: Crawford Road - Phase 2

JOB NO. 0080-0002B

GRAIN SIZE DISTRIBUTION CURVES

Meskel & Associates Engineering, PLLC

Appendix C

Double Ring Infiltrometer Test Summary Sheet

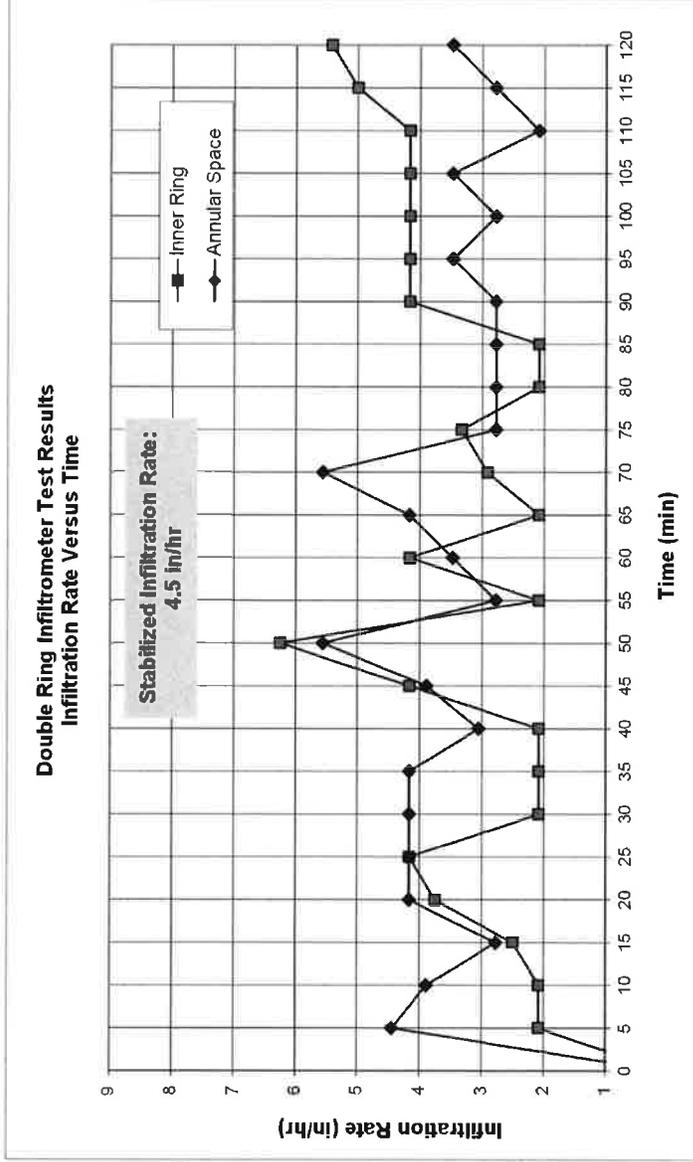
ASTM D3385

Project Name: Crawford Road - Phase 2
Callahan
Nassau County, FL

Test No.: DRI-3
Date Performed: 6/17/2015
Performed by: PR Young
MAE Project No.: 0080-0002B

Test Location: DRI-3

Groundwater Depth: 4.3
Test Depth: 1.5 feet
Soil Description: See Boring A-18



Comments: N/A



Double Ring Infiltrometer Test Summary Sheet

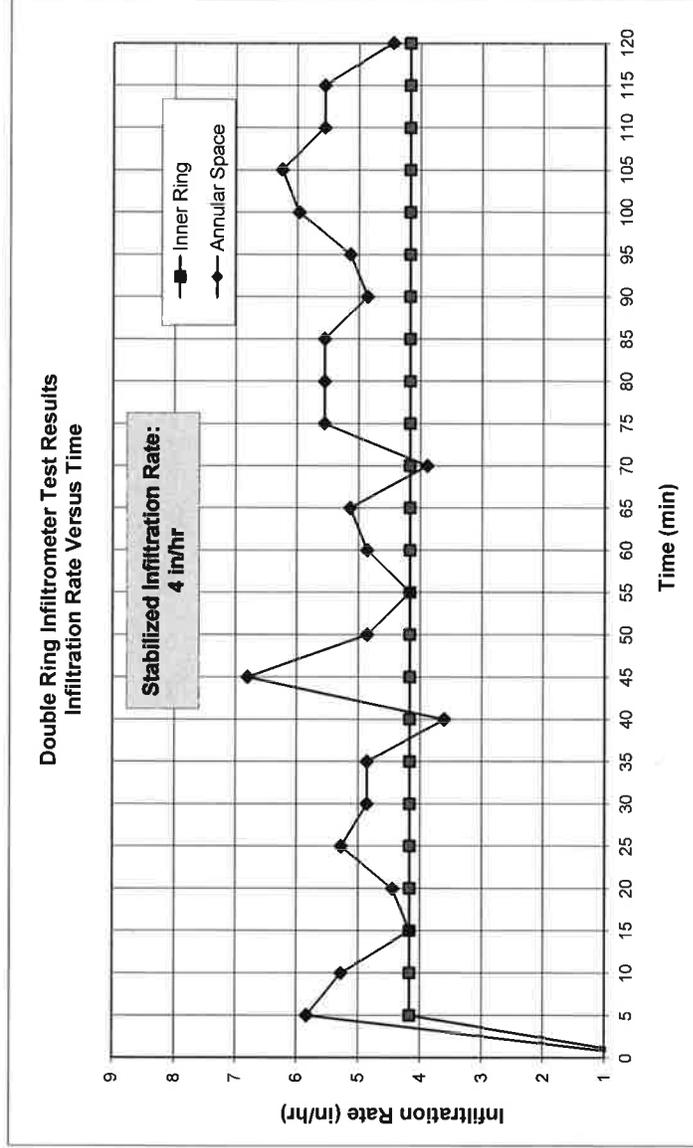
ASTM D3385

Project Name: Crawford Road - Phase 2
Callahan
Nassau County, FL

Test No.: DRI-4
Date Performed: 6/17/2015
Performed by: PR Young
MAE Project No.: 0080-0002B

Test Location: DRI-4

Groundwater Depth: 5.6 feet
Test Depth: 2.0 feet
Soil Description: See Boring A-26



Comments: N/A



Double Ring Infiltrometer Test Summary Sheet

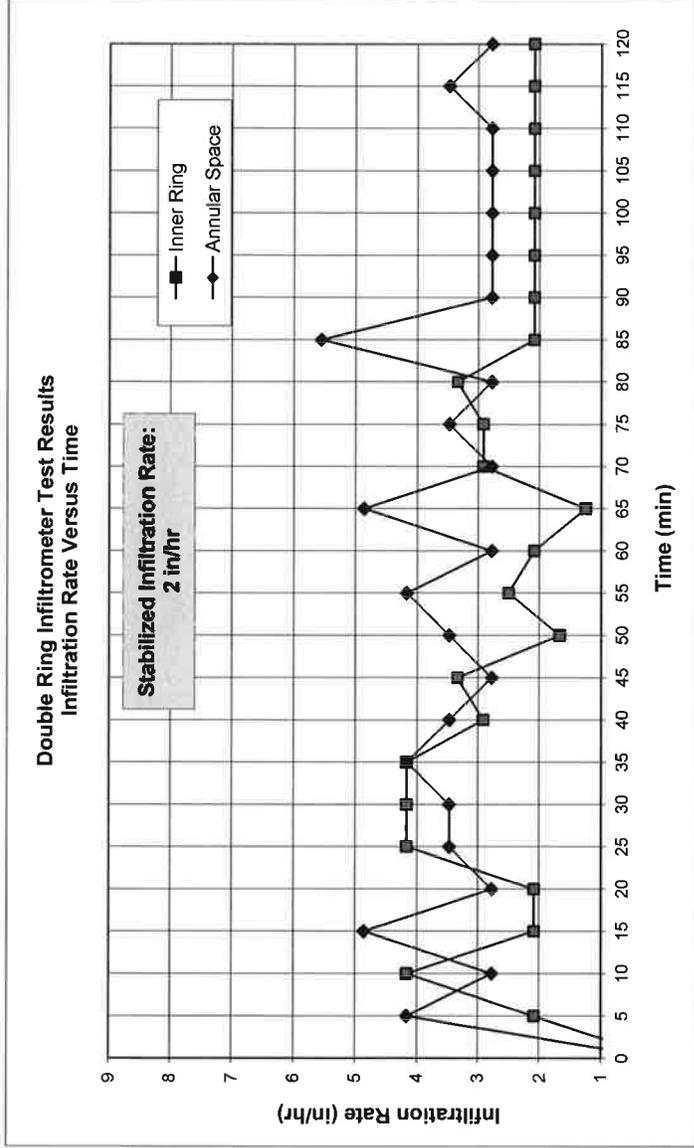
ASTM D3385

Project Name: Crawford Road - Phase 2
Callahan
Nassau County, FL

Test No.: DRI-5
Date Performed: 6/18/2015
Performed by: PR Young
MAE Project No.: 0080-0002B

Test Location: DRI-5

Groundwater Depth: 4.2 feet
Test Depth: 2.0 feet
Soil Description: See Boring A-34



Comments: N/A

Double Ring Infiltrometer Test Summary Sheet

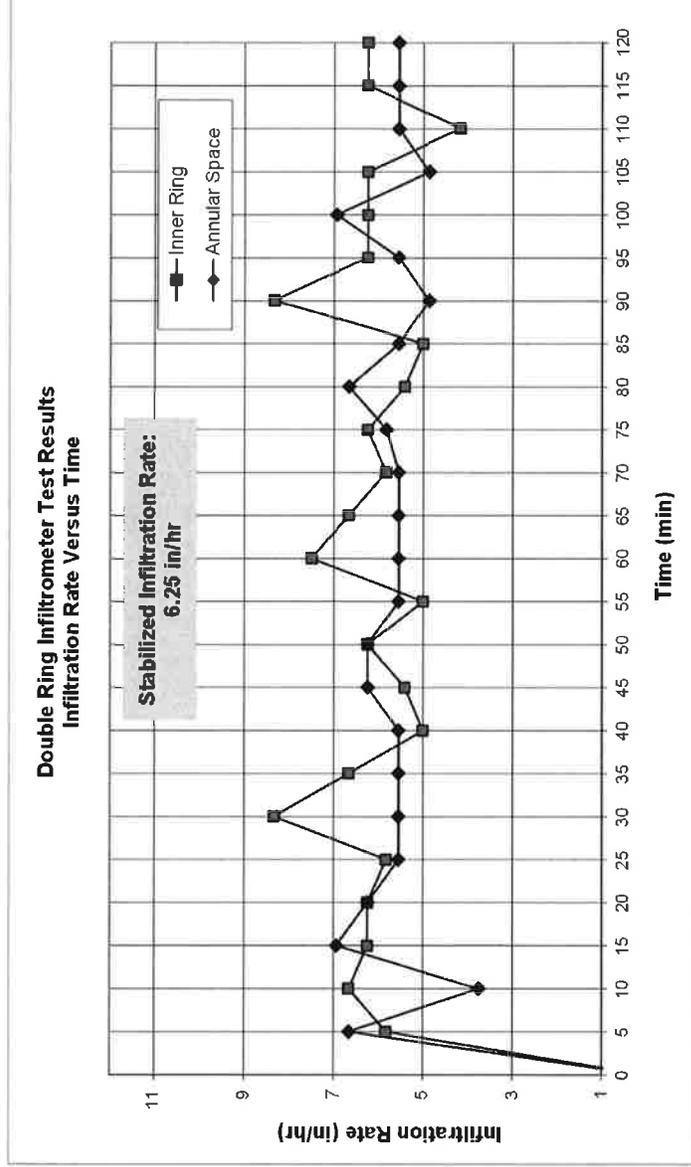
ASTM D3385

Project Name: Crawford Road - Phase 2
Callahan
Nassau County, FL

Test No.: DRI-6
Date Performed: 6/18/2015
Performed by: PR Young
MAE Project No.: 0080-0002B

Test Location: DRI-6

Groundwater Depth: 3.2 feet
Test Depth: 1.7 feet
Soil Description: See Boring A-43



Comments: N/A

FIELD EXPLORATION PROCEDURES

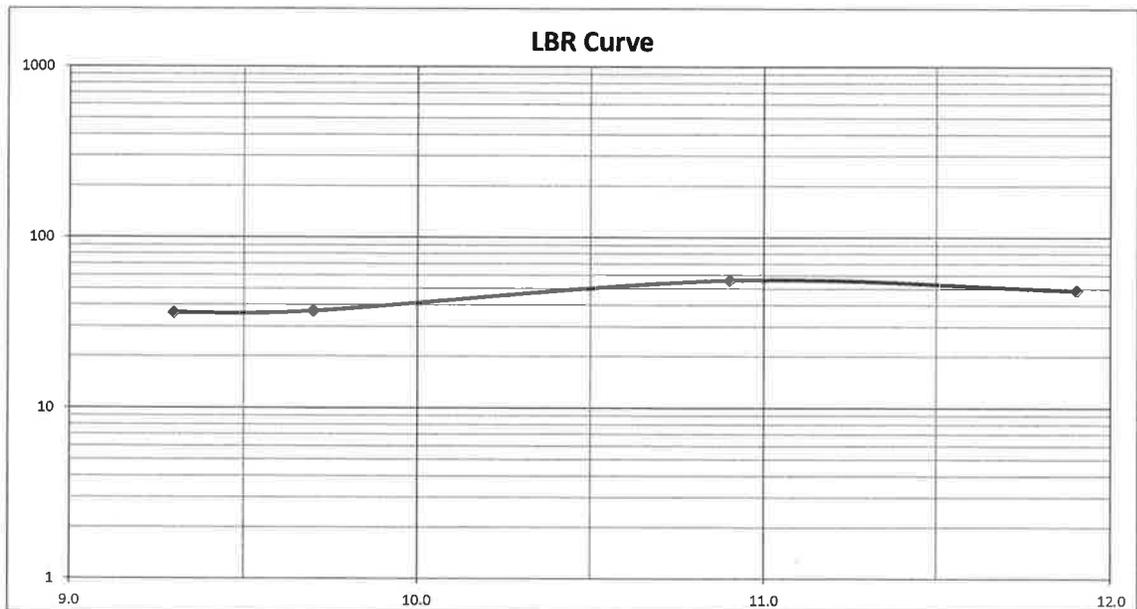
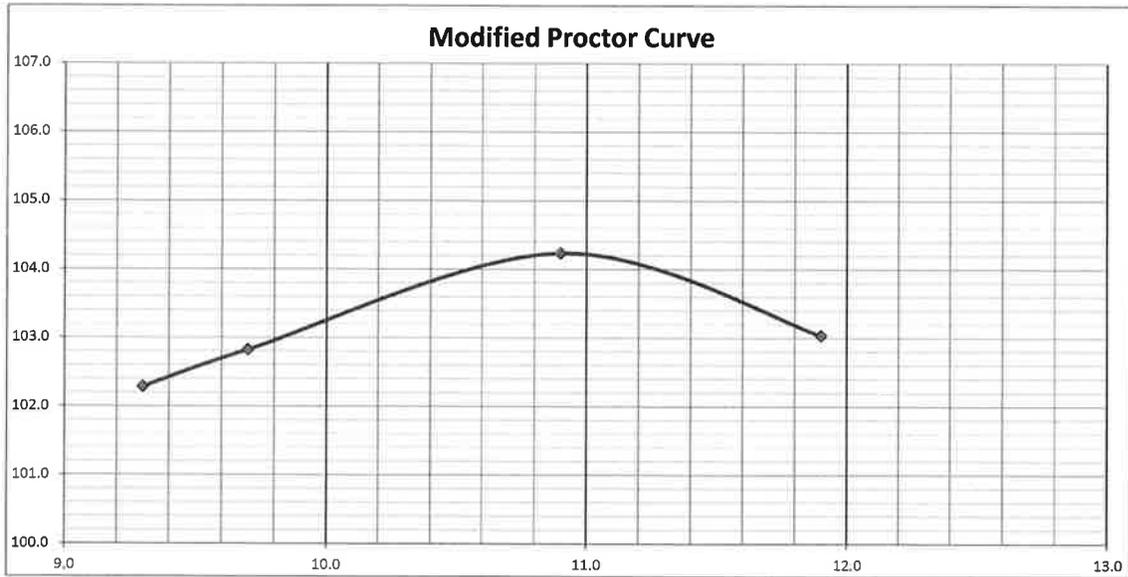
Double-Ring Infiltrometer Test

The Double-Ring Infiltrometer test was performed in the field in general accordance with the procedures outlined in the latest revision of ASTM D 3385, "Infiltration Rate of Soils in Field using Double-Ring Infiltrometers." The test location was initially cleared of all surface vegetation and topsoil, excavated to the desired test depth and then leveled. The outer ring, approximately 24 inches in diameter, was driven to a depth of 6 inches below the test depth. The inner ring, approximately 12 inches in diameter, was inserted inside the outer ring, centered, and driven to a depth of approximately 2 inches below the test depth. A thin layer of gravel was placed on the exposed soils inside the rings at the test level. The two rings were filled simultaneously with 4 inches of water.

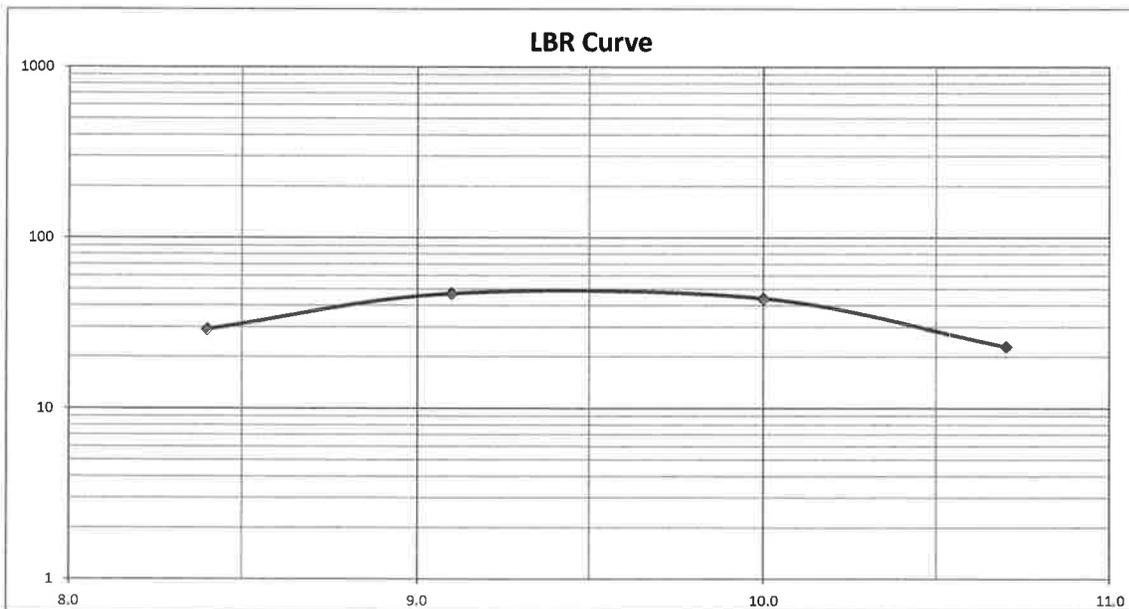
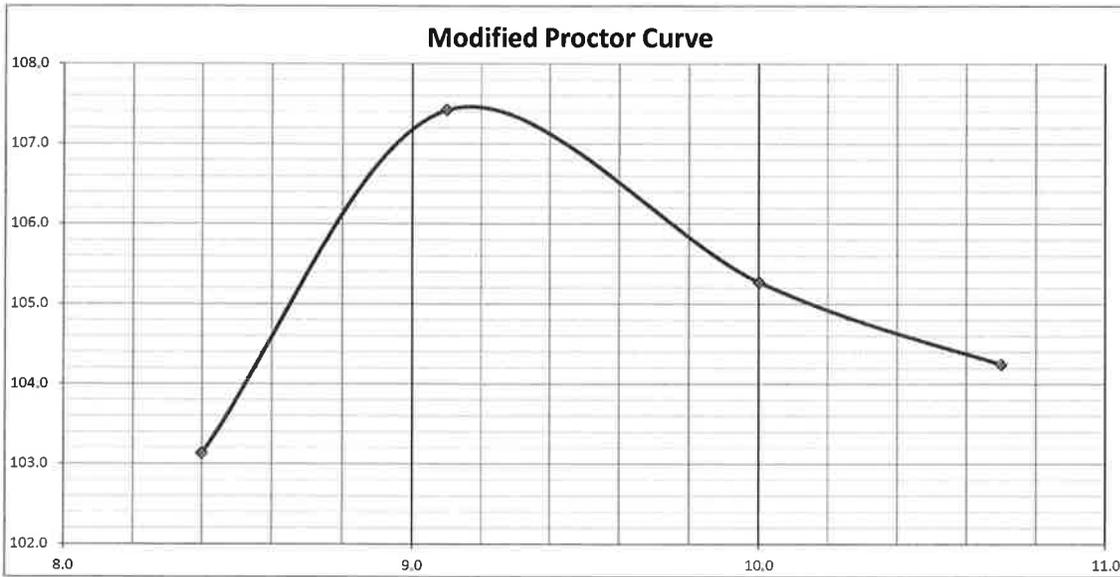
This water level maintained throughout the test period, with the required amount of water added to maintain this level in both rings recorded at time intervals of five minutes. After reaching a stabilized inflow volume of water, the test was continued for approximately 120 minutes. To determine the infiltration rate, the volume of water used during the stabilized flow period for the inner ring, the annular space and both rings combined is converted to the depth of water per unit of time (e.g., in inches per hour).

Appendix D

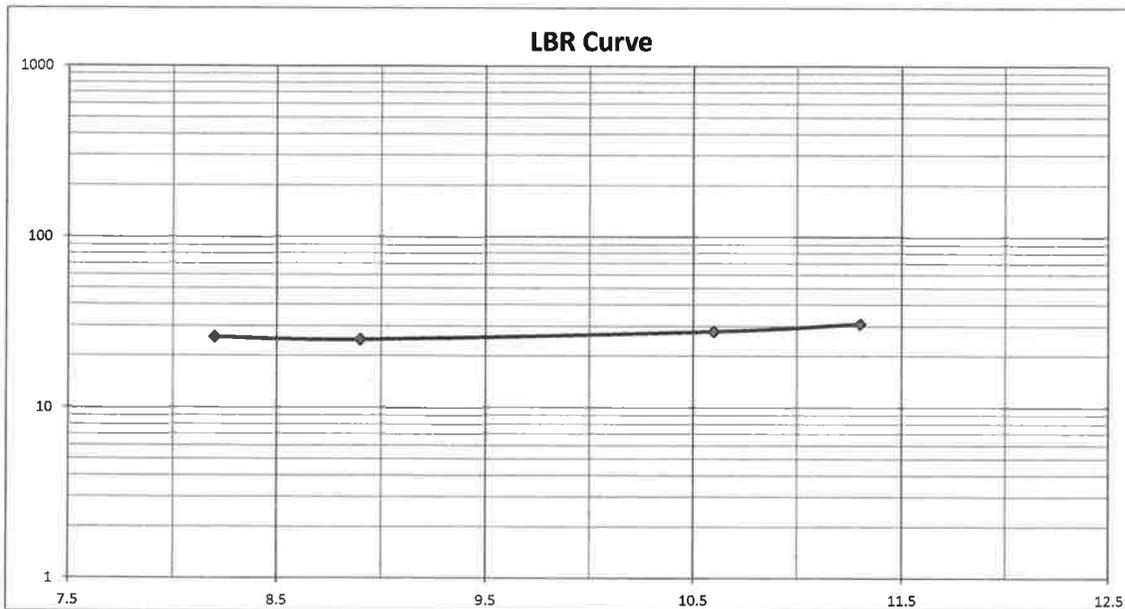
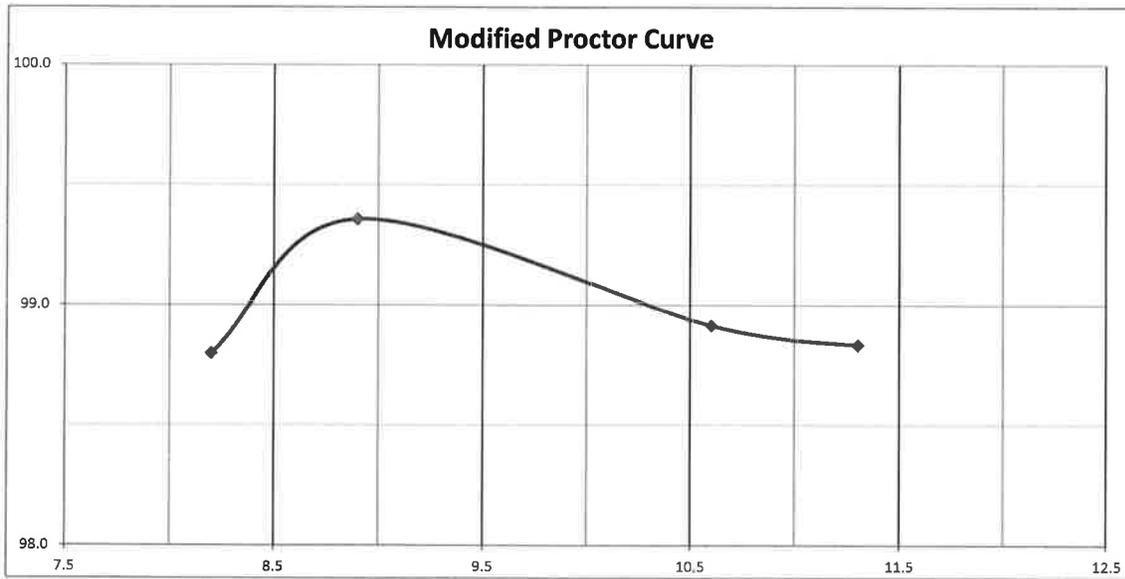
PROJECT NAME :	<u>Crawford Road - Phase 2</u>	PROJECT NO.	<u>0080-0002B</u>
CLIENT :	<u>EltonAlan, Inc.</u>	SAMPLE NO.	<u>LBR-4</u>
SAMPLE LOCATION:	<u>100+02.23</u>	LAB NO.	<u>N/A</u>
SAMPLE DESCRIPTION:	<u>Brown Fine Sand with Silt</u>		
DATE SAMPLED :	<u>6/15/2015</u>	SAMPLED BY:	<u>Paul Young</u>
DATE TESTED :	<u>6/27/2015</u>	TESTED BY:	<u>Tom Traver</u>
TEST METHOD :	<u>FM5-515</u>		
MAX.DRY DENSITY :	<u>104</u>	OPTIMUM MOISTURE :	<u>11%</u>
MAXIMUM LBR :	<u>56</u>	JOB SPECIFICATION:	<u>40</u>



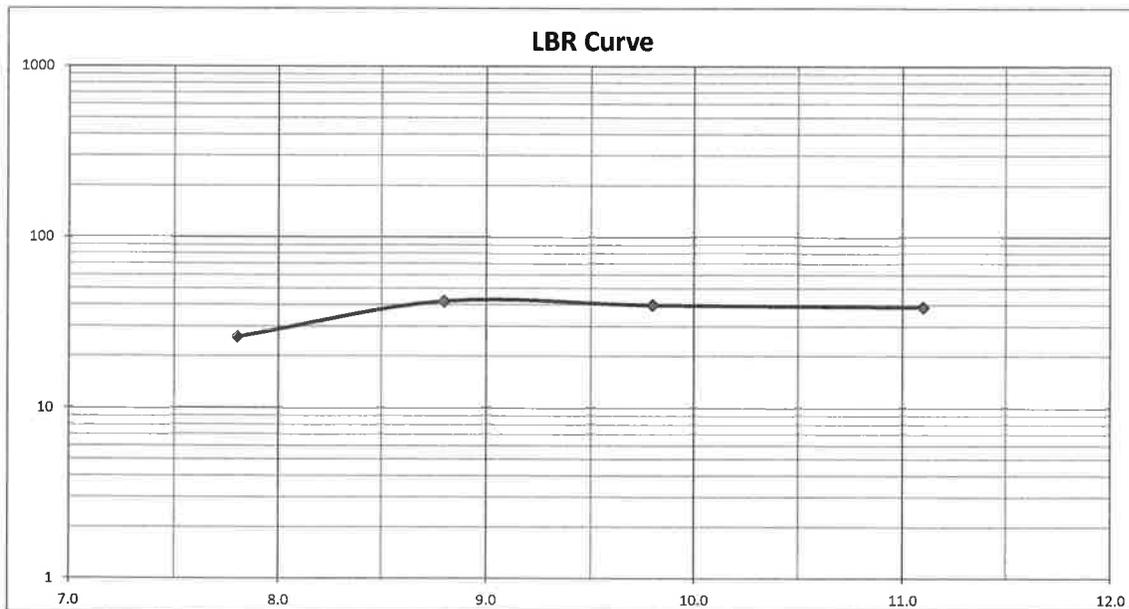
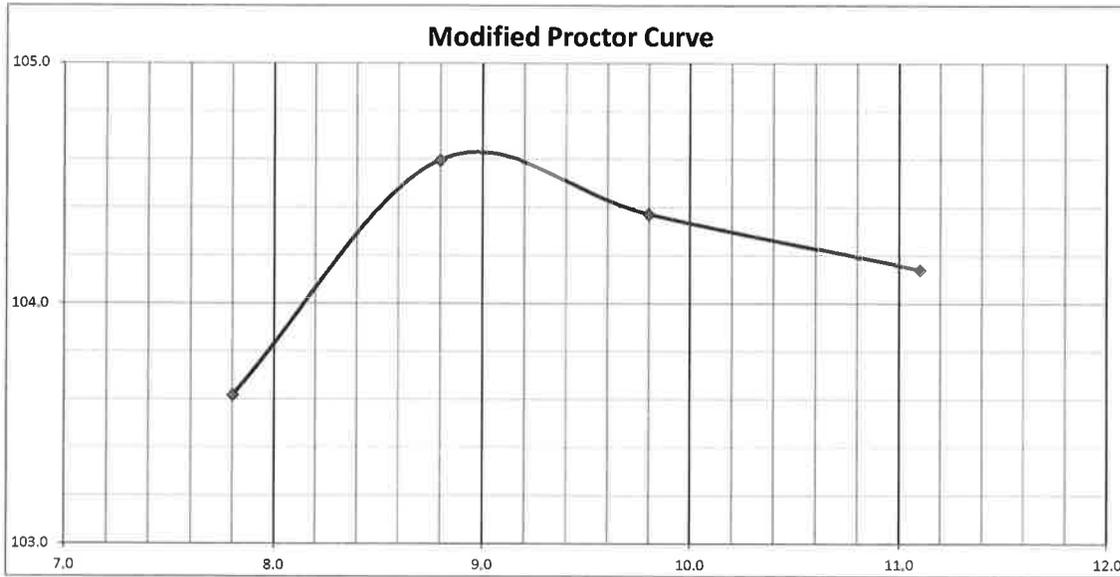
PROJECT NAME :	<u>Crawford Road - Phase 2</u>	PROJECT NO.	<u>0080-0002B</u>
CLIENT :	<u>EltonAlan, Inc.</u>	SAMPLE NO.	<u>LBR-5</u>
SAMPLE LOCATION:	<u>126+02.05</u>	LAB NO.	<u>N/A</u>
SAMPLE DESCRIPTION:	<u>Gray Brown Fine Sand with Silt</u>		
DATE SAMPLED :	<u>6/15/2015</u>	SAMPLED BY:	<u>Paul Young</u>
DATE TESTED :	<u>6/29/2015</u>	TESTED BY:	<u>Tom Traver</u>
TEST METHOD :	<u>FM5-515</u>		
MAX. DRY DENSITY :	<u>107</u>	OPTIMUM MOISTURE :	<u>9%</u>
MAXIMUM LBR :	<u>47</u>	JOB SPECIFICATION:	<u>40</u>



PROJECT NAME :	<u>Crawford Road - Phase 2</u>	PROJECT NO.	<u>0080-0002B</u>
CLIENT :	<u>Elton Alan, Inc</u>	SAMPLE NO.	<u>LBR- 6</u>
SAMPLE LOCATION:	<u>151+02.10</u>	LAB NO.	<u>N/A</u>
SAMPLE DESCRIPTION:	<u>Tan Gray Fine Sand, trace Clay</u>		
DATE SAMPLED :	<u>6/17/2015</u>	SAMPLED BY:	<u>Paul Young</u>
DATE TESTED :	<u>7/10/2015</u>	TESTED BY:	<u>Tom Traver</u>
TEST METHOD :	<u>FM5-515</u>		
MAX.DRY DENSITY :	<u>99</u>	OPTIMUM MOISTURE :	<u>9%</u>
MAXIMUM LBR :	<u>31</u>	JOB SPECIFICATION:	<u>40</u>



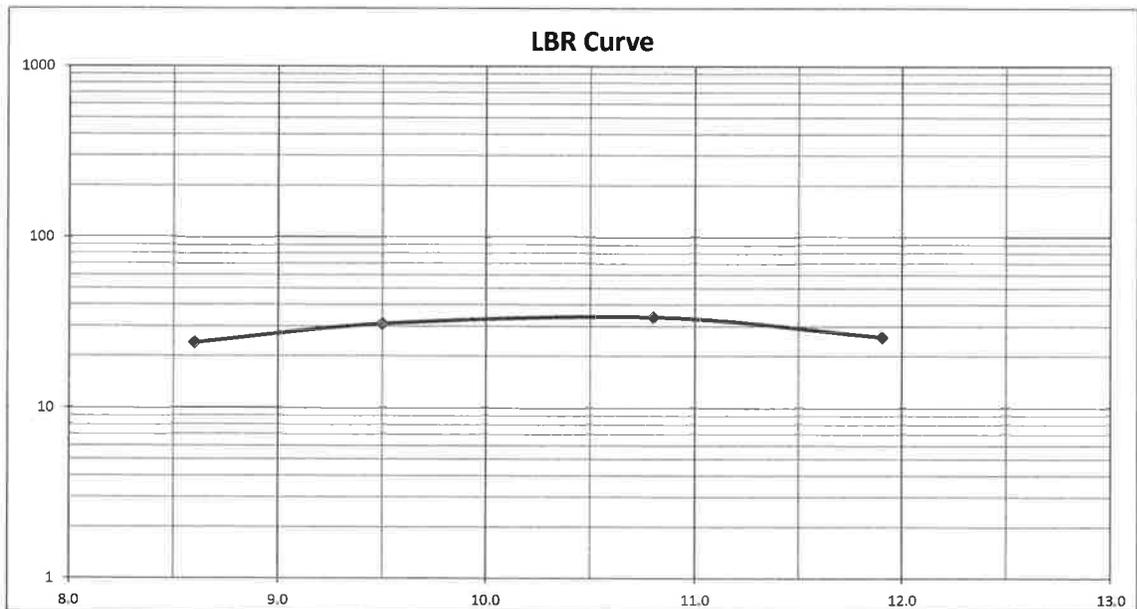
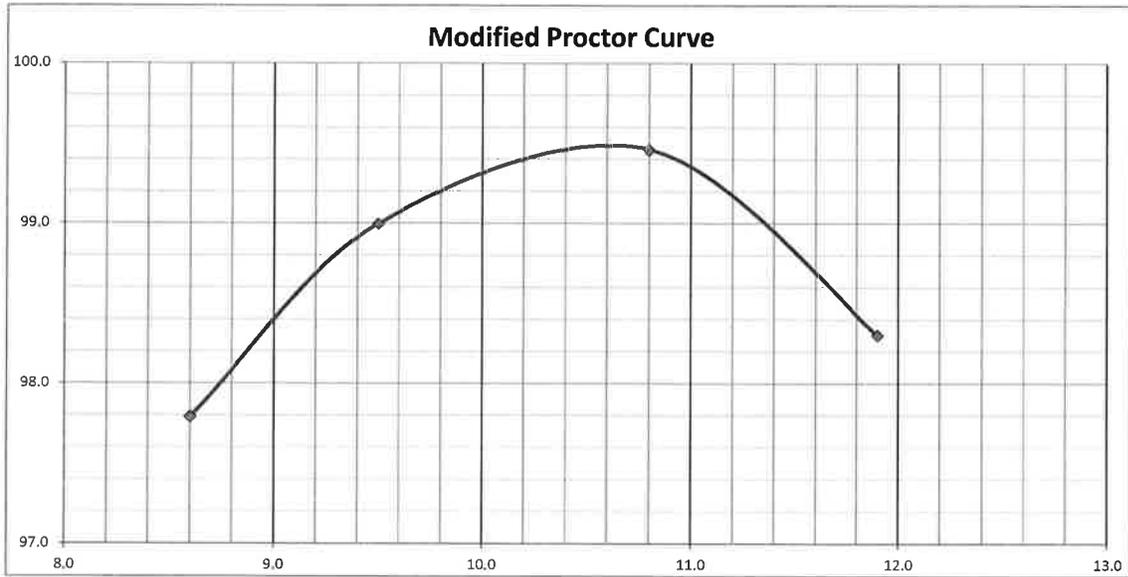
PROJECT NAME :	<u>Crawford Road - Phase 2</u>	PROJECT NO. :	<u>0080-0002B</u>
CLIENT :	<u>Elton Alan, Inc.</u>	SAMPLE NO. :	<u>LBR-7</u>
SAMPLE LOCATION :	<u>176+02.07</u>	LAB NO. :	<u>N/A</u>
SAMPLE DESCRIPTION :	<u>Gray Brown Fine Sand with Silt</u>		
DATE SAMPLED :	<u>6/15/2015</u>	SAMPLED BY :	<u>Paul Young</u>
DATE TESTED :	<u>7/8/2015</u>	TESTED BY :	<u>Tom Traver</u>
TEST METHOD :	<u>FM5-515</u>		
MAX. DRY DENSITY :	<u>105</u>	OPTIMUM MOISTURE :	<u>9%</u>
MAXIMUM LBR :	<u>42</u>	JOB SPECIFICATION :	<u>40</u>



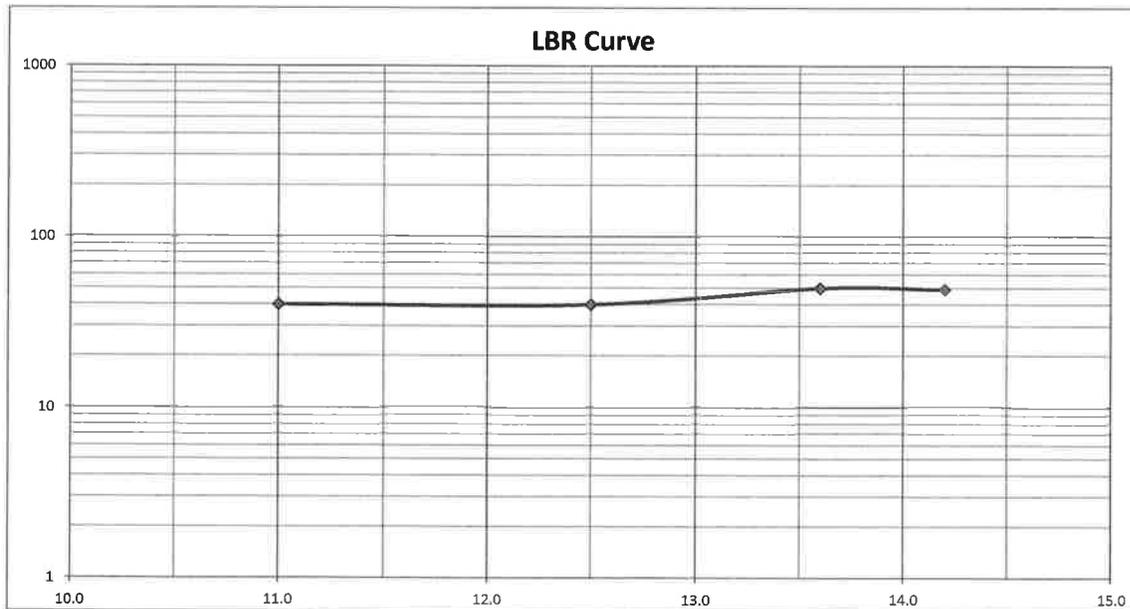
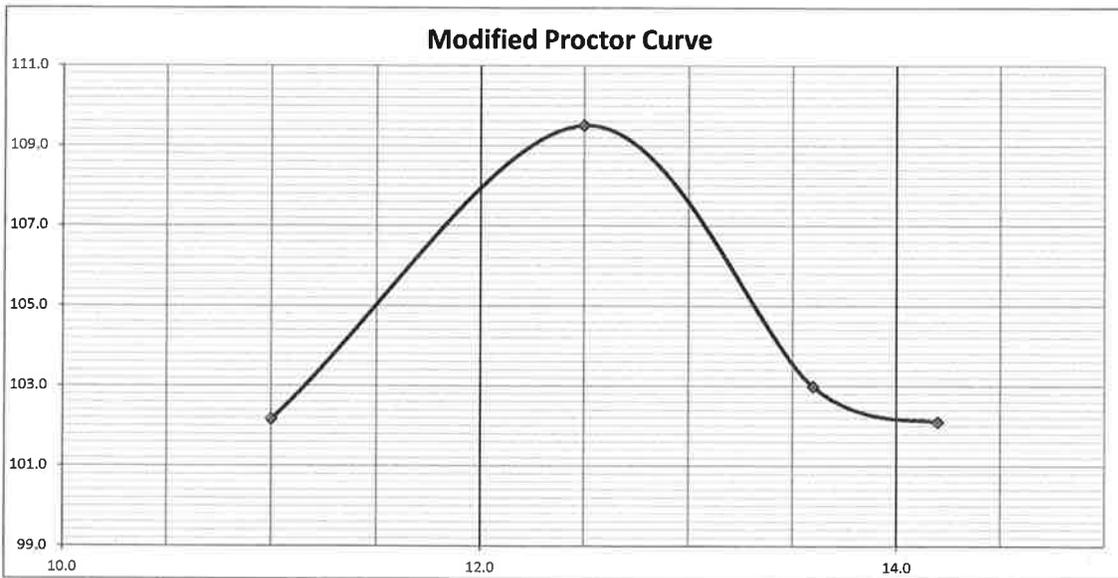


8369 Western Way, Suite 12
Jacksonville, Florida 32256

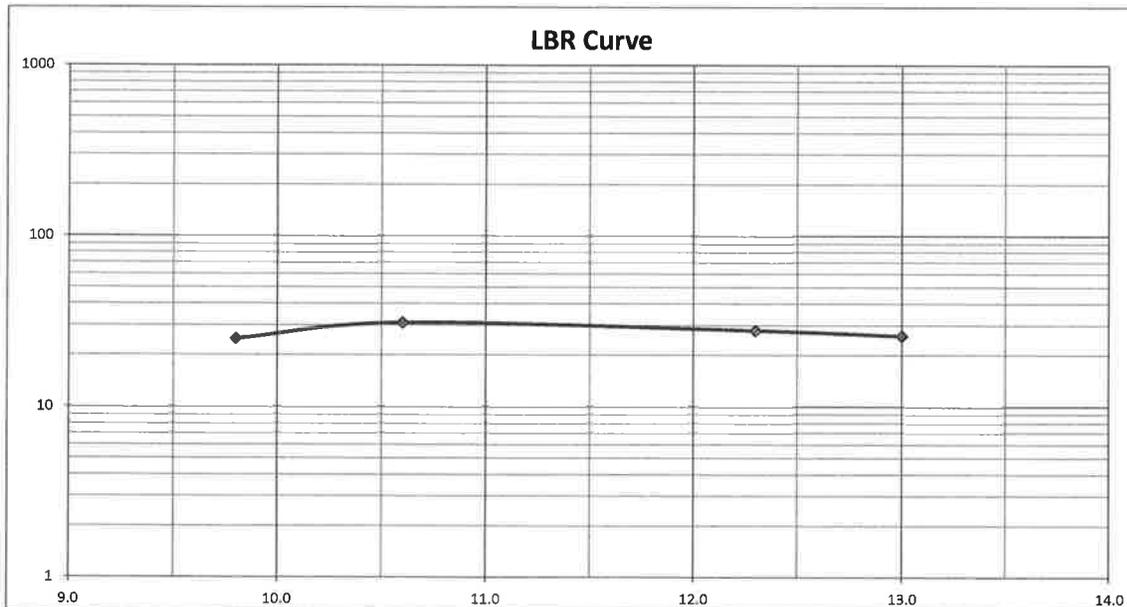
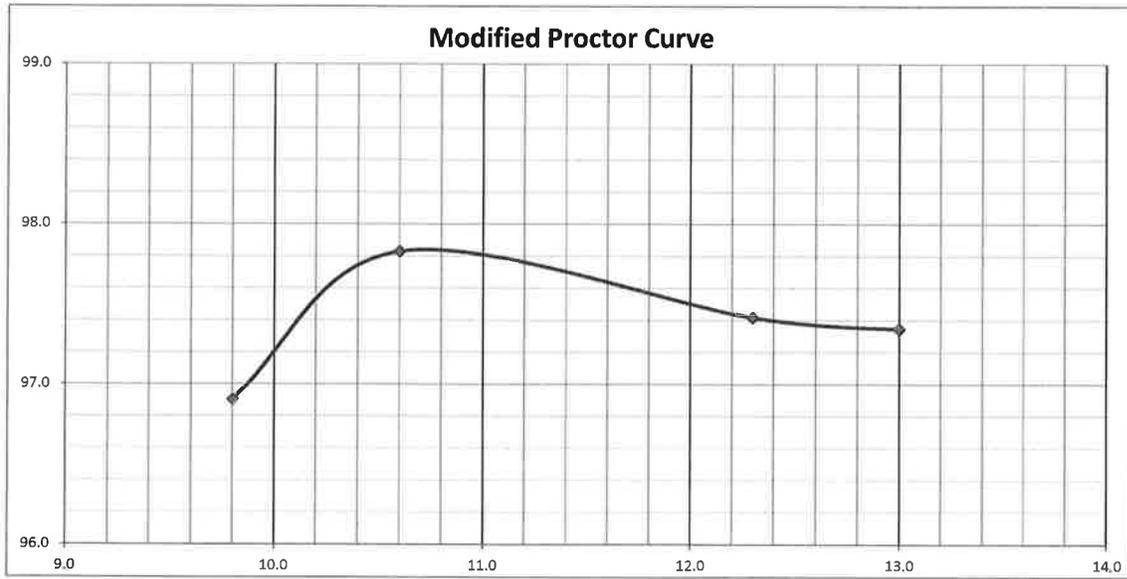
PROJECT NAME :	<u>Crawford Road - Phase 2</u>	PROJECT NO.:	<u>0080-0002B</u>
CLIENT :	<u>EltonAlan, Inc.</u>	SAMPLE NO.:	<u>LBR-8</u>
SAMPLE LOCATION:	<u>201+02.14</u>	LAB NO.:	<u>N/A</u>
SAMPLE DESCRIPTION:	<u>Gray Fine Sand with Silt</u>		
DATE SAMPLED :	<u>6/15/2015</u>	SAMPLED BY:	<u>Rickey Astin</u>
DATE TESTED :	<u>6/27/2015</u>	TESTED BY:	<u>Tom Traver</u>
TEST METHOD :	<u>FM5-515</u>		
MAX.DRY DENSITY :	<u>99</u>	OPTIMUM MOISTURE :	<u>11%</u>
MAXIMUM LBR :	<u>34</u>	JOB SPECIFICATION:	<u>40</u>



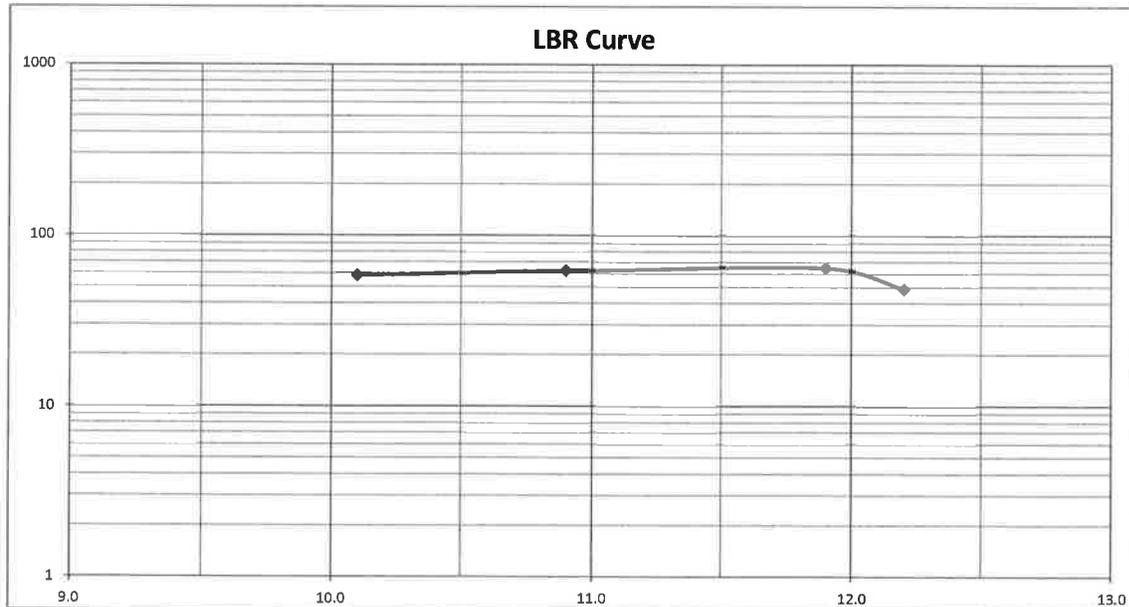
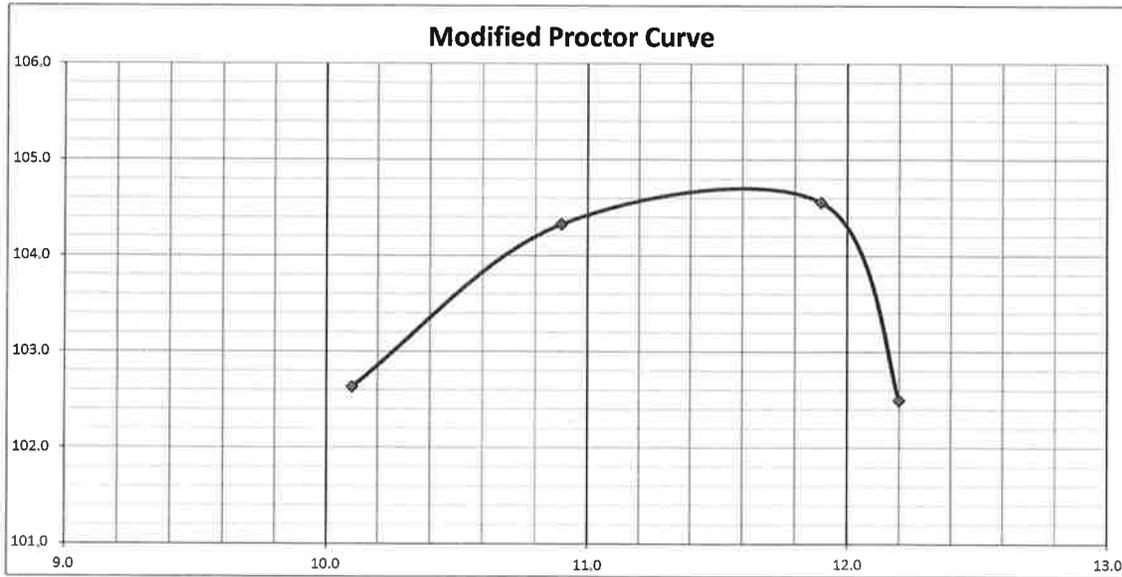
PROJECT NAME :	<u>Crawford Road - Phase 2</u>	PROJECT NO. :	<u>0080-0002B</u>
CLIENT :	<u>Eiton Alan, Inc.</u>	SAMPLE NO. :	<u>LBR-9</u>
SAMPLE LOCATION :	<u>229+41.52</u>	LAB NO. :	<u>N/A</u>
SAMPLE DESCRIPTION :	<u>Gray Brown Fine Sand with Silt</u>		
DATE SAMPLED :	<u>6/15/2015</u>	SAMPLED BY :	<u>Paul Young</u>
DATE TESTED :	<u>6/27/2015</u>	TESTED BY :	<u>Tom Traver</u>
TEST METHOD :	<u>FM5-515</u>		
MAX. DRY DENSITY :	<u>110</u>	OPTIMUM MOISTURE :	<u>12%</u>
MAXIMUM LBR :	<u>50</u>	JOB SPECIFICATION :	<u>40</u>



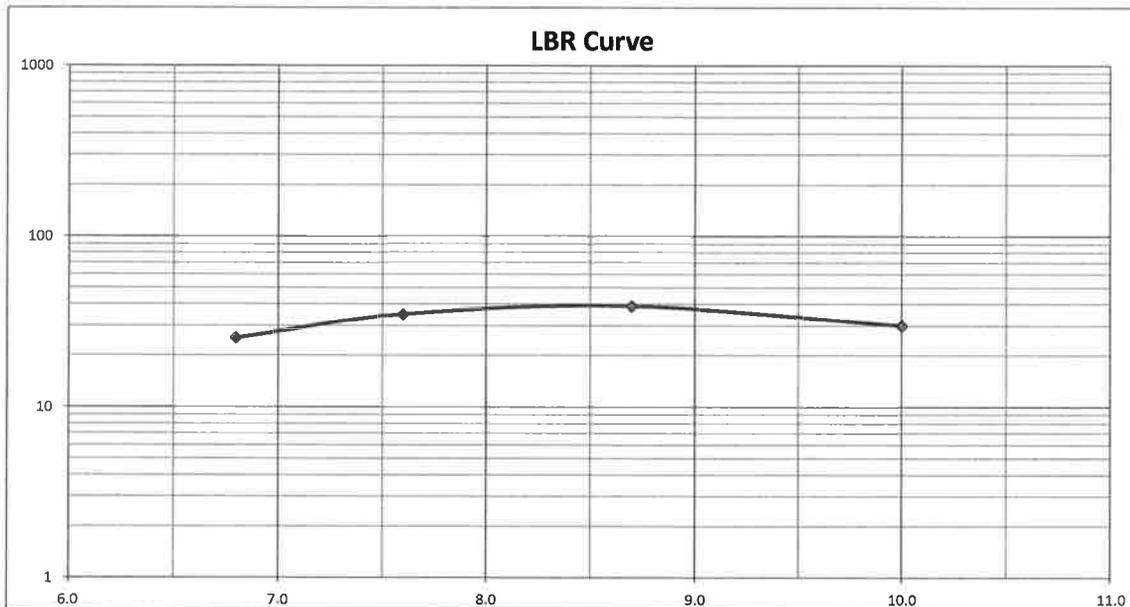
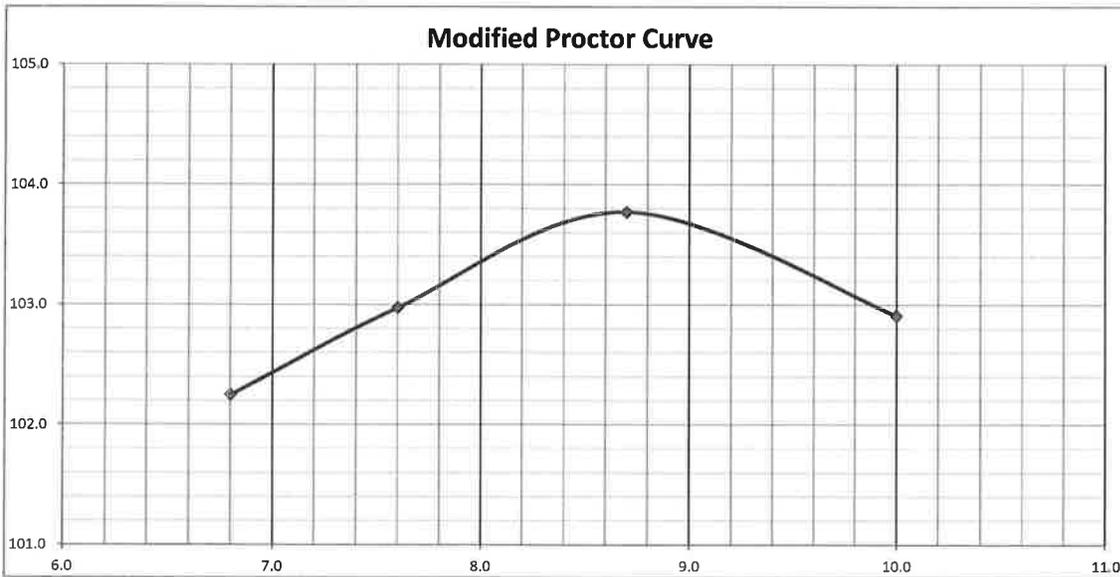
PROJECT NAME :	<u>Crawford Road - Phase 2</u>	PROJECT NO.	<u>0080-0002B</u>
CLIENT :	<u>EltonAlan, Inc.</u>	SAMPLE NO.	<u>LBR-10</u>
SAMPLE LOCATION:	<u>256+02.07</u>	LAB NO.	<u>N/A</u>
SAMPLE DESCRIPTION:	<u>Gray Fine Sand with Silt</u>		
DATE SAMPLED :	<u>6/15/2015</u>	SAMPLED BY:	<u>Paul Young</u>
DATE TESTED :	<u>7/8/2015</u>	TESTED BY:	<u>Tom Traver</u>
TEST METHOD :	<u>FM5-515</u>		
MAX.DRY DENSITY :	<u>98</u>	OPTIMUM MOISTURE :	<u>11%</u>
MAXIMUM LBR :	<u>31</u>	JOB SPECIFICATION:	<u>40</u>



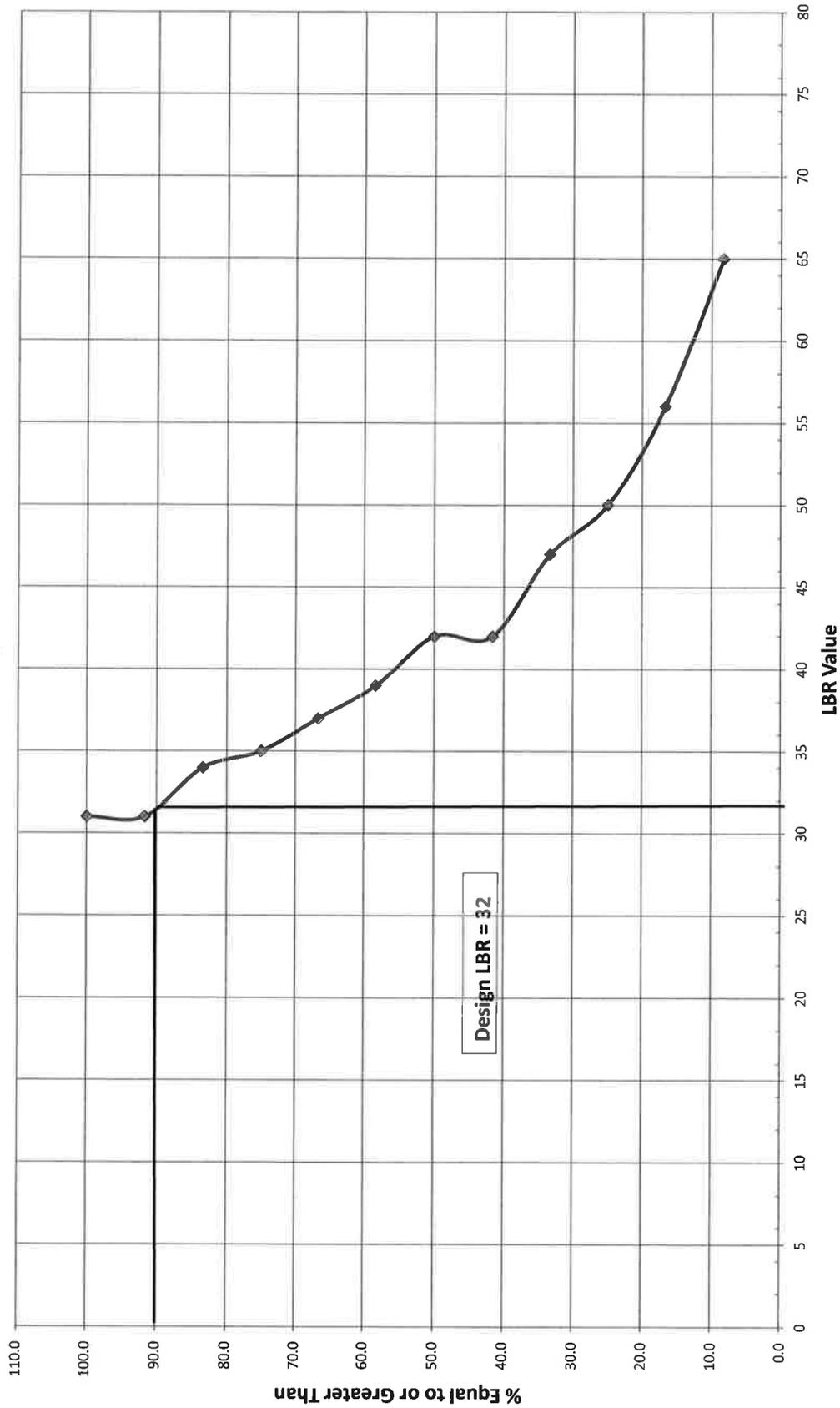
PROJECT NAME :	<u>Crawford Road - Phase 2</u>	PROJECT NO.	<u>0080-0002B</u>
CLIENT :	<u>Elton Alan, Inc.</u>	SAMPLE NO.	<u>LBR-11</u>
SAMPLE LOCATION:	<u>281+02.02</u>	LAB NO.	<u>N/A</u>
SAMPLE DESCRIPTION:	<u>Brown Fine Sand with Silt</u>		
DATE SAMPLED :	<u>6/15/2015</u>	SAMPLED BY:	<u>Paul Young</u>
DATE TESTED :	<u>6/27/2015</u>	TESTED BY:	<u>Tom Traver</u>
TEST METHOD :	<u>FMS-515</u>		
MAX. DRY DENSITY :	<u>105</u>	OPTIMUM MOISTURE :	<u>12%</u>
MAXIMUM LBR :	<u>65</u>	JOB SPECIFICATION:	<u>40</u>



PROJECT NAME :	<u>Crawford Road - Phase 2</u>	PROJECT NO. :	<u>0080-0002B</u>
CLIENT :	<u>Elton Alan, Inc.</u>	SAMPLE NO. :	<u>LBR-12</u>
SAMPLE LOCATION :	<u>316+02.04</u>	LAB NO. :	<u>N/A</u>
SAMPLE DESCRIPTION :	<u>Gray Brown Fine Sand with Silt</u>		
DATE SAMPLED :	<u>6/15/2015</u>	SAMPLED BY :	<u>Paul Young</u>
DATE TESTED :	<u>6/27/2015</u>	TESTED BY :	<u>Tom Traver</u>
TEST METHOD :	<u>FM5-515</u>		
MAX. DRY DENSITY :	<u>104</u>	OPTIMUM MOISTURE :	<u>9%</u>
MAXIMUM LBR :	<u>39</u>	JOB SPECIFICATION :	<u>40</u>



FDOT 90% LBR Design Method



FIELD EXPLORATION PROCEDURES

Limerock Bearing Ratio Test

This test is used to evaluate the bearing properties of soils that are used for base, stabilized subgrade, or embankment material used in the state of Florida. Samples are compacted at moistures varying from the dry to wet side of the optimum to determine the relationship between the moisture content and the density of the material. The test apparatus and procedure used is similar to that of the Modified Proctor test and uses a 10-pound compaction rammer falling 18-inches to compact the sample within a density mold in general accordance to FM 5-515. The results are shown on a moisture-density curve for the material.

Road Closure Policy



Nassau County Engineering Services Department
96161 Nassau Place
Yulee, Florida 32097

Road Closure Policy

1. Submit a written request to the Public Works Director for the road closure. In the request you must explain the following:
 - a) Why the road needs to be closed and the duration of the closure?
 - b) What are the benefits to public for closing the road?
 - c) Include a draft detour plan.

After the road closure request and draft detour plan have been approved, the following information shall be submitted to the Nassau County Engineering Services Department for review and approval.

2. Submit to Nassau County Engineering Services Department: A Maintenance of Traffic (MOT) Plan that was prepared by or approved by Florida Advanced Maintenance of Traffic (AMOT) certified personnel referencing the latest editions of the Florida Department of Transportation (FDOT) Design Standards Section 600 and the Manual on Uniform Traffic Control Devices (MUTCD). These plans shall include the Worksite Traffic Supervisor as per the latest edition of the FDOT Standard Specifications for Road & Bridge Construction Section 105-8.3. Variable Message Boards (VMB) will be required and shall be installed 7 days prior to the detour taking place and remain throughout. Any signed detour that will be within FDOT Right-of-Way (or on portions thereof) shall have prior FDOT approval.

A Maintenance of Traffic Plan proposing a change to any approved documents, including contract documents and approved construction plans must be signed and sealed.

3. Provide a public notification advertisement to an approved local newspaper. To appear no less than fourteen (14) days prior to the scheduled closure. Submit the draft notification to Nassau County Engineering Services for review and approval prior to advertising. This notification will clearly describe the name of the project and contractor, scope of the detour, scope of construction, the name of all roads that will be affected, official detour routes, duration of closure and the Worksite Traffic Supervisor's telephone number. Attach a diagram showing the surrounding area and detour routes. Diagram must be clear and depict road names and route direction. The size of advertisement in newspaper shall be a minimum of 2 columns wide by 12 inches long (tall) or one fifth (1/5) of a page with a minimum of 24 point font for the heading and 10 point font for the body and detour plan. Flyers with the same information may be required. With the Engineering Services Department's written approval, local roads may not require publishing of the advertisement in the paper; however, all other criteria must be adhered to.



4. Submit notification to the following departments and agencies prior to the road closure. A confirmation of notification to the Engineering Services Department must be provided prior to road closure.

- Nassau County Sheriff's Office:
 - Ricky A Rowell, TAC
Phone – (904) 548-4000
Fax – (904) 225-5737
Email – ricky@nassauso.com
 - L. Rene Graham, Lt.
Phone – (904) 548-4000
Fax – (904) 548-4128
Email – lrgraham@nassauso.com
- Nassau County Emergency Management:
 - Martha Oberdorfer
Phone – (904) 548-4094
Fax – (904) 548-4194
Email – mlwagaman@nassauso.com
- Nassau County Fire Department:
 - Scott Hemmingway
Phone – (904) 530-6600
Fax – (904) 321-5748
Email – shemmingway@nassaucountyfl.com
- Nassau County School Bus Transportation:
 - Amy Bell
Phone – (904) 225-0127
Fax – (904) 255-9404
Email – amy.bell@nassau.k12.fl.us
- Nassau County Road & Bridge Department:
 - Jennifer Kirkland
Phone – (904) 530-6175
Fax – (904) 530-6901
Email – jbeaver@nassaucountyfl.com
- Nassau County Manager's Office
 - Sabrina Robertson
Phone – (904) 530-6010
Fax – (904) 321-5784
Email – SRobertson@nassaucountyfl.com
- United Postal Service (Yulee)
 - Beverly Dye
Phone – (904) 225-5331
Fax – (904) 225-9733
Email – beverly.a.dye@usps.gov
- United Postal Service (Fernandina)
 - Edwin Lang
Phone – (904) 491-8102
Fax – (904) 277-7947
Email – edwin.p.lang@usps.gov
- United Postal Service (Callahan)
 - Kim Vojtech
Phone – (904) 879-2131
Fax – (904) 879-6737
Email – kim.k.vojtech@usps.gov
- United Postal Service (Hilliard)
 - Heather Ackerman
Phone – (904) 845-2151
Fax – (904) 845-7738
Email – heather.r.ackerman@usps.gov

Depending on the location of the project/detour, notification to other agencies may be required.



5. Signage will be in place prior to road closure. They will be bagged/covered until needed. VMBs, will be installed and operating a minimum of seven (7) calendar days prior to any closure/detour.
6. Visual inspection of the VMB by the Engineering Services Department is required at installation or relocation. Visual inspection of all road/detour signage shall be accomplished prior to road closure. Contact Engineering Services 48 hours prior to installation for inspection.

As-Builts Requirements



Nassau County Engineering Services Department
96161 Nassau Place
Yulee, Florida 32097

AS-BUILT REQUIREMENT CHECKLIST:

The following list is intended to highlight the majority of the as-built requirements for Construction projects in Nassau County. This list should not be considered to be all-inclusive as each project is unique in nature and may require additional information that can only be determined during the course of the project's completion. Generally, however, the AS-BUILT information shall contain the following:

1. AS-BUILTS should be based on the design plans as approved through the DRC process. The submitted as-builts should be at the same scale and have the same orientation as the design files.
2. AS-BUILTS should have the same page numbering as the design plans, and the cover of the AS-BUILT plans should have all sheets from the design plans listed with sheets not "AS-BUILTED" stricken through.
3. AS-BUILTS should display the original design information as displayed on the plan sheets with the design information stricken through and the as-built information displayed in bold adjacent to the design information.
4. AS-BUILTS shall be accompanied by an "Engineer's Certification" form from the Engineer of Record. (Exhibits 3 & 4)
5. Three (3) sets of fully signed and sealed AS-BUILTS should be submitted along with CD containing the PDF file(s) and CADD file(s) of the AS-BUILT information. CADD files should be in State Plane coordinates (NAD 83) with a vertical datum of NAVD88 or NGVD 1929 (with the datum shift noted). Furthermore, CADD files should only be submitted in ACAD version 2013 or later.
6. Northing and Easting of all drainage structures should be included.
7. The plans should be clearly legible, and all structure notes, distances, angles and elevations should be clearly readable.
8. If the plan represents a phase of a development, then that phase should be clearly identified for clarity and avoid confusion with future phases.
9. There should be a north arrow and scale on each sheet.
10. A legend should be included explaining the symbols used in the plans.
11. ALL sheets must be signed and sealed by a surveyor licensed in the State of Florida.



12. There should be sufficient "plan" and "as-built" elevations shown to verify that the streets were constructed substantially in accordance with the approved construction plans. Generally, the County will review all low points and high points in the street and verify that the minimum grade exists for each street. On straight sections between high and low points elevations should be taken every 200 feet.
13. All street curve radii should be shown on the plans or in a table.
14. Street widths and curb type should be identified for each street on each sheet.
15. Whenever there are islands within the streets the as-builts should include dimensions for these islands.
16. The paved radii of all Cui-de-Sacs should be listed and Cul-De-Sac center and edge of pavement or gutter elevations at quarter points shall be shown.
17. All underdrains should be shown with size, lengths, inverts and cleanouts all shown.
18. Where swales are utilized there should be sufficient flow line elevations and ditch cross sections to verify capacity of the channel.
19. There should be a comparison table of design and as-built pipe sizes, lengths, invert elevations, and pipe slopes.
20. The as-built surface area of the pond(s) at Normal Water Level (design) and Top of Bank (as-built) should be included.
21. The bottom elevation and area should be shown (2 locations min. per pond).
22. The surveyor shall certify by note (for each pond) that no slope is greater than 1:4 above the design NWL, unless the pond is fenced.
23. All structures in the pond (overflow weirs, etc.) should be included.
24. All water main and sewer main locations, size, lengths, inverts, etc.
25. All easements required (or on a plat) should be shown on the "As- BUILTS" and improvement located so as to verify improvements are within the easement. Easement not recorded as part of the recorded plat including drainage and right-of-way easements shall also be identified as "as-built". For these easements the book and page of their record, property to whom easement is dedicated and date of filing should be shown on as the "as-built". All improvements intended to be within these easements shall be shown as the "as-builts" to verify the improvements are within the easement. Wetlands are not reviewed by Nassau County and need not be shown.
26. Depict all storm drain and utility repair locations and methods.

EXHIBIT "E"