FAYETTE County
Create Your Story!

Purchasing Department
140 Stonewall Avenue West, Ste 204
Fayetteville, GA 30214
Phone: 770-305-5420
www.fayettecountyga.gov

July 28, 2023

Subject: ITB #2285-B: FCWS – Trilith Studios Elevated Water Storage Tank Addendum #2

Gentlemen/Ladies:

Below, please find responses to questions, clarification, or additional information for the above referenced Invitation to Bid. You will need to consider this information when preparing your bid.

Specifications:

Item S1. **Replace** 00 41 13, Bid Form with the Bid Form Specification included in Attachment 1 of Addendum 2.

Item S2. **Replace** 01 22 13, Measurement and Payment with Measurement and Payment Specification included in Attachment 1 of Addendum 2.

Item S4. **Replace** 09 91 00, Painting with the Painting Specification included in Attachment 1 of Addendum 2.

Item S4. Section 40 05 05 Table A **replace** Overflow Pipe material from DI to CS.

Drawings:

Item D1-D24. Drawing G-01, C-00-C-011, ESC-01-ESC-11, **replace** with drawings included in Attachment 3 of Addendum 2.

Questions:

1. Please provide a copy of the subsurface report as described in SC-5.03.E & F for the Contractor's use.

   Response: Refer to Addendum #1.

2. Will the Contractor be required to provide field offices as detailed in Section 01 52 13 for the duration of the project?

   Response: Yes.

3. What are the anticipated building permit fees to be paid by the Contractor per Section 01 41 24-1.2.A.2?

   Response: Separate building permits for the pump station and tower will be required. Each permit will include electrical, plumbing, mechanical, and structural. For initial plan review & inspections, fees are waived. Please see Additional Terms & Conditions, Item #27

4. Section 01 32 33 requires photos and videos be uploaded to a project website. Who provides and maintains the project website?

   Response: Engineer will provide access and maintain the project files on SharePoint site.

5. Section 31 63 16 refers to the installation of auger cast grout piles. The location, depth, quantity, or size of the piles is not indicated in the drawings.

   Response: Refer to Addendum 2, Attachment 2, with revised 01 22 13, Measurement and Payment specification.

6. Should the contractor include the maximum possible cost for auger piles in the lump sum price or does the Owner wish to add a unit price or allowance to the bid form for this scope?

   Response: See response #5.

7. Which bid item should contain the water line construction?

   Response: See item No. 1 – Site Work in Section 01 22 13 Measurement and Payment, Section 1.4 Bid Items.

8. Can the 16" waterline be taken out of service for the cut in of the valves and tee for the new 12" waterline connection?

   Response: Yes, refer to Section 01 22 13 Coordination with Owner's Operation, Table 01 14 16-B for duration of shut down of the 16-inch transmission main.

9. Please provide the profiles of the proposed/existing storm sewer for the Contractor's use.

   Response: Not available.

10. Which bid item should include the instrumentation?

    Response: See Item No. 2 – Booster Pump Station in Section 01 22 13 Measurement and Payment, Section 1.4 Bid Items.

11. What is the owner's budget for this project?

    Response: The County does not release the project budget. Please submit a bid based on the scope and specification.

12. Is this project exempt from state and local taxes?

    Response: Refer to Section 00 73 01 SC-7.10 and Section 01 33 00 1.2.C.

13. Will the Contractor be required to obtain any building or construction permits for this project?

    Response: See response to question #3.

14. If permits are required, what is their cost or who do we contact to obtain their cost or find out if the cost will be waived?

    Response: See response #3.

15. Will one permit cover the entire structure or are separate permits require for foundation, tank, electrical, plumbing, etc.?

    Response: See response #3.

16. Sheet 26 of 60 shows a 12" diameter DIP Overflow Pipe. We suggest carbon steel, as stated in the specifications, instead of ductile iron pipe (DIP).

    Response: Overflow Pipe to be Carbon Steel, see Addendum 2.

17. Will the contractor be required to hire a third-party paint inspector?

    Response: Yes, refer to Specification 09 91 00, Painting.

18. Will there be any 3rd party inspection on construction or painting? If so, who will it be and on what portion of work? Who will bear the cost?

    Response: See response #17. Refer to 01 45 29, Testing Laboratory Services for who will be doing 3rd party inspections and who will pay for the services.

19. Has an Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) been filed with the FAA? If one has been filed and completed, are the results available? If there has not been one completed, please notify the Owner that one must be completed by the Owner for the permanent structure prior to the Contractor mobilizing on site?

    Response: Filing with the OE/AA is not required for the permanent tank structure. The notice criteria tool results are provided in Attachment 2 of Addendum 2. The contractor will need to file with the OE/AAA for any crane used during construction that is taller than 200-ft.

20. The specified system appears to be Epoxy-Epoxy (Interior) and Epoxy-Epoxy-Urethane (Exterior). We would suggest you consider Zinc-Epoxy-Epoxy (Interior) and Zinc-Urethane-Fluorourethane (Exterior).

    Response: Refer to Specification 09 91 00 included in Attachment 1 of Addendum 2.

21. The exterior paint DFT's (dry film thicknesses) are over the manufacturer's recommendations. Will this be changed to their recommendations?

    Response: No.

22. Can the primer be changed from an epoxy system to a zinc system?

    Response: See response #20.

23. What is the exterior tank color?

    Response: Refer to Specification 09 91 00, Painting for specified tank color.

24. The paint specification states to raise the temperature of the tank up to 150 degrees. Will this be changed to comply with manufacturer's recommendations?

    Response: Paint system application needs to comply with manufacturer's requirements as well as applicable ANSI/NSF 61 requirements as applicable to project conditions.

Attachments:

- Attachment 1 – Revised Specifications
  - 00 41 13, Bid Form
  - 01 22 13 Measurement and Payment
  - 09 91 00, Painting
- Attachment 2 – OE/FAA Notice Criteria Tool Results
- Attachment 3 – Revised Drawings
  - G-01
  - C-00 – C-11
  - ESC-01 – ESC-11

Received by (Name): _____ Company_____

Note: If this addendum is not returned to the Fayette County Purchasing Department or if it is returned not signed, responding individuals, companies or other organizations will still be responsible for the requirements of this addendum and the specifications or changes herein.

The opening date for this ITB has not changed. **The opening time and date are 3:00 p.m., Thursday, August 10, 2023.** Bids must be received by the Purchasing Department at the address above, Suite 204, at or before the opening date and time.

The deadline for inquiries has passed, so the Purchasing Department will not be able to accept any additional questions after this time.

If you have questions, please contact Natasha Duggan, Contract Administrator at (770) 305-5150, fax (770) 719-5534 or email at nduggan@fayettecountyga.gov.

Sincerely,

Ted L. Burgess
Director of Purchasing

Attachment 1

ITB #2285-B: FCWS – Trilith Studios
Elevated Water Storage Tank

Addendum #2

Revised Specifications

Fayette County, Georgia

Fayetteville, Georgia

FCWS – Trilith Studios Elevated Water Storage Tank

Invitation to Bid ITB#2285-B

BID FORM

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to: **Fayette County Purchasing Department, 140 Stonewall Avenue West, Suite 204, Fayetteville, Georgia 30214**

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

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The required documents to be submitted with and made a condition of this Bid are listed in the Checklist of Required Documents in 00 11 13 Invitation to Bid.

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

3.01 *Lump Sum Bids*

A. Bidder will complete the Work in accordance with the Contract Documents for the following lump sum (stipulated) price(s), together with any Unit Prices indicated in Paragraph 3.02:

1. Lump Sum Price (Single Lump Sum)

Item No. 1	Site Work	$
Item No. 2	Booster Pump Station	$
Item No. 3	400,000 Gallon Elevated Storage Tank	$

B. All specified allowance(s) to be approved by County Manager are included in the price(s) set forth below.

Item No. **1**	Lump Sum Cash Allowance **Materials Testing Laboratory**	$ 10,000.00
Item No. **2**	Lump Sum Contingency Allowance **Owner-Directed Changes**	$ 50,000.00
Total for all Lump Sum Contingency Allowances		$ 60,000.00

1 3.02 Unit Prices

A. Bidder will complete the work in accordance with the contract documents for the following unit price items:

1. Unit Price

Item No. 4	Quantity	Unit	Unit Price	Total Cost
Auger Cast Piles	3,040	VF	$	$

3.03 *Total Bid Price (Lump Sum and Unit Prices)*

Total Bid Price (Total of all Lump Sum and Unit Price Items)	$

ARTICLE 4—BASIS OF BID—COST-PLUS FEE (NOT USED)

ARTICLE 5—PRICE-PLUS-TIME BID (NOT USED)

ARTICLE 6—TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

7.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 *Instructions to Bidders*

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

7.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTICLE 8—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

8.01 *Bidder's Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

8.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.

2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.

3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:

   a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.

   b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

   c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.

   d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

_____

(typed or printed name of organization)

By: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

Address for giving notices:

_____

_____

Bidder's Contact:

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Phone: _____

Email: _____

Address:

_____

_____

_____

Bidder's Contractor License No.: (if applicable) _____

SECTION 01 22 13

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. Items listed starting in Article 0 of this Section refer to and are the same pay items listed in the Bid Form and constitute all pay items for completing the Work.

2. No direct or separate payment will be made for providing miscellaneous temporary or accessory works, plant or facility services, CONTRACTOR's or ENGINEER's field offices, layout surveys, Project signs, sanitary requirements, testing, safety provisions and safety devices, submittals and record drawings, water supplies, power and fuel, maintenance of traffic, removal of waste, security, coordination with OWNER's operations, information technology (including hardware, software, and services) required during construction, commissioning where specified, bonds, insurance, or other requirements of the General Conditions, Supplementary Conditions, Division 01 Specifications, and other requirements of the Contract Documents.

3. Compensation for all services, items, materials, and equipment shall be included in prices stipulated for lump sum and unit price pay items listed in this Section and included in the Contract.

B. Each lump sum and unit price, as bid, shall include an amount considered by contractor to be adequate to cover contractor's overhead and profit for each separately identified item.

C. Bid prices included on the bid form shall be full compensation for all materials, labor, equipment, tools, construction equipment and machinery, heat, utilities, transportation, taxes, overhead, markup, incidentals and services necessary for the execution and completion of the work in the contract documents to be performed under this contract. For the work described, the allowance and unit price, actual used and installed quantities of each bid item shall be measured in the field and certified by the engineer and/or owner upon completion of construction in the manner set forth for each item in this and other sections of the specifications.

Payment for all items listed on the bid form will constitute full compensation for all work shown and specified to be performed.

1.2 ENGINEER'S ESTIMATE OF QUANTITIES

A. ENGINEER's estimated quantities for items of Unit Price Work, as included in the Contract, are approximate only and are included solely for purpose of comparing Bids and pricing. OWNER does not expressly or by implication agree that nature of materials encountered below the ground surface or actual quantities of material encountered or required will correspond with the quantities included in the Contract at the time of award and reserves the right to increase or decrease quantities, and to eliminate quantities, as OWNER may deem necessary.

B. CONTRACTOR and OWNER will not be entitled to adjustment in unit prices as a result of change in estimated quantity and agree to accept the unit prices accepted in the Bid as complete and total compensation for additions or deletions caused by changes or alterations in the Unit Price Work directed by OWNER.

1.3 RELATED PROVISIONS

A. Payments to contractor: refer to general conditions, supplementary conditions, agreement, and section 01 29 76, progress payment procedures.

B. Changes in contract price: refer to general conditions, supplementary conditions, and section 01 26 00, contract modification procedures.

C. Schedule of values: refer to general conditions, supplementary conditions, and section 01 29 73, schedule of values.

1.4 BID ITEMS

A. Lump sum payment will be full compensation for completing the work, as shown or indicated under division 01 through division 46, including owner/engineer directed work items.

B. The following Item No. 1 through 3 comprise the Base Bid Total as listed on the Bid Form

1. Item No. 1 – Site Work

a. Measurement and Payment: Lump sum payment for Item 1 will be full compensation for all required site work, including erosion and sedimentation controls, demolition, and removal of any abandoned equipment on the existing site, tree removal necessary to allow installation of the site fencing, clearing and grubbing of the area, site grading, finish grading, installation of paved surfaces, bollards, rip rap, fences and lawns. Complete installation of the buried

watermain indicated on the plans and specifications, to connect the new storage tank with the Owner's existing water system, including all valves, and appurtenances, tie-ins, and shutdowns. Coordination with the power provider, and installation of all electrical components required to provide electrical service to the new storage tank and site.

2. Item No. 2 – Booster Pump Station

   a. Measurement and Payment: Lump sum payment for Item 2 will be full compensation for the complete installation of a new booster pump station as shown on the plans and indicated in the specifications, including pumps and associated valves and instruments inside the Booster Pump Station.

3. Item No. 3 – 400,000 Gallon Elevated Storage Tank

   a. Measurement and Payment: Lump sum payment for Item 3 will be full compensation for the complete installation of a new 400,000-gallon elevated water storage tank as shown on the plans and indicated in the specifications, including all foundation work <u>except for auger cast piles</u>, tank erection, and painting.

1 4. <u>Item No. 4 –Elevated Storage Tank Auger Cast Piles</u>

   a. <u>Measurement and Payment: Payment for Item 4 will be full compensation at the contractor's unit price per 16-inch pile vertical foot for the mobilization of equipment, auger drilling of piles, concrete reinforcement, and all other work for complete installation of auger cast piles. The estimated quantity of pile vertical feet is based on 6 piles per tank leg and 8 piles for the vertical riser each at an estimated pile depth of 95-feet. The Final depth of the pile shall be determined in the field at the time of drilling based on pile bearing capacity shown and specified by the geotechnical engineer. The final payment will be based on the total vertical feet of installed piles.</u>

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 22 13

SECTION 09 91 00

PAINTING

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:
   1. CONTRACTOR shall provide all labor, materials, tools, equipment, and incidentals as shown, specified, and required to furnish and apply paint systems.
      a. CONTRACTOR is responsible for surface preparation and painting of all new and existing interior and exterior items and surfaces throughout the Project areas included under this and other Sections.
   2. Extent of painting includes the Work specified below. Painting shown in schedules may not provide CONTRACTOR with complete indication of all painting Work. Refer to Article 2.2 of this Section where all surfaces of generic types specified are specified for preparation and painting according to their status, intended function, and location, using the painting system for that surface, function, and location as specified, unless specifically identified on the Drawings as a surface not to receive specified painting system.
      a. All new and specifically identified existing surfaces and items except where the natural finish of the material is specified as a corrosion-resistant material not requiring paint; or is specifically indicated in the Contract Documents as a surface not to be painted. Where items or surfaces are not specifically mentioned, paint them the same as adjacent similar materials or areas.
      b. Mechanical and process items to be painted include:
         1) Piping, pipe hangers, and supports, including electrical conduit.
         2) Tanks.
         3) Motors, mechanical equipment, and supports.
         4) Accessory items.
      c. Surface preparation and painting of all new items, both interior and exterior, and other surfaces, including items furnished by OWNER, are included in the Work, except as otherwise shown or specified.
      d. Approved stepped-down mock-ups for all painting systems showing all components of the surface preparation and paint system application before start of Work. Check all dry film thicknesses; demonstrate methods of surface preparation, and methods of application, and obtain ENGINEER's approval of colors and textures to be used in the Work.

B. Coordination:
   1. Review installation, removal, and demolition procedures under other Sections and coordinate them with the Work specified in this Section.
   2. Coordinate painting of areas that will become inaccessible once equipment, and similar fixed items have been installed.

3. Coordinate primers with finish paint materials to provide primers that are compatible with finish paint materials. Review other Sections where primed surfaces are provided, to ensure compatibility of total painting system for each surface. CONTRACTOR is responsible for coordinating compatibility of all shop primed and field painted items in other Sections and in general contract.
4. Furnish information to ENGINEER on characteristics of finish materials proposed for use and ensure compatibility with prime coats used. Provide barrier coats over incompatible primers or remove and repaint as required. Notify ENGINEER in writing of anticipated problems using specified painting systems with surfaces primed by others. Reprime equipment primed in factory and other factory-primed items that are damaged or scratched.

C. Related Sections:
1. Section 07 92 00, Joint Sealants.
2. Section 43 41 13, Elevated Steel Water Storage Tank.

D. Work Not Included: The following Work is not included as painting Work, or are included under other Sections:
1. Shop Priming: Shop priming of structural metal, miscellaneous metal fabrications, other metal items and fabricated components such as shop-fabricated or factory-painted process equipment, plumbing equipment, heating and ventilating equipment, electrical equipment, and accessories shall conform to applicable requirements of this Section but are included under other Sections or in other contracts.
2. Pre-finished Items:
   a. Items furnished with such finishes as baked-on enamel, porcelain, and polyvinylidene fluoride shall only be touched up at Site by CONTRACTOR using manufacturer's recommended compatible field-applied touchup paint.
   b. Items furnished with finishes such as chrome plating or anodizing.
3. Concealed Surfaces: Non-metallic wall or ceiling surfaces in areas not exposed to view, and generally inaccessible areas, such as furred spaces, pipe chases, duct shafts, and elevator shafts.
4. Concrete surfaces, unless otherwise shown or specified.
5. Concrete floors, unless specifically shown as a surface to be painted.
6. Face brick, glazed structural tile, and prefaced, ground-faced or split-faced concrete unit masonry.
7. Exterior face of architectural precast concrete.
8. Collector bearings, shafts and chains, wood flights, wood stop logs, and wood or fiberglass baffles.
9. Corrosion-Resistant Metal Surfaces: Where the natural oxide of item forms a barrier to corrosion, whether factory- or Site-formed, including such materials as copper, bronze, muntz metal, terne metal, and stainless steel.
10. Operating Parts and Labels:
    a. Do not paint moving parts of operating units, mechanical and electrical parts such as valve and damper operators, linkages, sensing devices, interior of motors, and fan shafts.

b. Do not paint over labels required by governing authorities having jurisdiction at Site, or equipment identification, performance rating, nameplates, and nomenclature plates.

c. Cover moving parts and labels during the painting with protective masking. Remove all protective masking upon completion of Work. Remove all paint, coatings, and splatter that comes in contact with such labels.

11. Structural and miscellaneous metals covered with concrete need not receive primers, intermediate, or finish coats of paint.

12. Existing structures, equipment, and other existing surfaces and items unless otherwise shown or specified.

E. Description of Colors and Finishes:

1. Color Selection:

a. A maximum of six different colors will be selected by ENGINEER in addition to color coding of pipelines, valves, equipment, ducts, and electrical conduit.

b. ENGINEER reserves the right to select non-standard colors for paint systems specified within ability of paint manufacturer to produce such non-standard colors. Provide such colors at no additional expense to OWNER.

2. Color Coding of Pipelines, Valves, Equipment, and Ducts:

a. In general, color-coding of pipelines, valves, equipment and ducts shall comply with applicable standards of ANSI A13.1, ANSI Z535.1 and 40 CFR 1910.144. Provide color-coding for pipelines per Table 09 91 00-B, Pipeline Color Table.

b. For equipment on roofs or exposed to view, such as on exterior building facades and in offices and lobbies, color shall be selected by ENGINEER.

3. Color Coding of Pipelines and Equipment:

a. Finish coats of paint for pipelines and equipment shall be coded in basic colors. Colors shall be brilliant, distinctive shades matching the following safety and pipeline colors per ANSI Z535.1, Recommended Standards for Water Works; Recommended Standards for Wastewater Facilities, color specifications for safety colors and other primary colors:

Color	**Designation***
Aqua	Aqua Sky: 10GN
Black	Black; 35GR
Blue	True/Safety Blue; 11SF
Brown	Terra Cotta; 07RD
Charcoal	Deep Space; 34GR
Dark Blue	Academy Blue; 35BL
Dark Brown	Medium Bronze; 85BR
Dark Gray	Slate Gray; 31GR
Gray	Gray-ANSI 61; 33GR
Green	Spearmint/Safety Green; 09SF
Light Blue	Fontain Bleau; 25BL
Light Brown	Twine; 68BR
Light Gray	Light Gray; 32GR

Light Green	Margarita; 38 GN
Olive	Clover; 110GN
Orange	Tangerine/Safety Orange; 04SF
Red	Candy Apple/Safety Red; 06SF
White	White; 11WH
Yellow	Lemon/Safety Yellow; 02SF

* Color designations are provided per Tnemec Company, Inc. paint color numbers and are provided as a standard of quality; equivalent colors matching these colors are acceptable. Provide with Shop Drawing submittal direct color comparisons of color numbers available from manufacturer submitted.

b. General Color Code: Unless otherwise specified, use the following color code:

TABLE 09 91 00-B
PIPELINE COLOR TABLE

Pipeline	**Color**
WATER	
Potable Water	Dark Blue
Sump Drains	Gray

c. Color of final coats shall match as closely as possible, without custom blending, color tabulated for specific pipeline service.

4. After approval by ENGINEER of colors and Shop Drawings and prior to commencing painting Work, ENGINEER will furnish color schedules for surfaces to be painted.

F. Abbreviations and Symbols:

1. Abbreviations and symbols used in painting systems are explained in Article 2.2 of this Section and provide information on generic composition of required materials, manufacturers, number of coats and dry mil film thickness per coat (DMFTPC), and coverage for determining required number of gallons for the Work.

1.2 REFERENCES

A. Referenced Standards: Standards referenced in this Section are:

1. ANSI A13.1, Scheme for Identification of Piping Systems.
2. ANSI Z535.1, Safety Color Code.
3. ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects.
4. ANSI/NSF Standard 61, Drinking Water System Components – Health Effects.
5. ASTM D16, Terminology for Paint, Related Coatings, Materials and Applications.
6. ASTM D2200, Pictoral Surface Preparation Standards for Painting Steel Surfaces.
7. ASTM D4258, Practice for Surface Cleaning Concrete for Coating.
8. ASTM D4259, Practice for Abrading Concrete.
9. ASTM D4262, Testing Method for pH of Chemically Cleaned or Etched Concrete Surfaces.

10. ASTM D4263, Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method.
11. ASTM D4285, Test Method for Indicating Oil or Water in Compressed Air.
12. ASTM D4417, Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel.
13. ASTM D4541, Test Methods for Pull-Off Strength of Coatings Using Portable Adhesion-Testers.
14. ASTM E329, Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction.
15. AWWA C652, Disinfection of Water-Storage Facilities.
16. AWWA D102, Coating Steel Water-Storage Tanks.
17. California Air Resources Board (CARB) Revised Suggested Control Measure (SCM).
18. 29 CFR 1910.144, Safety Color Code for Marking Physical Hazards.
19. 40 CFR, Subpart D-2001, National Volatile Organic Compound Emission Standards for Architectural Coatings.
20 South Coast Air Quality Management District (SCAQMD) Rule 1113.
21. Green Seal, Inc. Paint, (GS-11).
22. Maricopa County, Arizona Architectural Coatings Rule 335.
23. National Association of Piping Fabricators, NAPF 500-03, Surface Preparation Standard For Ductile Iron Pipe and Fittings in Exposed Locations Receiving Special External Coatings And/or Special Internal Linings.
24. Ozone Transport Commission, (OTC), OTC Model Rule for Architectural and Industrial Maintenance Coatings.
25. Resource Conservation and Recovery Act of 1976 (RCRA).
26. SSPC PA 2, Measurement of Dry Coating Thickness with Magnetic Gages.
27. SSPC SP 1, Solvent Cleaning.
28. SSPC SP 3, Power Tool Cleaning.
29. SSPC SP 6, Commercial Blast Cleaning.
30. SSPC SP 10, Near-White Blast Cleaning.
31. SSPC SP 11, Power Tool Cleaning To Bare Metal.
32. SSPC VIS 1, Visual Standard for Abrasive Blast Cleaned Steel.
33. SSPC VIS 2, Method of Evaluating Degree of Rusting/Painted Steel Surfaces.
34. SSPC Volume 2, Systems and Specifications.

1.3 DEFINITIONS

A. Standard coating terms defined in ASTM D16 apply to this Section, including:
   1. Paint: Pretreatment and all painting system materials, such as primer, emulsion, enamel, organic/inorganic polymer coating, stain sealer and filler, and other applied materials whether used as prime, filler, intermediate, or finish coats.
   2. Exposed: All items not covered with cement plaster, concrete, or fireproofing. Items covered with these materials shall be provided with specified primer only, except where specified as a surface not to be painted. Exposed-to-view surfaces include areas visible after permanent or built-in fixtures, convector covers, ceiling tile, covers for finned tube radiation, grilles, and similar covering products are in areas scheduled to be painted.

3. Low VOC: All interior and exterior field-applied coatings that have maximum VOC content as listed in OTC Model Rule for Architectural and Industrial Maintenance Coatings.
4. OTC: Ozone Transport Commission, which recommends standard VOC content levels in several Northeastern and Mid-Atlantic states.

1.4 QUALITY ASSURANCE

A. Applicator Qualifications:
   1. Engage a single applicator that regularly performs installation of paint materials, with documented skill and successful experience in installing types of products required and that agrees to employ only trained, skilled tradesmen who have successful experience in installing types of products specified.
   2. Submit name and qualifications to ENGINEER along with following information for at least three successful, completed projects:
      a. Names and telephone numbers of owner and design professional responsible for project.
      b. Approximate contract cost of paint products.
      c. Amount of area painted.
   3. Submit to ENGINEER proof of acceptability of applicator by manufacturer.

B. Testing Agency Qualifications: Provide an independent testing agency for testing specified in this Section. Testing agency shall be selected by OWNER and paid for by CONTRACTOR. When requested, submit documentation demonstrating to satisfaction of ENGINEER, that testing agency has experience and capability to satisfactorily conduct testing required without delaying the Work, in accordance with ASTM E329.

C. Source Quality Control:
   1. Obtain materials from manufacturers that will provide services of a qualified manufacturer's representative at Site at commencement of painting Work, to advise on products, mock-ups, installation, and finishing techniques and, at completion of Work, to advise ENGINEER on acceptability of completed Work and during the course of the Work as may be requested by ENGINEER.
   2. Certify long-term compatibility of all coatings with surfaces.
   3. Do not submit products that decrease number of coats, surface preparation, or generic type and formulation of coatings specified. Products exceeding VOC limits and chemical content specified will not be approved.
   4. ENGINEER may review manufacturers' recommendations concerning methods of installation and number of coats of paint for each painting system. CONTRACTOR shall prepare construction costs based on painting systems, number of coats, coverage's and installation methods specified.
   5. Submit "or equal" products, when proposed, with direct comparison to products specified, including information on durability, adhesion, color and gloss retention, percent solids, VOC's grams per liter, and recoatability after curing.

6. “Or equal” manufacturers shall furnish same color selection as manufacturers specified, including intense chroma and custom pigmented colors in all painting systems.
7. Color Pigments: Provide pure, non-fading, applicable types to suit surfaces and services to be painted. Comply with:
    a. Lead and Chromate: Lead and chromate content shall not exceed amount permitted by authorities having jurisdiction.
    b. Areas subject to hydrogen sulfide fume exposure will be identified by ENGINEER. Through CONTRACTOR, paint manufacturer shall notify ENGINEER of colors that are not suitable for long-term color retention in such areas.
    c. Manufacturer shall identify colors that meet the requirements of authorities having jurisdiction at Site for use in locations subject to contact with potable water or water being prepared for use as potable water.
    d. Comply with paint manufacturer’s recommendations on preventing coating contact with levels of carbon dioxide and carbon monoxide that may cause yellowing during application and initial stages of curing of paint.
8. Obtain each product from one manufacturer. Multiple manufacturing sources for the same system component are unacceptable.
9. Certify product shelf life history for each product source for materials manufactured by the same manufacturer, but purchased and stored at different locations or obtained from different sources.
10. Constantly store materials to be used for painting Work between 60 degrees F and 90 degrees F, and per paint manufacturer’s written recommendations, for not more than six months. Certify to ENGINEER that painting materials have been manufactured within six months of installation and have not, nor will be, subjected to freezing temperatures.

D. Regulatory Requirements:
1. Painting systems for surfaces in contact with potable water, or water being treated for potable use, shall not impart any taste or odor to the water or result in any organic or inorganic content in excess of the maximum allowable contaminant level established by authorities having jurisdiction at Site. Such painting systems shall be approved by the regulatory agency. Revise painting systems specified herein to provide manufacturer's regulatory agency approved painting system(s) where required.
2. Comply with VOC content limits of OTC Model Rule for Architectural and Industrial Maintenance Coatings:
    a. Industrial Maintenance Coatings: 340 grams per liter.
    b. Interior and Exterior Non-Flat Coatings: 150 grams per liter.
3. Comply with the following:
    a. 29 CFR 1910.144, Safety Color Code for Marking Physical Hazards.
    b. 40 CFR, Subpart D-2001, National Volatile Organic Compound Emission Standards for Architectural Coatings.
    c. Resource Conservation and Recovery Act of 1976 (RCRA).
    d. SW-846, Toxic Characteristic Leaching Procedure (TCLP).

4. Comply with authorities having jurisdiction at Site for blast cleaning, confined space entry, and disposition of spent abrasive and debris.

E. Mock-ups:
1. Demonstrate installation of specified painting systems on actual wall surfaces and building components at locations selected by ENGINEER.
2. Provide 4-foot by 8-foot stepped-down sample area for each painting system. Prior to application of painting system, but after ENGINEER's approval of the components of each painting system, apply a 4-foot wide sample of each operation and application step required by this Section and specified manufacturer's written application recommendations. Show each application step as a 2-foot long section that shall remain exposed to demonstrate work performed in that step. Continue application procedures until topcoat is provided. Topcoat shall be a minimum of two feet long. When completed, finished mock-up for each paint system shall reveal each step and each coat of paint required for paint system with 2-foot wide strips revealing Work performed to prepare surface and apply each coat. Lengthen overall mock-up as required to completely demonstrate each painting system. Use tinted shades differing from coat to coat for each component of each painting system.
3. ENGINEER may approve or disapprove each component of each painting system on an individual component basis.
4. Painting Work that does not meet standard approved on sample areas shall be removed and replaced.
5. Painting Work advanced without approved mock-ups shall stop, and mock-ups prepared for approval by ENGINEER.

F. Pre-painting Conference:
1. Prior to installing painting systems, arrange a meeting at Site with painting applicator and its foreman, paint manufacturer's technical representative, installers of other work in and around painting that must follow painting Work, ENGINEER, and other representatives directly concerned with performance of painting Work. Record discussions of conference and decisions and agreements and disagreements and furnish a copy of record to each party attending. Review foreseeable methods and procedures relating to painting Work including:
   a. Review Project requirements including Contract Documents, approved Shop Drawings, pending and approved Change Orders, requests for information that submitted by CONTRACTOR to ENGINEER, and other pertinent documents.
   b. Review required samples and submittals, both completed and to be completed.
   c. Review status of surfaces including drying, surface preparations, and similar considerations.
   d. Review availability of materials, tradesmen, equipment, and facilities required for progress, to avoid delays, and to protect Work from damage.
   e. Review required inspection, testing, certifying, and quality control procedures.
   f. Review weather and forecasted weather conditions, and procedures for coping with unfavorable conditions. Supplemental heating sources required to for

working in low-temperature conditions, shall be operating and acceptable to paint applicator and ENGINEER.

g. Review methods for complying with regulations of authorities having jurisdiction at Site, such as compliance with environmental protection, health, safety, fire, and similar regulations.

h. Review laws and procedures covering removal and disposal of blast debris.

2. Reconvene meeting at earliest opportunity if additional information must be developed to conclude the required topics of the meeting.

3. Record revisions or changes agreed upon, reasons therefore, and parties agreeing or disagreeing with them.

1.5 SUBMITTALS

A. Action Submittals: Submit the following:

1. Product Data:

a. Copies of manufacturer's technical information and test performance data, including paint analysis, VOC and chemical component content in comparison to maximum allowed by the Contract Documents, and application instructions for each product proposed for use.

b. Submit proof of acceptability of proposed application techniques by paint manufacturer selected.

c. Copies of CONTRACTOR's proposed protection procedures in each area of the Work explaining methods of protecting adjacent surfaces from splatter, for confining application procedures in a manner that allows other work adjacent to surface preparation and painting Work to proceed safely and without interruption, and for maintaining acceptable application, curing, and environmental conditions during and after painting systems application.

d. List each material and cross-reference to the specific painting system and application, including a list of site-specific surfaces to which painting system will be applied. Identify by manufacturer's catalog number and general classification. State number of gallons of each product being purchased for delivery to Site and square foot area calculated to be covered by each painting system specified based on theoretical loss of 20 percent. Where actual area to be covered by paint system exceeds area submitted to ENGINEER for that system, proof of additional material purchase shall be provided to ENGINEER. Calculated coverage shall be as specified for each component of each painting system specified. This requirement does not take precedence over CONTRACTOR's responsibility to provide dry film thickness required for each component of each painting system.

e. Identify maximum exposure times allowable for each paint system component before next coat of paint can be applied. Submit proposed methods for preparing surfaces for subsequent coats if maximum exposure times are exceeded.

f. Information on curing times and environmental conditions that affect curing time of each paint system component and proposed methods for

accommodating variations in curing time. Identify this information for each painting system in the Work.

g. Specification for spray equipment with cross-reference to paint manufacturer's recommended equipment requirements.

2. Samples:
   a. Copies of manufacturer's complete color charts for each coating system.
   b. Mock-ups specified for the Site.

B. Informational Submittals: Submit the following:
   1. Certificates:
      a. Certificate from paint manufacturer stating that materials meet or exceed Contract Documents requirements.
      b. Evidence of shelf life history for all products verifying compliance with the requirements of the Contract Documents.
      c. CONTRACTOR shall provide notarized statement verifying that all painting systems are compatible with surfaces specified. All painting systems components shall be reviewed by an authorized technical representative of paint manufacturer for use as a compatible system. Verify that all painting systems are acceptable for exposures specified and that paint manufacturer is in agreement that selected systems are proper, compatible, and are not in conflict with paint manufacturer's recommended specifications. Show by copy of transmittal form that a copy of letter has been transmitted to paint applicator.
   2. Test Reports:
      a. Certified laboratory test reports for required performance and analysis testing in compliance with ASTM E329.
      b. Adhesion testing plan and procedures.
      c. Results of adhesion testing on existing surfaces containing paints or other coatings to be topcoated with paint systems specified. Prior to adhesion testing, submit a testing plan establishing methods, procedures and number of tests in each area where existing coatings are to remain and become substrate for painting Work. Based on results of adhesion testing, recommend methods, procedures, and painting system modifications, if necessary, for proceeding with Work.
      d. Locations of and test methods for soil sampling before beginning Work and after Substantial Completion.
      e. Proposed methods for testing, handling, and disposal of waste generated during Work.
      f. Results of alkalinity and moisture content tests performed in accordance with ASTM D4262 and ASTM D4263.
      g. Results of tests of film thickness, holidays, and imperfections.
   3. Manufacturer's Instructions: Provide paint manufacturer's storage, handling, and application instructions prior to commencing painting Work at Site.
   4. Manufacturer's Site Reports: Provide report of paint manufacturer's representative for each visit to Site by paint manufacturer's representative.

5. Special Procedure Submittals:
    a. Proposed protection procedures for each area of Work, explaining methods of protecting adjacent surfaces from splatter, for confining application procedures in a manner that allows other work adjacent to surface preparation and painting Work to proceed safely and without interruption.
    b. Site-specific health and safety plan.
    c. Procedures for maintaining acceptable application, curing and environmental conditions during and after painting systems application.
    d. Procedures for providing adequate lighting, ventilation, and personal protection equipment relative to painting Work.
6. Qualifications:
    a. Applicator.
    b. Testing laboratory

C. Closeout Submittals: Submit the following:
1. Operations and Maintenance Data: Upon completion of the painting Work, furnish ENGINEER five copies of detailed maintenance manual including the following information:
    a. Complete and updated product catalog of paint manufacturer's currently available products including complete technical information on each product. Identify product names and numbers of each product used in the painting Work.
    b. Name, address, e-mail address and telephone number of manufacturer, local distributor, applicator and technical representative.
    c. Detailed procedures for routine maintenance and cleaning.
    d. Detailed procedures for light repairs such as dents, scratches and staining.
2. Record Documentation: Statement of Application: Upon completion of the painting Work, submit a notarized statement to ENGINEER signed by CONTRACTOR and painting applicator stating that Work complies with requirements of the Contract Documents and that application methods, equipment, and environmental conditions were proper and adequate for conditions of installation and use.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Product Delivery Requirements: Deliver products to Site in original, new, and unopened packages and containers, accurately and legibly and accurately labeled with the following:
1. Container contents, including name and generic description of product.
2. Manufacturer's stock number and date of manufacture.
3. Manufacturer's name.
4. Contents by volume, for major pigment and vehicle constituents.
5. Grams per liter of volatile organic compounds.
6. Thinning instructions, where recommended.
7. Application instructions.
8. Color name and number.

B. Product Storage Requirements:
   1. Store acceptable materials at Site.
   2. Store in an environmentally controlled location as recommended in paint manufacturer's written product information. Keep area clean and accessible. Prevent freezing of products.
   3. Store products that are not in actual use in tightly covered containers.
   4. Comply with health and fire regulations of authorities having jurisdiction at Site.

C. Product Handling Requirements:
   1. Handle products in a manner that minimizes the potential for contamination, or incorrect product catalyzation.
   2. Do not open containers or mix components until necessary preparatory work has been completed and approved by ENGINEER and painting Work will start immediately.
   3. Maintain containers used in storing, mixing, and applying paint in a clean condition, free of foreign materials and residue.

1.7 SITE CONDITIONS

A. Site Facilities:
   1. Supplemental heat sources, as required to maintain both ambient and surface temperatures within range recommended by paint manufacturer for paint system application, are not available at Site.
   2. Provision of supplemental heat energy sources, power, equipment, and operating, maintenance and temperature monitoring personnel is responsibility of CONTRACTOR.
   3. Do not use heat sources that emit carbon dioxide or carbon monoxide into areas being painted. Properly locate and vent such heat sources to exterior such that paint systems are unaffected by exhaust.

B. Existing Conditions:
   1. Existing surfaces to receive painting Work shall be surface-prepared to meet requirements of painting systems specified. Prior to commencing painting Work, perform adhesion tests on existing surfaces to be painted. Perform testing per ASTM D4541 or other method acceptable to ENGINEER. Number and location of tests shall be sufficient to determine condition of existing coatings and suitability of existing coatings to remain to provide acceptable substrate for new coatings. Submit testing plan prior to testing and provide ENGINEER a copy of adhesion test results.
   2. Provide abrasive blasting, scraping, or other abrading or surface film removal, or preparatory techniques accepted by ENGINEER.
   3. Before commencing painting in an area, surfaces to be painted and floors shall be cleaned of dust using commercial vacuum cleaning equipment equipped with high-efficiency particulate air (HEPA(filters and dust containment systems.

C. Environmental Requirements:
   1. Apply water-base paints when the temperature of surfaces to be painted and ambient air temperatures are between 55 degrees F and 90 degrees F, unless otherwise permitted by paint manufacturer's published instructions.
   2. Surfaces to be painted shall be at least 5 degrees F above dew point temperature and be dry to the touch. Apply paint only when temperature of surfaces to be painted, paint products, and ambient air temperatures are between 65 degrees F and 95 degrees F, unless otherwise permitted by paint manufacturer's published instructions.
   3. Apply paint system within shortest possible time consistent with manufacturer's recommended curing instructions for each coat. If chemical, salt, or other contamination contacts paint film between coats, remove contamination per SSPC SP 1 and restore surface before applying paint.
   4. Do not paint tanks or pipelines containing fluid without specific permission of ENGINEER and only under conditions where "sweating" of outside surface of vessel being painted is not likely to occur within 24 hours of paint application.
   5. Do not apply epoxy paints if ambient temperature is expected to go below 50 degrees F within twelve hours of application. Follow manufacturer's instructions when manufacturer's published recommendations require a higher minimum ambient temperature.
   6. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent. Do not apply paint to damp or wet surfaces or when surfaces will reach dew point due to falling or rising temperatures and humidity conditions during course of paint application, unless otherwise permitted by paint manufacturer's published instructions.
   7. Do not paint unacceptably hot or cold surfaces until such surfaces can be maintained within temperature and dew point ranges acceptable to paint manufacturer. Arrange for surfaces to be brought within acceptable temperature and dew point ranges as part of painting Work.
   8. Moisture content of surfaces shall be verified to ENGINEER as acceptable prior to commencement of painting using methods recommended by paint manufacturer.
   9. Painting may be continued during inclement weather only if areas and surfaces to be painted are enclosed and heated within temperature limits specified by paint manufacturer for application and drying.
   10. Provide adequate illumination and ventilation where painting operations are in progress.

D. Protection:
   1. Cover or otherwise protect finished work of other trades and surfaces not being painted concurrently, or not to be painted.
   2. During surface preparation and painting, facility shall remain in operation. Use procedures that prevent contamination of process or cause or require facility shutdown.
   3. Coordinate and schedule surface preparation and painting to avoid exposing personnel to hazards associated with painting Work. Provide required personnel safety equipment per requirements of authorities having jurisdiction at Site.

4. Submit protection procedures to be employed. Do not begin surface preparation and painting Work until ENGINEER accepts protection techniques proposed by CONTRACTOR.
5. When working with flammable materials, provide fire extinguishers and post temporary signs warning against smoking and open flame.

E. Testing:
1. Obtain and test eight soil samples from each Site, at locations within twenty feet of the tank and spaced equally around tank circumference. Four samples shall be taken and analyzed at Substantial Completion is achieved and all surface preparation and paint application operations are completed.
2. Test at a laboratory residue from sand blasting to determine whether blast residue can be landfilled as required by disposal facility.
3. Test at a laboratory sediment in tank prior to disposing of sediment to determine suitability of sediment for landfilling. Test for TCLP and RCRA characteristics. Perform additional tests as required by disposal facility.
4. Perform additional testing of waste materials and existing paint required under Federal, state, or local regulations not specifically addressed in this Section.

1.8 MAINTENANCE

A. Extra Materials: Furnish, tag, and store an additional one percent by volume of all coatings and colors installed. Provide a minimum of one gallon of each coating and color. Store in unopened containers as specified until turned over to OWNER.

PART 2 - PRODUCTS

2.1 PAINTING SYSTEM MANUFACTURERS

A. Products and Manufacturers: Where referenced under painting systems provide products manufactured by the following:
1. Tnemec Company, Inc. (TCI).
2. The Carboline Company, part of StonCor Group, an RMP Company (TCC).
3. Sherwin-Williams Company (SWC).
4. Benjamin Moore & Company (BMC).
5. Righter Group Inc. (RGI).
6. Duron Inc. (DI).

2.2 PAINTING SYSTEMS

Surface/ Exposure	Surf. Prep.	Primer/Surfacer System Type % Solids	(Coats) DFT (Mils) Max VOC g/l (EPA)	Intermediate System Type % Solids	(Coats) DFT (Mils) Max VOC g/l (EPA)	Finish System Type % Solids	(Coats) DFT (Mils) Max VOC g/l (EPA)
Ferrous Metals, Structural Steel, Exterior Surfaces of Valves, Pumps, and Piping, Doors							
TABLE 09 91 00-A							
Low VOC Content; Non-Submerged; Interior	1.5.A.2. 3.2.A. 3.2.C.1. 3.2.C2.	- Series 91-H20 Hydro-Zinc (TCI) -Carbozinc 859 (TCC) - Zinc Clad 2 (SWC) Zinc 63%	(1) 2-10 234	Field Primer & Touch Up -Series 73 Endura-Shield (TCI) -Carbothane 133 HB (TCC) - Acrolon 218 (SWC) Polyurethane ~~69%~~	(1) 2-10 228	-Series 700 Hydroflon (TCI) -Carboxane 950 (TCC) - Fluorokem HS100 (SWC) Fluoropolymer ~~69%~~	(1) 2-10 H (1) 4-6 V 228
Ferrous Metals Interior Surfaces of Potable Water Storage Reservoirs							
TABLE 09 91 00-B							
Submerged, Interior of Water Storage Tank, Exterior Surfaces of Piping Inside the Water Storage Tank	1.5.A.2. 3.2.A. 3.2.C.1. 3.2.C2. 3.2.D. 3.2.E.	1. -Serie 91-H20 Hydro-Zinc (TCI) -Carbozinc (TCC) - Zinc Clad 2 (SWC) Zinc 63%	(1) 5-10 221	-Series L140F Pota-Pox Plus (TCI) -Carboguard 891 (TCC) - Macropoxy 5500LT (SWC) Epoxy 68%	(1) 5-10 221	2. -Series L140F Pota-Pox Plus (TCI) -Carboguard 891 (TCC) - Macropoxy 5500LT (SWC) Epoxy 68%	(2) 5-10 221

1. At Ambient Temperatures of Greater Than 400,000 Gallon Capacity, Galvanized Metals and Non-ferrous metals, Exterior Surfaces of Piping; Non-Submerged and Intermittently Submerged, up to 4 feet above liquid level, ANSI/NSF Standard 61; Moderate VOC Content; Interior

2. To comply with ANSI/NSF 61 forced-cure requirements, CONTRACTOR shall provide surface temperatures of 75 degree F for 24 hours after applying prime coat.
3. To comply with ANSI/NSF 61 forced-cure requirements, CONTRACTOR shall immediately raise temperature of surface to 75 degree F for a minimum of two hours and for a maximum of four hours followed by increasing temperature of substrate to 150 degree F for 24 hours followed by 24 hours at temperature of 75 degree F after application of finish coat.

1

Ferrous Metals, Non-Ferrous Metals; Galvanized Metals, Including Water Storage Tanks							
TABLE 09 91 00-C							
Non-Submerged; Low VOC Content; Gloss; Exterior	1.5.A.2. 3.2.A. 3.2.C.1. 3.2.C2. 3.2.E.	Galvanized and Non-Ferrous Metal Primer -Series V69 Epoxoline II (TCI) -Carboguard 890 (TCC) - Macropoxy 646FC (SWC) Epoxy 67%	(1) 4-6 250	Ferrous Metal Touch Up Low Temperature - Series V69F Epoxoline II (TCI) -Carboguard 890 LT (TCC) Epoxy - Duraplate 235 (SWC) 69% Ferrous Metal Touch Up Warm Temperature - Series V69F Epoxoline II (TCI) -Carboguard 890 (TCC) - Macropoxy 646FC (SWC) Epoxy 69%	(1) 4-6 228 (1) 4-6 228	-Series 1075 Endura-Shield (TCI) -Carbothane 134 VOC (TCC) - Acrolon 218HS (SWC) Polyureathane 70%	(2) 2-5 220

1

TABLE 09 91 00-D							
Aluminum in Contact With Dissimilar Materials; Interior and Exterior.	1.5.A.2. 3.2.A. 3.2.D.	-Series 22 Pota-Pox 100 (TCI) -Carboguard 954 HB (TCC) - Duraplate UHS (SWC) Epoxy 100%	(1) 12-16			-Series 22 Pota-Pox 100 (TCI) -Carboguard 954 HB (TCC) - Duraplate UHS (SWC) Epoxy 100%	(1) 12-16

			10				10

2.3 CALKING AND SEALANTS

A. Refer to Section 07 92 00, Joint Sealants.

2.4 INSTRUMENTS

A. Instruments:
   1. Provide one new dry-film thickness gauge for checking film thickness, one holiday detector to detect holidays or holes in the coating, and one set of visual standards to check surface preparation. Calibrate dry film thickness gauge at Site using Bureau of Standards standard shim blocks.
   2. Products and Manufacturers: Provide the following:
      a. Film Thickness Testers: Model FM-III manufactured by Mikrotest, or equal.
      b. Holiday detector shall be Model M-1 as manufactured by Tinker & Rasor, or equal.
      c. Visual Standards: ASTM D2200, Swedish Standards, SSPC VIS 1.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine areas and conditions under which painting Work is to be performed and notify ENGINEER in writing of conditions detrimental to proper and timely completion of Work. Do not proceed with Work until unsatisfactory conditions have been corrected in a manner acceptable to ENGINEER.

B. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to formation of a durable paint film capable of performing in accordance with claims made in paint manufacturer's product literature for surfaces and conditions encountered.

C. Do not paint over existing paint where there is no assurance that existing paint will provide an acceptable surface for long-term adherence and durability of painting systems specified or where paint manufacturer requires removal of all existing paint to recommend use of specified painting system.

3.2 SURFACE PREPARATION

A. General:
   1. Test for moisture content of surfaces before commencement of painting Work. Test for moisture in concrete in compliance with ASTM D4263. Report results to ENGINEER before commencing Work.

2. Prepare existing surfaces to be painted as specified for new surfaces. Submit substitute methods of preparing existing surfaces, when proposed, with Shop Drawing submittal. ENGINEER's acceptance of substitute surface preparation methods does not relieve CONTRACTOR of performance required under the Contract Documents. To provide surfaces acceptable for application of painting system specified:
    a. Clean and roughen surfaces of existing paint and other decorative or protective toppings on surfaces to remain that are to receive a painting system under this Section.
    b. Where existing surfaces to be painted have corrosion, peeling paint, or unacceptably adhering coatings, remove all topcoats, primers, and intermediate coats of paint, and other protective or decorative coatings.
3. Perform preparation and cleaning procedures as specified herein and in strict accordance with paint manufacturer's approved instructions for each surface and atmospheric condition.
4. Remove hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items already in place that do not require field painting, or provide effective surface-applied protection prior to surface preparation and painting.
5. Remove as necessary items that must be field-painted where adjacent surfaces cannot be completely protected from splatter or overspray. Following completion of painting of each space or area, the removed items shall be reinstalled by workers skilled in the trades involved.
6. Clean surfaces to be painted before applying painting system components. Remove oil and grease with clean cloths and cleaning solvents prior to mechanical cleaning.
7. Prepare surfaces that were improperly shop-painted and abraded or rusted shop-painted surfaces as specified.

B. Ferrous Metals:
    1. Ferrous Metals Except Ductile and Cast Iron:
        a. Comply with paint manufacturer's recommendations for type and size of abrasive to provide a surface profile that meets manufacturer's painting system requirements for type, function, and location of surface. Verify that paint manufacturer-recommended profiles have been achieved on prepared surfaces. Report profiles to ENGINEER using Test Method C of ASTM D4417.
        b. Clean non-submerged ferrous surfaces including structural steel and miscellaneous metal to be shop-primed, of all oil, grease, dirt, mill scale, and other contamination by commercial blast cleaning complying with SSPC SP 6 at time of paint system application, using SSPC VIS 1 as a standard of comparison.
        c. Clean submerged ferrous surfaces including structural steel and miscellaneous metal to be shop-primed of all oil, grease, dirt, mill scale, and other contamination by near-white blasting complying with

SSPC SP 10 at time of painting system application, using SSPC VIS 1 as a standard of comparison.

d. Clean non-submerged, ferrous surfaces that have not been shop-coated of all oil, grease, dirt, loose mill scale, and other contamination by commercial blasting complying with SSPC SP 6 at the time of painting system application, using SSPC VIS 1 as a standard of comparison.

e. Clean submerged ferrous surfaces that have not been shop-coated or that have been improperly shop-coated of all oil, grease, dirt, mill scale, and other contamination by near-white blasting complying with SSPC SP 10 at time of painting system application, using SSPC VIS 1 as a standard of comparison.

f. Touch-up shop-applied prime coats that have damaged or have bare areas with primer recommended by paint manufacturer after commercial blasting complying with SSPC SP 6 at the time of painting system application, using SSPC VIS 1 as a standard of comparison, to provide a surface profile of not less than one mil.

g. Power tool-clean per SSPC SP 3 to remove welding splatter and slag.

h. Remove all rust and contamination on existing ferrous metals to sound surfaces by power tool-cleaning complying with SSPC SP 11 to provide a surface profile of not less than one mil.

i. Cleaning: Clean tank to remove sediment and coarse debris, including aluminum or magnesium anode rods, from tank floor and other horizontal surfaces. Sediment and debris shall be removed and disposed of in accordance with local, state, and federal regulations.

2. Ductile and Cast Iron:

a. Comply with paint manufacturer's recommendations and NAPF 500-03 for type and size of abrasive to provide a surface profile meeting paint manufacturer's requirements for type, function and location of surface. Verify that paint manufacturer-recommended profiles are achieved on prepared surfaces.

b. Clean submerged and non-submerged ductile and cast iron surfaces to be shop-primed of all oil, grease, dirt, mill scale, and other contamination by solvent cleaning and abrasive blasting complying with NAPF 500-03-01, NAPF 500-03-04, and NAPF 500-03-05 at time of paint system application.

c. Clean submerged ductile and cast iron that have not been shop-coated or that have been improperly shop-coated of all oil, grease, dirt, mill scale, and other contamination by solvent cleaning and abrasive blasting complying with NAPF 500-03-01, NAPF 500-03-04, and NAPF 500-03-05 at time of paint system application.

d. Touch-up shop-applied prime coats that are damaged or have bare areas with primer recommended by paint manufacturer, after power tooling complying with NAPF 500-03 at the time of painting system application.

e. Remove all contamination on existing ductile and cast iron to sound surfaces by power tool cleaning complying with NAPF 500-03-03.

C. Non-Ferrous Metal Surfaces: Prepare non-ferrous metal surfaces for painting by light whip blasting or by lightly sanding with 60- to 80-mesh sandpaper.

D. Galvanized (Zinc-Coated) Surfaces: Prepare galvanized surfaces for painting by lightly sanding with 60- to 80-mesh sandpaper or by light whip blasting.

3.3 PROTECTION OF PROPERTY AND STRUCTURES

A. Protect property and structures adjacent to the Work from waste residues resulting from cleaning, surface preparation and paint application.

B. Use shrouding, vacuum blasting, or other approved methods for cleaning and surface preparation of exterior surfaces.

C. During blast cleaning and surface preparation of interior and exterior surfaces, control discharge of dust and grit, using shrouding, negative-pressure containment/dust collection systems, or other means to protect adjacent property and structures and prevent dust/grit from escaping. Similarly control removal and temporary storage of residues to protect adjacent property and structures.

D. For painting of exterior surfaces, use rollers, shrouding or other approved methods as required to protect adjacent property and structures from wind-blown paint residues.

E. Submit proposed procedures for cleaning, surface preparation and paint application describing methods for protecting adjacent property and structures from residues. Do not proceed with cleaning, surface preparation or painting until proposed procedures are approved by ENGINEER.

3.4 MATERIALS PREPARATION

A. General:
   1. Mix and prepare paint products in strict accordance with paint manufacturer’s product literature.
   2. Do not mix painting materials produced by different manufacturers, unless otherwise permitted by paint manufacturer’s instructions.
   3. Where thinners are required, they shall be produced by paint system manufacturer unless otherwise permitted by paint manufacturer’s product literature and submitted to and accepted by ENGINEER with Shop Drawings.

B. Tinting:

1. Where multiple coats of the same material are to be provided, tint each undercoat a lighter shade to facilitate identification of each coat of paint.
2. Tint undercoats to match color of finish coat of paint, but provide sufficient difference in shade of undercoats to distinguish each separate coat. Provide a code number to identify material tinted by manufacturer.

C. Mixing:
1. For products requiring constant agitation, use methods in compliance with manufacturer's product literature to prevent settling during paint application.
2. Mix in containers placed in suitably sized non-ferrous or oxide resistant metal pans to protect floors from slashes or spills that could stain the floor or react with subsequent finish floor material.
3. Mix and apply paint in containers bearing accurate product name of material being mixed or applied.
4. Stir products before application to produce a mixture of uniform density and as required during the application. Do not stir into the product film that forms on surface; instead, remove film and, if necessary, strain product before using.
5. Strain products requiring such mixing procedures. After adjusting mixer speed to break up lumps and after components are thoroughly blended, strain through 35 to 50-mesh screen before application.

3.5 APPLICATION

A. General:
1. Apply paint systems by brush, roller, or airless spray per manufacturer's recommendations and in compliance with Paint Application Specifications No. 1 in SSPC Volume 2, where applicable. Use brushes best suited for type of paint applied. Use rollers of carpet, velvet back, or high pile sheeps wool as recommended by paint manufacturer for product and texture required. Use air spray and airless spray equipment recommended by paint manufacturer for specific painting systems specified. Submit a list of application methods proposed, listing paint systems and location.
2. Paint dry film thicknesses required are the same regardless of the application method. Do not apply succeeding coats until previous coat has completely dried.
3. Apply additional coats when undercoats, stains, or other conditions show through final coat of paint, until paint film is uniform finish, color, and appearance, particularly for intense chroma primary colors. Ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners, receive a film thickness equivalent to that of flat surfaces.
4. Surfaces of items not normally exposed-to-view do not require the same color as other components of system of which they are part, but require the same painting system specified for exposed surfaces of system.

5. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, non-specular black paint before final installation of registers or grilles.
6. Paint backs of access panels and removable or hinged covers to match exposed surfaces.
7. Paint aluminum parts in contact with dissimilar materials with specified paint system.
8. Paint tops, bottoms, and side edges of doors the same as exterior surfaces.
9. Omit field-applied primer on metal surfaces that have been primed in the shop. Touch-up paint shop-primed coats and pre-finished items only when approved by ENGINEER using compatible primers and manufacturer's recommended compatible field-applied finishes.
10. Welds shall be stripe-coated with intermediate or finish coat of paint after application of prime coat.
11. Paint steel water storage tanks per AWWA D102.

B. Minimum/Maximum Paint Film Thickness:
1. Apply each product at not less than, nor more than, manufacturer's recommended spreading rate, and provide total dry film thickness as specified.
2. Apply additional coats of paint if required to obtain specified total dry film thickness.
3. Maximum dry film thickness shall not exceed 100 percent of minimum dry film thickness, except where more stringent limitations are recommended by paint manufacturer for a specific product.

C. Scheduling Surface Preparation and Painting:
1. As soon as practical after preparation, apply first-coat material to surfaces that have been cleaned, pretreated, or otherwise prepared for painting. Apply first-coat material before subsequent surface deterioration due to atmospheric conditions existing at time of surface preparation and painting. Surfaces that have started to rust before first-coat application is complete shall be brought back to required standard by abrasive blasting.
2. Allow sufficient time between successive coats to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure and application of another coat of paint does not cause lifting or loss of adhesion to undercoat.
3. Scarify primers and other painting system components by brush-blasting if paint has been exposed for lengths of time or under conditions beyond manufacturer's written recommendations for painting systems required, intended use, or method of application proposed for subsequent coats of paint.
4. Schedule cleaning and painting so that dust and other contaminants from cleaning process do not fall on wet, newly painted surfaces.

D. Prime Coats: Recoat primed and sealed walls and ceilings where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn-through or other defects caused by insufficient sealing.

E. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage.

F. Brush Application:
   1. Brush out and work all brush coats onto surfaces in an even film. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections are unacceptable. Neatly draw all glass and color break lines.
   2. Brush-apply primer or first coats, unless otherwise permitted to use mechanical applicators.

G. Mechanical Applicators:
   1. Use mechanical methods for paint application when permitted by governing ordinances, manufacturer, and approved by ENGINEER.
   2. Limit roller applications, if approved by ENGINEER, to interior wall finishes for second and third coats. Apply each roller coat to provide the equivalent hiding as brush-applied coats.
   3. Where spray application is used, apply each coat to provide equivalent hiding of brush-applied coats. Do not double back with spray equipment for purpose of building up film thickness of multiple coats in one pass.

H. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint Work not in compliance with specified requirements as required by ENGINEER.

3.6 FIELD QUALITY CONTROL

A. ENGINEER may invoke the following material testing procedure at any time for a maximum of five times during field painting Work:
   1. CONTRACTOR shall engage service of an independent testing laboratory to sample paints used, as designated by ENGINEER. Samples of products delivered to Site shall be obtained, identified, sealed, and certified as to being products actually applied to surfaces in each area, in presence of CONTRACTOR.
   2. A testing laboratory selected by OWNER and paid for by CONTRACTOR shall perform appropriate tests for any or all of the following:
      a. Abrasion resistance.
      b. Apparent reflectivity.
      c. Flexibility.
      d. Washability.
      e. Absorption.

f. Accelerated weathering.
g. Dry opacity.
h. Accelerated yellowness.
i. Recoating.
j. Skinning.
k. Color retention.
l. Alkali resistance.
m. Quantitative materials analysis.

3. If test results show that products being used do not comply with specified requirements, CONTRACTOR may be directed to stop painting Work and remove non-complying paint, and shall prepare and repaint surfaces coated with rejected paint with material complying with the Contract Documents.

B. Notify ENGINEER after completing each coat of paint. After inspection and checking of film thickness, holidays, and imperfections, and after acceptance by ENGINEER, proceed with succeeding coat. Perform testing using testing instruments specified in Article 2.4 of this Section.

1. ENGINEER will witness all testing and shall be notified of scheduled testing at least twenty-four hours in advance.
2. Apply additional coats, if required, to produce specified film thickness and to correct holidays and to completely fill all surface air holes.

C. For magnetic substrates, measure thickness of dry film nonmagnetic coatings following recommendations of SSPC PA-2. These procedures supplement manufacturers' approved instructions for manual operation of measurement gauges and do not replace such instructions.

D. Record time, location, number of coats, dry film thickness, holidays, and other imperfections and submit testing results to ENGINEER.

3.7 DISINFECTION

A. Disinfection shall conform to applicable requirements of AWWA C652, except as modified below.

B. After tank painting is complete and interior surfaces thoroughly dried, remove all visible dirt and contaminating materials. Disinfect interior of tank by spraying all surfaces, including underside of roof and roof support members, with a chlorine solution measuring at least 200 mg/L chlorine. Chlorine solution shall remain in contact with surfaces for at least thirty minutes. Provide a sterile environment inside tank. After spray-disinfection, flush tank contents to drain by spraying disinfected surfaces with potable water for at least ten minutes, then fill tank to result in overflow for another ten minutes, after which samples for bacteriological testing will be obtained by CONTRACTOR. CONTRACTOR shall provide proper disinfection until successful bacteriological testing results are achieved.

C. Water for initial disinfection and filling will be furnished by OWNER. CONTRACTOR shall provide pumps, hoses, and other temporary equipment required to fill tank. CONTRACTOR shall furnish chlorine.

D. First set of bacteriological testing will be paid for by OWNER.

E. If tank must be emptied, re-disinfected, flushed, and refilled to obtain satisfactory bacteriological samples, or because of extensive leakage, CONTRACTOR shall pay for additional chlorine, re-testing, and water at the utility owner's standard rates.

F. Water VOC Concentration Testing:
   1. After tank has filled and allowed to stand for twenty-four hours, OWNER will provide one set of water samples for testing for total volatile organic compounds per EPA Method 524.2 and bacteriological levels to confirm acceptability of water with applicable drinking water standards.
   2. If a sample does not meet applicable requirements, CONTRACTOR shall drain tank and allow the paint system to further cure. CONTRACTOR shall pay costs for additional refilling, testing, and disposal of water necessary to achieve compliance with applicable drinking water standards.

3.8 PROTECTION OF NEW FINISHES

A. Provide signs that read, "Wet Paint" as required to protect newly painted finishes. Remove temporary wrappings provided for protection of the Work after completion of painting.

3.9 ADJUSTING AND CLEANING

A. Correct damages to work of other trades through cleaning, repairing or replacing, and repainting, as acceptable to ENGINEER.

B. During progress of Work, remove from Site all discarded paint materials, rubbish, cans, and rags at end of each workday.

C. Upon completion of painting, clean paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping, while avoiding scratching or otherwise damaging finished surfaces.

D. At completion of work of other trades, touch-up and restore damaged or defaced painted surfaces as determined by ENGINEER.

3.10 SCHEDULES

A. The schedules listed below, following the “End of Section” designation, are a part of this Specification section.
   1. Table 09 91 00-C, Painting Schedule.

TABLE 09 91 00-C
PAINTING SCHEDULE

Facility or Surface *	Room No.	Painting System **	Remarks
New Ferrous Metals Not Attached to the Water Storage Tank; Structural Steel, Exterior Surfaces of Valves, Pumps, and Piping, Doors		A	
Interior of Water Storage Tank; Exterior Surfaces of Piping Inside the Water Storage Tank		B	
Exterior of Water Storage Tank		C	Provide Sherwin Williams color SW 7004, Snowbound, or equal color match.
Aluminum in Contact With Dissimilar Materials		D	

* Refer to Drawings for facility locations and for facilities not listed above.
** Refer to Article 2.2 of this Section.

+ + END OF SECTION + +

Attachment 2

ITB #2285-B: FCWS – Trilith Studios
Elevated Water Storage Tank

Addendum #2

OE/AAA Notice Criteria Tool
Results

Federal Aviation Administration

« OE/AAA

Notice Criteria Tool

Notice Criteria Tool - Desk Reference Guide V_2018.2.0

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference CFR Title 14 Part 77.9.

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...) and once adjusted upward with the appropriate vertical distance would exceed a standard of 77.9(a) or (b)
- your structure will emit frequencies, and does not meet the conditions of the FAA Co-location Policy
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your proposed structure will be in proximity to a navigation facility and may impact the assurance of navigation signal reception
- your structure will be on an airport or heliport
- filing has been requested by the FAA

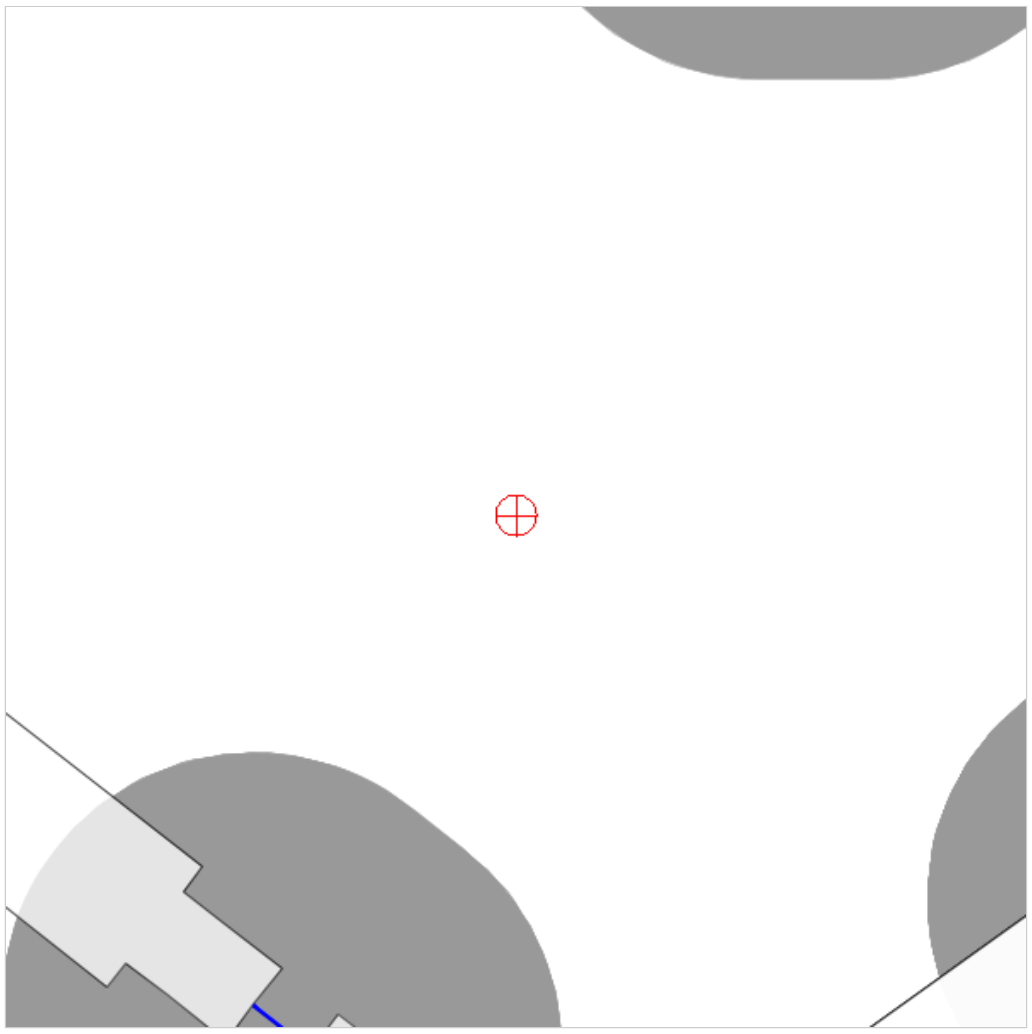
If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the Air Traffic Areas of Responsibility map for Off Airport construction, or contact the FAA Airports Region / District Office for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

* **Structure Type:**	TANK | Water Tank Please select structure type and complete location point information.
Latitude:	33 Deg 28 M 9.70 S N
Longitude:	84 Deg 30 M 41.32 S W
Horizontal Datum:	NAD83
Site Elevation (SE):	875 (nearest foot)
Structure Height :	162 (nearest foot)
Is structure on airport:	(●) No ( ) Yes

Results

You do not exceed Notice Criteria.



Attachment 3

ITB #2285-B: FCWS – Trilith Studios
Elevated Water Storage Tank

Addendum #2

Revised Drawings

FCWS - TRILITH STUDIOS ELEVATED WATER STORAGE TANK

ISSUED FOR BID
JULY 2023

VICINITY MAP

NOT TO SCALE

LOCATION MAP

NOT TO SCALE

OWNER:

FAYETTE County Water

ENGINEER OF RECORD

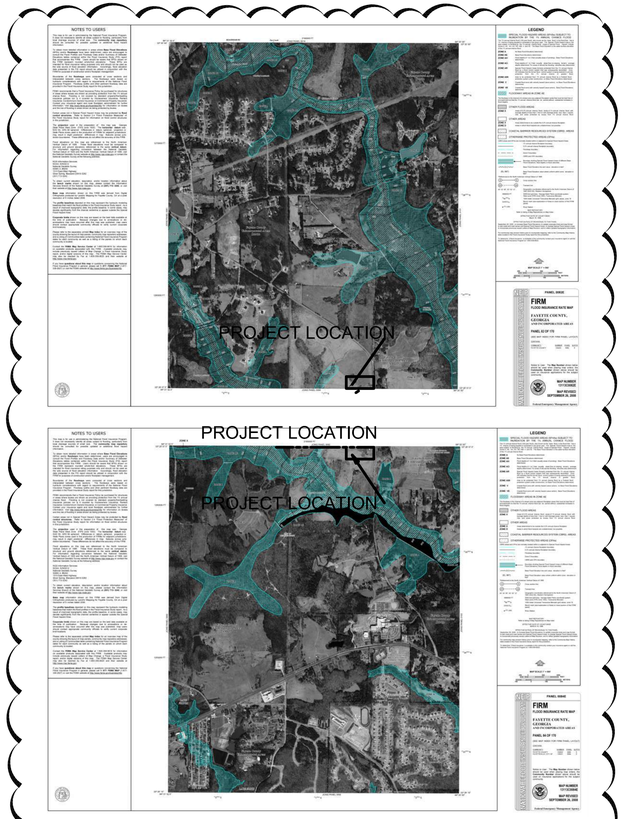
LEGAL ENTITY: ARCADIS-U.S., INC.

ARCADIS Design & Consultancy for natural and built assets

2839 PACES FERRY ROAD, SUITE 400, ATLANTA,
GA 30339-3769 TEL: 770-431-8666 FAX: 770-435-2666
www.ARCADIS.com

PROJECT DESCRIPTION

THE TRILITH STUDIO IMPROVEMENT PROJECT INCLUDES THE CONSTRUCTION OF APPROXIMATELY 900 LF OF POTABLE WATER LINES, WATER TANK, PUMP HOUSE, AND ACCESS RAOD.
THE EXISTING TRILITH STUDIOS SITE IS A MOVIE PRODUCTION CAMPUS THAT HAS MULTIPLE STAGE BUILDINGS FOR PRODUCTION.
THE PROJECT AREA FOR THE WATER TANK IS ON AN EXISTING GRASSED HILL ADJACENT TO THE CEMETERY NEAR THE ENTRANCE OF THE TRILITH CAMPUS.



PRIMARY PERMITTEE & 24-HOUR CONTACT:
VANESSA TIGERT
FAYETTE COUNTY WATER SYSTEM
ADDRESS: 245 MCDONOUGH RD.
FAYETTEVILLE, GA 30214
PHONE: 770-320-6016
EMAIL: VTIGERT@FAYETTECOUNTYGA.GOV

GEORGIA811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

ARCADIS ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS (HORIZONTAL AND VERTICAL). THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900 ATLANTA, GA 30339
TEL: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FAYETTE County Water

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY,
FAYETTEVILLE, GA 30214,
UNITED STATES

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	TT

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	G-01
DESIGNED BY:	T. THOMAS
DRAWN BY:	M. DEEPALI
CHECKED BY:	H. GILES

SHEET TITLE

GENERAL

COVER SHEET AND SITE LOCATION

SCALE: NTS

G-01

SHEET 1 OF 62

GENERAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR, AND PROPERLY RESTORE ALL PAVEMENT, DRIVES, SIDEWALK, AND CURBS, WHICH MAY HAVE BEEN DAMAGED, REMOVED OR DISTURBED AS RESULT OF ACCOMPLISHING THE WORK.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING GRADES AND DIMENSIONS AND NOTIFYING THE ENGINEER IN ADVANCE AND IN WRITING OF ANY DISCREPANCIES PRIOR TO PERFORMING ANY WORK.
3. EXISTING UTILITY LOCATIONS SHOWN ARE BASED ON SURFACE OBSERVATION AND LIMITED DETECTION SERVICES. NOT ALL EXISTING UTILITIES ARE SHOWN ON THE DRAWING. CONTRACTOR IS RESPONSIBLE FOR DETERMINING BOTH THE EXACT LOCATION OF ALL EXISTING UTILITIES AND FOR DETERMINING THEIR PROTECTION DURING CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL OPERATIONS WITH ALL UTILITIES WHICH MAY BE IN CONFLICT WITH HIS WORK.
4. A COPY OF THE APPROVED SET OF CONSTRUCTION PLANS MUST BE ON THE JOBSITE AT ALL TIMES DURING CONSTRUCTION.
5. ALL EROSION AND SEDIMENTATION CONTROLS AND TREE PROTECTION SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBANCE ACTIVITY.
6. UNLESS NOTED OTHERWISE ALL CONSTRUCTION SHALL CONFORM TO THE FAYETTE COUNTY AND STATE OF GEORGIA STANDARDS AND SPECIFICATIONS.
7. WHERE SHOWN ON DRAWINGS ALL SUBSURFACE TOPOGRAPHICAL FEATURES WHICH INCLUDE GROUND WATER TABLE, PARTIALLY WEATHERED ROCK, AND ROCK SHOWN ARE APPROXIMATE. THE CONTRACTOR AT HIS EXPENSE SHALL CONDUCT ADDITIONAL SUBSURFACE SOIL EXPLORATION IF DEEMED NECESSARY.
8. THE CONTRACTOR SHALL COORDINATE, OBTAIN APPROVAL AND PROVIDE TEMPORARY TRAFFIC ROUTING PLANS PRIOR TO ANY LANE CLOSURES WITH THE FAYETTE COUNTY.
9. ALL WORK AROUND THE EXISTING UTILITIES AND UTILITY STRUCTURES WHETHER ABOVE OR BELOW GROUND SHALL BE PERFORMED IN A MANNER THAT WILL AVOID DAMAGE TO THE UTILITIES AND STRUCTURES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL ACCURATELY LOCATE ABOVE AND BELOW UTILITIES WHICH MAY BE AFFECTED BY THE WORK AND PROTECT ALL UTILITIES NOT DESIGNATED FOR REMOVAL, RESTORATION, OR REPLACEMENT IN THE COURSE OF CONSTRUCTION. PROVIDE 72 HOURS OF ADVANCE NOTICE TO THE UTILITY OWNER AND FAYETTE COUNTY PRIOR TO BEGINNING CONSTRUCTION IN THE VICINITY OF THE EXISTING UTILITIES. FOR EXISTING UTILITY LOCATION ASSISTANCE CALL THE UNDERGROUND UTILITIES PROTECTION CENTER (GA 811).
10. ANY DAMAGE TO EXISTING UTILITIES CAUSED BY THE CONTRACTOR, CONTRACTOR'S CREW AND/OR EQUIPMENT SHALL BE THE CONTRACTOR'S COST AND RESPONSIBILITY TO REPLACE PER OWNER'S STANDARDS AND SPECIFICATIONS.
11. THE REFUSE RESULTING FROM THE CLEARING AND GRUBBING OPERATION SHALL BE HAULED TO A DISPOSAL SITE SECURED BY THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL REQUIREMENTS OF FEDERAL, STATE, COUNTY AND MUNICIPAL REGULATIONS. NO DEBRIS OF ANY KIND SHALL BE DEPOSITED IN ANY STREAM OR BODY OF WATER, OR IN ANY STREET OR ALLEY. NO DEBRIS SHALL BE DEPOSITED UPON ANY PRIVATE PROPERTY EXCEPT BY WRITTEN CONSENT OF THE PROPERTY OWNER. IN NO CASE SHALL ANY MATERIAL BE LEFT ON THE PROJECT, SHOVED ONTO ABUTTING PRIVATE PROPERTIES, OR BE BURIED IN THE EMBANKMENTS OR TRENCHES ON THE PROJECT.
12. FINISHED GRADING OF THE DISTURBED AREA SHALL BE ACCORDING TO CIVIL DRAWINGS. NO STANDING WATER OR PONDING OF ANY KIND IS ALLOWED. ALL DISTURBED AREA SHALL BE IMMEDIATELY GRASSED.
13. THE CONTRACTOR SHALL COMPLY WITH THE STATE OF GEORGIA MANUAL FOR EROSION AND SEDIMENT CONTROL STANDARDS, LATEST EDITION.
14. IN THE EVENT ACTIVE UTILITY SERVICES REQUIRE INTERRUPTION, THE CONTRACTORS SHALL COORDINATE AND CONSULT WITH THE OWNER OR/OWNERS AND OBTAIN APPROVAL FROM THEM PRIOR TO SERVICES BEING DISRUPTED.
15. THE CONTRACTOR SHALL ALL TIMES CONTROL DUST AND DEBRIS FROM THE OPERATIONS TO A LEVEL ACCEPTABLE TO FAYETTE COUNTY AND LOCAL BUSINESSES AT ALL TIMES.
16. ALL UTILITY WORK WITHIN THE FAYETTE COUNTY RIGHT OF WAY SHALL BE PERFORMED IN ACCORDANCE TO WHITFIELD COUNTY STANDARDS AND SPECIFICATIONS, LATEST EDITION. WORK ON THE SITE SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
17. TEMPORARY DISCONNECTION, REMOVAL AND/OR REPLACEMENT OF THE FOLLOWING ITEMS BUT NOT LIMITED TO, FIRE HYDRANTS, WATER METERS, BACK FLOW PREVENTION DEVICES, VAULTS, MANHOLE AND OTHER POTABLE WATER SYSTEM APPURTENANCES. ASSOCIATED APPURTENANCES SHALL BE IN STRICT ACCORDANCE WITH THE LATEST FAYETTE COUNTY STANDARDS AND SPECIFICATIONS. BEFORE CONNECTION, REMOVAL AND/OR REPLACEMENT OF ANY UTILITIES. THE CONTRACTOR SHALL CONTACT AND OBTAIN APPROVAL FROM FAYETTE COUNTY PUBLIC WORKS REPRESENTATIVES PRIOR TO CONSTRUCTION.
18. THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH FAYETTE COUNTY OR LOCAL AUTHORITY FIRE MARSHAL PRIOR TO REMOVING ANY FIRE HYDRANTS OR ANY FIRE PROTECTION UTILITIES. ANY WORK OR MATERIALS REQUIRED BY THE FIRE MARSHAL TO TEMPORARILY PROVIDE FOR FIRE PROTECTION TO THE LOCAL BUSINESS SHALL BE PART OF THE CONTRACTOR'S SCOPE OF WORK. "OUT-OF-SERVICE RINGS" WILL BE REQUIRED FOR HYDRANTS WHILE OUT OF SERVICE.
19. ALL EXCAVATION SHALL BE ADEQUATELY SHORED TO ENSURE WORKER SAFETY. ALL PIPE LAYING OPERATIONS SHALL COMPLY WITH OSHA REQUIREMENTS FOR TRENCH SAFETY.
20. MAINTENANCE AND TRAFFIC: THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL ROAD PERMITS FROM FAYETTE COUNTY INCLUDING PROVIDING ANY RESTORATION BONDS. THE CONTRACTOR SHALL PROVIDE A DETAILED PHASED TRAFFIC CONTROL PLAN BASED ON THE PROPOSED WORK PHASING AS DETERMINED BY THE CONTRACTOR.
21. 72 HOURS NOTICE IS REQUIRED TO GEORGIA 811 UTILITY PROTECTION CENTER BEFORE ANY PLANNED DIGGING. http://www.georgia811.com

STAKING NOTES

1. THE EXISTING TRILITH STUDIOS ENTRANCE AREA SHOWN IS BASED ON THE PROPOSED DESIGN BY OTHERS.
2. ALL UNDERGROUND UTILITY LOCATIONS SHOWN ARE BASED ON SURVEY. ALL UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE AND THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION AND FABRICATION. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE RESULTING FROM THIS WORK.

GRADING NOTES:

1. CONTRACTOR SHALL NOT PERMIT EQUIPMENT TO BE USED IN SUCH A MANNER AS TO CAUSE EQUIPMENT TO EXCESSIVELY BUMP OR RUT THE SUBGRADE OR OTHER PREPARED AREAS.
2. CONTRACTOR SHALL GRADE IN A MANNER TO ESTABLISH LONG SMOOTH GRADIENTS IN ORDER TO REDUCE ABRUPT CHANGES, DIPS AND SHARP TRANSITIONS IN THE FINISHED GRADE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE POSITIVE DRAINAGE ON GRADED SURFACE AREAS AT 1% MINIMUM ON HARDSCAPE AT 2% MINIMUM ON GRADE UNLESS OTHERWISE INDICATED.
4. ANY REQUIRED DETENTION FACILITIES AND EROSION CONTROL MEASURES ARE TO BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ON THE SITE AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
5. ELEVATIONS GIVEN ARE TO FINISH GRADE UNLESS OTHERWISE SHOWN.
6. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
7. UNLESS SHOWN ON THE EROSION & SEDIMENT CONTROL PLANS AND / OR LANDSCAPING PLANS, ALL DISTURBED AREAS NOT RECEIVING A SURFACE SHALL BE COVERED IN GRASS.
8. GENERALLY TAKE STANDARD PRECAUTIONS TO PROTECT TREES. SEE LANDSCAPE DRAWINGS FOR TREE PROTECTION REQUIREMENTS WHEN APPLICABLE.

PROJECT COMPLETION

1. PRIOR TO ACCEPTANCE AND FINAL PAYMENT, CONTRACTOR IS TO PROVIDE AN AS-BUILT SURVEY, WHICH IS A DRAWING PREPARED AND SIGNED BY A REGISTERED LAND SURVEYOR REGISTERED IN THE STATE OF GEORGIA ILLUSTRATING THE LOCATIONS, DIMENSIONS AND ELEVATIONS OF A DEVELOPMENT AS IT HAS BEEN CONSTRUCTED FOLLOWING COMPLETION OF CONSTRUCTION ON DIRECT FIELD MEASUREMENTS AND SHOWN TO SCALE.

1

LEGEND & SYMBOLS

- 800 — EXISTING MAJOR CONTOUR
- 801 — EXISTING MINOR CONTOUR
- NVS — EXISTING SANITARY SEWER
- UP — EXISTING UNDERGROUND POWER
- W — EXISTING WATER LINE
- UC — EXISTING UNDERGROUND COMMUNICATIONS
- EXISTING STORM SYSTEM
- EXISTING LANDSCAPE
- EXISTING PAVEMENT
- EXISTING CONCRETE
- 800 — PROPOSED MAJOR CONTOUR
- 801 — PROPOSED MINOR CONTOUR
- PROPOSED PROPERTY LINE
- W — PROPOSED WATER LINE
- PROPOSED SECURITY FENCE
- PROPOSED STORM SYSTEM
- X — PROPOSED SILT FENCE
- PROPOSED EASEMENT
- 20' POTABLE WATER LINE EASEMENT
- PROPOSED CONCRETE
- PROPOSED GRAVEL

1

CIVIL ABBREVIATIONS

APPROX.	APPROXIMATE	GRAT.	GRATING
ASPH	ASPHALT	GV	GATE VALVE
BLDG.	BUILDING	HORIZ.	HORIZONTAL
BOC	BOTTOM OF CURB	ID	INSIDE DIAMETER
℄	CENTERLINE	IN., "	INCHES
CB	CATCH BASIN	INF.	INFLUENT
CO	CLEANOUT	INV.	INVERT
CONC.	CONCRETE	JT.	JOINT
CONT.	CONTINUED	LF	LINEAR FOOT/FEET
CPLG.	COUPLING	MAS	MASONRY
CY	CUBIC YARD(S)	MAX.	MAXIMUM
DE	DIATOMACEOUS EARTH	MFR.	MANUFACTURER
DET.	DETAIL	MGD	MILLION GALLONS PER DAY
DI	DROP INLET	MH	MANHOLE
DIP	DUCTILE IRON PIPE	MIN.	MINIMUM
DIA.	DIAMETER	NC	NORMALLY CLOSED
DISCH.	DISCHARGE	NO	NORMALLY OPEN
DWG	DRAWING	NO.	NUMBER
EA.	EACH	OD	OUTSIDE DIAMETER
EFF.	EFFLUENT	PDW	PROCESS DRAIN TO WASTE
EJ	EXPANSION JOINT	PE	POLYETHYLENE
ELEV.	ELEVATION	PG.	PROPOSED GROUND
ELEC.	ELECTRIC	PROP.	PROPOSED
EQ.	EQUAL	PSI	POUNDS PER SQUARE INCH
EXIST.	EXISTING	R	REDUCER
FCV	FLOW CONTROL VALVE	REINF.	REINFORCEMENT OR REINFORCE
FD	FLOOR DRAIN	REQ'D.	REQUIRED
FDN	FOUNDATION	ROW	RIGHT OF WAY
FIN.	FINISHED	SHT.	SHEET
FLEX.	FLEXIBLE	SS	STAINLESS STEEL
FLG	FLANGE	STD.	STANDARD
FLR.	FLOOR	STRUC.	STRUCTURAL
FTG.	FOOTING	TOC	TOP OF CURB
FT.	FEET	THK.	THICK
GRD.	GROUND	TYP.	TYPICAL
		VERT.	VERTICAL
		W/	WITH

DRAWING NUMBER EXPLANATION

COMPONENT DESIGNATOR — DRAWING NUMBER

C-01

TITLE MARKERS

PLAN

0 10' 20' 40'

SECTION

1 / G00-01

SECTION

0 10' 20' 40'

REFERENCE BACK TO THE PLAN SHEET SECTION IS CUT FROM

DETAIL LETTER

A / G00-01

DETAIL

0 2' 4' 8'

REFERENCE BACK TO THE DETAIL MARKER

TYPICAL DETAILS

SECTION MARKERS

SECTION NUMBER

1 / G00-01

SHEET SECTION IS SHOWN ON

DETAIL MARKERS

DETAIL LETTER

A / G00-01

A / G00-01

SHEET DETAIL IS SHOWN ON

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA

FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

1

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	C-00
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

CIVIL

CIVIL NOTES, SYMBOLS, & ABBREVIATIONS

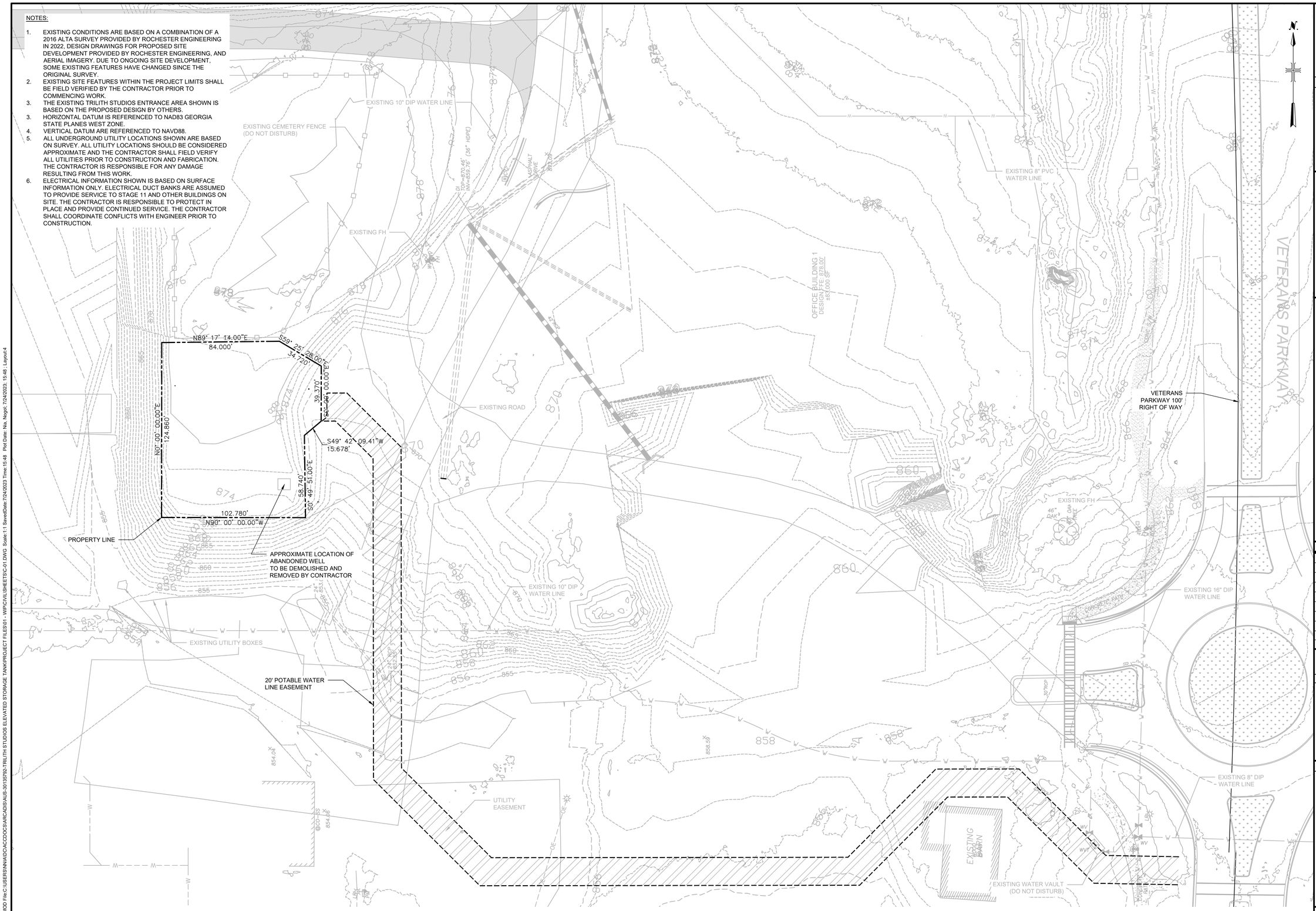
SCALE: AS SHOWN

C-00

SHEET 3 OF 62

NOTES:

1. EXISTING CONDITIONS ARE BASED ON A COMBINATION OF A 2016 ALTA SURVEY PROVIDED BY ROCHESTER ENGINEERING IN 2022, DESIGN DRAWINGS FOR PROPOSED SITE DEVELOPMENT PROVIDED BY ROCHESTER ENGINEERING, AND AERIAL IMAGERY. DUE TO ONGOING SITE DEVELOPMENT, SOME EXISTING FEATURES HAVE CHANGED SINCE THE ORIGINAL SURVEY.
2. EXISTING SITE FEATURES WITHIN THE PROJECT LIMITS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING WORK.
3. THE EXISTING TRILITH STUDIOS ENTRANCE AREA SHOWN IS BASED ON THE PROPOSED DESIGN BY OTHERS.
3. HORIZONTAL DATUM IS REFERENCED TO NAD83 GEORGIA STATE PLANES WEST ZONE.
4. VERTICAL DATUM ARE REFERENCED TO NAVD88.
5. ALL UNDERGROUND UTILITY LOCATIONS SHOWN ARE BASED ON SURVEY. ALL UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE AND THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION AND FABRICATION. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE RESULTING FROM THIS WORK.
6. ELECTRICAL INFORMATION SHOWN IS BASED ON SURFACE INFORMATION ONLY. ELECTRICAL DUCT BANKS ARE ASSUMED TO PROVIDE SERVICE TO STAGE 11 AND OTHER BUILDINGS ON SITE. THE CONTRACTOR IS RESPONSIBLE TO PROTECT IN PLACE AND PROVIDE CONTINUED SERVICE. THE CONTRACTOR SHALL COORDINATE CONFLICTS WITH ENGINEER PRIOR TO CONSTRUCTION.



User:NNIA Spec:AUS-NCSMOD File:C:\USERS\NNIA\DC\ACCDOCS\ARCADIS\AUS-30135792-TRILITH STUDIOS ELEVATED STORAGE TANK\PROJECT FILES\01 - WIP\CIVIL\SHEETS\C-01.DWG Scale:1:1 SavedDate:7/24/2023 Time:15:48 Plot Date: Nia, Nogol; 7/24/2023; 15:48 ; Layout4

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA

FAYETTE COUNTY WATER SYSTEM

FAYETTE County Water

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	C-01
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

CIVIL

EXISTING CONDITIONS PLAN

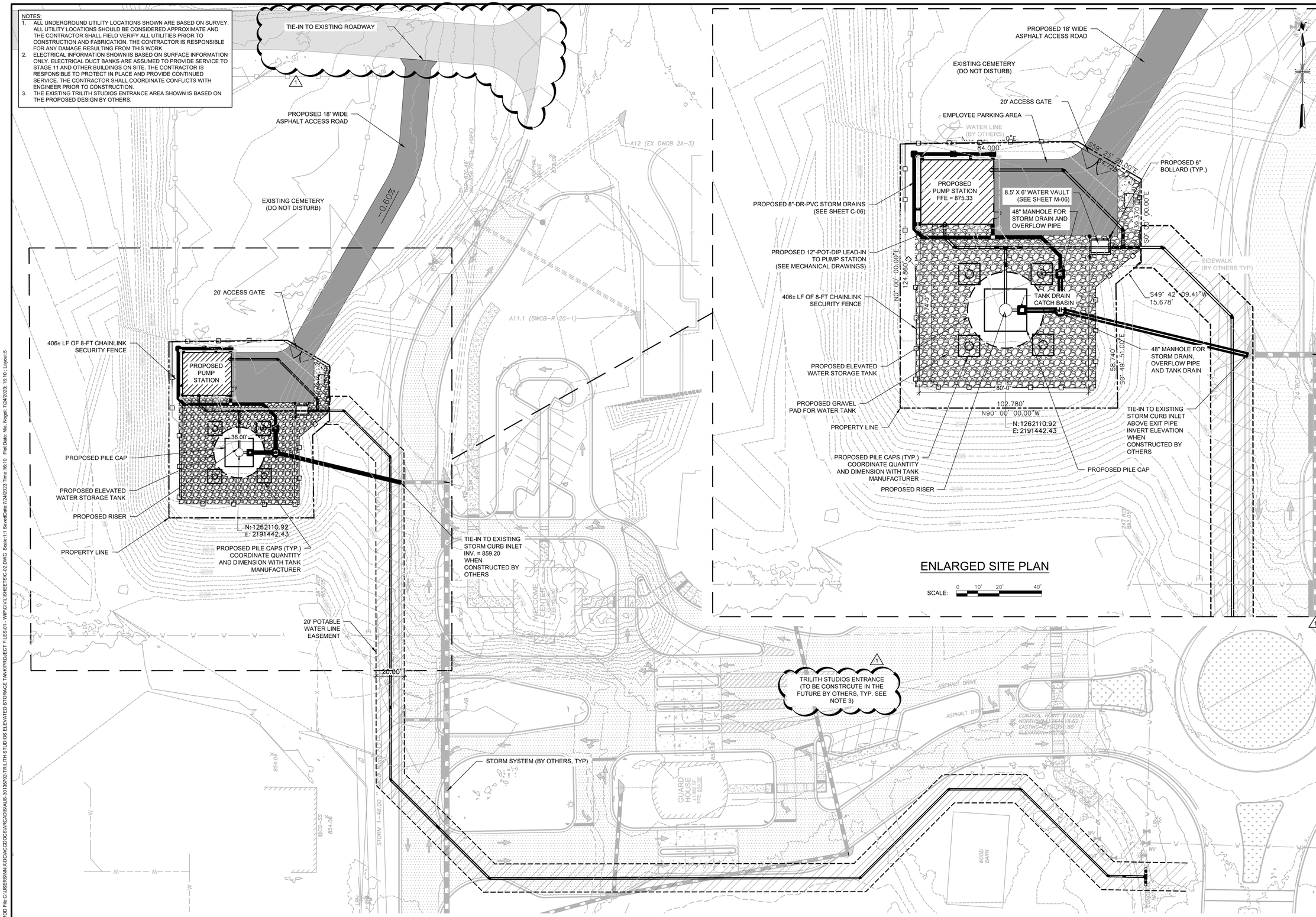
SCALE: AS SHOWN

C-01

SHEET 4 OF 62

811 Know what's **below.** **Call** before you dig.

NOTES:
1. ALL UNDERGROUND UTILITY LOCATIONS SHOWN ARE BASED ON SURVEY. ALL UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE AND THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION AND FABRICATION. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE RESULTING FROM THIS WORK.
2. ELECTRICAL INFORMATION SHOWN IS BASED ON SURFACE INFORMATION ONLY. ELECTRICAL DUCT BANKS ARE ASSUMED TO PROVIDE SERVICE TO STAGE 11 AND OTHER BUILDINGS ON SITE. THE CONTRACTOR IS RESPONSIBLE TO PROTECT IN PLACE AND PROVIDE CONTINUED SERVICE. THE CONTRACTOR SHALL COORDINATE CONFLICTS WITH ENGINEER PRIOR TO CONSTRUCTION.
3. THE EXISTING TRILITH STUDIOS ENTRANCE AREA SHOWN IS BASED ON THE PROPOSED DESIGN BY OTHERS.



Know what's **below.** **Call** before you dig.

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	C-02
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

CIVIL

OVERALL SITE PLAN

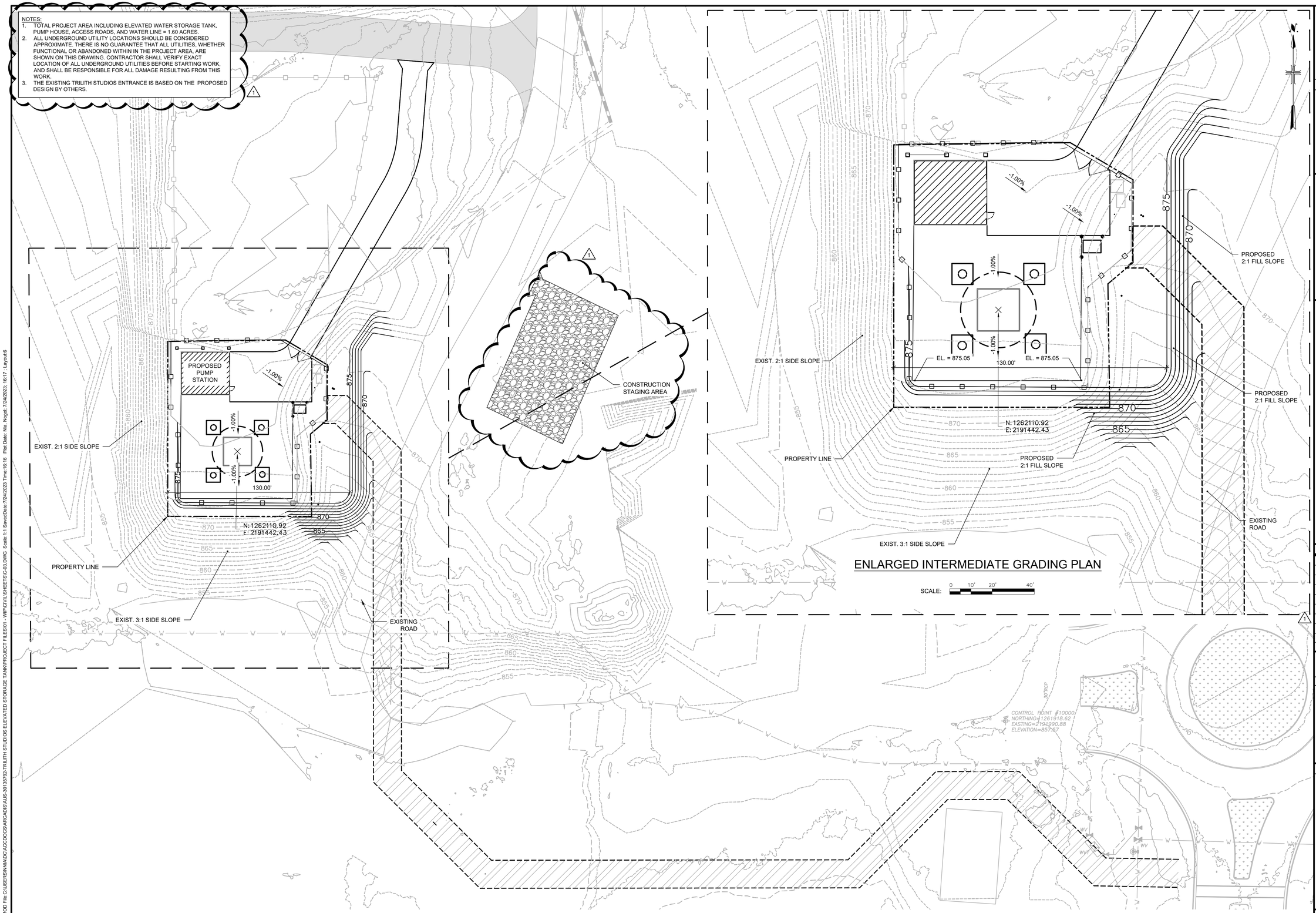
SCALE: AS SHOWN

C-02

SHEET 5 OF 62

User:NNIA Spec:AUS-NCSMOD File:C:\USERS\NNIA\DC\ACCDOCS\ARCADIS\AUS-30135792-TRILITH STUDIOS ELEVATED STORAGE TANK\PROJECT FILES\01 - WIP\CIVIL\SHEETS\C-02.DWG Scale:1:1 SavedDate:7/24/2023 Time:16:10 Plot Date: Nia, Nogal; 7/24/2023; 16:10 ; Layout:5

NOTES:
1. TOTAL PROJECT AREA INCLUDING ELEVATED WATER STORAGE TANK, PUMP HOUSE, ACCESS ROADS, AND WATER LINE = 1.60 ACRES.
2. ALL UNDERGROUND UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. THERE IS NO GUARANTEE THAT ALL UTILITIES, WHETHER FUNCTIONAL OR ABANDONED WITHIN IN THE PROJECT AREA, ARE SHOWN ON THIS DRAWING. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE STARTING WORK, AND SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM THIS WORK.
3. THE EXISTING TRILITH STUDIOS ENTRANCE IS BASED ON THE PROPOSED DESIGN BY OTHERS.



ENLARGED INTERMEDIATE GRADING PLAN

SCALE: 0 10' 20' 40'

Know what's **below.** **Call** before you dig.

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	DW

PROJECT STATUS: ISSUE FOR BID
PROJECT NO.: 30135792
DATE: JULY 2023
FILE NAME: C-03
DESIGNED BY: T. THOMAS
DRAWN BY: N. NIA
CHECKED BY: D. WILSON

SHEET TITLE

CIVIL

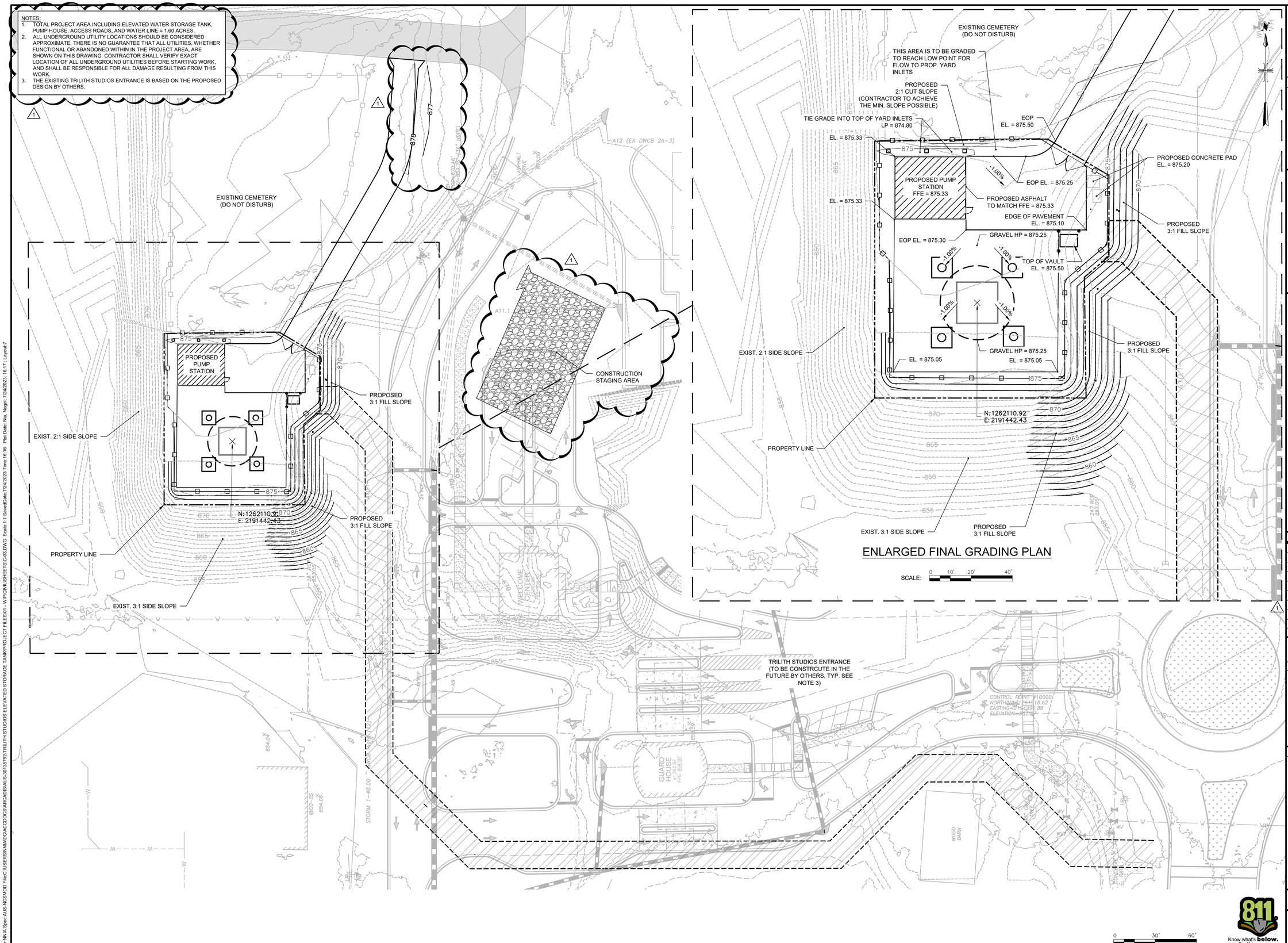
INTERMEDIATE GRADING PLAN

SCALE: 1" = 30'

C-03

SHEET 6 OF 62

NOTES:
1. TOTAL PROJECT AREA INCLUDING ELEVATED WATER STORAGE TANK, PUMP HOUSE, ACCESS ROADS, AND WATER LINE = 1.60 ACRES.
2. ALL UNDERGROUND UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. THERE IS NO GUARANTEE THAT ALL UTILITIES, WHETHER FUNCTIONAL OR ABANDONED WITHIN IN THE PROJECT AREA, ARE SHOWN ON THIS DRAWING. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE STARTING WORK, AND SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM THIS WORK.
3. THE EXISTING TRILITH STUDIOS ENTRANCE IS BASED ON THE PROPOSED DESIGN BY OTHERS.



ENLARGED FINAL GRADING PLAN

SCALE: 0 10' 20' 40'

0 30' 60'

Know what's **below.** **Call** before you dig.

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2028	ISSUE FOR BID	~~NW~~

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	C-04
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

CIVIL

FINAL GRADING PLAN

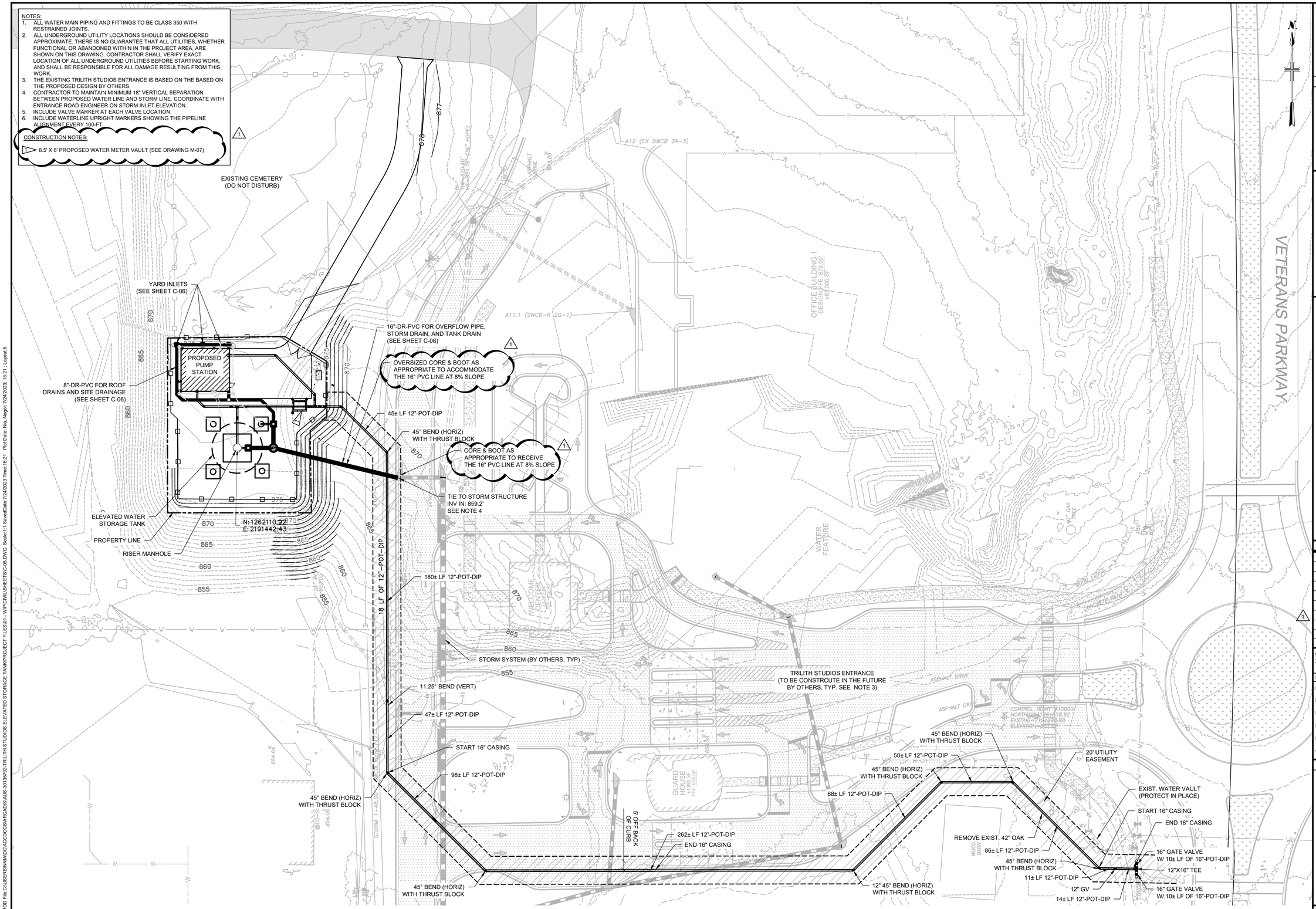
SCALE: 1" = 30'

C-04

SHEET 7 OF 62

NOTES:
1. ALL WATER MAIN PIPING AND FITTINGS TO BE CLASS 350 WITH RESTRAINED JOINTS.
2. ALL UNDERGROUND UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. THERE IS NO GUARANTEE THAT ALL UTILITIES, WHETHER FUNCTIONAL OR ABANDONED WITHIN IN THE PROJECT AREA, ARE SHOWN ON THIS DRAWING. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE STARTING WORK, AND SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM THIS WORK.
3. THE EXISTING TRILITH STUDIOS ENTRANCE IS BASED ON THE BASED ON THE PROPOSED DESIGN BY OTHERS.
4. CONTRACTOR TO MAINTAIN MINIMUM 18" VERTICAL SEPARATION BETWEEN PROPOSED WATER LINE AND STORM LINE. COORDINATE WITH ENTRANCE ROAD ENGINEER ON STORM INLET ELEVATION.
5. INCLUDE VALVE MARKER AT EACH VALVE LOCATION.
6. INCLUDE WATERLINE UPRIGHT MARKERS SHOWING THE PIPELINE ALIGNMENT EVERY 100-FT.

CONSTRUCTION NOTES:
1. 8.5' X 6' PROPOSED WATER METER VAULT (SEE DRAWING M-07)



Know what's below. Call before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	C-05
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

CIVIL

UTILITY PLAN

SCALE: AS SHOWN

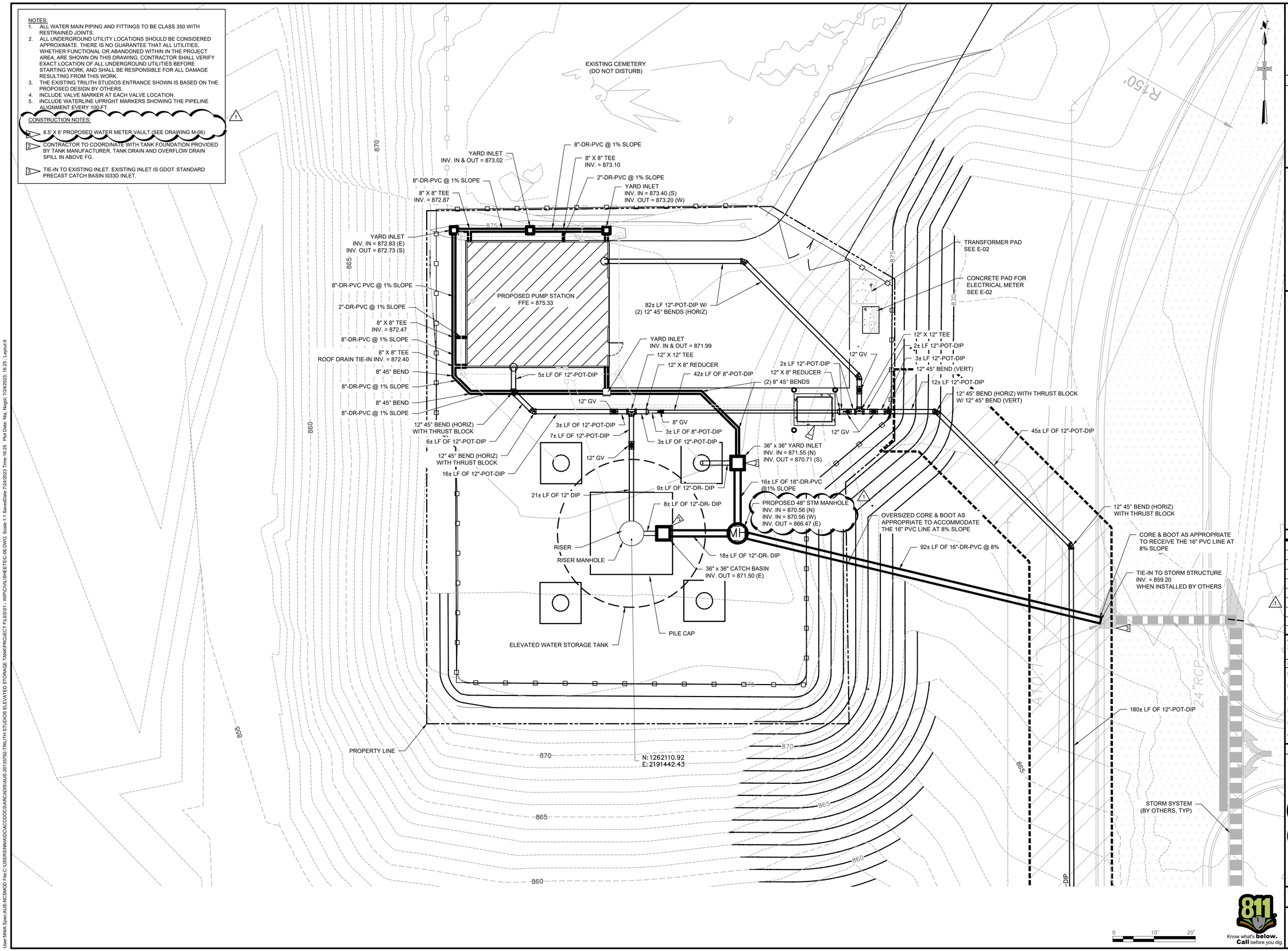
C-05

SHEET 8 OF 62

NOTES:
1. ALL WATER MAIN PIPING AND FITTINGS TO BE CLASS 350 WITH RESTRAINED JOINTS.
2. ALL UNDERGROUND UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. THERE IS NO GUARANTEE THAT ALL UTILITIES, WHETHER FUNCTIONAL OR ABANDONED WITHIN IN THE PROJECT AREA, ARE SHOWN ON THIS DRAWING. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE STARTING WORK, AND SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM THIS WORK.
3. THE EXISTING TRILITH STUDIOS ENTRANCE SHOWN IS BASED ON THE PROPOSED DESIGN BY OTHERS.
4. INCLUDE VALVE MARKER AT EACH VALVE LOCATION.
5. INCLUDE WATERLINE UPRIGHT MARKERS SHOWING THE PIPELINE ALIGNMENT EVERY 100-FT.

CONSTRUCTION NOTES:

1. 8.5' X 6' PROPOSED WATER METER VAULT (SEE DRAWING M-06)
2. CONTRACTOR TO COORDINATE WITH TANK FOUNDATION PROVIDED BY TANK MANUFACTURER. TANK DRAIN AND OVERFLOW DRAIN SPILL IN ABOVE FG.
3. TIE-IN TO EXISTING INLET. EXISTING INLET IS GDOT STANDARD PRECAST CATCH BASIN I033D INLET.



0 10' 20'

Know what's **below.** **Call** before you dig.

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FAYETTE County Water

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	C-06
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

CIVIL

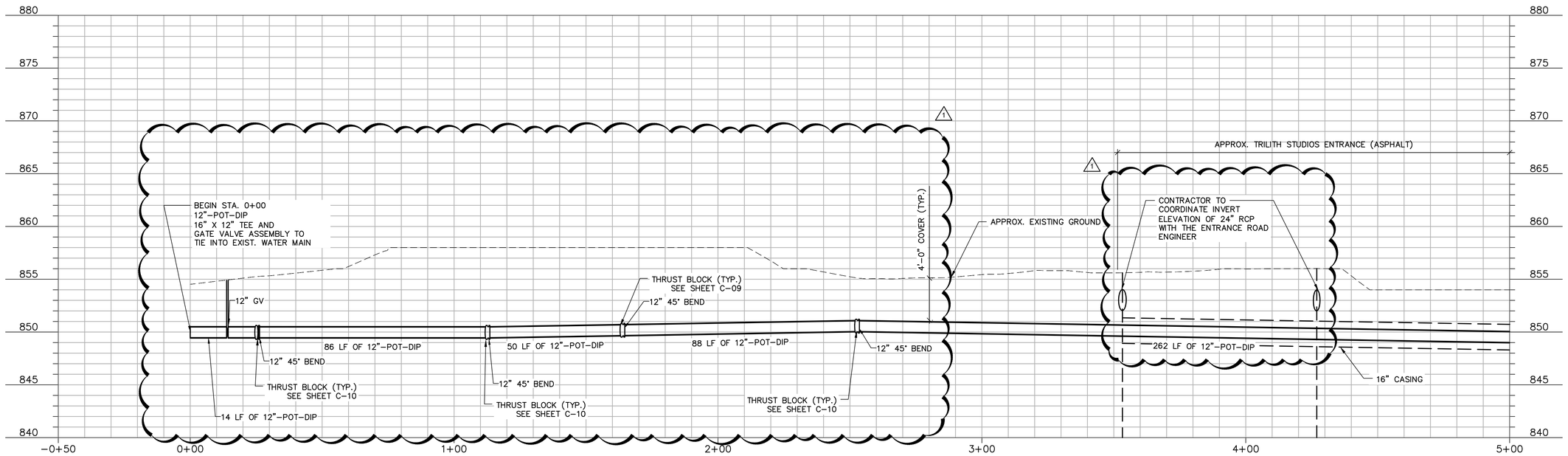
ENLARGED UTILITY PLAN FOR TANK AREA

SCALE: AS SHOWN

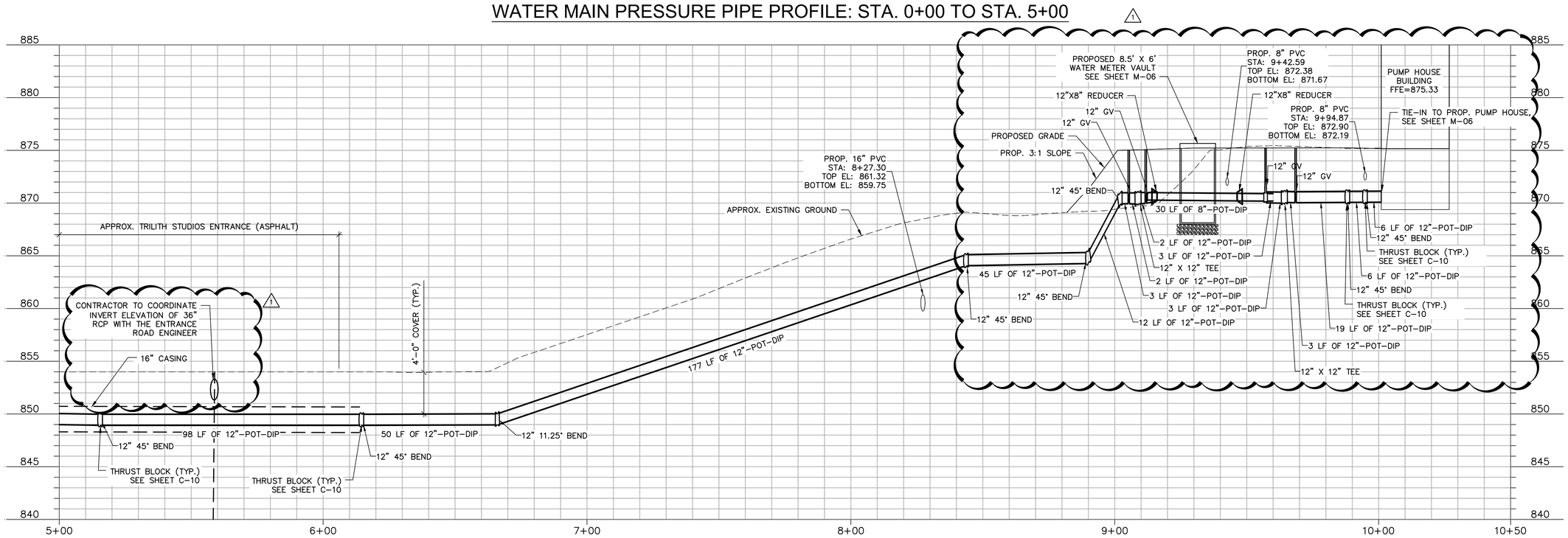
C-06

SHEET 9 OF 62

User:NNIA Spec:AUS-NCSMOD File:C:\USERS\NNIA\DOCACCDOCS\ARCADIS\AUS-30135792-TRILITH STUDIOS ELEVATED STORAGE TANK\PROJECT FILES\01 - WIP\CIVIL\SHEETS\C-06.DWG Scale:1:1 SavedDate:7/24/2023 Time:16:25 Plot Date: Nia, Noga; 7/24/2023; 16:25 ; Layout:9



WATER MAIN PRESSURE PIPE PROFILE: STA. 0+00 TO STA. 5+00



WATER MAIN PRESSURE PIPE PROFILE: STA. 5+00 TO STA. 9+78

NOTES:
1. ALL WATER MAIN PIPING AND FITTINGS TO BE CLASS 350 WITH RESTRAINED JOINTS.
2. ALL UNDERGROUND UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. THERE IS NO GUARANTEE THAT ALL UTILITIES, WHETHER FUNCTIONAL OR ABANDONED WITHIN IN THE PROJECT AREA, ARE SHOWN ON THIS DRAWING. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE STARTING WORK, AND SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM THIS WORK.

LEGEND
- EXISTING GROUND
- PROPOSED GROUND
- PROPOSED PRESSURE PIPE

SCALE: HORIZ. 0 10' 20' 40'
VERT. 0 5' 10'

Know what's **below.** **Call** before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FAYETTE County Water

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	C-07
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

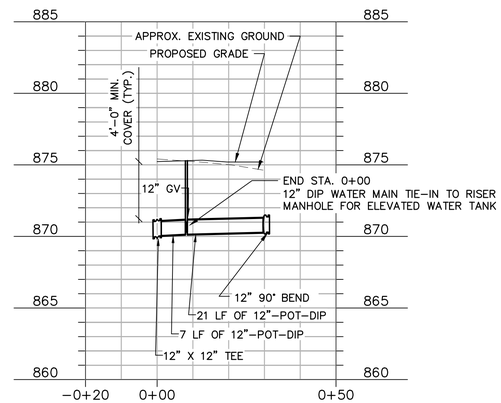
SHEET TITLE
CIVIL

PRESSURE PIPE PROFILES (SHEET 1 OF 2)

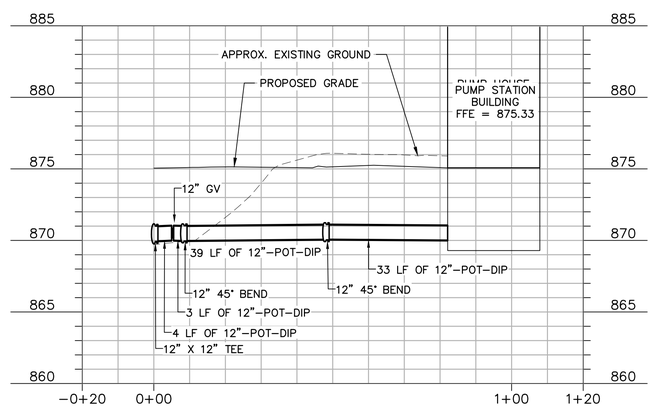
SCALE: AS SHOWN

C-07

SHEET 10 OF 62



WATER TANK TO 12"X12" TEE



PUMP STATION BUILDING TO WATER VAULT TEE

NOTES:
1. ALL WATER MAIN PIPING AND FITTINGS TO BE CLASS 350 WITH RESTRAINED JOINTS.
2. ALL UNDERGROUND UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. THERE IS NO GUARANTEE THAT ALL UTILITIES, WHETHER FUNCTIONAL OR ABANDONED WITHIN IN THE PROJECT AREA, ARE SHOWN ON THIS DRAWING. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE STARTING WORK, AND SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM THIS WORK.

LEGEND
- EXISTING GROUND
- PROPOSED GROUND
- PROPOSED PRESSURE PIPE

SCALE: HORIZ. 0 10' 20' 40'
VERT. 0 5' 10'

Know what's **below.** **Call** before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	C-07
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

CIVIL

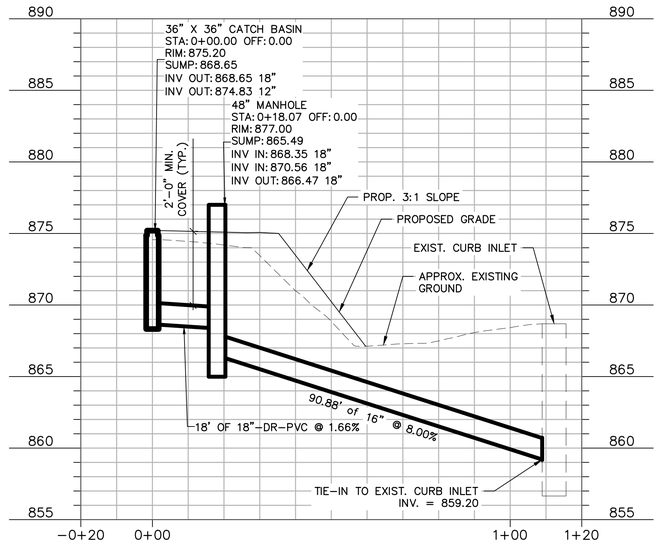
PRESSURE PIPE PROFILES (SHEET 2 OF 2)

SCALE: AS SHOWN

C-08

SHEET 11 OF 62

User:NNIA Spec:AUS-NCSMOD File:C:\USERS\NNIA\DC\ACCDOCS\ARCADIS\AUS-30135792-TRILITH STUDIOS ELEVATED STORAGE TANK\PROJECT FILES\01 - WIP\CIVIL\SHEETS\C-07.DWG Scale:1:1 SavedDate:7/24/2023 Time:16:31 Plot Date: Nia, Nogal; 7/24/2023; 16:31 ; Layout:L11



STORM SEWER LINE FROM TANK DRAIN CATCH BASIN TO EXISTING GDOT CURB INLET

NOTES:
1. ALL WATER MAIN PIPING AND FITTINGS TO BE CLASS 350 WITH RESTRAINED JOINTS.
2. ALL UNDERGROUND UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. THERE IS NO GUARANTEE THAT ALL UTILITIES, WHETHER FUNCTIONAL OR ABANDONED WITHIN IN THE PROJECT AREA, ARE SHOWN ON THIS DRAWING. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE STARTING WORK, AND SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM THIS WORK.

LEGEND
- EXISTING GROUND
- PROPOSED GROUND
- PROPOSED STORM SEWER PIPE

SCALE: HORIZ. 0 10' 20' 40'
VERT. 0 5' 10'

Know what's **below.** **Call** before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.: 30135792
DATE: JULY 2023
FILE NAME: C-07
DESIGNED BY: T. THOMAS
DRAWN BY: N. NIA
CHECKED BY: D. WILSON

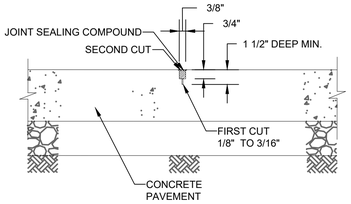
SHEET TITLE
CIVIL

STORM SEWER PROFILES

SCALE: AS SHOWN

C-09

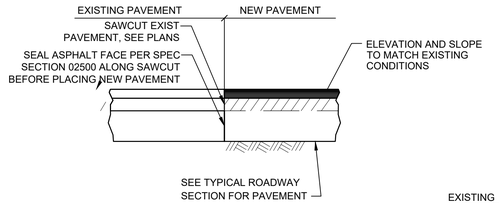
SHEET 12 OF 62



NOTE:
ALLOW 30 DAYS CONC. CURING THEN FILL JOINTS W/ "DYNATRED" POLYURETHANE NON-SAG TRAFFIC GRADE SEALANT PECORA CORP. (W/ PRIMERS) OR APPROVED EQUAL, APPLIED IN ACCORDANCE W/ MANUFACTURERS INSTRUCTIONS.

SAWED CONTROL JOINT

NTS

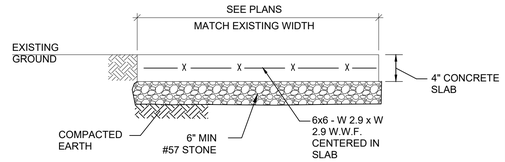


NOTES:
1. JOINT SHALL BE SMOOTH AND PATCH TO BE LEVEL FROM ONE END TO THE OTHER. IF SURFACE IS NOT SMOOTH, GRIND ASPHALT TO PROVIDE SMOOTH SURFACE.

ASPHALT TO ASPHALT TRANSITION

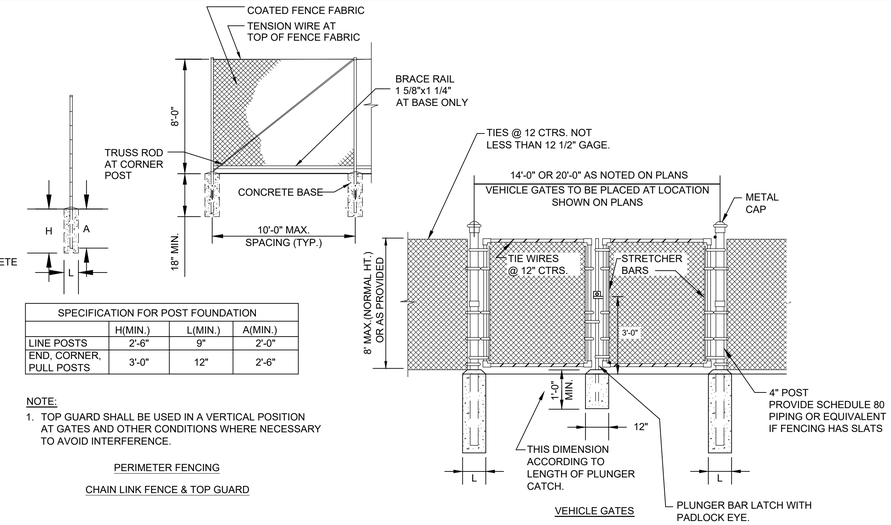
PAVEMENT TRANSITION DETAIL

NTS



CONCRETE PAVEMENT

NTS



SPECIFICATION FOR POST FOUNDATION			
	H(MIN.)	L(MIN.)	A(MIN.)
LINE POSTS	2'-6"	9"	2'-0"
END, CORNER, PULL POSTS	3'-0"	12"	2'-6"

NOTE:
1. TOP GUARD SHALL BE USED IN A VERTICAL POSITION AT GATES AND OTHER CONDITIONS WHERE NECESSARY TO AVOID INTERFERENCE.

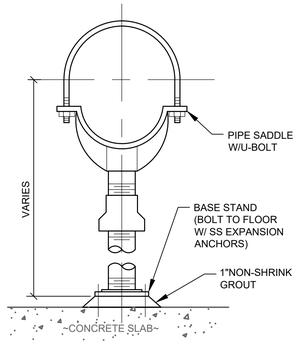
PERIMETER FENCING

CHAIN LINK FENCE & TOP GUARD

VEHICLE GATES

CHAIN LINK PERIMETER FENCING AND GATE DETAILS

NOT TO SCALE.

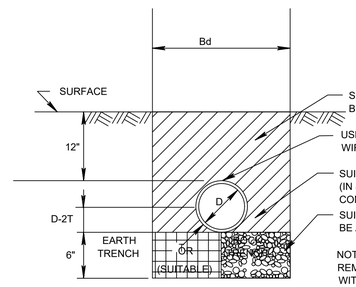


STANCHION SADDLE
PIPE SUPPORT DETAIL

NTS

PIPE OR CASING DIA INCHES	Bd TRENCH WIDTH TOP OF PIPE FEET
4"	2.00
6"	2.00
8"	2.33
10"	2.50
12"	2.67
15"	3.00
18"	3.25
20"	3.54
24"	3.83

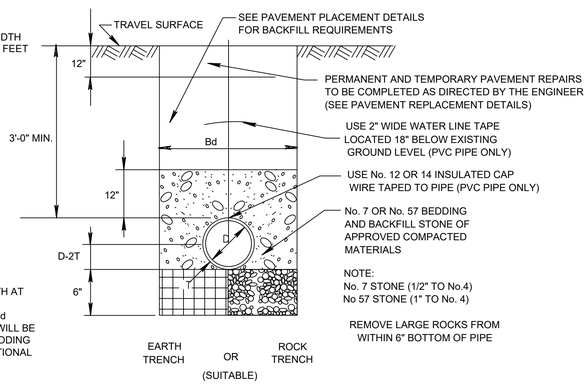
Bd - MAXIMUM TRENCH WIDTH AT 12" ABOVE TOP OF PIPE IF DITCH IS CUT WIDER THAN Bd SHOWN THE CONTRACTOR WILL BE REQUIRED TO INCREASE BEDDING TO COMPENSATE FOR ADDITIONAL LOAD ON PIPE AT HIS OWN EXPENSE.



NOTE:
REMOVE LARGE ROCKS FROM WITHIN 6" BOTTOM OF PIPE

WATER LINE DETAILS FOR PVC & D.I. PIPE OPEN AREAS

PIPE OR CASING DIA INCHES	Bd TRENCH WIDTH TOP OF PIPE FEET
4"	2.00
6"	2.00
8"	2.33
10"	2.50
12"	2.67
15"	3.00
18"	3.25
20"	3.54
24"	3.83



Bd - MAXIMUM TRENCH WIDTH AT 12" ABOVE TOP OF PIPE IF DITCH IS CUT WIDER THAN Bd SHOWN THE CONTRACTOR WILL BE REQUIRED TO INCREASE BEDDING TO COMPENSATE FOR ADDITIONAL LOAD ON PIPE AT HIS OWN EXPENSE.

NOTE:
No. 7 STONE (1/2" TO No.4)
No 57 STONE (1" TO No. 4)

REMOVE LARGE ROCKS FROM WITHIN 6" BOTTOM OF PIPE

WATER LINE DETAILS FOR PVC & D.I. PIPE TRAVELED AREAS

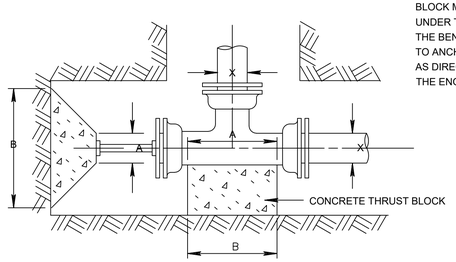
PIPE SIZE X	A	B	DEPTH C
90° BEND			
12"	1'-6"	2'-0"	3'-0"
10"	1'-4"	2'-0"	2'-6"
8"	1'-0"	1'-6"	2'-0"
6"	1'-0"	1'-0"	2'-0"
4"	0'-9"	1'-0"	1'-0"
45° BEND			
12"	1'-0"	3'-4"	1'-0"
10"	0'-9"	2'-6"	1'-0"
8"	0'-9"	1'-6"	1'-0"
6"	0'-9"	1'-0"	1'-0"
4"	0'-6"	1'-0"	1'-0"
22 1/2° BEND			
12"	1'-0"	1'-9"	1'-0"
10"	0'-9"	1'-6"	0'-10"
8"	0'-9"	1'-0"	0'-8"
6"	0'-9"	1'-0"	0'-6"
4"	0'-6"	1'-0"	0'-4"

TABLE OF DIMENSIONS FOR HORIZONTAL & VERTICAL SAG BENDS.

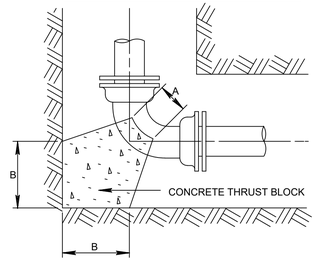
PIPE SIZE X	A	B	DEPTH C
11 1/4° BEND			
12"	1'-0"	1'-0"	1'-0"
10"	0'-9"	1'-0"	0'-10"
8"	0'-9"	1'-0"	0'-8"
6"	0'-9"	1'-0"	0'-6"
4"	0'-6"	1'-0"	0'-4"
UNBALANCED TEE & PLUG			
12"	2'-0"	4'-6"	2'-0"
10"	1'-0"	3'-0"	2'-0"
8"	1'-0"	2'-9"	1'-6"
6"	1'-0"	1'-0"	1'-0"
4"	1'-0"	1'-0"	1'-0"
TEE			
12"	2'-0"	4'-6"	2'-0"
10"	1'-9"	3'-0"	2'-0"
8"	1'-6"	2'-9"	1'-6"
6"	1'-0"	1'-0"	1'-0"
4"	1'-0"	1'-0"	1'-0"

TABLE OF DIMENSIONS FOR HORIZONTAL & VERTICAL SAG BENDS.

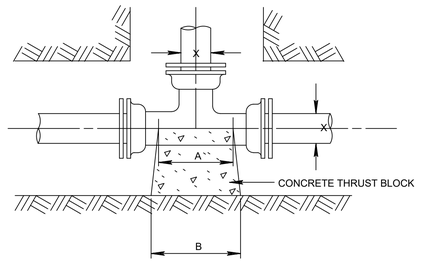
NOTE:
BLOCK MAY BE POURED UNDER THE BEND WITH THE BEND STRAPPED TO ANCHOR.
AS DIRECTED BY THE ENGINEER.



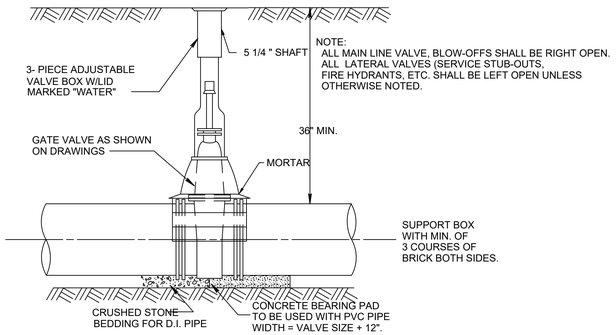
PLAN-TYPICAL PLUG



PLAN-TYPICAL HORIZONTAL BEND



PLAN-TYPICAL TEE



NOTE:
ALL MAIN LINE VALVE, BLOW-OFFS SHALL BE RIGHT OPEN. ALL LATERAL VALVES (SERVICE STUB-OUTS, FIRE HYDRANTS, ETC. SHALL BE LEFT OPEN UNLESS OTHERWISE NOTED.

TYPICAL VALVE BOX AND GATE VALVE PIPE DIAMETER OR LESS

Know what's **below.** **Call** before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	C-10
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

CIVIL

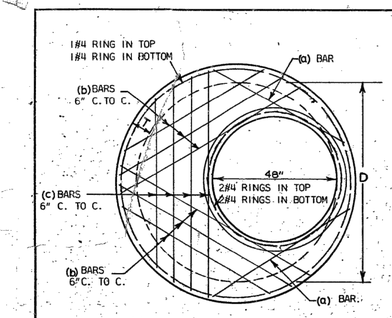
CIVIL DETAILS (SHEET 1 OF 2)

SCALE: AS SHOWN

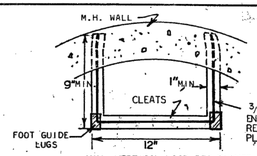
C-10

SHEET 13 OF 62

User:NNIA Spec:AUS-NCSMOD File:C:\USERS\NNIA\DC\ACCDOCS\ARCADIS\AUS-30135792-TRILITH STUDIOS ELEVATED STORAGE TANK\PROJECT FILES\01 - WIP\CIVIL\SHEETS\C-10.DWG Scale:1:1 SavedDate:7/24/2023 Time:16:35 Plot Date: Nia, Nogal; 7/24/2023; 16:36 ; Layout:L13



PLAN OF STEEL REINFORCEMENT

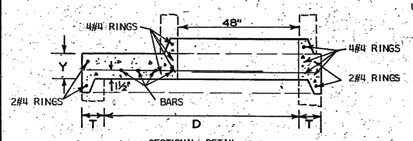


MIN. VERTICAL LOAD RESISTANCE = 400 LBS.
MIN. PULLOUT RESISTANCE = 700 LBS.

STEP DETAIL

D	Y MIN.	(a) BARS No.	(a) BARS SIZE	(b) BARS No.	(b) BARS SIZE	(c) BARS No.	(c) BARS SIZE
60"	8"	2	#6	4	#6	2	#6
72"	9"	2	#6	6	#6	4	#6

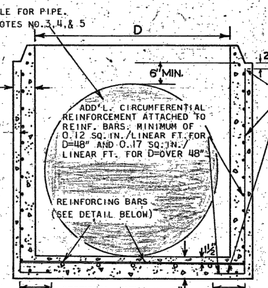
NOTE: 10 FT. MAXIMUM ALLOWANCE COVER ABOVE TOP OF REDUCER SLABS. REDUCER CONES TO BE USED WHERE REDUCER SLABS NOT PERMITTED.



SECTIONAL DETAIL
REDUCER SLAB

D = INSIDE DIAMETER OF BASE UNIT

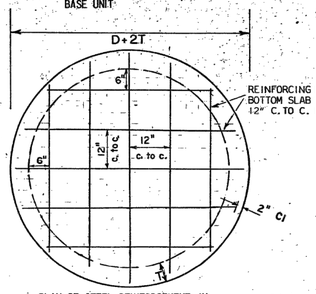
PRECAST HOLE FOR PIPE. SEE GEN. NOTES NO. 3, 4, & 5



SECTIONAL DETAIL
BASE UNIT

BASE UNIT SHALL CONTAIN IN ADDITION TO A.S.T.M. C-478 REINFORCEMENT, TWO NO. 5 VERTICAL BARS AT EACH OPENING EXTENDING FROM WITHIN 2" OF JOINT DOWN WALL INTO BOTTOM SLAB AS SHOWN MINIMUM 2" CLEARANCE ALL AROUND.

D	T (MIN)
48"	5"
60"	5"
72"	6"

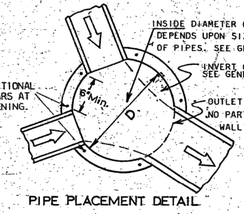


REINFORCING BARS IN TOP OF BOTTOM SLAB MAXIMUM SPACING 12" C. TO C. BOTH WAYS

D	BAR SIZE
48"	#5
60"	#6
72"	#6

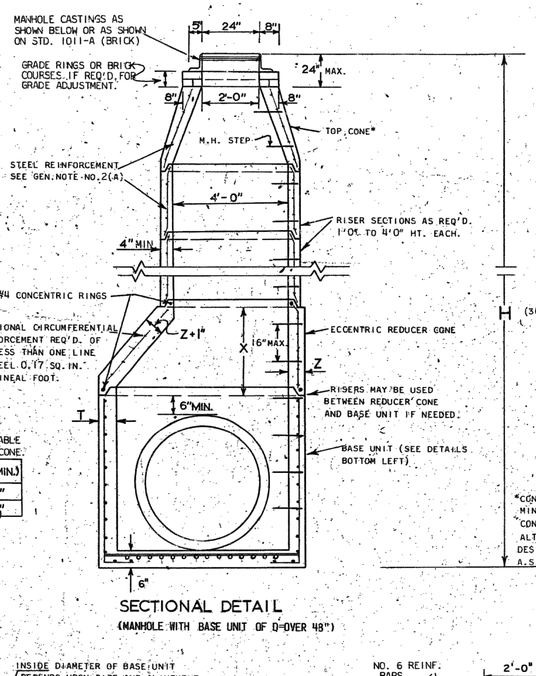
PLAN OF STEEL REINFORCEMENT IN BOTTOM SLAB

BASE UNIT



PIPE PLACEMENT DETAIL

STEPS ARE REQUIRED IN ALL MANHOLES OVER 4 FT. IN HEIGHT.

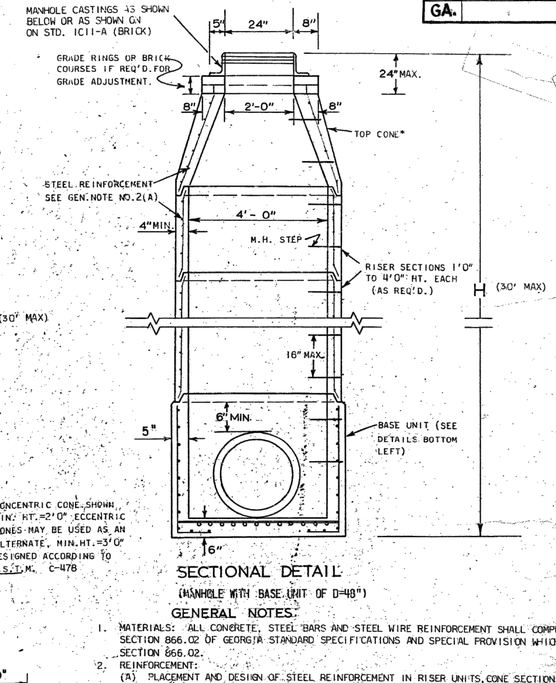


SECTIONAL DETAIL
(MANHOLE WITH BASE UNIT OF D=OVER 48")

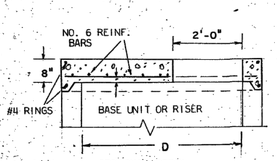
NOTE:
25 FT. MAXIMUM ALLOWABLE COVER ABOVE REDUCER CONE.

D	X (MIN.)	Z (MIN.)
60"	1'-6"	5"
72"	3'-0"	6"

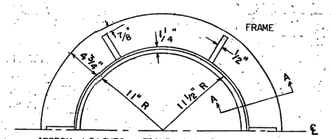
*CONCENTRIC CONE SHOWN. MIN. HT. = 2'0" ECCENTRIC CONES MAY BE USED AS AN ALTERNATE. MIN. HT. = 3'0" DESIGNED ACCORDING TO A.S.T.M. C-478



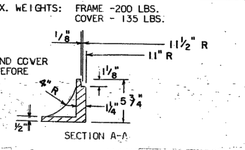
SECTIONAL DETAIL
(MANHOLE WITH BASE UNIT OF D=48")



SECTIONAL DETAIL



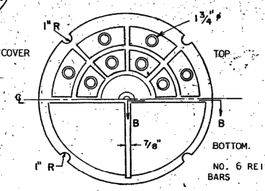
APPROX. WEIGHTS: FRAME - 200 LBS.
COVER - 135 LBS.

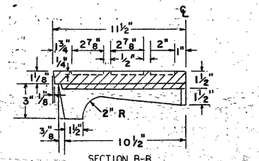


NOTE: FRAME AND COVER TO BE FITTED BEFORE LEAVING SHOP.

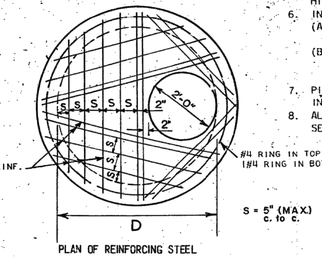
SECTION A-A

MANHOLE CASTINGS (C.I.)





SECTION B-B



PLAN OF REINFORCING STEEL

FLAT TOP SLAB IS FOR USE IN AREA OF MINIMUM COVER ONLY. MAXIMUM HEIGHT OF MANHOLE WITH FLAT TOP SLAB SHALL BE 4 FT. ABOVE TOP OF HIGHEST ENTERING PIPE.

FLAT TOP SLAB

GENERAL NOTES.

1. MATERIALS: ALL CONCRETE, STEEL BARS AND STEEL WIRE REINFORCEMENT SHALL COMPLY WITH SECTION 866.02 OF GEORGIA STANDARD SPECIFICATIONS AND SPECIAL PROVISION WHICH MODIFY SECTION 866.02.
2. REINFORCEMENT:
   (A) PLACEMENT AND DESIGN OF STEEL REINFORCEMENT IN RISER UNITS, CONE SECTIONS, GRADE RINGS AND JOINTS SHALL BE IN COMPLIANCE WITH A.S.T.M. C-478 UNLESS OTHERWISE NOTED.
   (B) BASE UNITS, REDUCER SLABS AND FLAT TOP SLABS SHALL HAVE STEEL REINFORCEMENT AS SHOWN IN DETAILS AT LEFT.
3. OPENINGS FOR PIPES LARGER THAN 6 INCHES IN DIAMETER ARE TO BE PRECAST. A MINIMUM OF 6" ALONG THE INTERCIRCUMFERENCE IS TO REMAIN BETWEEN THE EXTREMITIES OF HOLE FOR ADJACENT PIPE IN ANY SINGLE UNIT. A MINIMUM OF TWO REINF. BARS SHALL REMAIN IN WALL BETWEEN ANY TWO OPENINGS.
4. THE CONTRACTOR WILL FURNISH THE FABRICATOR WITH THE ANGLE OF ALINEMENT AND SIZE OF ALL PIPES TO ENTER MANHOLE AND THE HEIGHT OF STRUCTURE.
5. BASE UNITS SHALL HAVE SUFFICIENT HEIGHT TO ALLOW FOR MINIMUM OF 6" OF WALL BETWEEN TOP OF HIGHEST OPENING FOR PIPES AND BOTTOM OF JOINT.
6. INVERT CHANNELS:
   (A) FOR SANITARY SEWER MANHOLES SEE GEORGIA STANDARD SPECIFICATIONS FOR CHANNEL REQUIREMENTS.
   (B) FOR STORM SEWER MANHOLES, CHANNELS BUILT TO SUIT PIPE SIZES AND LOCATION. HEIGHT OF CHANNEL EQUAL TO 1/2 DIAMETER OF OUTLET PIPE. CHANNEL BUILT FROM GROUT OR CLASS "A" CONCRETE.
7. PIPES ARE TO BE EXTENDED INTO STRUCTURE WALL A MINIMUM OF 4" BUT SHOULD NOT EXTEND BEYOND INTERIOR WALL OF STRUCTURE.
8. ALL JOINTS, EXCEPT FOR GRADE RINGS AND TOP OF TOP CONE, SHALL HAVE TONGUE AND GROOVE SECTION.

REVISIONS	DATE	
CASTINGS & BASE U.	6-1-75	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
PRECAST REINFORCED CONCRETE MANHOLE

NO SCALE — AUGUST, 1973

DESIGNED: GCL
DRAWN: RNU
CHECKED: JFC
SUBMITTED: A. J. Kretchmer — STATE ROAD DESIGN ENGINEER
APPROVED: — STATE HIGHWAY ENGINEER

NUMBER 1011-A
PRECAST

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	C-10
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

CIVIL

CIVIL DETAILS
(SHEET 2 OF 2)

SCALE:
AS SHOWN

C-11

SHEET 14 OF 62

Know what's below. Call before you dig.

User:NNIA Spec:AUS-NCSMOD File:C:\USERS\NNIA\DACCDOCS\ARCADIS\AUS-30135792-TRILITH STUDIOS ELEVATED STORAGE TANK\PROJECT FILES\01 - WIP\CIVIL\SHEETS\C-10.DWG Scale:1:1 SavedDate:7/24/2023 Time:16:35 Plot Date: Nia, Noga6: 7/24/2023; 16:36 ; Layout:L14

GEORGIA
UNIFORM CODING SYSTEM
FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES
GEORGIA SOIL AND WATER CONSERVATION COMMISSION

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT		Co (LABEL)	A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION		Cr	A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE		Dn1 (LABEL)	A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE		Dn2 (LABEL)	A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE		Gr (LABEL)	Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL		Re (LABEL)	A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING		Rt (LABEL)	A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER		TYPE (SHOW TYPE)	A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP		Sd2	An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN		Sd3 (LABEL)	A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER		Sk (LABEL)	A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
Spb	SEEP BERM		Spb (LABEL)	A linear control device constructed as a diversion perpendicular to the direction of the runoff to enhance dissipation and infiltration of runoff, while creating multiple sedimentation chambers with the employment of intermediate dikes.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING		Sr (LABEL)	A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN OUTLET PROTECTION		St (LABEL)	A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING		Su	A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN		Tc	A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Tp	TOPSOILING		Tp (SHOW STRIPPING STORAGE AREAS)	The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION		(SHOWS TREE CANOPY)	To protect desirable trees from injury during construction activity.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE		Bf (LABEL)	Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)		Cs (LABEL)	Planting vegetation on dunes that are denuded, artificially constructed, or re-nourished.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		Ds1	Establishing temporary protection for disturbed areas where seedings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)		Ds3	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SODDING)		Ds4	A permanent vegetative cover using sods on highly erodable or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fl-Co	FLOCCULANTS AND COAGULANTS		Fl-Co	Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (USING PERM VEGETATION)		Sb	The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION		Ss	A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKIFIERS AND BINDERS		Tac	Substance used to anchor straw or hay mulch by causing the organic material to bind together.

CONSTRUCTION SEQUENCE:

1. FOR EACH STAGE OF CONSTRUCTION THE FOLLOWING SEQUENCE WILL APPLY:

1.1. CONFIRM LOCATIONS OF AND CONSTRUCT/INSTALL INITIAL EROSION AND SEDIMENT CONTROL BMPS WITHIN THE LIMITS OF THE STAGE PRIOR TO ANY OTHER CONSTRUCTION ACTIVITIES ON SITE. INITIAL EROSION AND SEDIMENT CONTROL BMPS SHALL INCLUDE THE FOLLOWING: CONSTRUCTION FENCING, TREE PROTECTION FENCING, SILT FENCING, INLET SEDIMENT TRAPS, SAND BAG SEDIMENT BARRIER, AND CONSTRUCTION ENTRANCES. ALL EROSION AND SEDIMENT CONTROL BMPS TO BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS.

1.2. CLEAR AND GRUB TO THE LIMITS REQUIRED FOR CONSTRUCTION AND REMOVE EXISTING TREES AS SHOWN ON THE PLANS.

1.3. EXCAVATE TRENCHES FOR INSTALLATION OF THE WATER INFRASTRUCTURE PIPING, AS NECESSARY, CONSTRUCT PIPE DIVERSIONS TO DIVERT AND BYPASS RUNOFF FROM EXISTING SYSTEM.

1.4. BEGIN INTERMEDIATE PHASE EXCAVATION AND GRADING ACTIVITIES AFTER ALL REQUIRED INITIAL EROSION CONTROL MEASURES HAVE BEEN INSTALLED AND CONSTRUCTED.

1.5. BEGIN CONSTRUCTION OF WATER TANK AND WATER INFRASTRUCTURE PIPING, UTILITY RELOCATIONS, CURB AND GUTTER, DRIVEWAYS, ROADWAYS, AND REMAINING STRUCTURES AS SHOWN ON PLANS. INSTALL INLET PROTECTION AS SHOWN ON PLANS.

1.6. ESTABLISH FINISHED GRADES AT EARLIEST POSSIBLE DATE. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY VEGETATION AND MULCH IF LAND-DISTURBING ACTIVITIES CEASE FOR MORE THAN 14 CALENDAR DAYS IN ACCORDANCE WITH NPDES REQUIREMENTS. ONCE FINAL GRADES ARE ESTABLISHED, APPLY PERMANENT SOIL STABILIZATION IN ACCORDANCE WITH PLANS. ANY DISTURBED AREA REMAINING IDLE FOR 30 DAYS SHALL BE STABILIZED WITH PERMANENT VEGETATION.

2. THE FOLLOWING SHALL APPLY AFTER ALL CONSTRUCTION STAGES ARE COMPLETE:

2.1. AFTER FINAL STABILIZATION FOR THE PROJECT AS DEFINED BY NPDES GAR100001 IS ACHIEVED, RETURN TO THE SITE AND REMOVE ALL TEMPORARY MEASURES INCLUDING SILT FENCES, SEDIMENT TRAPS, AND DIVERSIONS. INSTALL PERMANENT VEGETATION TO ALL AREAS (EXCEPT IMPERVIOUS SURFACES) DISTURBED BY THE TEMPORARY MEASURES.

2.2. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES INCLUDING CONSTRUCTION FENCING, TREE PROTECTION FENCING, AND CONSTRUCTION ENTRANCES WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION.

DAVID A WILSON
GSWCC LEVEL II CERTIFICATION NO. 0000044976
EXPIRES 10/02/2025

MANAGEMENT PLAN:

ALL EROSION CONTROL MEASURES SHALL BE INSPECTED DAILY AND AFTER EVERY RAINFALL. ALL NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO PREVENT FURTHER DAMAGE AND EROSION. STRUCTURES THAT SHALL BE INSPECTED INCLUDE:

1. SEDIMENT BARRIER - SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER. SEDIMENT BARRIERS SHALL BE REPLACED PER MANUFACTURER'S RECOMMENDATIONS OR THE HEIGHT OF THE PRODUCT IS NOT MAINTAINING 80% OF ITS PROPERLY INSTALLED HEIGHT.
2. STORM DRAIN INLET PROTECTION - INSPECT STONE FILTER RING INLET STRUCTURE AFTER HEAVY RAINS TO SEE IF ANY EROSION AROUND OR BELOW THE FILTER RING HAS TAKEN PLACE OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.
3. SLOPE STABILIZATION - ALL EROSION CONTROL BLANKETS AND MATTING SHOULD BE INSPECTED PERIODICALLY FOLLOWING INSTALLATION, PARTICULARLY AFTER RAINSTORMS TO CHECK FOR EROSION AND UNDERMINING. ANY DISLOCATION OR FAILURE SHOULD BE REPAIRED IMMEDIATELY. IF WASHOUTS OR BREAKAGE OCCURS, REINSTALL THE MATERIAL AFTER REPAIRING DAMAGE TO THE SLOPE OR DITCH. CONTINUE TO MONITOR THESE AREAS UNTIL THEY BECOME PERMANENTLY STABILIZED.
4. INLET SEDIMENT TRAP - TRAP SHOULD BE CLEANED OUT AFTER HEAVY RAIN EVENTS. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE HEIGHT OF THE TRAP.
5. SEEDING, FERTILIZING, AND MULCHING - SEEDED AREAS SHALL BE INSPECTED FOR FAILURE AND NECESSARY REPAIRS SHALL BE MADE IMMEDIATELY.
6. CONSTRUCTION ENTRANCE/EXIT - INSPECT CONSTRUCTION ROAD SURFACE DAILY. MAINTAIN WHEN NEEDED IN A CONDITION TO PREVENT SEDIMENT AND TOPSOIL FROM LEAVING THE SITE.

SITE NOTES:

1. PROJECT IS LOCATED IN FAYETTE COUNTY WITHIN THE CITY OF FAYETTEVILLE, GEORGIA.
2. PROJECT LATITUDE/LONGITUDE: (33.469325, -84.511536)
3. APPROXIMATE TOTAL DISTURBED ACREAGE OF THE TRILITH STUDIOS ELEVATED WATER TANK SITE IS 1.60 ACRES.
4. THE STORMWATER RUNOFF FOR THIS PROJECT FLOWS INTO TRILITH STUDIO'S POND #5 WHICH DISCHARGES TO SANDY CREEK. SEE STORMWATER MANAGEMENT REPORT ISSUED BY ROCHESTER & ASSOCIATES FOR DETAILS.
5. IT IS ANTICIPATED THAT THE PROJECT WILL NOT HAVE ANY BUFFER ENCROACHMENTS AND BUFFER VARIANCE WILL NOT BE REQUIRED.
6. WETLAND CERTIFICATION: THE DESIGN PROFESSIONAL, WHOSE SEAL APPEARS HEREON, CERTIFIES THE FOLLOWING: THE NATIONAL WETLAND INVENTORY MAPS HAVE BEEN CONSULTED; AND, WETLANDS ARE INDICATED ON THE PROPERTY; HOWEVER, NO PORTION OF PROPOSED PROJECT AND DISTURBED AREA IS WITHIN THE WETLAND AREA. THE LAND DISTURBANCE OF PROTECTED WETLAND SHALL NOT OCCUR.
7. NO PORTION OF THIS SITE LIES WITHIN A SPECIAL FLOOD HAZARD ZONE "AE" OR "A". THE SITE LIES WITHIN THE FIRM MAPS OF THE CITY OF FAYETTEVILLE FLOOD INSURANCE STUDY. FIRM MAP NUMBERS: 13113C0082E AND 13113CO084E, EFFECTIVE DATE: SEPTEMBER 26, 2008.
8. THE PRE-DEVELOPMENT RUNOFF COEFFICIENT (CN) IS 61 AND THE POST-DEVELOPMENT RUNOFF COEFFICIENT IS 92. SEE STORMWATER MANAGEMENT REPORT ISSUED BY ROCHESTER & ASSOCIATES FOR DETAILS.
9. MAINTENANCE AND TRAFFIC: THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL ROAD PERMITS FROM CITY OF FAYETTEVILLE AS NECESSARY.
10. PRIMARY PERMITTEE & 24-HOUR CONTACT:
    VANESSA TIGERT
    FAYETTE COUNTY WATER SYSTEM
    ADDRESS: 245 MCDONOUGH RD.
    FAYETTEVILLE, GA 30214
    PHONE: 770-320-6016
    EMAIL: VTIGERT@FAYETTECOUNTYGA.GOV

1

EROSION CONTROL

1. EROSION CONTROL PRACTICES MUST COMPLY WITH THE MINIMUM BEST MANAGEMENT PRACTICES FOR EROSION CONTROL AND SHALL COMPLY WITH THE "STANDARDS / SPECIFICATIONS IN THE "MANUAL FOR EROSION CONTROL AND SEDIMENT CONTROL IN GEORGIA", LATEST EDITION.
2. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE.
3. PERMANENT VEGETATION SHALL BE PLACED AT ALL AREAS GRADED TO FINAL GRADE IMMEDIATELY UPON COMPLETION. WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING. DURING UNSUITABLE GROWING SEASONS, MULCH WILL BE USED AS A TEMPORARY COVER (DS1). ON SLOPES THAT ARE 2:1 OR STEEPER, MULCH WILL BE ANCHORED.
4. IN CONCENTRATED FLOW AREAS, ALL SLOPES STEEPER THAN 2.5:1 AND WITH THE HEIGHT TEN FEET OR GREATER, AND CUTS AND FILLS WITHIN STREAM BUFFER, SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKET.
5. SEDIMENT / EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN ANY ADDITIONAL EROSION CONTROL MEASURES AS DIRECTED BY THE GOVERNING JURISDICTION AND/OR THE ENGINEER.
6. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL DEVICES AND ENSURE THAT THEY ARE PROPERLY FUNCTIONING PRIOR TO ANY LAND DISTURBANCE ACTIVITIES.
7. AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMPS WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
8. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
9. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
10. ANY DISTURBED AREAS LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
11. BUILDING MATERIALS AND BUILDING PRODUCTS NOT IN USE SHALL BE COVERED BY HEAVY PLASTIC.

GSWCC Georgia Soil and Water Conservation Commission
David A Wilson
Level II Certified Design Professional
Certification Number 0000044976
Issued: 10/02/2022 Expires: 10/02/2025

CONSTRUCTION SCHEDULE

ACTIVITY	MONTH 2	MONTH 4	MONTH 6	MONTH 8	MONTH 10	MONTH 12
SITE PREPARATION						
EROSION CONTROL						
TANK AND WATER INFRASTRUCTURE INSTALLATION						
PAVEMENT REPLACEMENT						
RESTORATION						

TREE PROTECTION

1. WHEN DIGGING NEAR TREES, THE CONTRACTOR SHALL PRUNE ALL EXPOSED ROOTS ONE INCH IN DIAMETER OR LARGER ON THE SIDE OF THE TRENCH ADJACENT TO THE TREES. PRUNING SHALL CONSIST OF MAKING A CLEAN CUT FLUSH WITH THE SIDE OF THE TRENCH TO PROMOTE NEW ROOT GROWTH.
2. THE CONTRACTOR SHALL PROTECT ALL TREES AND VEGETATION ON SITE EXCEPT AS APPROVED BY THE ENGINEER AND/OR FAYETTE COUNTY.
3. PROTECT THE TRUNKS OF ANY TREES BEING PRESERVED WITHIN THE TEMPORARY OR PERMANENT EASEMENTS WITH STRAPPED ON PLANKING OR SIMILAR PROTECTIVE DEVICE.
4. TREE PROTECTION DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY CLEARING, GRUBBING OR GRADING IF REQUIRED.

POLLUTION CONTROLS

1. BMP'S SUCH AS CONSTRUCTION EXITS, WATERING STATIONS, AND SWEEPERS MAY BE UTILIZED TO MINIMIZE OFF-SITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST.
2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.
3. PETROLEUM BASED PRODUCTS- CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.
   - 3.1. SOLVENTS- ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
   - 3.2. CONCRETE TRUCK WASHING- WASHOUT OF CONCRETE DRUMS AT THE CONSTRUCTION SITE IS PROHIBITED. CONTRACTOR IS TO SELECT LOCATIONS ON THE SITE FOR CONCRETE WASH DOWN THAT MEET THE CONDITIONS OF THE NPDES STAND ALONE PERMIT. CONCRETE WASH DOWN AREA SHOULD BE OUTSIDE OF THE AREA THAT IS MARKED FOR EXCAVATION. CONTRACTOR SHALL SELECT AN EPA RECOMMENDED WASHOUT BMP TO BE USED AND SUBMIT LOCATIONS AND WASH OUT BMP TYPE FOR ENGINEER'S APPROVAL. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.
   - 3.3. FERTILIZER/HERBICIDES- THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.
   - 3.4. CONSTRUCTION MATERIALS- NO CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF ACCORDING TO APPLICABLE STATE AND LOCAL REGULATIONS.
   - 3.5. WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
4. SOIL CLEANUP AND CONTROL PRACTICES
   - 4.1. LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES MADE AVAILABLE TO SITE PERSONNEL.
   - 4.2. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO: BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST AND PROPERTY LABELED PLASTIC AND METAL WASTE CONTAINERS.
   - 4.3. SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
   - 4.4. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS.
   - 4.5. FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.
   - 4.6. FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS A 1-800-424-8802.
   - 4.7. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.
   - 4.8. FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.
   - 4.9. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY A LICENSED PROFESSIONAL.
5. A PORTABLE SANITARY WASTE UNIT WILL BE ONSITE TO COLLECT SANITARY WASTE DURING CONSTRUCTION.

1

PROJECT DESCRIPTION

THE TRILITH STUDIO IMPROVEMENT PROJECT INCLUDES THE CONSTRUCTION OF APPROXIMATELY 900 LF OF POTABLE WATER LINES, WATER TANK, PUMP HOUSE, AND ACCESS ROAD. THE EXISTING TRILITH STUDIOS SITE IS A MOVIE PRODUCTION CAMPUS THAT HAS MULTIPLE STAGE BUILDINGS FOR PRODUCTION. THE PROJECT AREA FOR THE WATER TANK IS ON AN EXISTING GRASSED HILL ADJACENT TO THE CEMETERY NEAR AN ENTRANCE OF THE TRILITH CAMPUS.

Know what's **below.** **Call** before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	ESC-01
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

EROSION & SEDIMENT CONTROL

EROSION & SEDIMENT CONTROL LEGEND & NOTES

SCALE: AS SHOWN

ESC-01

SHEET 15 OF 62

EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN CHECKLIST
INFRASTRUCTURE CONSTRUCTION PROJECTS

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS
SWCD: CITY OF FAYETTEVILLE

Project Name: TRILITH STUDIOS ELEVATED WATER TANK **Address:461 SANDY CREEK ROAD**
City/County:CITY OF FAYETTEVILLE/FAYETTE COUNTY **Date on Plans:07/07/2023**
Name & email of person filling out checklist: Nogol Nia, Nogol.Nia@arcadis.com

TO BE SHOWN ON ES&PC PLAN

Plan Page #	Included Y/N	
ESC-02	Y	1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)
ESC-01 TO ESC-11	Y	2 Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed)
N/A	N	3 Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the GAEPD District Office. If GAEPD approves the request to disturb 50 acres or more at any one time, the Plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist and the GAEPD approval letter. * (A copy of the written approval by GAEPD must be attached to the plan for the Plan to be reviewed.)
ESC-01	Y	4 The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.
ESC-01	Y	5 Provide the name, address, email address, and phone number of primary permittee.
ESC-01	Y	6 Note total and disturbed acreages of the project or phase under construction.
ESC-06	Y	7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
ESC-01 TO ESC-10	Y	8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
ESC-01	Y	9 Description of the nature of construction activity and existing site conditions.
COVER	Y	10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
ESC-01	Y	11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
ESC-02	Y	12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on **Part IV page 19** of the permit.
ESC-02	Y	13 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on **Part IV page 19** of the permit. *
ESC-01	Y	14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." in accordance with **Part IV.A.5 page 25** of the permit. *
ESC-01	Y	15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
ESC-01	Y	16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
ESC-01	Y	17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *
ESC-01	Y	18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *
ESC-01	Y	19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
ESC-01	Y	20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
ESC-01	Y	21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
N/A	N	22 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of a Biota Impaired Stream Segment must comply with Part III. C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. * **SITE IS LOCATED 2.00 MILES FROM THE NEAREST IMPAIRED STREAM.**
N/A	N	23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. * **SITE IS LOCATED 2.00 MILES FROM THE NEAREST IMPAIRED STREAM.**
ESC-01	Y	24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. *
ESC-01	Y	25 Provide BMPs for the remediation of all petroleum spills and leaks.
ESC-01	Y	26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *
ESC-01	Y	27 Description of practices to provide cover for building materials and building products on site. *
ESC-01	Y	28 Description of the practices that will be used to reduce the pollutants in storm water discharges. *
ESC-01	Y	29 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).
ESC-03	Y	30 Provide complete requirements of Inspections and record keeping by the primary permittee. *
ESC-03	Y	31 Provide complete requirements of Sampling Frequency and Reporting of sampling results. *
ESC-03	Y	32 Provide complete details for Retention of Records as per Part IV.F. of the permit. *
ESC-03	Y	33 Description of analytical methods to be used to collect and analyze the samples from each location. *
ESC-02	Y	34 Appendix B rationale for NTU values at all outfall sampling points where applicable. *
ESC-05	Y	35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged. *
ESC-01	Y	36 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase. *
ESC-05 - ESC-08	Y	37 Graphic scale and North arrow.
ESC-05 - ESC-08	Y	38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft.
1 inch = 30ft or larger scale	Flat 0 - 2%	0.5 or 1
	Rolling 2 - 8%	1 or 2
	Steep 8% +	1, 2,5 or 10

N/A	N	39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by GAEPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov.
N/A	N	40 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *
N/A	N	41 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
N/A	N	42 Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site. **Wetlands or state waters are not located on and within 200 feet of the project site.**
HYDRO REPORT	Y	43 Delineation and acreage of contributing drainage basins on the project site. **Hydro Report by Rochester & Associates**
HYDRO REPORT	Y	44 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. * **Hydro Report by Rochester & Associates**
HYDRO REPORT	Y	45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed. **Hydro Report by Rochester & Associates**
BY OTHERS	Y	46 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points. **Designed by Rochester & Associates**
ESC-04	Y	47 Soil series for the project site and their delineation.
ESC-01	Y	48 The limits of disturbance for each phase of construction.
BY OTHERS	Y	49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
ESC-05 - ESC-08	Y	50 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
ESC-05 - ESC-08	Y	51 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
ESC-10	Y	52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of the year that seeding will take place and for the appropriate geographic region of Georgia.

* If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream, the * checklist items would be N/A.

Effective January 1, 2023

1

CERTIFICATION STATEMENTS

1

1. I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATION DESCRIBED HERE-IN BY MYSELF OR MY AUTHORIZED AGENT UNDER MY DIRECT SUPERVISION.
2. I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT CERTIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE,AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."
3. I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001.
4. I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STEAMS AND OTHER WATER BODIES, OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 100001, THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER.
5. THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER CONTROL BMPS, AND SEDIMENT BASINS WITHIN 7 DAYS AFTER INSTALLATION.

DAVID A WILSON
GSWCC LEVEL II CERTIFICATION NO. 0000044976
EXPIRES 10/02/2025

DATE

GSWCC Georgia Soil and Water Conservation Commission
David A Wilson
Level II Certified Design Professional
Certification Number 0000044976
Issued: 10/02/2022 Expires: 10/02/2025

NOTE:
THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER CONTROL BMPS, AND SEDIMENT BASINS WITHIN 7 DAYS AFTER INSTALLATION.

DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION:

DATE OF INSPECTION

I CERTIFY THE SITE WAS IN COMPLIANCE WITH THE ES&PC PLAN ON THE DATE OF INSPECTION.

GSWCC LEVEL II CERTIFICATION NO. GSWCC NO. 0000044976. EXPIRES 10/02/2025

INSPECTION REVEALED THE FOLLOWING DISCREPANCIES FROM THE ES&PC PLAN.

THESE DEFICIENCIES MUST BE ADDRESSED IMMEDIATELY AND A RE-INSPECTION SCHEDULED. WORK SHALL NOT PROCEED ON THE SITE UNTIL DESIGN PROFESSIONAL CERTIFICATION IS OBTAINED.

NPDES - NTU APPENDIX B VALUES

SIZE OF SITE: 1.30 ACRES
SURFACE WATER DRAINAGE AREA: 0.00203 SQUARE MILES
TYPE OF RECEIVING WATER: WARM WATER
NTU VALUE: 200

Warm Water (Supporting Warm Water Fisheries)

Surface Water Drainage Area, square miles

Site Size, acres	0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
1.00-10	75	150	200	400	750	750	750	750
10.01-25	50	100	100	200	300	500	750	750
25.01-50	50	50	100	100	200	300	750	750
50.01-100	50	50	50	100	100	150	300	600
100.01+	50	50	50	50	50	100	200	100

811 Know what's **below.** **Call** before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID
PROJECT NO.: 30135792
DATE: JULY 2023
FILE NAME: ESC-02
DESIGNED BY: T. THOMAS
DRAWN BY: N. NIA
CHECKED BY: D. WILSON

SHEET TITLE
EROSION & SEDIMENT CONTROL

NPDES COMPLIANCE (SHEET 1 OF 2)

SCALE: AS SHOWN

ESC-02

User:NNIA Spec:AUS-NCSMOD File:C:\USERS\NNIA\DC\ACCDOCS\ARCADIS\AUS-30135792-TRILITH STUDIOS ELEVATED STORAGE TANK\PROJECT FILES\01 - WIP\CIVIL\SHEETS\ESC-02.DWG Scale:1:1 SavedDate:8/4/2023 Time:15:38 Plot Date: Ebrahimi Nia, Nogol; 8/4/2023; 15:38 ; Layout:12

SAMPLING FREQUENCY AND REPORTING
GENERAL PERMIT NO. GAR 100001 - EFFECTIVE (AUGUST 1, 2018)

SAMPLING METHODS & PROCEDURES
GENERAL PERMIT NO. GAR 100001 - EFFECTIVE (AUGUST 1, 2018)
REPRESENTATIVE SAMPLING ON INFRASTRUCTURE CONSTRUCTION PROJECT

Receiving water samples and storm water discharge samples will be collected by "grab samples", as specified in Part IV.D.6 of the GAR 100001 permit. All "grab samples" will be collected using the following methods and procedures.

INSPECTIONS

(1). Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment and (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted.

(2). Measure and record rainfall within disturbed areas of the site that have not met final stabilization once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday. The data collected for the purpose of compliance with this permit shall be representative of the monitored activity. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region.

(3). Certified personnel (provided by the primary permittee) shall inspect the following at least once every fourteen (14) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the primary permittee's construction site; (b) areas used by the primary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, the permittee must comply with Part IV.D.4.a.(4). These inspections must be conducted until a Notice of Termination is submitted.

(4). Certified personnel (provided by the primary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination has been submitted) the areas of the site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s).

(5). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection.

(6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e. initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.a.(5). of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site or that portion of a construction site that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the report shall contain a certification that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit.

RETENTION OF RECORDS

1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:

a. A copy of all Notices of Intent submitted to EPD;
b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
d. A copy of all monitoring information, results, and reports required by this permit;
e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;
f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and
g. Daily rainfall information collected in accordance with Part IV.D.4.a.(2) of this permit.

2. Copies of all Notices of Intent, Notices of Termination, inspection reports, sampling reports (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), or other reports requested by the EPD, Erosion, Sedimentation and Pollution Control Plans, records of all data used to complete the Notice of Intent to be covered by this permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the the NOT is submitted in accordance with Part VI of this permit. These records must be maintained at the permittee's primary place of business or at a designated alternative location once the construction activity has ceased at the permitted site. This period may be extended by request of the EPD at any time upon written notification to the permittee.

SAMPLING FREQUENCY

(1). The primary permittee must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any storm water discharge to a monitored receiving water and/or from a monitored outfall location within forty-five (45) minutes or as soon as possible.

(2). However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the storm water discharge.

(3). Sampling by the permittee shall occur for the following qualifying events:

(a). For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the sampling location;

(b). In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the sampling location, whichever comes first;

(c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained;

(d). Where sampling pursuant to (a), (b), or (c) above is required but not possible (or not required because there was no discharge), the permittee, in accordance with Part IV.D.4.a.(6), must include a written justification in the inspection report of why sampling was not performed. Providing this justification does not relieve the permittee of any subsequent sampling obligations under (a), (b), or (c) above; and

(e). Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.

*Note that the permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week.

REPORTING

1. The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any storm water discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. The sampling reports must be signed in accordance with Part V.G.2. Sampling reports must be submitted to EPD using the electronic submittal service provided by EPD. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.

2. All sampling reports shall include the following information:

a. The rainfall amount, date, exact place and time of sampling or measurements;
b. The name(s) of the certified personnel who performed the sampling and measurements;
c. The date(s) analyses were performed;
d. The time(s) analyses were initiated;
e. The name(s) of the certified personnel who performed the analyses;
f. References and written procedures, when available, for the analytical techniques or methods used;
g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU;" and
i. Certification statement that sampling was conducted as per the Plan.

3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI.

SAMPLE TYPE

All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved); the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.

Sample containers should be labeled prior to collecting the samples. Samples should be well mixed before transferring to a secondary container. Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.

Manual, automatic or rising stage sampling may be utilized. Samples required by the permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. If automatic sampling is utilized and the automatic sampler is not activated during the qualifying event, the permittee must utilize manual sampling or rising stage sampling during the next qualifying event. Dilution of samples is not required. Samples may be analyzed directly with a properly calibrated turbidimeter. Samples are not required to be cooled.Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in the permit must be reported to EPD as specified in Part IV.E.

SAMPLING POINTS

For construction activities the primary permittee must sample all receiving water(s), or all outfall(s), or a combination of receiving water(s) and outfall(s). Samples taken for the purpose of compliance with the permit shall be representative of the monitored activity and representative of the water quality of the receiving water(s) and /or the stormwater outfalls using the following minimum guidelines:

The upstream sample for each receiving water must be taken immediately upstream of the confluence of the first stormwater discharge from the permitted activity (i.e. the discharge farthest upstream at the site) but downstream of any other stormwater discharges not associated with the permitted activity. Where appropriate, several upstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the upstream turbidity value.

The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last stormwater discharge from the permitted activity (i.e. the discharge farthest downstream at the site) but upstream of any other stormwater discharge not associated with the permit activity. Where appropriate, several downstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the downstream turbidity value.

Ideally the samples should be taken from the horizontal and vertical center of the receiving water(s) or the stormwater outfall channel(s). Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall stormwater channel. The sampling container should be held so that the opening faces upstream. The samples should be kept free from floating debris.

Permittees do not have to sample sheet flow that flows onto undisturbed natural areas or areas stabilized by the project. Stabilized shall mean 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures as defined in the Manual (excluding a crop of annual vegetation and a seeding of target crop perennials appropriate for the region).

All sampling pursuant to this permit must be done in such a way (including generally accepted sampling methods, locations, timing, and frequency) as to accurately reflect whether stormwater runoff from the construction site is in compliance with the standard set forth in Parts III.D.3. or III.D.4., whichever is applicable.

PROJECT SAMPLING POINTS

For this project, a sampling point located at the downstream stormwater outlet will be sampled for the construction project in accordance with current NPDES General Permit No. GAR 100001.

The Project for the Trilith Studios Water Tank involves construction of a elevated water tank and a water pipeline. The sampling location is shown on ESC-05 at the outfall from the stromwater system.

The sampling location for the disturbed drainage basin above shall be monitored concurrent with land disturbance/clearing. Sampling is required during construction and until all disturbed areas are stabilized. Stabilization shall mean at least 70% of the disturbed soil surface is uniformly covered in permanent vegetation or equivalent permanent stabilization measures (such as the use of rip rap, permanent mulches or geotextiles) have been employed.

Note: Monitors shall be located as shown on the drawings or as directed by the Engineer of Record and/or Georgia EPD.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	ESC-02
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

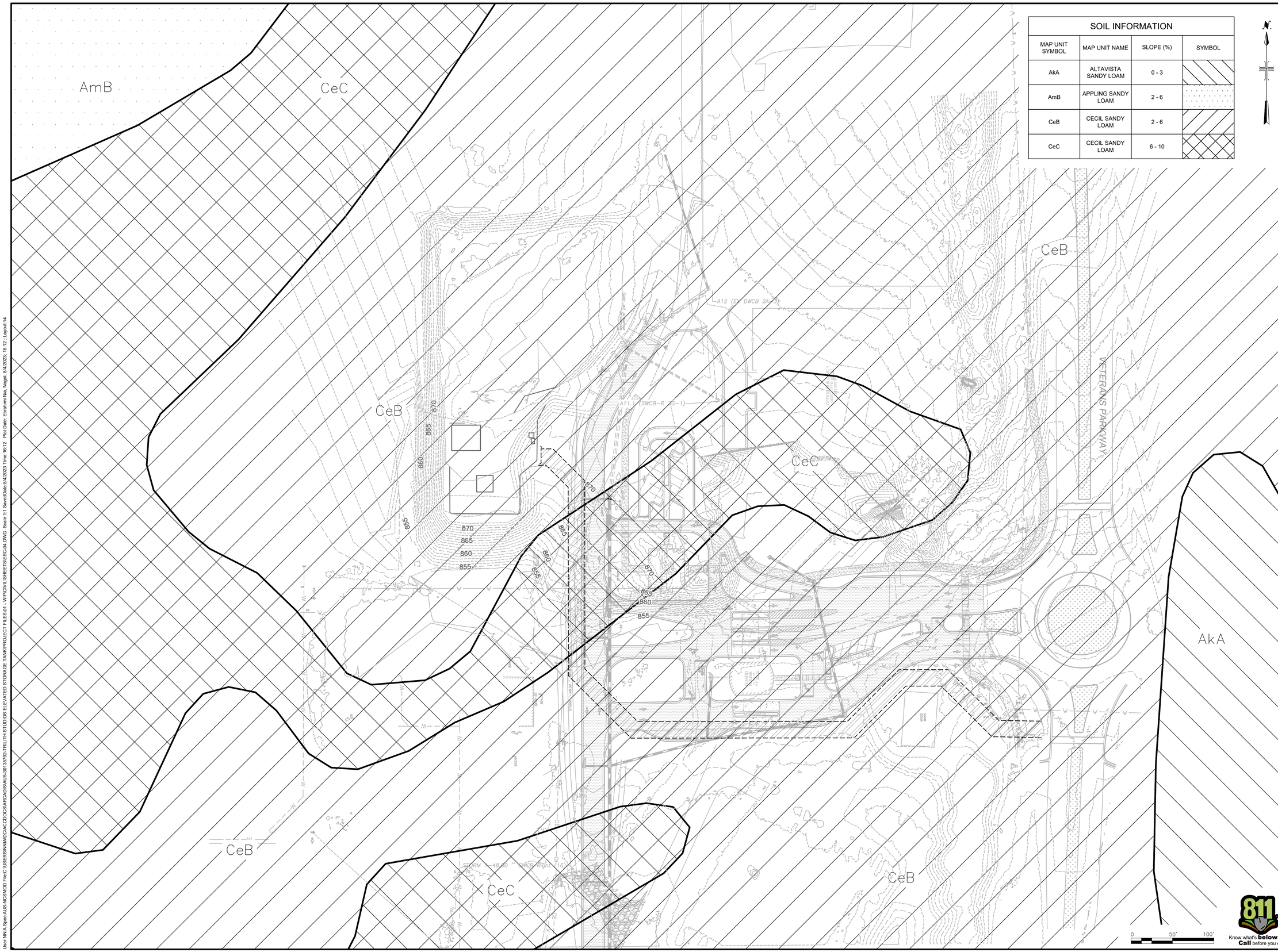
EROSION & SEDIMENT CONTROL

NPDES COMPLIANCE (SHEET 2 OF 2)

SCALE: AS SHOWN

ESC-03

SHEET 17 OF 62



SOIL INFORMATION			
MAP UNIT SYMBOL	MAP UNIT NAME	SLOPE (%)	SYMBOL
AkA	ALTAVISTA SANDY LOAM	0 - 3	
AmB	APPLING SANDY LOAM	2 - 6	
CeB	CECIL SANDY LOAM	2 - 6	
CeC	CECIL SANDY LOAM	6 - 10	

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA

FAYETTE COUNTY WATER SYSTEM

FAYETTE County Water

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	ESC-04
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

CIVIL

SOIL MAP

SCALE: AS SHOWN

ESC-04

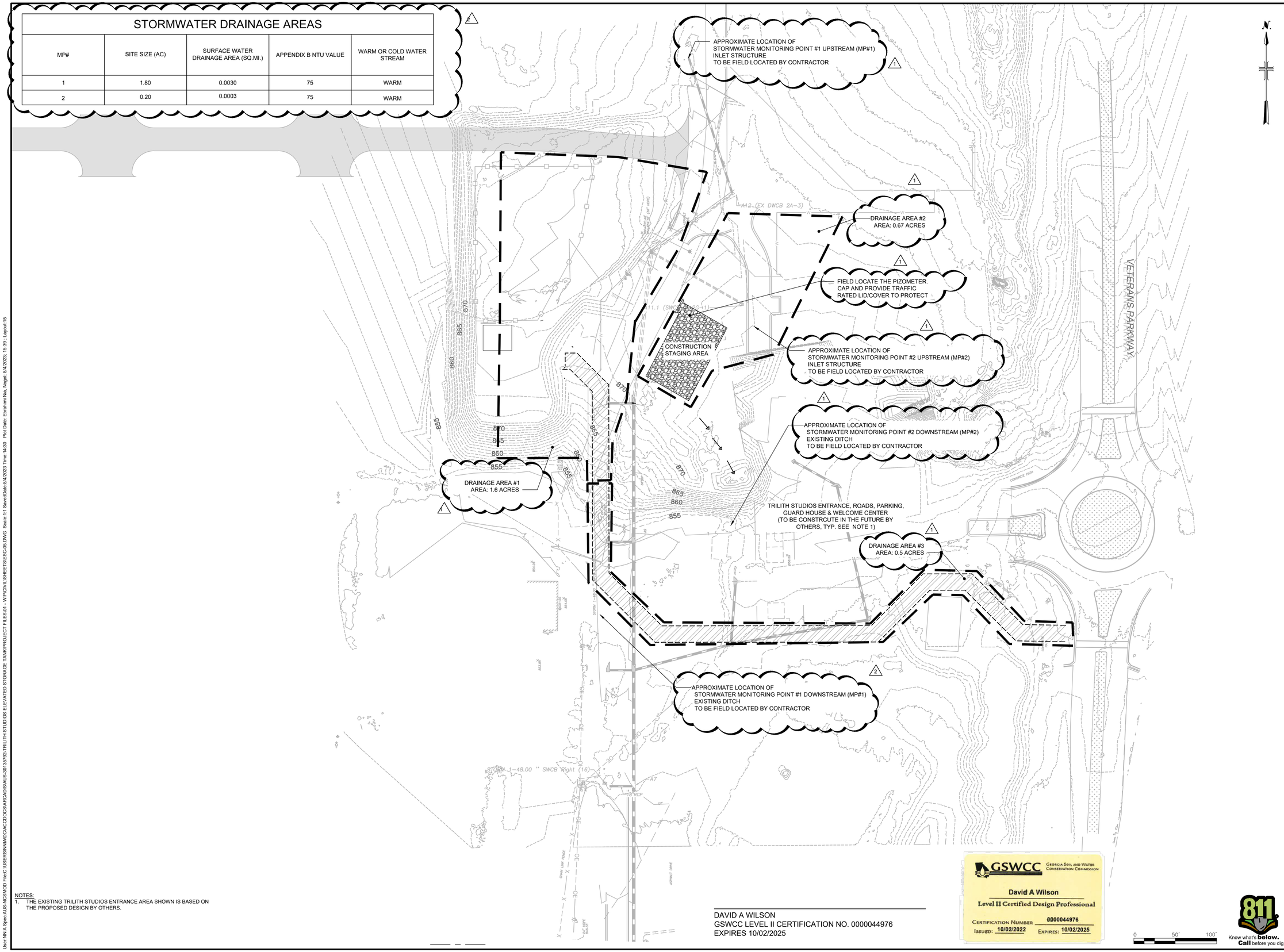
SHEET 18 OF 62

Know what's below. Call before you dig.

User:NNIA Spec:AUS-NCSMOD File:C:\USERS\NNIA\DC\ACCDOCS\ARCADIS\AUS-30135792-TRILITH STUDIOS ELEVATED STORAGE TANK\PROJECT FILES\01 - WIP\CIVIL\SHEETS\ESC-04.DWG Scale:1:1 SavedDate:8/4/2023 Time:16:12 Plot Date:Ebrahimi Nia, Negot; 8/4/2023; 16:12 ; Layout:14

STORMWATER DRAINAGE AREAS

MP#	SITE SIZE (AC)	SURFACE WATER DRAINAGE AREA (SQ.MI.)	APPENDIX B NTU VALUE	WARM OR COLD WATER STREAM
1	1.80	0.0030	75	WARM
2	0.20	0.0003	75	WARM



NOTES:
1. THE EXISTING TRILITH STUDIOS ENTRANCE AREA SHOWN IS BASED ON THE PROPOSED DESIGN BY OTHERS.

DAVID A WILSON
GSWCC LEVEL II CERTIFICATION NO. 0000044976
EXPIRES 10/02/2025

GSWCC Georgia Soil and Water Conservation Commission
David A Wilson
Level II Certified Design Professional
Certification Number 0000044976
Issued: 10/02/2022 Expires: 10/02/2025

Know what's **below.** **Call** before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

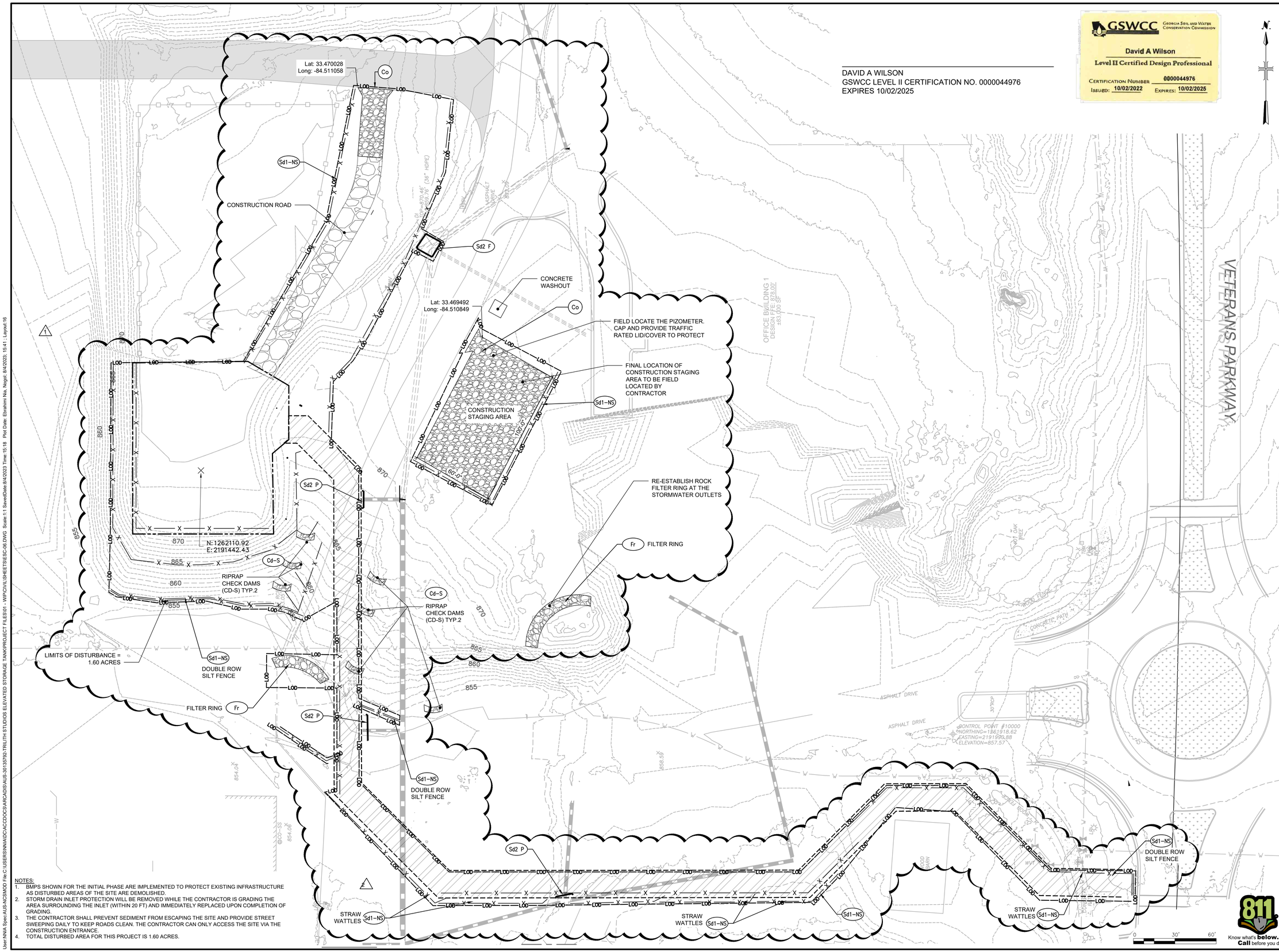
PROJECT STATUS: ISSUE FOR BID
PROJECT NO.: 30135792
DATE: JULY 2023
FILE NAME: ESC-05
DESIGNED BY: T. THOMAS
DRAWN BY: N. NIA
CHECKED BY: D. WILSON

SHEET TITLE
CIVIL

NPDES COMPLIANCE MAP

SCALE: AS SHOWN

ESC-05
SHEET 19 OF 62



DAVID A WILSON
GSWCC LEVEL II CERTIFICATION NO. 0000044976
EXPIRES 10/02/2025

GSWCC Georgia Soil and Water Conservation Commission
David A Wilson
Level II Certified Design Professional
Certification Number 0000044976
Issued: 10/02/2022 Expires: 10/02/2025

NOTES:
1. BMPS SHOWN FOR THE INITIAL PHASE ARE IMPLEMENTED TO PROTECT EXISTING INFRASTRUCTURE AS DISTURBED AREAS OF THE SITE ARE DEMOLISHED.
2. STORM DRAIN INLET PROTECTION WILL BE REMOVED WHILE THE CONTRACTOR IS GRADING THE AREA SURROUNDING THE INLET (WITHIN 20 FT) AND IMMEDIATELY REPLACED UPON COMPLETION OF GRADING.
3. THE CONTRACTOR SHALL PREVENT SEDIMENT FROM ESCAPING THE SITE AND PROVIDE STREET SWEEPING DAILY TO KEEP ROADS CLEAN. THE CONTRACTOR CAN ONLY ACCESS THE SITE VIA THE CONSTRUCTION ENTRANCE.
4. TOTAL DISTURBED AREA FOR THIS PROJECT IS 1.60 ACRES.

Know what's **below.** **Call** before you dig.

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FAYETTE County Water

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	ESC-06
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

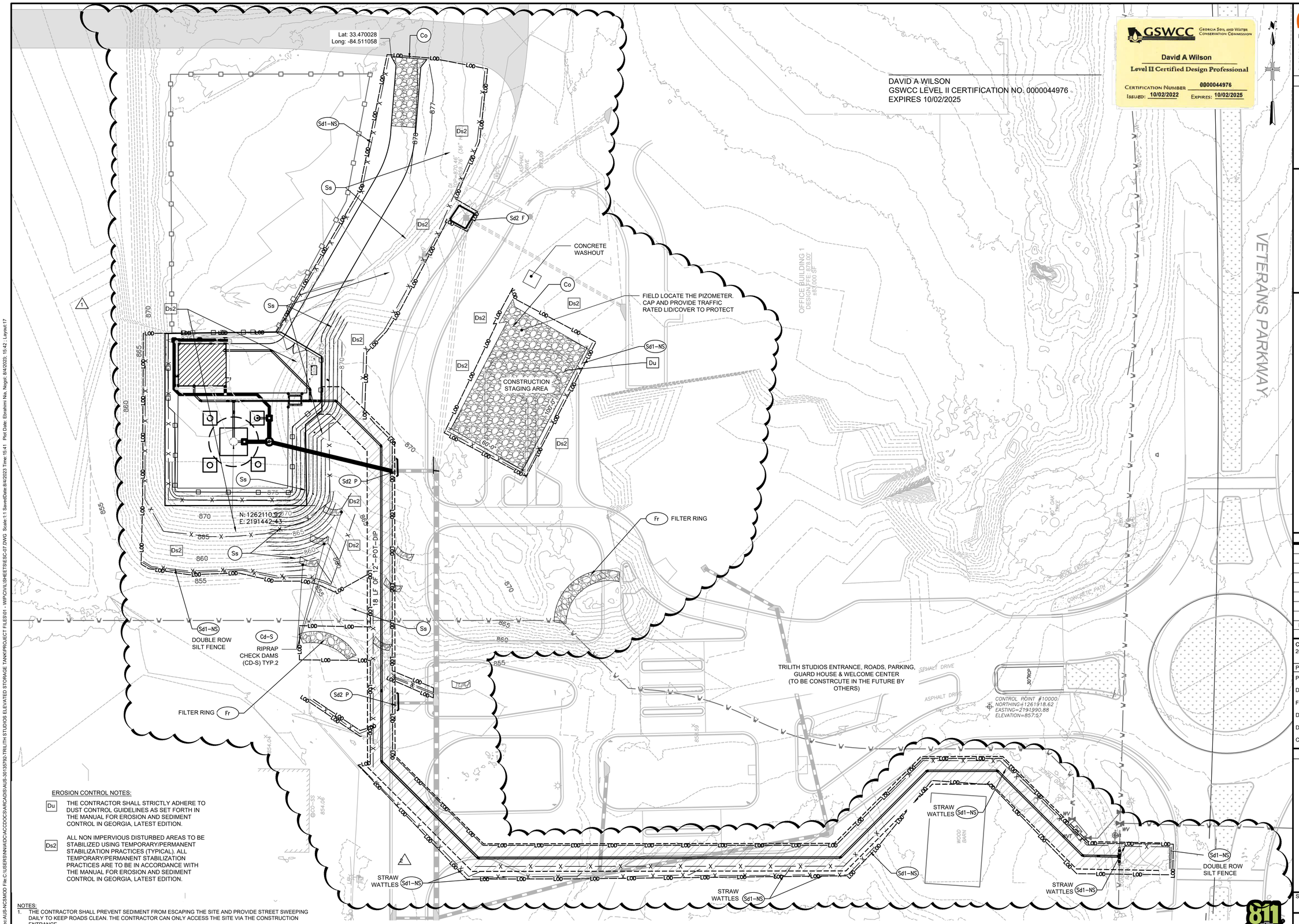
CIVIL

EROSION & SEDIMENT CONTROL INITIAL PHASE

SCALE: AS SHOWN

ESC-06

SHEET 20 OF 62



DAVID A WILSON
GSWCC LEVEL II CERTIFICATION NO. 0000044976
EXPIRES 10/02/2025

GSWCC Georgia Soil and Water Conservation Commission
David A Wilson
Level II Certified Design Professional
Certification Number 0000044976
Issued: 10/02/2022 Expires: 10/02/2025

EROSION CONTROL NOTES:

Du — THE CONTRACTOR SHALL STRICTLY ADHERE TO DUST CONTROL GUIDELINES AS SET FORTH IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.

Ds2 — ALL NON IMPERVIOUS DISTURBED AREAS TO BE STABILIZED USING TEMPORARY/PERMANENT STABILIZATION PRACTICES (TYPICAL). ALL TEMPORARY/PERMANENT STABILIZATION PRACTICES ARE TO BE IN ACCORDANCE WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.

NOTES:
1. THE CONTRACTOR SHALL PREVENT SEDIMENT FROM ESCAPING THE SITE AND PROVIDE STREET SWEEPING DAILY TO KEEP ROADS CLEAN. THE CONTRACTOR CAN ONLY ACCESS THE SITE VIA THE CONSTRUCTION ENTRANCE.
2. EROSION CONTROL BLANKET (SC-150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL) SHALL COVER ALL SLOPES 3:1 OR STEEPER.
3. TOTAL DISTURBED AREA FOR THIS PROJECT IS 1.60 ACRES.

Know what's **below.** **Call** before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	ESC-07
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

CIVIL

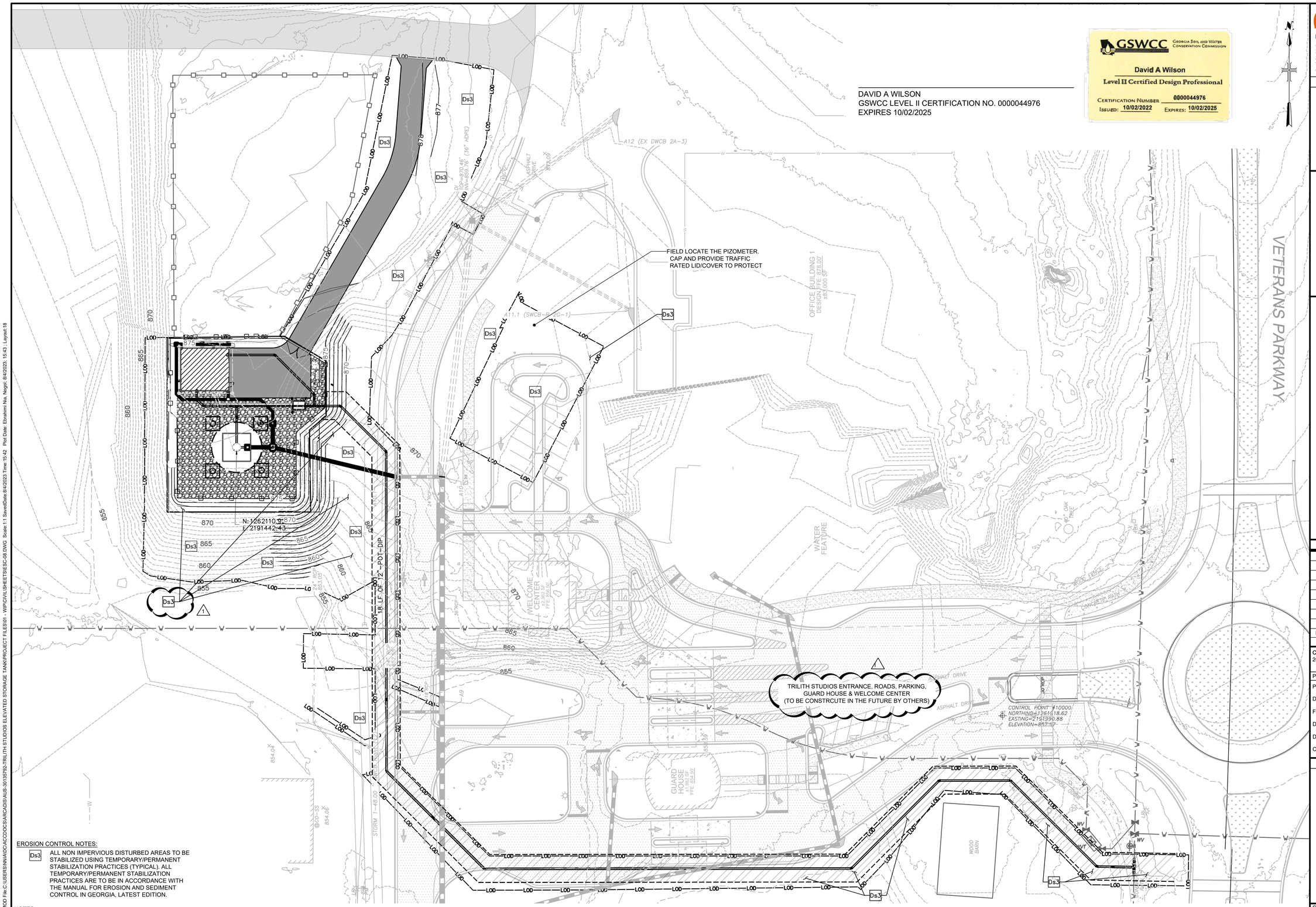
EROSION & SEDIMENT CONTROL INTERMEDIATE PHASE

SCALE: AS SHOWN

ESC-07

SHEET 21 OF 62

User:NNIA Spec:AUS-NCSMOD File:C:\USERS\NNIA\DC\ACCDOCS\ARCADIS\AUS-30135792-TRILITH STUDIOS ELEVATED STORAGE TANK\PROJECT FILES\01 - WIP\CIVIL\SHEETS\ESC-07.DWG Scale:1:1 SavedDate:8/4/2023 Time:15:41 Plot Date: Ebrahimi Nia, Negot: 8/4/2023; 15:42 ; Layout:17



DAVID A WILSON
GSWCC LEVEL II CERTIFICATION NO. 0000044976
EXPIRES 10/02/2025

GSWCC Georgia Soil and Water Conservation Commission
David A Wilson
Level II Certified Design Professional
Certification Number 0000044976
Issued: 10/02/2022 Expires: 10/02/2025

EROSION CONTROL NOTES:

Ds3 ALL NON IMPERVIOUS DISTURBED AREAS TO BE STABILIZED USING TEMPORARY/PERMANENT STABILIZATION PRACTICES (TYPICAL). ALL TEMPORARY/PERMANENT STABILIZATION PRACTICES ARE TO BE IN ACCORDANCE WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.

NOTES:

1. ALL NON IMPERVIOUS DISTURBED AREAS TO BE STABILIZED USING TEMPORARY/PERMANENT STABILIZATION PRACTICES (TYPICAL). ALL TEMPORARY/PERMANENT STABILIZATION PRACTICES ARE TO BE IN ACCORDANCE WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.
3. TOTAL DISTURBED AREA FOR THIS PROJECT IS 1.60 ACRES.

0 30' 60'

Know what's **below.** **Call** before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	ESC-08
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

CIVIL

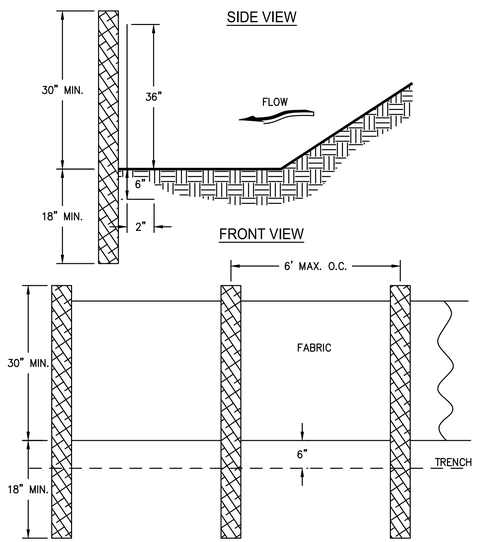
EROSION & SEDIMENT CONTROL FINAL PHASE

SCALE: AS SHOWN

ESC-08

SHEET 22 OF 62

User:NNIA Spec:AUS-NCSMOD File:C:\USERS\NNIA\DC\ACCDOCS\ARCADIS\AUS-30135792-TRILITH STUDIOS ELEVATED STORAGE TANK\PROJECT FILES\01 - WIP\CIVIL\SHEETS\ESC-08.DWG Scale:1:1 SavedDate:8/4/2023 Time:15:42 Plot Date: Ebrahimi Nia, Negot: 8/4/2023; 15:43 ; Layout:18



NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. SILT FENCE – TYPE NON-SENSITIVE (SD1-NS) SHALL MEET THE SPECIFICATIONS OF SILT FENCE, TYPE A AS DESCRIBED IN SECTION 171 OF THE "GDOT STANDARD SPECIFICATIONS CONSTRUCTION OF TRANSPORTATION SYSTEMS", 2013 EDITION.
3. Sd1-NS = TYPE A SILT FENCE.

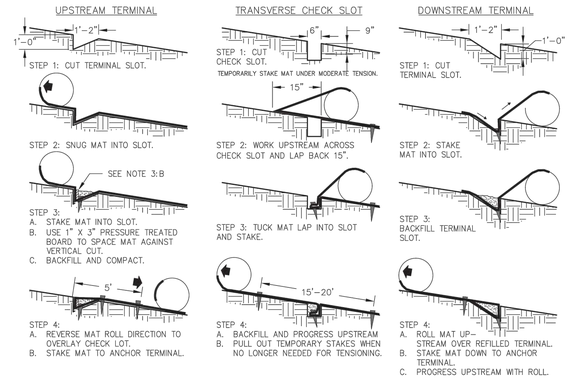
Sd1-NS

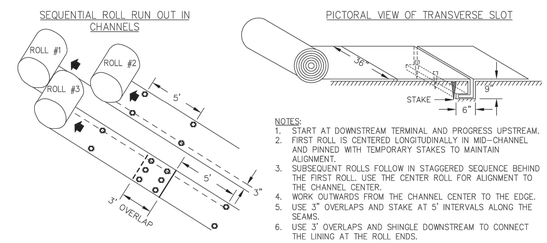
SILT FENCE - TYPE NON-SENSITIVE

N.T.S.

TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)

BLANKET AND MATTING CROSS-SECTIONS





NOTES:
1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID-CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER.
4. WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE.
5. USE 3" OVERLAPS AND STAKE AT 5' INTERVALS ALONG THE SEAMS.
6. USE 3' OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LINING AT THE ROLL ENDS.

Ss

Figure 6-10.1 - Typical Installation Guidelines for Matting and Blankets

SLOPE STABILIZATION

DAVID A WILSON
GSWCC LEVEL II CERTIFICATION NO. 0000044976
EXPIRES 10/02/2025

GSWCC Georgia Soil and Water Conservation Commission
David A Wilson
Level II Certified Design Professional
Certification Number 0000044976
Issued: 10/02/2022 Expires: 10/02/2025

DEFINITION

CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADS, AND DEMOLITION SITES.

CONDITIONS

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST WHERE ON AND OFF-SITE DAMAGE MAY OCCUR WITHOUT TREATMENT.

METHOD AND MATERIALS

A. TEMPORARY METHODS

MULCHES. SEE STANDARD DS1 – DISTURBED AREA STABILIZATION (WITH MULCHING ONLY). SYNTHETIC RESINS MAY BE USED INSTEAD OF ASPHALT TO BIND MULCH MATERIAL. REFER TO STANDARD TB-TACKIFIERS AND BINDERS. RESINS SUCH AS CURASOL OR TERRATACK SHOULD BE USED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

VEGETATIVE COVER. SEE STANDARD DS2 – DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING).

SPRAY-ON ADHESIVES. THESE ARE USED ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS. REFER TO STANDARD TB-TACKIFIERS AND BINDERS.

TILLAGE. THIS PRACTICE IS DESIGNED TO ROUGHEN AND BRING CLODS TO THE SURFACE. IT IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE WIND EROSION STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

IRRIGATION. THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS WET. REPEAT AS NEEDED.

BARRIERS. SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 15 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING WIND EROSION.

CALCIUM CHLORIDE. APPLY AT RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

B. PERMANENT METHODS

PERMANENT VEGETATION. SEE STANDARD DS3 –DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION). EXISTING TREES AND LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.

TOPSOILING. THIS ENTAILS COVERING THE SURFACE WITH LESS EROSIVE SOIL MATERIAL. SEE STANDARD TP – TOPSOILING.

STONE. COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL. SEE STANDARD CR-CONSTRUCTION ROAD STABILIZATION.

Du

DUST CONTROL ON DISTURBED AREAS

1

Cd

Stone Check Dams Cd-S

- Drainage area not to exceed 2 acres.
- Constructed of graded size 2"-10" stone.
- The center of the check dam should be at least 9" lower than the outer edges.
- The dam height should be a maximum of 2 ft from the center to the rim edge.
- Place a suitable geotextile between the graded stone and the soil base and abutments.

STONE CHECK DAM

SPACING BETWEEN CHECK DAMS

A = THE TOE OF THE UPSTREAM CHECK DAM.
B = TOP OF THE DOWNSTREAM CHECK DAM.
L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION.

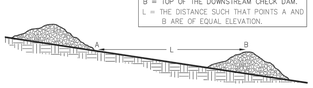


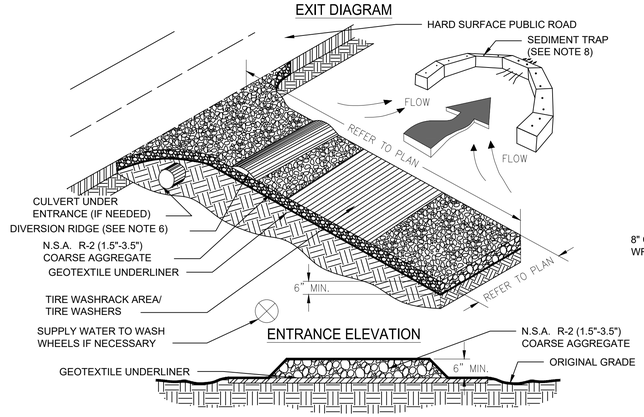
Figure 1. Stone Check Dam Spacing Requirements

CD-S

STONE CHECK DAM

SCALE: NONE

EXIT DIAGRAM

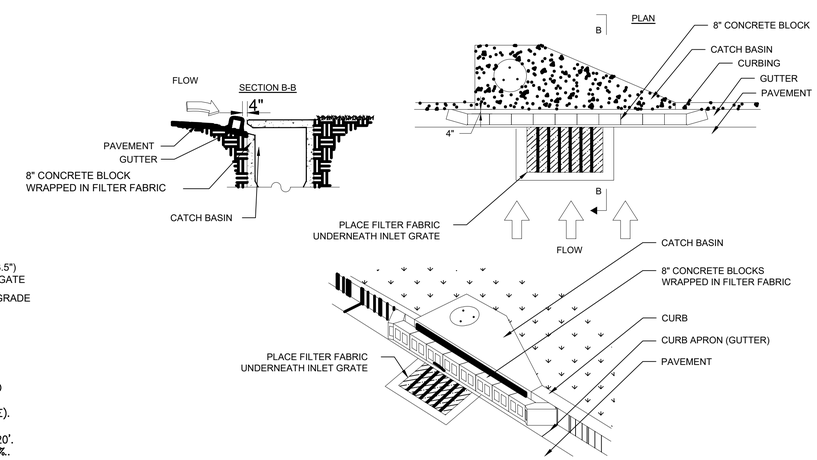


NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%..
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Co

TEMPORARY CONSTRUCTION EXIT

SCALE: NONE



NOTES:
1. INSTALL FILTER AFTER ANY ASPHALT PAVEMENT INSTALLATION.
2. WRAP 8" CONCRETE BLOCKS IN FILTER FABRIC AND SPAN ACROSS CATCH BASIN INLET.
3. FACE OPENINGS IN BLOCKS OUTWARD.
4. LEAVE A GAP OF APPROXIMATELY 4 INCHES BETWEEN THE CURB AND THE FILTERS TO ALLOW FOR OVERFLOW TO PREVENT HAZARDOUS PONDING.
5. INSTALL OUTLET PROTECTION BELOW STORM DRAIN OUTLETS.

Sd2-P

CURB INLET FILTER

SCALE: N.T.S.

811 Know what's **below.** **Call** before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID

PROJECT NO.:	30135792
DATE:	JULY 2023
FILE NAME:	ESC-09
DESIGNED BY:	T. THOMAS
DRAWN BY:	N. NIA
CHECKED BY:	D. WILSON

SHEET TITLE

EROSION & SEDIMENT CONTROL

EROSION & SEDIMENT CONTROL DETAILS (SHEET 1 OF 2)

SCALE: AS SHOWN

ESC-09

SHEET 23 OF 62

SEEDING SCHEDULE TEMPORARY COVER

SPECIES	BROADCAST RATES – PLS PER ACRE	BROADCAST RATES – PLS PER 1000 SQ. FT.	RESOURCE AREA^3
BARLEY (HORDEUM VULGARE)			M–L
ALONE	3 BU. (144 LBS.)	3.3 LB.	P
IN MIXTURES	½ BU. (24 LBS.)	0.6 LB.	C
LESPEDEZA, ANNUAL (LEZPEDEZA STRIATA)			M–L
ALONE	40 LBS.	0.9 LB.	P
IN MIXTURES	10 LBS.	0.2 LB.	C
LOVEGRASS, WEEPING (ERAGROSTIS CURVULA)			M–L
ALONE	4 LBS.	0.1 LB.	P
IN MIXTURES	2 LBS.	0.05 LB.	C
MILLET, BROWNTOP (PANCIUM FASCICULATUM)			M–L
ALONE	40 LBS.	0.9 LB.	P
IN MIXTURES	10 LBS.	0.2 LB.	C
MILLET, PEARL (PENNESETUM GLAUCUM)			M–L
ALONE	50 LBS.	1.1 LB.	P
			C
OATS (AVENA SATIVA)			M–L
ALONE	4 BU. (128 LBS.)	2.9 LB.	P
IN MIXTURES	1 BU. (32 LBS.)	0.7 LB.	C
RYE (SECALE CEREALE)			M–L
ALONE	3 BU. (168 LBS.)	3.9 LB.	P
IN MIXTURES	½ BU. (28 LBS.)	0.6 LB.	C
TRITICALE (X–TRITICOSECALE)			C
ALONE	3 BU. (144 LBS.)	3.3 LB.	
IN MIXTURES	½ BU. (24 LBS.)	0.6 LB.	
RYEGRASS, ANNUAL (LOLIUM TEMULENTUM)			M–L
ALONE	40 LBS.	0.9 LB.	P
			C
SUDANGRASS (SORGHUM SUDANESE)			M–L
ALONE	60 LBS.	1.4 LB.	P
			C
WHEAT (TRITICUM AESTIVUM)			M–L
ALONE	3 BU. (180 LBS.)	4.1 LB.	P
IN MIXTURES	½ BU. (30 LBS.)	0.7 LB.	C

PLANTING DATES (SOLID LINES INDICATE OPTIMUM DATES. DOTTED LINES INDICATED PERMISSIBLE BUT MARGINAL DATES.)

LIME: APPLY AT A RATE OF ONE TON PER ACRE
FERTILIZER: APPLY 500–700 POUNDS OF 10–10–10 OR EQUIVALENT PER ACRE

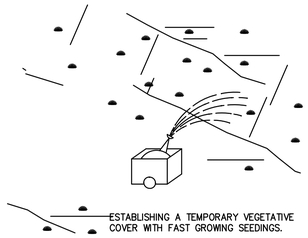
FERTILIZER REQUIREMENTS PERMANENT COVER

TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N–P–K	RATE	N TOP DRESSING RATE
1. COOL SEASON GRASSES	FIRST	6–12–12	1500 lbs./AC.	50–100 lbs./AC. 1/2/
	SECOND	6–12–12	1000 lbs./AC.	——
	MAINTENANCE	10–10–10	400 lbs./AC.	30 lbs./AC.
2. COOL SEASON GRASSES & LEGUMES	FIRST	6–12–12	1500 lbs./AC.	0–50 lbs./AC. 1/
	SECOND	10–10–10	1000 lbs./AC.	——
	MAINTENANCE	10–10–10	400 lbs./AC.	——
3. GROUND COVERS	FIRST	10–10–10	1300 lbs./AC. 3/	——
	SECOND	10–10–10	1300 lbs./AC. 3/	——
	MAINTENANCE	10–10–10	1100 lbs./AC.	——
4. PINE SEEDLINGS	FIRST	20–10–5	ONE 21–GRAM PELLET PER SEEDLING PLACED IN THE CLOSING HOLE	——
5. SHRU LESPEDEZA	FIRST	0–10–10	700 lbs./AC.	——
	MAINTENANCE	0–10–10	700 lbs./AC. 4/	——
6. TEMPORARY COVER CROPS SEEDED ALONE	FIRST	10–10–10	500 lbs./AC.	30 lbs./AC. 5/
7. WARM SEASON GRASSES	FIRST	6–12–12	1500 lbs./AC.	50–100 lbs./AC. 2/6/
	SECOND	6–12–12	800 lbs./AC.	50–100 lbs./AC. 2/
	MAINTENANCE	10–10–10	400 lbs./AC.	30 lbs./AC.
8. WARM SEASON GRASSES & LEGUMES	FIRST	6–12–12	1500 lbs./AC.	50 lbs./AC. 6/
	SECOND	0–10–10	1000 lbs./AC.	——
	MAINTENANCE	0–10–10	400 lbs./AC.	——

LIME: APPLY AT A RATE OF ONE TON PER ACRE

1/ APPLY IN SPRING FOLLOWING SEEDING.
2/ APPLY IN SPLIT APPLICATIONS WHEN HIGH RATES ARE USED.
3/ APPLY IN 3 SPLIT APPLICATIONS.
4/ APPLY WHEN PLANTS ARE PRUNED.
5/ APPLY TO GRASS SPECIES ONLY.
6/ APPLY WHEN PLANTS GROW TO A HEIGHT OF 2 TO 4 INCHES.

SCALE: NONE

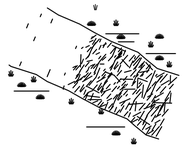


ESTABLISHING A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS.

1. < 12 MONTHS OR UNTIL ESTABLISHMENT OF FINISHED GRADE OR PERMANENT VEGETATION.
2. SITE PREPARATION:
   - GRADING AND SHAPING
   - SEEDBED PREPARATION
   - APPLY LIME AND FERTILIZER
   - PLANT SEEDINGS, SELECT SPECIES BY SEASON AND REGION
   - APPLY MULCHING MATERIAL IF NEEDED
   - IRRIGATE IF NEEDED BUT NOT @ RATE TO CAUSE EROSION
3. PLANTING DATES DEPEND ON SPECIES AND REGION (MOUNTAIN, PIEDMONT OR COASTAL)

NOTES:
CONTRACTOR SHALL STABILIZE ALL AREAS WITH TEMPORARY VEGETATION THAT ARE TO BE EXPOSED WITHOUT STORM WATER PROTECTION FOR LONGER THAN 7 DAYS.

Ds2 DISTURED AREA STABILIZATION
(WITH TEMPORARY SEEDINGS)



ESTABLISHING A TEMPORARY PROTECTION FOR DISTURBED AREAS USING SPECIFIC MULCH MATERIALS.

1. MULCH MATERIALS SHALL CONSIST OF DRY STRAW OR HAY AT 2.5 TONS PER ACRE, WOOD CHIPS AT 6 TO 9 TONS PER ACRE, EROSION CONTROL MATTING OR NETTING, OR POLYETHYLENE FILM.
2. THIS STANDARD APPLIED TO GRADES OR CLEARED AREAS WHICH MAY BE SUBJECTED TO EROSION CONTROL FOR 6 MONTHS OR LESS, AND CAN BE STABILIZED WITH A MULCH COVER.

Ds1 DISTURED AREA STABILIZATION
(WITH MULCHING)

SEEDING SCHEDULE PERMANENT COVER

SPECIES	BROADCAST RATES - PLS PER ACRE	BROADCAST RATES - PLS PER 1000 SQ. FT.	RESOURCE AREA^3
BERMUDA, SPRIGS (CYNODON DACTYLON)			M-L
COASTAL COMMON OR TIFT 44	40 CU. FT. OR SOD PLUGS 3'X3'	0.9 CU. FT.	P
			C
BERMUDA, COMMON (CYNODON DACTYLON)			
ALONE	10 LBS.	0.2 LB.	
W/ OTHER PERRENIALS	6 LBS.	0.1 LB.	
FESCUE, TALL (FESTUCA ARUNDINACEA)			M-L
ALONE	50 LBS.	1.1 LB.	P
W/OTHER PERRENIALS	30 LBS.	0.7 LB.	
CROWNVTECH (CORONILLA VARIA) W/WINTER ANNUALS OR COOL SEASON GRASSES	15 LBS.	0.3 LB.	M-L P
REED CANARY GRASS (PHARLARIS ARUNDINACEA)			M-L
ALONE	50 LBS.	1.1 LB.	P
W/OTHER PERRENIALS	30 LBS.	0.7 LB.	
CENTIPEDE (EREMOCHLOA OPHIUROIDES)	BLACK SOD ONLY		P
			C
LOVEGRASS, WEEPING (ERAGROSTIS CURVULA)			M-L
ALONE	4 LBS.	0.1 LB.	P
W/OTHER PERRENIALS	2 LBS.	0.05 LB.	C
LESPEDEZA, SERICEA (LESPEDEZA CUNEATA)			
SCARIFIED	60 LBS.	1.4 LB.	M-L
UNSCARIFIED	75 LBS.	1.7 LB.	P
SEED-BEARING HAY	3 TONS	138 LB.	C

PLANTING DATES (SOLID LINES INDICATE OPTIMUM DATES. DOTTED LINES INDICATED PERMISSIBLE BUT MARGINAL DATES.)

HULLED SEED
UNHULLED SEED

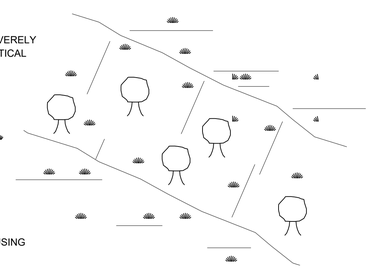
NOTE:
1. YOU MAY USE ANY OTHER SPECIES IF APPROVED BY MANUAL OF EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.
2. ALL FERTILIZER RATE AND APPLICATION, SEED QUALITY, SEEDBED PREPERATION, INNOCULANTS, PLANTING, AND MULCHING SHALL COMPLY WITH MANUAL OF EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.

ESTABLISHING A PERMANENT VEGETATIVE COVER AS A DISTURBED AREA.

1. APPLICABLE ON HIGHLY ERODIBLE OR SEVERELY ERODED AREAS, SOMETIMES CALLED "CRITICAL AREAS" INCLUDING:
   - CUT OR FILL SLOPES
   - EARTH SPILLWAYS
   - BORROW AREAS
   - CHANNEL BANKS
   - BERMS
   - ROADSIDES
   - SPOIL AREAS
   - GULLIED LANDS
2. GRADING AND SHAPING REQ'D. WHERE FEASIBLE AND PRACTICAL.
3. SEEDBED PREPARATION (NOT REQ'D. IF USING HYDRAULIC SEEDING AND FERTILIZING)

SLOPE	SEEDBED
3:1 OR FLATTER	> 4" DEEP
2:1 TO 3:1	1" TO 4" DEEP
2:1 OR STEEPER	DEPRESSIONS EVERY 6"-8" WITH HAND TOOL

4. HAVE SOIL ANALYZED FOR LIME AND FERTILIZER RATE.
5. MULCH ALL SLOPES STEEPER THAN 3%AND IN BOTTOM OF SPILLWAYS AND ON ROADBANKS.
6. ANCHOR MULCH IMMEDIATELY.



Ds3 DISTURED AREA STABILIZATION
(WITH PERMANENT VEGETATION)

Table 6-6.1. Fertilizer Requirements for Soil Surface Application

Fertilizer Type	Fertilizer Rate (lbs/acre)	Fertilizer Rate (lbs/sq ft)	Season
10-10-10	1000	.025	Fall

Table 6-6.2 Sod Planting Requirements

Grass	Varieties	Resource Area	Growing Season
Bermudagrass	Common Tifway Tifgreen Tiflawn	M-L,P,C P,C P,C P,C	warm weather
Bahiagrass	Pensacola	P,C	warm weather
Centipede	_	P,C	warm weather
St. Augustine	Common Bitterblue Raleigh	C	warm weather
Zoysia	Emerald Myer	P,C	warm weather
Tall Fescue	Kentucky	M-L,P	cool weather

Table 6-6.3 Fertilizer Requirements for Sod

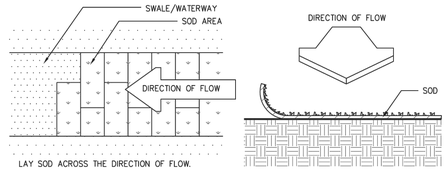
Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre)	Nitrogen Top Dressing Rate (lbs./acre)
cool season grasses	first second maintenance	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 - 30
warm season grasses	first second maintenance	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30

Ds4 DISTURED AREA STABILIZATION
(WITH SOD)

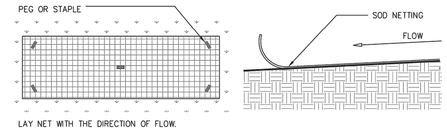
DAVID A WILSON
GSWCC LEVEL II CERTIFICATION NO. 0000044976
EXPIRES 10/02/2025

SODDED WATERWAYS

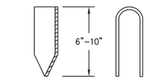
SOD DIRECTIONS



NETTING DIRECTIONS



PEG DETAIL



IN CRITICAL AREAS, SECURE SOD WITH NETTING USING STAPLES.

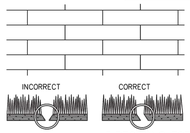
USE PEGS OR STAPLES TO FASTEN SOD FIRMLY -- AT THE ENDS OF STRIPS AND IN THE CENTER, OR EVERY 3–4 FEET IF THE STRIPS ARE LONG. WHEN READY TO MOW, DRIVE PEGS OR STAPLES FLUSH WITH THE GROUND.

Source: Va. DSWC

Figure 6-6.1

SOD MAINTENANCE AND INSTALLATION

SOD LAYOUT AND PREPARATION



LAY SOD IN A STAGGERED PATTERN. BUTT THE STRIPS TIGHTLY AGAINST EACH OTHER. DO NOT LEAVE SPACES AND DO NOT OVERLAP. A SHARPENED MASON'S TROWEL IS A HANDY TOOL FOR TUCKING DOWN THE ENDS AND TRIMMING PIECES.

BUTTING: ANGLED ENDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED CORRECTLY.

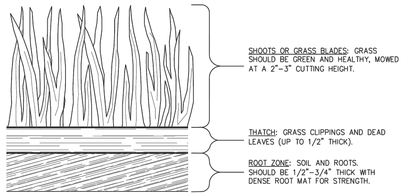
DIRECTIONS FOR INITIAL MAINTENANCE

Step 1. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL

Step 2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID.

Step 3. MOW WHEN THE SOD IS ESTABLISHED -- IN 2–3 WEEKS. SET THE MOWER HIGH (2"–3").

APPEARANCE OF GOOD SOD



Source: Va. DSWC

Figure 6-6.2

Know what's **below.** **Call** before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID
PROJECT NO.: 30135792
DATE: JULY 2023
FILE NAME: ESC-09
DESIGNED BY: T. THOMAS
DRAWN BY: N. NIA
CHECKED BY: D. WILSON

SHEET TITLE
EROSION & SEDIMENT CONTROL

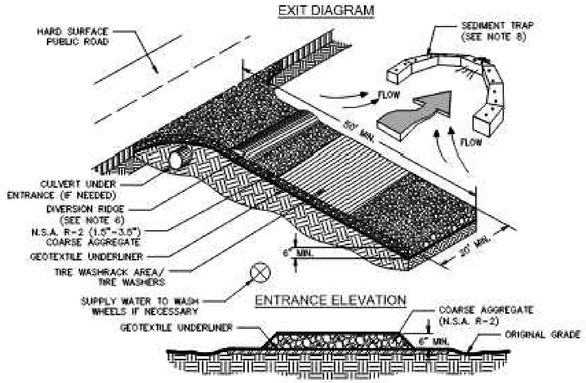
EROSION & SEDIMENT CONTROL DETAILS (SHEET 2 OF 2)

SCALE: AS SHOWN

ESC-10
SHEET 24 OF 62

User:NNIA Spec:AUS-NCSMOD File:C:\USERS\NNIA\DC\ACCDOCS\ARCADIS\AUS-30135792-TRILITH STUDIOS ELEVATED STORAGE TANK\PROJECT FILES\01 - WIP\CIVIL\SHEETS\ESC-09.DWG Scale:1:1 SavedDate:8/4/2023 PlotDate:8/4/2023 Time:15:47 Plot Date: Elsrahimi Nia, Nogol; 8/4/2023; 16:13 ; Layout:20

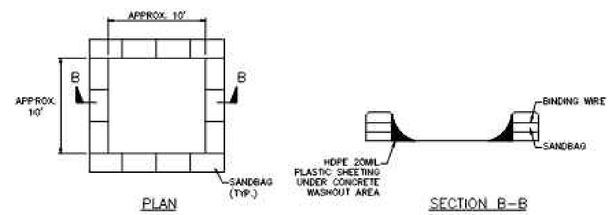
EXIT DIAGRAM

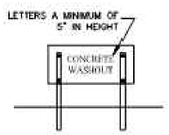


NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

CRUSHED STONE CONSTRUCTION EXIT

N.T.S.





CONCRETE WASHOUT SIGN DETAIL

NOTES:
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. REMOVE AND RELOCATE CONCRETE WASHOUTS AS CONSTRUCTION PROGRESSES.
3. INSTALL CONCRETE WASHOUT SIGN (24"X24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
4. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
5. CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
6. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS ROUTINE MAINTENANCE AND REGULAR CLEAN OUT.
7. SANDBAGS SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
8. A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

SANDBAG BARRIER CONCRETE WASHOUT

GSWCC Georgia Soil and Water Conservation Commission
David A Wilson
Level II Certified Design Professional
Certification Number 0000044976
Issued: 10/02/2022 Expires: 10/02/2025

DAVID A WILSON
GSWCC LEVEL II CERTIFICATION NO. 0000044976
EXPIRES 10/02/2025

Fr

- When utilized at pipes with diameters greater than 12", the filter ring shall be constructed of stone no smaller than 10"-15" (50-100 lbs).
- Construct the ring at a height no less than 2 ft above grade.
- Mechanically or hand place the stone uniformly around the structure.

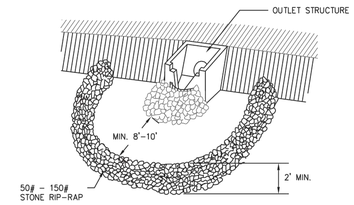


Figure 1. Filter Ring Placement

MAINTENANCE

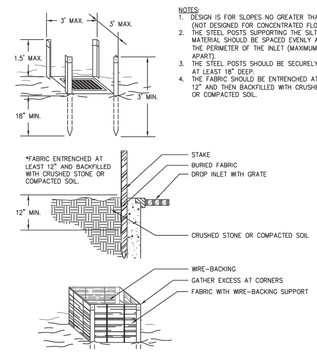
- Keep clear of trash and debris.
- Continuously monitor and maintain the structure.
- Remove sediment when it reaches one-half full.
- Remove structure when the project has reached final stabilization.

Fr FILTER FABRIC

Sd2

Filter Fabric with Supporting Frame **Sd2-F**

- Applicable where the inlet drains a relatively flat area (<5% slope).
- Use Type S steel posts.
- Space stakes evenly around perimeter at a maximum of 3 ft apart.
- Drive stakes into the ground ~18" deep.
- The fabric shall be 36" tall and entrenched at least 12" and backfill with crushed stone or compacted soil.
- Securely fasten the fabric and wire to the posts.



NOTES:
1. DESIGN IS FOR SLOPES NO GREATER THAN 5% (NOT DESIGNED FOR CONCENTRATED FLOWS).
2. THE STEEL POSTS SUPPORTING THE SILT FENCE MATERIAL SHOULD BE SPACED EVENLY AROUND THE PERIMETER OF THE INLET (MAXIMUM OF 3' APART).
3. THE STEEL POSTS SHOULD BE SECURELY DRIVEN AT LEAST 18" DEEP.
4. THE FABRIC SHOULD BE ENTRENCHED AT LEAST 12" AND THEN BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL.

Figure 1. Filter Fabric with Supporting Frame Installation Requirements (Sd2-F)

Sd2-F FILTER FABRIC INLET SEDIMENT TRAP

Know what's **below.** **Call** before you dig.

ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.
2839 PACES FERRY ROAD
SUITE 900, ATLANTA, GA 30339
TE: 770-431-8666
WWW.ARCADIS.COM

CONSULTANTS

SEALS

ISSUE FOR BID

FAYETTE COUNTY, GEORGIA
FAYETTE COUNTY WATER SYSTEM

FCWS-TRILITH STUDIOS ELEVATED WATER STORAGE TANK

400 VETERANS PARKWAY
FAYETTEVILLE, GA 30214

REVISIONS

NO.	DATE	ISSUED FOR	BY
1	08/04/2023	ADDENDUM 2	NN
0	07/07/2023	ISSUE FOR BID	NN

PROJECT STATUS: ISSUE FOR BID
PROJECT NO.: 30135792
DATE: JULY 2023
FILE NAME: ESC-09
DESIGNED BY: T. THOMAS
DRAWN BY: N. NIA
CHECKED BY: D. WILSON

SHEET TITLE
EROSION & SEDIMENT CONTROL

EROSION & SEDIMENT CONTROL DETAILS (SHEET 2 OF 2)

SCALE: AS SHOWN

ESC-11

SHEET 25 OF 62

User:NNIA Spec:AUS-NCSMOD File:C:\USERS\NNIA\DC\ACCDOCS\ARCADIS\AUS-30135792-TRILITH STUDIOS ELEVATED STORAGE TANK\PROJECT FILES\01 - WIP\CIVIL\SHEETS\ESC-09.DWG Scale:1:1 SavedDate:8/4/2023 Time:15:47 Plot Date: Ebrahimi Na, Nogol; 8/4/2023; 15:48 ; Layout:21