

ADDENDUM NO. 1

TO: PLANS AND SPECIFICATIONS FOR STATE OF MISSOURI

Replace 22 Electric Sites with 22 Premium Sites
Table Rock State Park, Campground #2
Branson, Missouri
PROJECT NO.: X2216-01

Bid Opening Date: 1:30 PM, Thursday, April 27, 2023 (Not Changed)

Revised Bid Form is attached. Bidders must use the bid form marked REVISED PER ADDENDUM #1 to bid this project.

Bidders are hereby informed that the construction Plans and/or Specifications are modified as follows:

SPECIFICATION CHANGES:

1. Section 004113 – Bid Form
 - a. REPLACE with revised Section 004113 – Bid Form (attached). The Alternate No.1 description was revised.
Bidders must use the attached revised bid form to bid this project.
2. Section 011000 – Summary of Work
 - a. REVISE Paragraph 1.6-A as follows:
 - A. The Owner will furnish fire rings, lantern posts, and pre-assembled picnic tables. These items will be Owner provided and Contractor installed.
3. Section 012300 – Alternates
 - a. REVISE Paragraph 3.1-A as follows:
 - A. Alternate No. 1: Provide all site improvements and utility connections for RV sites 255, 258, 260, 262, 264, and 266.
4. ADD new specification Section 321216 – Asphalt Paving (attached).
5. DELETE Section 330523 – Trenchless Utility Installation in its entirety. Directional drilling is not allowed.

DRAWING CHANGES:

1. Sheet C-102 (attached)
 - a. ADD Note: Ends of overlay areas shall be wedge-milled to provide smooth transition to existing pavement at tie-ins.

- b. DELETE representative shading for roadside shoulders.
 - c. ADD 2" mill and 2" BP-1 overlay notes.
2. Sheet C-103 (attached)
- a. ADD Note: Ends of overlay areas shall be wedge-milled to provide smooth transition to existing pavement at tie-in.
 - b. DELETE representative shading for roadside shoulders.
 - c. ADD 2" mill and 2" BP-1 overlay notes.
3. Sheet C-105 (attached)
- a. REVISE Note 2 as follows: See trenching and boring notes on this sheet.
 - b. ADD Water main and water service line along east side of site shall be bored only notes.
 - c. ADD Utilities under paved areas may be bored or open-cut trenched note.
 - d. DELETE See boring detail (typ) note.
4. Sheet C-107 (attached)
- a. REVISE Note 1 as follows: 8" Sanitary sewer main road crossing, if bored, must be jack and bore method per specification 330523.16.
 - b. ADD Note 2 as follows: Utilities under asphalt paved areas may be bored or open-cut trenched, utilities under concrete paved areas must be installed via jack and bore method per specification.
5. Sheet C-501 (attached)
- a. ADD detail UTILITY TRENCH WITH OVERLAY DETAIL
 - b. REVISE Note 1 as follows: Contractor to match existing bituminous pavement level, after 2" asphalt mill, with 6" concrete. Roadway project area shall have 2" asphalt overlay at the completion of project.
6. Sheet C-502 (attached)
- a. REMOVE concrete shoulder from Campsite Layout details.
 - b. ADD dimension for concrete turn-out at asphalt tie-in of 1'-0".

GENERAL COMMENTS:

- 1. The Pre-bid Meeting was held April 11, 2023 at 10:30 AM. The Pre-bid Meeting sign-in sheet is attached.
- 2. Please contact Mandy Roberson, Contract Specialist, at 573-522-0074 or mandy.roberson@oa.mo.gov for questions about bidding procedures, MBE\WBE\SDVE Goals, and other submittal requirements.
- 3. The deadline for technical questions was Wednesday, April 19, 2023 at noon.

4. Changes to, or clarification of, the bid documents are only made as issued in the addenda.
5. All correspondence with respect to this project must include the State of Missouri project number as indicated above.
6. Current Plan holders list available online at:
<https://www.oafmdcplanroom.com/jobs/1798/details/x2216-01-replace-22-electric-sites-with-22-premium-sites-table-rock-state-park-campground-2>
7. Prospective Bidders contact American Document Solutions, 1400 Forum Blvd Suite 1C, Columbia MO 65201, 573-446-7768 to order official plans and specifications.
8. **All bids shall be submitted on the bid form without additional terms and conditions, modifications, or stipulations. Each space on the bid form shall be properly filled including a bid amount for each alternate. Failure to do so will result in rejection of the bid.**
9. **MBE/WBE/SDVE participation requirements can be found in DIVISION 00. The MBE/WBE/SDVE participation goals are 10%/10%/3%, respectively. Only certified firms as of the bid opening date can be used to satisfy the MBE/WBE/SDVE participation goals for this project. If a bidder is unable to meet a participation goal, a Good Faith Effort Determination Form must be completed. Failure to complete this process will result in rejection of the bid.**
10. **The Contractor shall pay not less than the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed, as determined by the Missouri Department of Labor and Industrial Relations.** Bidders are to adhere to Prevailing Wage Hourly Rate of Wages and the Department of Labor and Industrial Relations can be contacted to determine the applicable wage rate for the work on this project.

ATTACHMENTS:

1. Pre-bid Meeting Sign-In Sheet
2. Section 004113 – Bid Form
3. Section 321216 - Asphalt Paving
4. Sheet C-102
5. Sheet C-103
6. Sheet C-105
7. Sheet C-107
8. Sheet C-501
9. Sheet C-502

April 20, 2023

END OF ADDENDUM NO. 1

Pre-Bid Meeting Attendance Sheet
Replace 22 Electric Sites with 22 Premium Sites
Table Rock State Park
Branson, Missouri

Project No. X2216-01
April 11, 2023 10:30 AM

| Name & Title | Company Name & Type of Contracting | MBE/WBE/SDVE Status | Phone | E-Mail Address of Attendee & E-Mail Address of Individual filling out Bid Documents |
|---|---|---------------------|--------------|---|
| Justin Adams | DNR/District Office Regional Director | | 417-532-7161 | justin.adams@dnr.mo.gov |
| Carl Bonnell <i>Carl Bonnell</i> | DNR/TRSP Deputy Regional Director | | 417-334-4704 | carl.bonnell@dnr.mo.gov |
| Caylen Cantrell <i>CC</i> | DNR/TRSP Park Superintendent | | 417-334-4704 | caylen.cantrell@dnr.mo.gov |
| Robert Simpson <i>Robert Simpson</i> | DNR/Central Office Engineer/P&D Program | | 573-751-5380 | robert.simpson@dnr.mo.gov |
| Connie Walden | Great Rivers Engineering Water Team Leader | | 816-499-2863 | cwalden@greatriv.com |
| David Lundstrom <i>DLC</i> | Great Rivers Engineering Project Engineer | | 417-406-2967 | dlundstrom@greatriv.com |

Pre-Bid Meeting Attendance Sheet
Replace 22 Electric Sites with 22 Premium Sites
Table Rock State Park
Branson, Missouri

Project No. X2216-01
April 11, 2023 10:30 AM

| Name & Title | Company Name Type of Contracting | MBE/WBE/ SDVE Status | Phone | E-Mail Address of Attendee and E-Mail Address of Individual filling out Bid Documents |
|-------------------------|--------------------------------------|-------------------------|--------------|---|
| Don Wagner <i>DW</i> | OAFMDC Construction Administrator | | 417-895-5001 | Don.Wagner@oa.mo.gov |
| Sandra Walther | OAFMDC Project Manager | | 573-257-7322 | sandra.walther@oa.mo.gov |
| Son Blech | Park Specialist Table Rock | | 417-334-4774 | Son.Blech@dr.mo.gov |
| SPUD PESTICIDE | A-1 ELECTRIC | WBE | 417 831-7770 | Spudca-lelec.com |
| Eric Friga | Friga Construction GC | | 417-887-7134 | eric@figainc.com |
| Kevin Marshall | Stone Electric LLC | | 417-634-6402 | K.Marshall@Stoneelectricllc.com |

Pre-Bid Meeting Attendance Sheet
Replace 22 Electric Sites with 22 Premium Sites
Table Rock State Park
Branson, Missouri

Project No. X2216-01
April 11, 2023 10:30 AM

| Name & Title | Company Name Type of Contracting | MBE/WBE/ SDVE Status | Phone | E-Mail Address of Attendee and E-Mail Address of Individual filling out Bid Documents |
|-------------------------------|-------------------------------------|-------------------------|------------------|---|
| Weston Hanger Project Eng. | GRE | | 417-886 7171 | WHANGER@greatriv.com |
| David Lundstrom Proj. Eng. | GRE | | ,, | dlundstrom@greatriv.com |
| Ann Johnson Proj. Mgr | MSP | | 573-751-5274 | Aecon.l.johnson@arr.mn.gov |
| Stan Schulte Estimator | Better By Design | WBE GC | 573-776- 8736 | SSchulte@betterbydesignllc.com |
| Kyle Te | Arete Contracting | MBE | 573-694-0748 | BIDS@aretecontracting.com |
| Chris Lambert Estimator | BNC Builders | MBE | 417-590-8765 | Chris@bncbuilders.com |

Pre-Bid Meeting Attendance Sheet
Replace 22 Electric Sites with 22 Premium Sites
Table Rock State Park
Branson, Missouri

Project No. X2216-01
April 11, 2023 10:30 AM

| Name & Title | Company Name Type of Contracting | MBE/WBE/ SDVE Status | Phone | E-Mail Address of Attendee and E-Mail Address of Individual filling out Bid Documents |
|--------------|-------------------------------------|-------------------------|-----------------|---|
| Aaron Martin | MARTIN GENERAL CONTRACTORS | | 573-485 2107 | A.MARTIN@MARTIN- GC.COM |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

SECTION 004113 - BID FORM

REVISED PER ADDENDUM #1

1.0 BID

A. From:

(Bidder's Name)

herein after called the "**Bidder**".

B. To:

Director, Division of Facilities Management, Design and Construction
Room 730, Harry S Truman State Office Building
301 West High Street
Jefferson City, Missouri 65101

herein after called the "**Owner**."

C. For:

REPLACE 22 ELECTRIC SITES WITH 22 PREMIUM SITES
Table Rock State Park, Campground #2
Branson, Missouri

D. Project Number:

X2216-01

hereinafter called the "**Work**."

E. Documents:

The undersigned, having examined and being familiar with the local conditions affecting the work and with the complete set of contract documents, including the Drawings, the Invitation For Bid, Instructions To Bidders, Statement of Bidders Qualifications, General Conditions, Supplement to General Conditions, and the technical specifications, including: addenda number _____ through _____ hereby proposes to perform the Work for the following:

F. Bid Amount:

_____ Dollars (\$ _____)

G. Allowances:

See Section 012100 for details.

H. Alternates:

Alternate No. 1: Provide all site improvements and utility connections for RV sites 255, 258, 260, 262, 264, and 266.

_____ Dollars (\$ _____)

Alternate No. 2: Provide a generator for each lift station, two generators total.

_____ Dollars (\$ _____)

2.0 MBE/WBE/SDVE PERCENTAGE OF PARTICIPATION PROJECT GOALS

A. This project's specific goals are: **MBE 10%**, **WBE 10%**, and **SDVE 3%**. NOTE: Only MBE/WBE firms certified by the State of Missouri Office of Equal Opportunity, and SDVE(s) meeting the requirements of Section 34.074, RSMo, and 1 CSR 30-5.010, as of the date of bid opening can be used to satisfy the MBE/WBE/SDVE participation goals for this project.

3.0 BID BOND

- A. Accompanying the bid is: ___ 5% Bid Bond or ___ Cashier's Check/Bank Draft for 5% of base bid that is payable without condition to the Division of Facilities Management, Design and Construction, State of Missouri, as per Article 5 of "Instructions To Bidders".

4.0 CONTRACT COMPLETION TIME AND LIQUIDATED DAMAGES

- A. The Bidder agrees to complete the work within **200 working days** from the date the Notice of Intent to Award is issued as modified by additional days added by the Owner's acceptance of alternates, if applicable. This includes ten (10) working days for document mailing and processing. The Bidder further agrees to pay to, or allow the State as liquidated damages the sum of **\$1,000** for each working day thereafter that the entire work is not substantially complete.

5.0 ATTACHMENTS TO BID

| | |
|--------|---|
| 004336 | Proposed Subcontractors |
| 004337 | MBE/WBE/SDVE Compliance Form |
| 004338 | MBE/WBE/SDVE Joint Venture Form |
| 004339 | MBE/WBE/SDVE Waiver Form |
| 004340 | SDVE Business Form |
| 004541 | Affidavit of Work Authorization |
| 004545 | Anti-Discrimination Against Israel Act Certification Form |

6.0 BIDDER'S CERTIFICATIONS

By signing and submitting this bid form, the Bidder certifies as follows:

A. No Undisclosed Interests or Associations, Collusion, or Solicitation of Other Bidders

1. This bid is genuine and is not made in the interest of or on behalf of any undisclosed person, firm, or corporation, and is not submitted in conformity with any agreement or rules of any group, association or corporation.
2. The Bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham proposal.
3. The Bidder has not solicited or induced any person, firm or corporation to refrain from submitting a bid.
4. The Bidder has not sought by collusion or otherwise to obtain any advantage over any other bidder or over the Owner.

B. Accuracy of Contract Documents

The Bidder has based this bid upon an official/complete set of contract documents, either obtained from the Owner or from a secondary source known to the Bidder to have provided a complete and accurate set of contract documents. If the Bidder received the contract documents from such a secondary source, any errors or omissions in the contract documents shall be interpreted and construed in favor of the Owner and against the Bidder. This bid is based upon the conditions within Article 1.2 of the General Conditions.

C. Non-Discrimination

The Bidder will not discriminate against any employee or applicant for employment because of race, creed, color or national origin in the performance of the Work.

D. Prevailing Wage

MISSOURI PREVAILING WAGE LAW (Sections 290.210 to 290.340, RSMo): The Contractor shall pay not less than the specified hourly rate of wages, as set out in the wage order attached to and made part of the specifications for work under this contract, to all workers performing work under the contract, in accordance with sections 290.210 to 290.340, RSMo. The Contractor shall forfeit a penalty to the Owner of one hundred

dollars per day (or portion of a day) for each worker that is paid less than the specified rates for any work done under the contract by the Contractor or by any subcontractor, in accordance with section 290.250, RSMo.

E. Transient Employers

The Bidder will comply with the provisions of Sections 285.230-234, RSMo, regarding transient employers.

F. Federal Work Authorization Program

The Bidder has enrolled and is participating in, and will continue to participate in, a federal work authorization program in accordance with Sections 285.525 and 285.530, RSMo for the duration of any contract awarded because of this bid.

G. Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA)

1. If awarded contract for this project, the Bidder/Contractor shall only utilize personnel authorized to work in the United States in accordance with applicable federal, state and local laws. This includes, but is not limited to, the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) and INA Section 274A.
2. If found to be in violation of this requirement or any applicable laws, and if the State of Missouri has reasonable cause to believe that the Contractor has knowingly employed individuals who are not eligible to work in the United States, the state shall have the right to cancel the contract immediately without penalty or recourse and suspend or debar the contractor from doing business with the state.
3. The Contractor agrees to cooperate fully with any audit or investigation from federal, state or local law enforcement agencies.

H. Anti-Discrimination Against Israel Act

1. If the awarded Contractor meets the definition of a company as defined in section 34.600, RSMo, and has ten or more employees, the Contractor shall not engage in a boycott of goods or services from the State of Israel; from companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel; or from persons or entities doing business in the State of Israel as defined in section 34.600, RSMo.
2. If, at any time during the life of the contract, Contractor meets the definition of a company as defined in section 34.600, RSMo, and the company's employees increases to ten or more OR the contractor's business status changes to become a company as defined in section 34.600, RSMo, and the company has ten or more employees, then the Contractor shall submit to the Division of Facilities Management, Design and Construction a completed Box C of the exhibit titled "Anti-Discrimination Against Israel Act Certification, and shall comply with the requirements of Box C.

I. The Personal Privacy Protection Act

1. If the Bidder provides any "personal information" as defined in §105.1500, RSMo concerning an entity exempt from federal income tax under Section 501(c) of the Internal Revenue Code of 1986, as amended, the Bidder understands and agrees that it is voluntarily choosing to seek a state contract and providing such information for that purpose. The state will treat such personal information in accord with §105.1500, RSMo.

7.0 CONTACT INFORMATION (mandatory for all bidders)

Sole Proprietorship/General Partnership LLC Limited Partnership Corporation Joint Venture

Business Name: _____

Address: _____

Telephone: _____ Fax Number: _____

Federal ID Number: _____ or Social Security Number: _____

Missouri Business Charter Number: _____ (or provide the proper certificate from the Secretary of State)

Contact Name: _____ Contact email: _____

8.0 SIGNATURES

FOR SOLE PROPRIETORSHIPS/GENERAL PARTNERSHIPS ONLY

Sole Proprietor's Name (printed) Name each general partner: _____

Today's Date: _____

I, _____, being the sole proprietor/general partner of (name of business) _____ (and if the name of said business is other than my legal name, having filed a Registration of Fictitious Name with the Missouri Secretary of State in order to allow me to use such name in connection with my business, as provided by Section 417.200, RSMo, et seq.), do hereby submit this bid and agree to be bound unto the State of Missouri as herein provided (if a general partnership, all partners must sign below).

Signature: _____ Signature: _____

Signature: _____ Signature: _____

FOR LIMITED LIABILITY COMPANIES ONLY

_____ today's date _____ State(s) of organization: _____
Manager's (or Managing Member's) Name (printed)

I, _____, being the Manager (or Managing Member) of (full legal name of limited liability company from Articles of Organization) _____, and being duly authorized to act as herein provided on behalf of said limited liability company, do hereby submit this bid on behalf of said limited liability company and agree that said limited liability company shall be bound unto the State of Missouri as herein provided.

Signature: _____

FOR LIMITED PARTNERSHIPS/LIMITED LIABILITY PARTNERSHIPS/LIMITED LIABILITY LIMITED PARTNERSHIPS ONLY

_____ today's date: _____ State(s) of organization: _____
General/Managing Partner's Name (printed)

I, _____, being the General Partner/Managing Partner of (full legal name of limited partnership/limited liability partnership/limited liability limited partnership from partnership agreement or Certificate of Limited Partnership) _____, and being duly authorized to act as herein provided on behalf of said limited partnership/limited liability partnership/limited liability limited partnership, do hereby submit this bid on behalf of said limited partnership/limited liability partnership/limited liability limited partnership and agree that said limited partnership/limited liability partnership/limited liability limited partnership shall be bound unto the State of Missouri as herein provided.

Signature: _____

FOR CORPORATIONS ONLY

President's Name (printed) Secretary's Name (printed) Today's date

State(s) of incorporation: _____

I, _____, being the (officer or title) _____ of (full legal name of corporation, from Articles of Incorporation) _____, and being duly authorized by the Board of Directors of said corporation to act as herein provided on behalf of said corporation, do hereby submit this bid on behalf of said corporation and agree that said corporation shall be bound unto the State of Missouri as herein provided.

Signature: _____ Attested by: _____
President Corporate Secretary

The President should sign as the bidder. If the signator is other than the corporate president, the bidder must provide satisfactory evidence that the signator has the legal authority to bind the corporation.

FOR ASSOCIATIONS/JOINT VENTURES

If multiple business entities/individuals are bidding collectively as an association or joint venture, each business entity/individual bidding as part of the association or joint venture shall sign this bid in the above sections relevant to the form that such business entity or individual does business, and the bidder shall duplicate the necessary number of signature pages so that all members of the association or joint venture shall sign this bid. If a name is adopted for use by the association or joint venture, the association or joint venture shall file a Registration of Fictitious Name with the Missouri Secretary of State in order to use such name in connection with the association or joint venture, as provided by Section 417.200, RSMo, *et seq.*

SECTION 321216 – ASPHALT PAVING

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section includes the following:
 - 1. Hot-mix asphalt paving.
 - 2. Hot-mix asphalt patching.
 - 3. Hot-mix asphalt overlays.
 - 4. Asphalt surface treatments:
 - 5. Pavement-marking paint.
 - 6. Hot-mix asphalt curbs.
 - 7. Wheel stops.

1.02 SYSTEM DESCRIPTION

- A. Provide hot-mix asphalt pavement according to the materials, workmanship, and other applicable requirements of the standard specifications of the state or of authorities having jurisdiction.

1.03 SUBMITTALS

- A. Product Data: For each product specified. Include technical data and tested physical and performance properties.
- B. Job-Mix Designs: Certification, by authorities having jurisdiction, of approval of each job mix proposed for the Work.
- C. Job-Mix Designs: For each job mix proposed for the Work.
- D. Shop Drawings: Indicate pavement markings, lane separations, and defined parking spaces. Indicate dedicated handicapped spaces with international graphics symbol.
- E. Samples: 12 by 12 inches minimum, of paving fabric.
- F. Qualification Data: For firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of engineers and owners, and other information specified.
- G. Material Test Reports: Indicate and interpret test results for compliance of materials with requirements indicated.
- H. Material Certificates: Certificates signed by manufacturers certifying that each material complies with requirements.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who has completed hot-mix asphalt paving similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- B. Manufacturer Qualifications: Engage a firm experienced in manufacturing hot-mix asphalt similar to that indicated for this Project and with a record of successful in-service performance.
- C. Testing Agency Qualifications: Demonstrate to Engineer's satisfaction, based on Engineer's evaluation of criteria conforming to ASTM D 3666, that the independent testing agency has the experience and capability to satisfactorily conduct the testing indicated without delaying the Work.
- D. Regulatory Requirements: Conform to applicable standards of authorities having jurisdiction for asphalt paving work on public property.
- E. Asphalt-Paving Publication: Comply with AI's "The Asphalt Handbook," except where more stringent requirements are indicated.
- F. Preinstallation Conference: Conduct conference at Project site to review methods and procedures related to asphalt paving including, but not limited to, the following:
 - 1. Review proposed sources of paving materials, including capabilities and location of plant that will manufacture hot-mix asphalt.
 - 2. Review condition of substrate and preparatory work performed by other trades.
 - 3. Review requirements for protecting paving work, including restriction of traffic during installation period and for remainder of construction period.
 - 4. Review and finalize construction schedule for paving and related work. Verify availability of materials, paving Installer's personnel, and equipment required to execute the Work without delays.
 - 5. Review inspection and testing requirements, governing regulations, and proposed installation procedures.
 - 6. Review forecasted weather conditions and procedures for coping with unfavorable conditions.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver pavement-marking materials to Project site in original packages with seals unbroken and bearing manufacturer's labels containing brand name and type of material, date of manufacture, and directions for storage.
- B. Store pavement-marking materials in a clean, dry, protected location and within temperature range required by manufacturer. Protect stored materials from direct sunlight.

1.06 PROJECT CONDITIONS

- A. Environmental Limitations: Do not apply asphalt materials if substrate is wet or exces-

sively damp or if the following conditions are not met:

1. Prime and Tack Coats: Minimum surface temperature of 60 deg F (15.5 deg C).
 2. Slurry Coat: Comply with weather limitations of ASTM D 3910.
 3. Asphalt Base Course: Minimum surface temperature of 40 deg F (4 deg C) and rising at time of placement.
 4. Asphalt Surface Course: Minimum surface temperature of 60 deg F (15.5 deg C) at time of placement.
- B. Pavement-Marking Paint: Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 40 deg F (4 deg C) for oil-based materials, 50 deg F (10 deg C) for water-based materials, and not exceeding 95 deg F (35 deg C).

PART 2 – PRODUCTS

2.01 AGGREGATES

- A. General: Use materials and gradations that have performed satisfactorily in previous installations.
- B. Coarse Aggregate: Sound; angular crushed stone; crushed gravel; or properly cured, crushed blast-furnace slag; complying with ASTM D 692.
- C. Fine Aggregate: Sharp-edged natural sand or sand prepared from stone; gravel, properly cured blast-furnace slag, or combinations thereof; complying with ASTM D 1073.
 1. For hot-mix asphalt, limit natural sand to a maximum of 20 percent by weight of the total aggregate mass.
- D. Mineral Filler: Rock or slag dust, hydraulic cement, or other inert material complying with ASTM D 242.

2.02 ASPHALT MATERIALS

- A. Asphalt Cement: ASTM D 3381 for viscosity-graded material; ASTM D 946 for penetration-graded material.
- B. Asphalt Cement: ASTM D 3381 for viscosity-graded material.
- C. Undersealing Asphalt: ASTM D 3141, pumping consistency.
- D. Prime Coat: ASTM D 2027; medium-curing cutback asphalt; MC-30, MC-70, or MC-250.
- E. Prime Coat: Asphalt emulsion prime coat material shall conform to Missouri Standard Specifications for Highway Construction, Section 408.
- F. Tack Coat: Asphalt emulsion tack coat material shall conform to Missouri Standard Specifications for Highway Construction, Section 409.

- G. Fog Seal: ASTM D 977, emulsified asphalt or ASTM D 2397, cationic emulsified asphalt, slow setting, factory diluted in water, of suitable grade and consistency for application.
- H. Water: Potable.

2.03 AUXILIARY MATERIALS

- A. Herbicide: Commercial chemical for weed control, registered by Environmental Protection Agency (EPA). Provide granular, liquid, or wettable powder form.
- B. Sand: ASTM D 1073, Grade Nos. 2 or 3.
- C. Paving Geotextile: Nonwoven polypropylene, specifically designed for paving applications, resistant to chemical attack, rot, and mildew.
- D. Pavement-Marking Paint: Alkyd-resin type, ready-mixed, complying with FS TT-P-115, Type I, or AASHTO M-248, Type N.
- E. Pavement-Marking Paint: Latex, water-base emulsion, ready-mixed, complying with FS TT-P-1952.
- F. Glass Beads: AASHTO M-247.
- G. Wheel Stops: Precast, air-entrained concrete, 2500-psi minimum compressive strength, approximately 6 inches high, 9 inches wide, and 84 inches long. Provide chamfered corners and drainage slots on underside, and provide holes for anchoring to substrate.
 - 1. Dowels: Galvanized steel, diameter 3/4 inch, minimum length 10 inches.

2.04 MIXES

- A. Hot-Mix Asphalt: Provide dense, hot-laid, hot-mix asphalt plant mixes approved by authorities having jurisdiction; designed according to procedures in AI's "Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types"; and complying with the following requirements:
 - 1. Provide mixes with a history of satisfactory performance in geographical area where Project is located.
 - 2. Base Course: As indicated.
 - 3. Surface Course: As indicated.
- B. Hot-Mix Asphalt: Provide dense, hot-laid, hot-mix asphalt plant mixes approved by authorities having jurisdiction and designed according to procedures in AI's "Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types."
 - 1. Provide mixes with a history of satisfactory performance in geographical area where Project is located.
 - 2. Provide mixes complying with the composition, grading, and tolerance requirements of ASTM D 3515 for the following nominal, maximum aggregate sizes:

- a. Base Course: 1 inch.
- b. Surface Course: 1/2 inch.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify that subgrade is dry and in suitable condition to support paving and imposed loads.
- B. Proof-roll subbase using heavy, pneumatic-tired rollers to locate areas that are unstable or that require further compaction.
- C. Notify Engineer in writing of any unsatisfactory conditions. Do not begin paving installation until these conditions have been satisfactorily corrected.

3.02 COLD MILLING

- A. Clean existing paving surface of loose and deleterious material immediately before cold milling. Remove existing asphalt pavement, including hot-mix asphalt and, as necessary, unbound-aggregate base course, by cold milling to grades and cross sections indicated.
 1. Repair or replace curbs, manholes, and other construction damaged during cold milling.

3.03 PATCHING AND REPAIRS

- A. Patching: Saw cut perimeter of patch and excavate existing pavement section to sound base. Recompact new subgrade. Excavate rectangular or trapezoidal patches, extending 12 inches into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically.
 1. Tack coat faces of excavation and allow to cure before paving.
 2. Fill excavation with dense-graded, hot-mix asphalt base mix and, while still hot, compact flush with adjacent surface.
 3. Partially fill excavation with dense-graded, hot-mix asphalt base mix and compact while still hot. Cover asphalt base course with compacted, hot-mix surface layer finished flush with adjacent surfaces.
- B. Portland Cement Concrete Pavement: Break cracked slabs and roll as required to reseal concrete pieces firmly.
 1. Pump hot undersealing asphalt under rocking slabs until slab is stabilized or, if necessary, crack slab into pieces and roll to reseal pieces firmly.
 2. Remove disintegrated or badly broken pavement. Prepare and patch with hot-mix asphalt.
- C. Leveling Course: Install and compact leveling course consisting of dense-graded, hot-mix asphalt surface course to level sags and fill depressions deeper than 1 inch in existing pavements.

1. Install leveling wedges in compacted lifts not exceeding 3 inches thick.
- D. Crack and Joint Filling: Remove existing filler material from cracks or joints to a depth of 1/4 inch. Refill with asphalt joint-filling material to restore watertight condition. Remove excess filler that has accumulated near cracks or joints.
- E. Tack Coat: Apply uniformly to existing surfaces of previously constructed asphalt or portland cement concrete paving and to surfaces abutting or projecting into new, hot-mix asphalt pavement. Apply at a uniform rate of 0.05 to 0.15 gal./sq. yd. of surface.
 1. Allow tack coat to cure undisturbed before paving.
 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

3.04 SURFACE PREPARATION

- A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
 1. Sweep loose granular particles from surface of unbound-aggregate base course. Do not dislodge or disturb aggregate embedded in compacted surface of base course.
- B. Herbicide Treatment: Apply herbicide according to manufacturer's recommended rates and written application instructions. Apply to dry, prepared subgrade or surface of compacted-aggregate base before applying paving materials.
 1. Mix herbicide with prime coat when formulated by manufacturer for that purpose.
- C. Prime Coat: Apply uniformly over surface of compacted-aggregate base at a rate of 0.15 to 0.50 gal./sq. yd. Apply enough material to penetrate and seal, but not flood, surface. Allow prime coat to cure for 72 hours minimum.
 1. If prime coat is not entirely absorbed within 24 hours after application, spread sand over surface to blot excess asphalt. Use just enough sand to prevent pickup under traffic. Remove loose sand by sweeping before pavement is placed and after volatiles have evaporated.
 2. Protect primed substrate from damage until ready to receive paving.

3.05 GEOTEXTILE INSTALLATION

- A. Apply bond coat, consisting of asphalt cement, uniformly to existing surfaces at a rate of 0.20 to 0.30 gal./sq. yd.
- B. Place paving geotextile promptly according to manufacturer's written instructions. Broom or roll geotextile smooth and free of wrinkles and folds. Overlap longitudinal joints 4 inches and transverse joints 6 inches.
 1. Protect paving geotextile from traffic and other damage and place overlay paving the same day.

3.06 HOT-MIX ASPHALT PLACING

- A. Machine place hot-mix asphalt mix on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness, when compacted.
 - 1. Place hot-mix asphalt base course in number of lifts and thicknesses indicated.
 - 2. Place hot-mix asphalt surface course in single lift.
 - 3. Spread mix at minimum temperature of 250 deg F.
 - 4. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes, unless otherwise indicated.
 - 5. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than 10 feet wide, except where infill edge strips of a lesser width are required.
 - 1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete asphalt base course for a section before placing asphalt surface course.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.07 JOINTS

- A. Construct joints to ensure continuous bond between adjoining paving sections. Construct joints free of depressions with same texture and smoothness as other sections of hot-mix asphalt course.
 - 1. Clean contact surfaces and apply tack coat.
 - 2. Offset longitudinal joints in successive courses a minimum of 6 inches.
 - 3. Offset transverse joints in successive courses a minimum of 24 inches.
 - 4. Construct transverse joints by bulkhead method or sawed vertical face method as described in AI's "The Asphalt Handbook."
 - 5. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement.
 - 6. Compact asphalt at joints to a density within 2 percent of specified course density.

3.08 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight

without excessive displacement. Compact hot-mix paving with hand tampers or vibratory-plate compactors in areas inaccessible to rollers.

1. Complete compaction before mix temperature cools to 185 deg F.
- B. Breakdown Rolling: Accomplish breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Repair surfaces by loosening displaced material, filling with hot-mix asphalt, and rerolling to required elevations.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling, while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
 1. Average Density: 96 percent of reference laboratory density according to ASTM D 1559, but not less than 94 percent nor greater than 100 percent.
 2. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent nor greater than 96 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while still hot, with back of rake or smooth iron. Compact thoroughly using tamper or other satisfactory method.
- F. Repairs: Remove paved areas that are defective or contaminated with foreign materials. Remove paving course over area affected and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.
- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.09 INSTALLATION TOLERANCES

- A. Thickness: Compact each course to produce the thickness indicated within the following tolerances:
 1. Base Course: Plus or minus 1/2 inch.
 2. Surface Course: Plus 1/4 inch, no minus.
- B. Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
 1. Base Course: 1/4 inch.
 2. Surface Course: 1/8 inch.

3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.

3.10 ASPHALT CURBS

- A. Construct hot-mix asphalt curbs over compacted pavement surfaces. Apply a light tack coat, unless pavement surface is still tacky and free from dust. Spread mix at minimum temperature of 250 deg F.
 1. Asphalt Mix: Same as pavement surface-course mix.
- B. Place hot-mix asphalt to curb cross section indicated or, if not indicated, to local standard shapes, by machine or by hand in wood or metal forms. Tamp hand-placed materials and screed to smooth finish. Remove forms after hot-mix asphalt has cooled.

3.11 SURFACE TREATMENTS

- A. Fog Seals: Apply fog seal at a rate of 0.10 to 0.15 gal./sq. yd. to existing asphalt pavement and allow to cure. Lightly dust areas receiving excess fog seal with a fine sand.
- B. Slurry Seals: Apply slurry coat in a uniform thickness according to ASTM D 3910 and allow to cure.
 1. Roll slurry seal to smooth ridges and provide a uniform, smooth surface.

3.12 PAVEMENT MARKING

- A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Engineer.
- B. Allow paving to cure for 30 days before starting pavement marking.
- C. Sweep and clean surface to eliminate loose material and dust.
- D. Apply paint with mechanical equipment to produce pavement markings of dimensions indicated with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.
 1. Broadcast glass spheres uniformly into wet pavement markings at a rate of 6 lb/gal.

3.13 WHEEL STOPS

- A. Securely attach wheel stops into pavement with not less than 2 steel rebar dowels embedded in precast concrete at one-third points. Firmly bond each dowel to wheel stop and to pavement.
 1. Extend upper portion of dowel 5 inches into wheel stop and lower portion a minimum of 5 inches into pavement.

3.14 FIELD QUALITY CONTROL

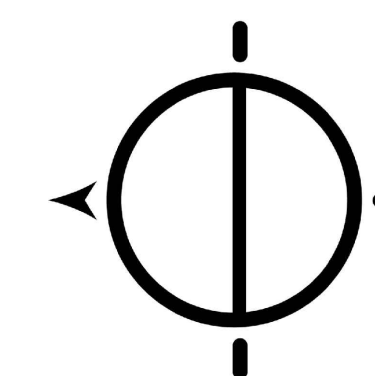
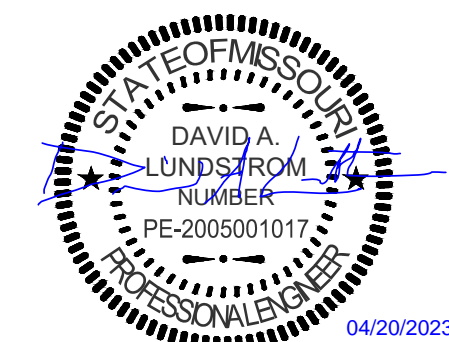
- A. Testing Agency: Contractor will engage a qualified independent testing agency to perform field inspections and tests and to prepare test reports.

1. Testing agency will conduct and interpret tests and state in each report whether tested Work complies with or deviates from specified requirements.
- B. Additional testing, at Contractor's expense, will be performed to determine compliance of corrected Work with specified requirements.
- C. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D 3549.
- D. Surface Smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerances.
- E. In-Place Density: Samples of uncompacted paving mixtures and compacted pavement will be secured by testing agency according to ASTM D 979.
 1. Reference laboratory density will be determined by averaging results from 4 samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to ASTM D 1559, and compacted according to job-mix specifications.
 2. Reference maximum theoretical density will be determined by averaging results from 4 samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to ASTM D 2041, and compacted according to job-mix specifications.
 3. In-place density of compacted pavement will be determined by testing core samples according to ASTM D 1188 or ASTM D 2726.
 - a. One core sample will be taken for every 1000 sq. yd. or less of installed pavement, but in no case will fewer than 3 cores be taken.
 - b. Field density of in-place compacted pavement may also be determined by nuclear method according to ASTM D 2950 and correlated with ASTM D 1188 or ASTM D 2726.
- F. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

3.15 WAYBILLS AND DELIVERY TICKETS

- A. Submit waybills and delivery tickets to onsite Resident Project Representative daily during the progress of work.

END OF SECTION 321216



Missouri State Certificate of Authority Numbers:
Engineering: 2000156885; Land Surveying: 2001011476;
Landscape Architecture: 2007013673

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES
MISSOURI STATE PARKS

TABLE ROCK STATE PARK
REPLACE 22 ELECTRIC SITES
WITH 22 PREMIUM SITES

TABLE ROCK STATE PARK
CAMPGROUND #2
5272 STATE HWY 165
BRANSON, MISSOURI 65616

PROJECT # X2216-01
SITE # 5603
ASSET # 7815603018

REVISION: REV. 1 - ADDENDUM 1
DATE: 04/20/2023
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 01/17/2023

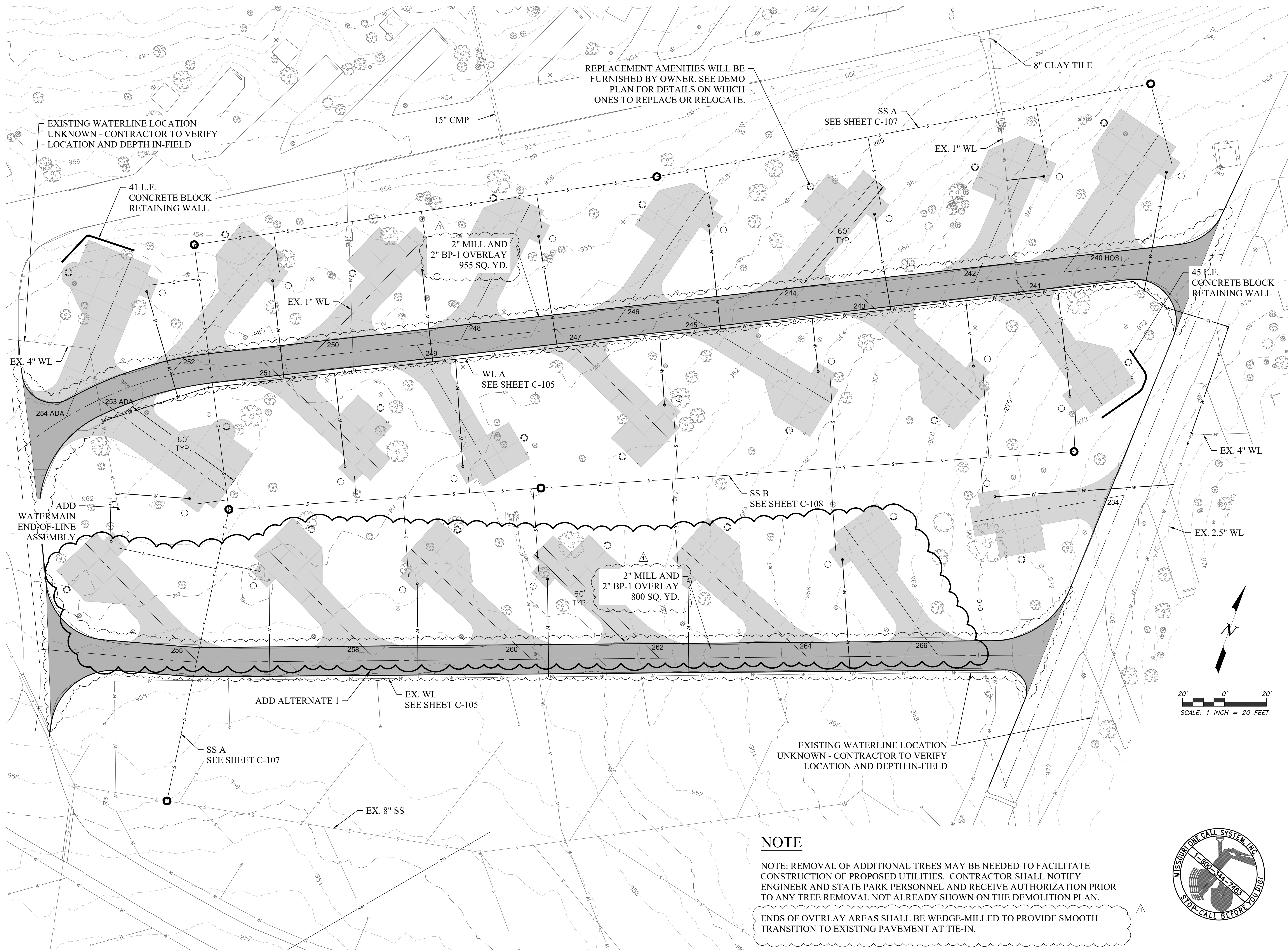
CAD DWG FILE: X2216-01_C-002
DRAWN BY: ALW
CHECKED BY: DAL
DESIGNED BY: ALW

SHEET TITLE:
SITE LAYOUT

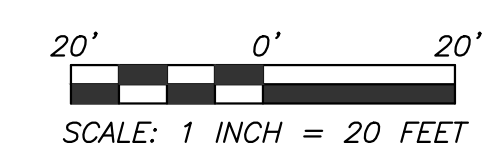
SHEET NUMBER:

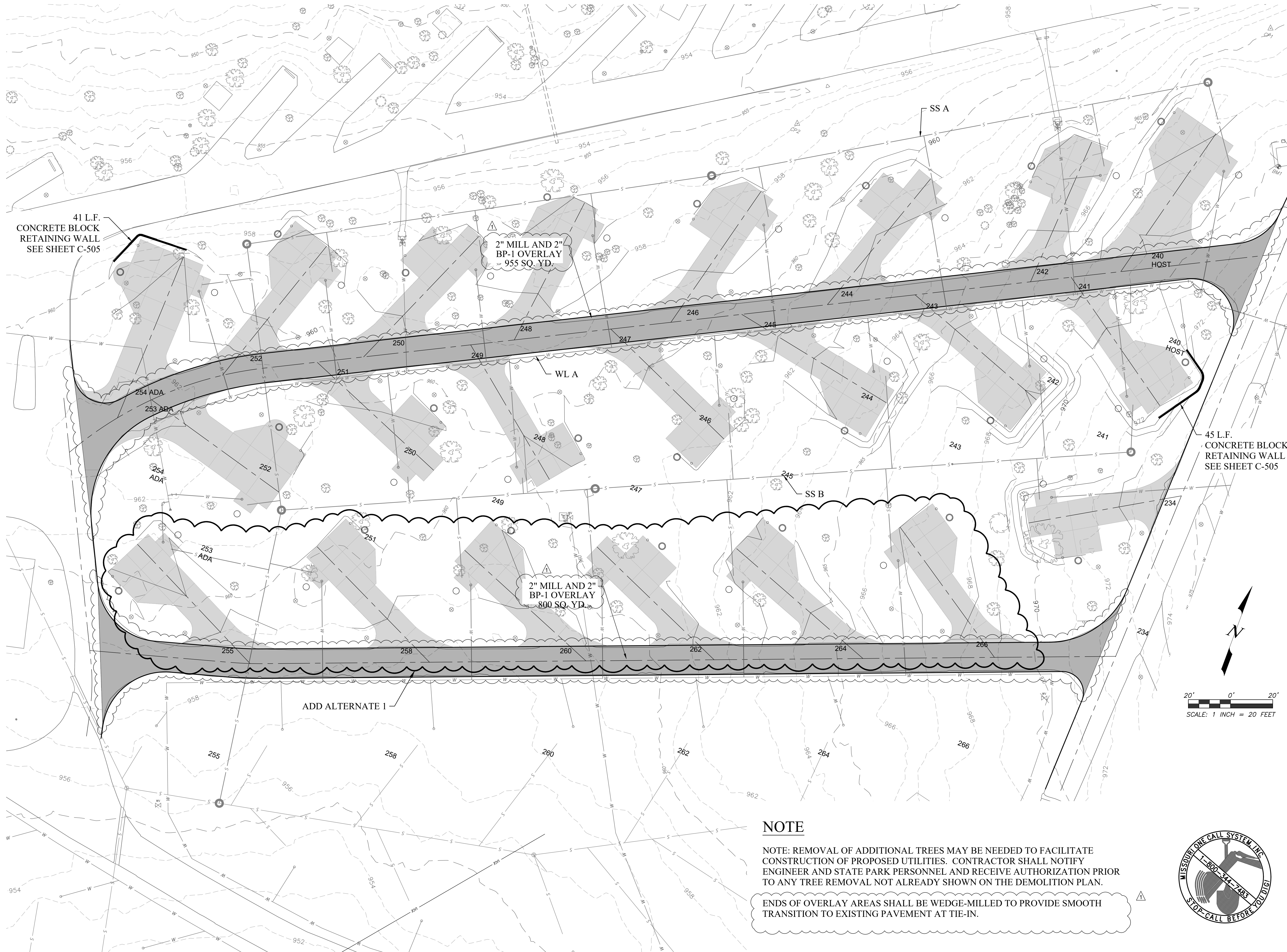
C-102

3 OF 18 SHEETS
JANUARY 17, 2023



NOTE
NOTE: REMOVAL OF ADDITIONAL TREES MAY BE NEEDED TO FACILITATE CONSTRUCTION OF PROPOSED UTILITIES. CONTRACTOR SHALL NOTIFY ENGINEER AND STATE PARK PERSONNEL AND RECEIVE AUTHORIZATION PRIOR TO ANY TREE REMOVAL NOT ALREADY SHOWN ON THE DEMOLITION PLAN.
ENDS OF OVERLAY AREAS SHALL BE WEDGE-MILLED TO PROVIDE SMOOTH TRANSITION TO EXISTING PAVEMENT AT TIE-IN.





41 L.F.
CONCRETE BLOCK
RETAINING WALL
SEE SHEET C-505

2" MILL AND 2"
BP-1 OVERLAY
955 SQ. YD.

2" MILL AND 2"
BP-1 OVERLAY
800 SQ. YD.

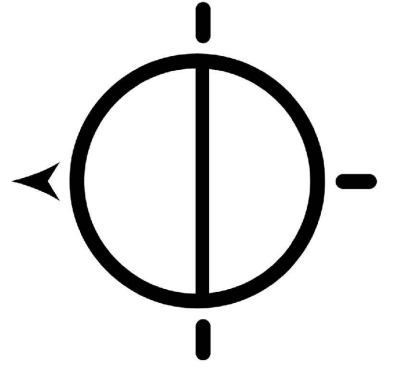
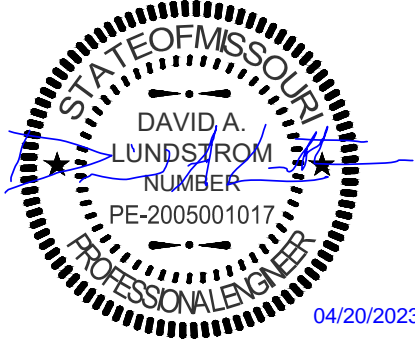
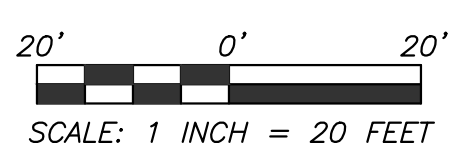
45 L.F.
CONCRETE BLOCK
RETAINING WALL
SEE SHEET C-505

ADD ALTERNATE 1

NOTE

NOTE: REMOVAL OF ADDITIONAL TREES MAY BE NEEDED TO FACILITATE CONSTRUCTION OF PROPOSED UTILITIES. CONTRACTOR SHALL NOTIFY ENGINEER AND STATE PARK PERSONNEL AND RECEIVE AUTHORIZATION PRIOR TO ANY TREE REMOVAL NOT ALREADY SHOWN ON THE DEMOLITION PLAN.

ENDS OF OVERLAY AREAS SHALL BE WEDGE-MILLED TO PROVIDE SMOOTH TRANSITION TO EXISTING PAVEMENT AT TIE-IN.



Missouri State Certificate of Authority Numbers:
Engineering: 2000156885; Land Surveying: 2001011476;
Landscape Architecture: 2007013673

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES
MISSOURI STATE PARKS

TABLE ROCK STATE PARK
REPLACE 22 ELECTRIC SITES
WITH 22 PREMIUM SITES

TABLE ROCK STATE PARK
CAMPGROUND #2
5272 STATE HWY 165
BRANSON, MISSOURI 65616

PROJECT # X2216-01
SITE # 5603
ASSET # 7815603018

REVISION: REV. 1 - ADDENDUM 1
DATE: 04/20/2023
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 01/17/2023

CAD DWG FILE: X2216-01_C-002
DRAWN BY: ALW
CHECKED BY: DAL
DESIGNED BY: ALW

SHEET TITLE:
SITE GRADING

SHEET NUMBER:

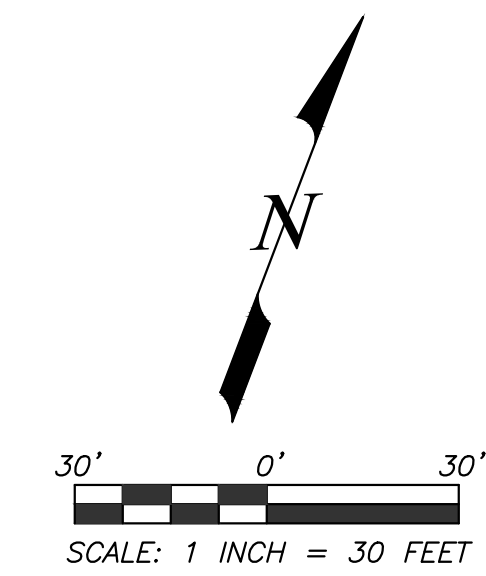
C-103

4 OF 18 SHEETS
JANUARY 17, 2023

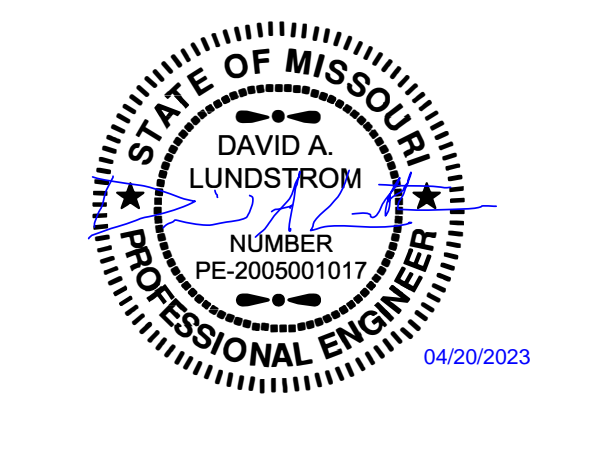
- | | | | |
|---|--|--|--|
| 1. STA 0+00.00 BEGIN 4" WATERLINE WITH 4" X 4" TEE | 8. STA 1+55.73 41 LF 1" SERVICE LINE | 15. STA 4+12.84 28 LF 1" SERVICE LINE | 22. STA 5+95.00 4" VALVE |
| 2. STA 0+05.00 4" VALVE | 9. STA 1+69.25 47 LF 1" SERVICE LINE | 16. STA 4+41.64 CONNECT TO 1" WATERLINE WITH 1" X 4" TEE | 23. STA 6+02.45 CONNECT TO EXISTING 4" WATERLINE WITH A 4" X 4" TEE |
| 3. STA 0+37.66 51 LF 1" SERVICE LINE | 10. STA 2+18.02 51 LF 1" SERVICE LINE | 17. STA 4+57.97 47 LF 1" SERVICE LINE | 24. STA 6+07.45 4" VALVE |
| 4. STA 0+51.97 4" X 11.25° BEND | 11. STA 2+66.05 29 LF 1" SERVICE LINE | 18. STA 4+96.53 4" X 45° BEND | 25. STA 6+12.45 4" X 2.5" REDUCER CONNECT TO EXISTING 2.5" WATERLINE |
| 5. STA 0+86.22 44 LF 1" SERVICE LINE | 12. STA 2+94.91 46 LF 1" SERVICE LINE | 19. STA 5+03.28 52 LF 1" SERVICE LINE | 26. STA 6+26.88 81 LF 1" SERVICE LINE ON EXISTING 2.5" WATERLINE |
| 6. STA 1+10.15 41 LF 1" SERVICE LINE | 13. STA 3+38.57 22 LF 1" SERVICE LINE | 20. STA 5+16.61 4" X 22.5° BEND | |
| 7. STA 1+22.51 CONNECT TO 1" WATERLINE WITH 1" X 4" TEE | 14. STA 3+76.39 42 LF 1" SERVICE LINE | 21. STA 5+47.73 4" X 90° BEND | |

LEGEND:

- w — EXISTING WATERLINE
- w — PROPOSED WATERLINE
- WV WATER VALVE
- WH YARD SPIGOT



STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



GRE GREAT RIVER ENGINEERING

Missouri State Certificate of Authority Numbers:
Engineering: 2000156885; Land Surveying: 2001011476;
Landscape Architecture: 2007013673

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES
MISSOURI STATE PARKS

TABLE ROCK STATE PARK
REPLACE 22 ELECTRIC SITES
WITH 22 PREMIUM SITES

TABLE ROCK STATE PARK
CAMPGROUND #2
5272 STATE HWY 165
BRANSON, MISSOURI 65616

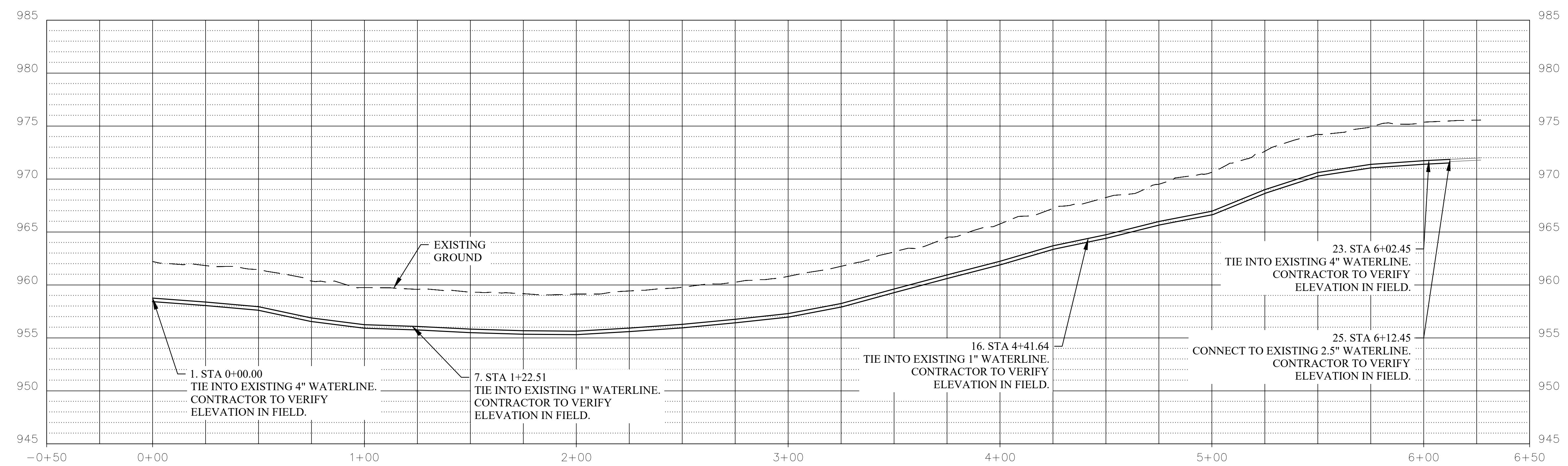
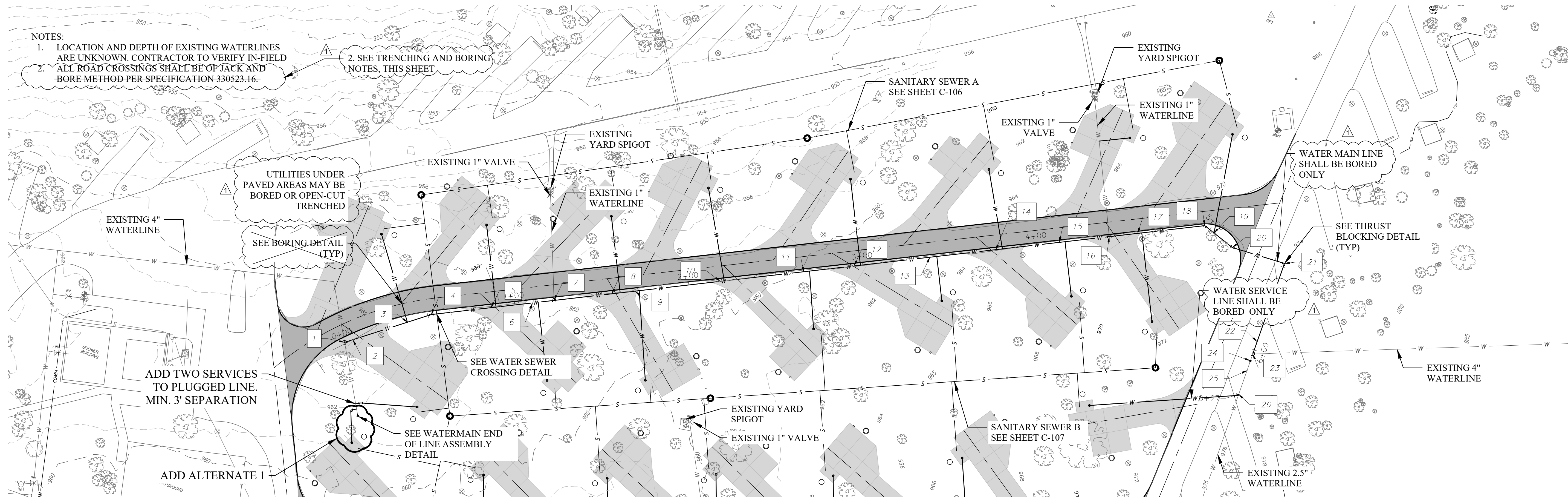
PROJECT # X2216-01
SITE # 5603
ASSET # 7815603018

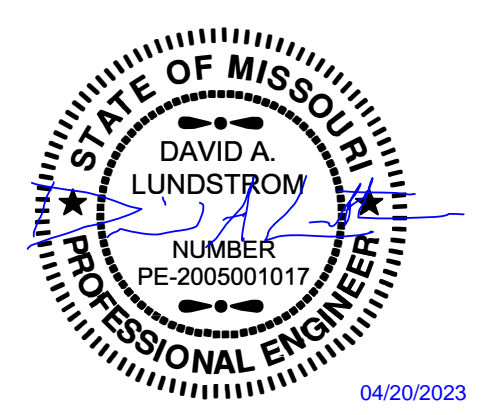
REVISION: REV. 1 - ADDENDUM 1
DATE: 04/20/2023
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 01/17/2023

CAD DWG FILE: X2216-01_C-003
DRAWN BY: ALW
CHECKED BY: CMW
DESIGNED BY: ALW

SHEET TITLE:
WATER LINE A

SHEET NUMBER:
C-105
6 OF 18 SHEETS
JANUARY 17, 2023





OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES
MISSOURI STATE PARKS

TABLE ROCK STATE PARK
REPLACE 22 ELECTRIC SITES
WITH 22 PREMIUM SITES

TABLE ROCK STATE PARK
CAMPGROUND #2
5272 STATE HWY 165
BRANSON, MISSOURI 65616

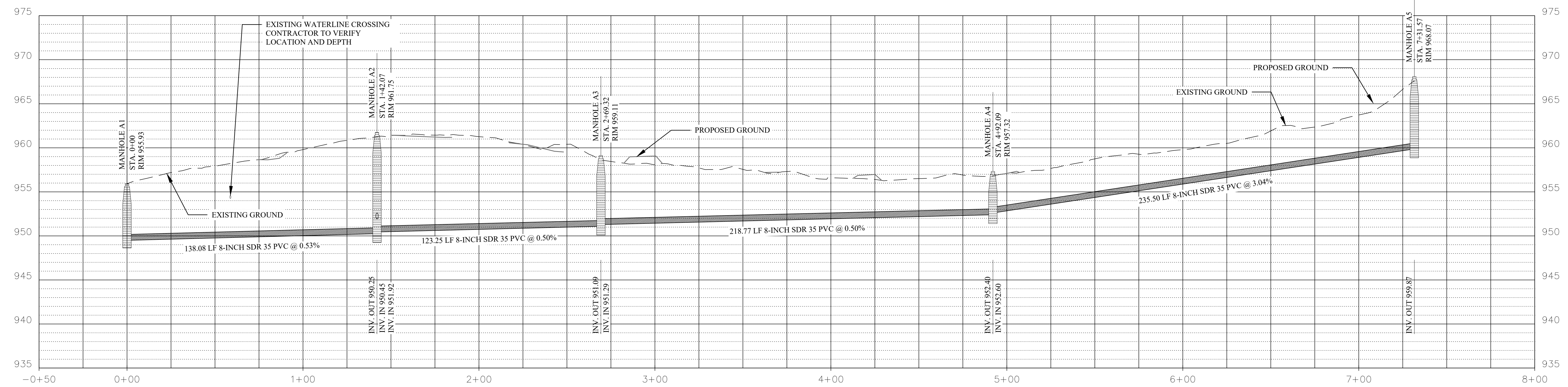
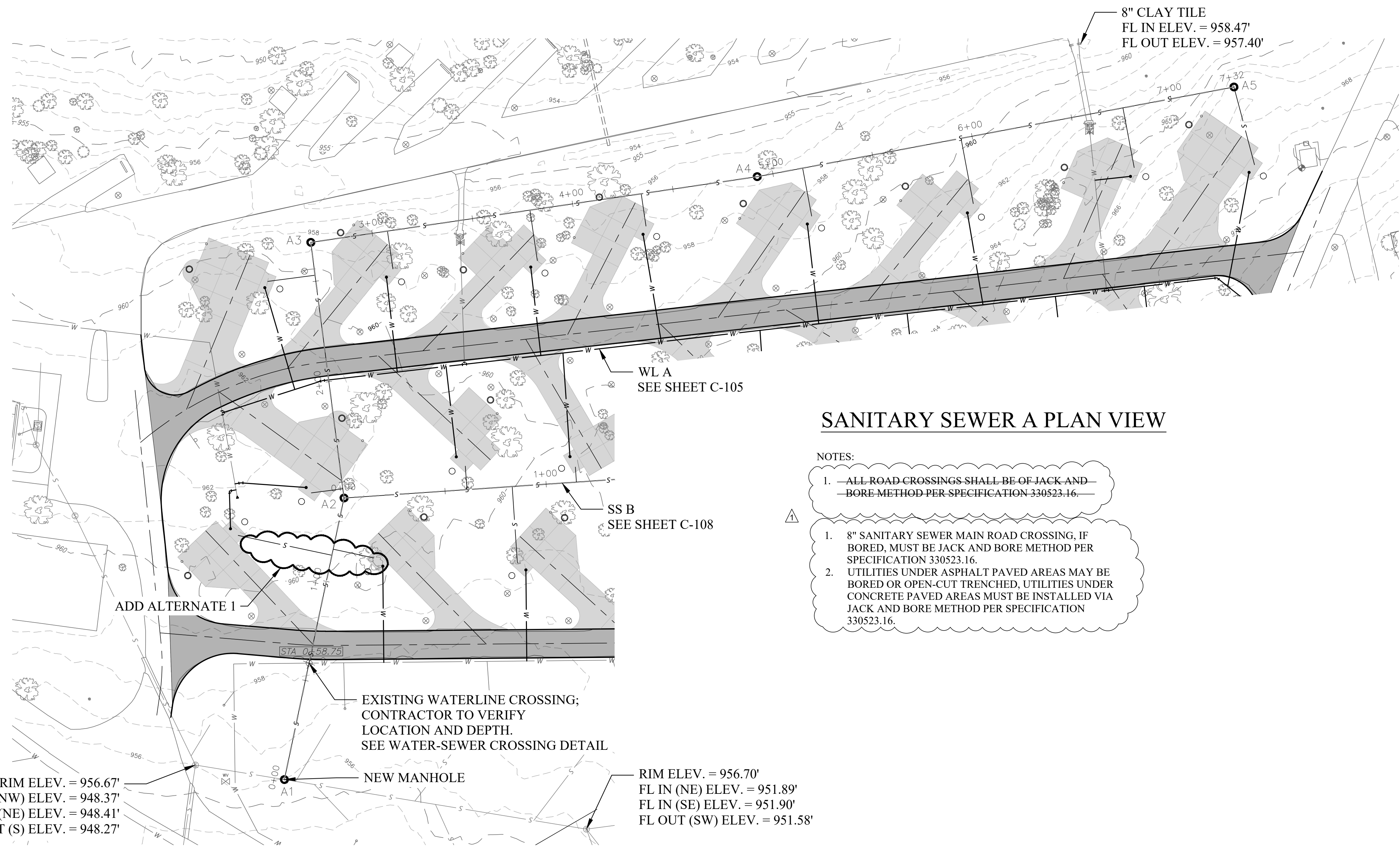
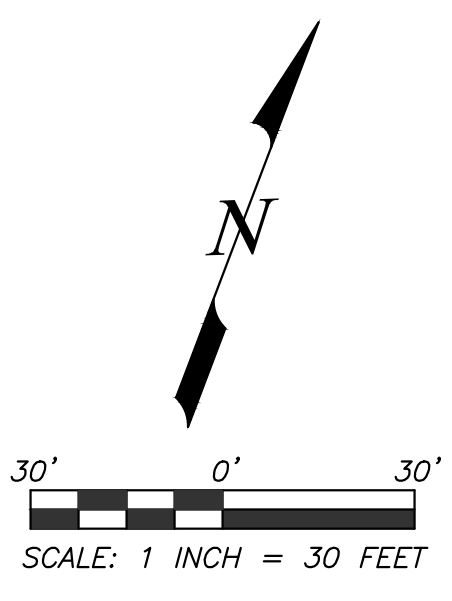
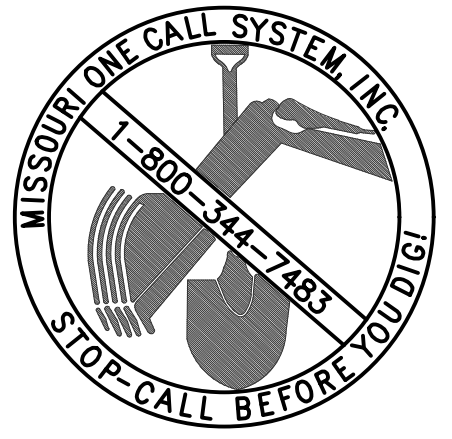
PROJECT # X2216-01
SITE # 5603
ASSET # 7815603018

REVISION: REV. 1 - ADDENDUM 1
DATE: 04/20/2023
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 01/17/2023

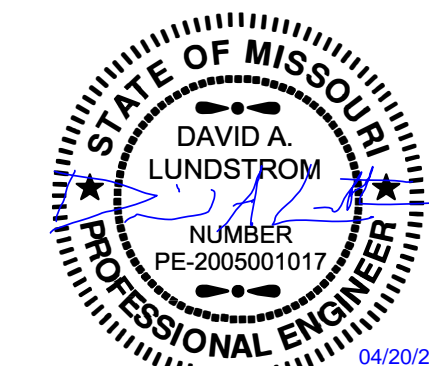
CAD DWG FILE: X2216-01_C-004
DRAWN BY: ALW
CHECKED BY: CMW
DESIGNED BY: ALW

SHEET TITLE:
SANITARY SEWER A

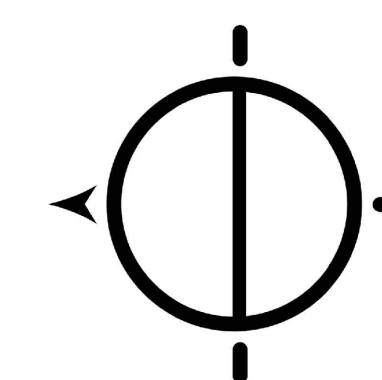
SHEET NUMBER:
C-107
8 OF 18 SHEETS
JANUARY 17, 2023



SANITARY SEWER A PROFILE



GRE
GREAT RIVER
ENGINEERING



Missouri State Certificate of Authority Numbers:
Engineering: 2000156885, Land Surveying: 2001011476,
Landscape Architecture: 2007013673

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES
MISSOURI STATE PARKS

TABLE ROCK STATE PARK
REPLACE 22 ELECTRIC SITES
WITH 22 PREMIUM SITES

TABLE ROCK STATE PARK
CAMPGROUND #2
5272 STATE HWY 165
BRANSON, MISSOURI 65616

PROJECT # X2216-01
SITE # 5603
ASSET # 7815603018

REVISION: REV. 1 - ADDENDUM 1
DATE: 04/20/2023
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 01/17/2023

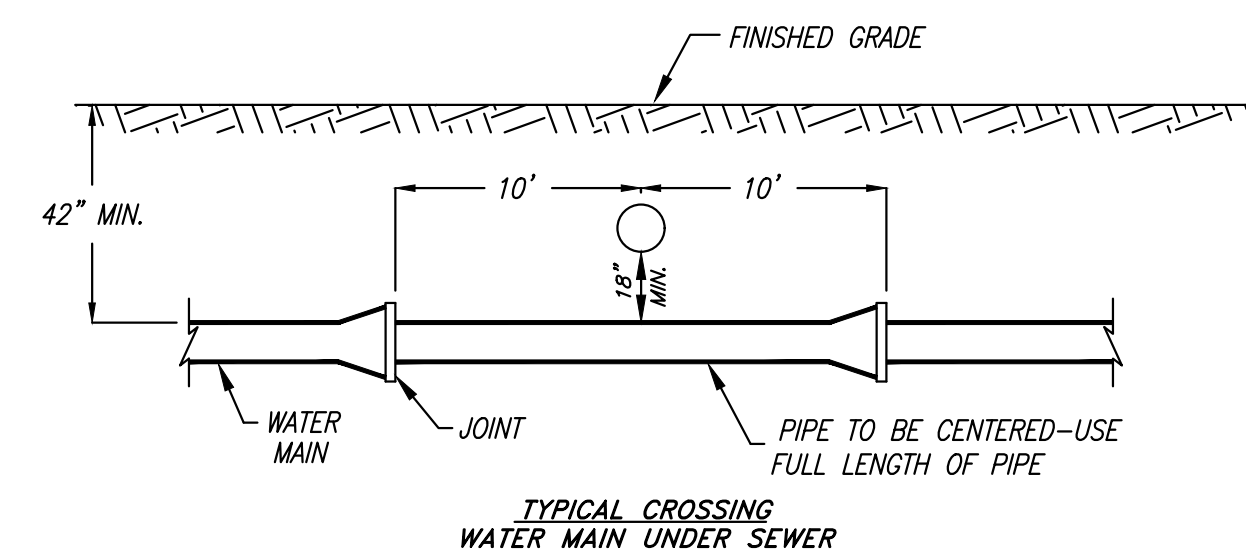
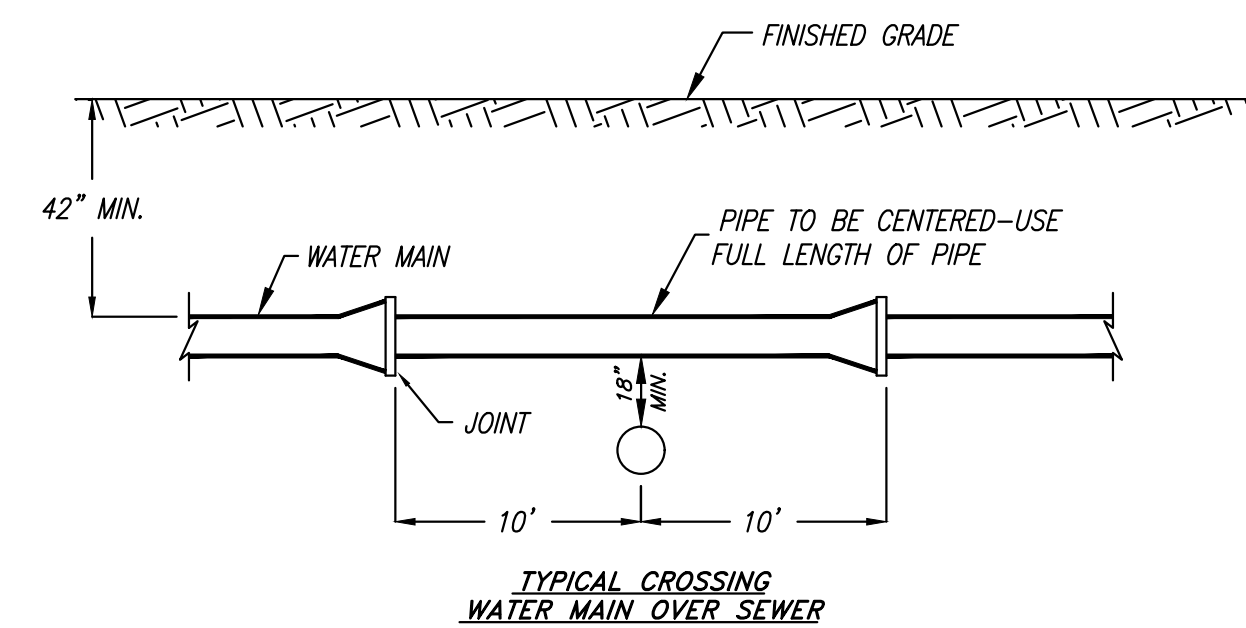
CAD DWG FILE: X2216-01_C-500
DRAWN BY: ALW
CHECKED BY: CMW
DESIGNED BY: CMW

SHEET TITLE:
WATER DETAILS

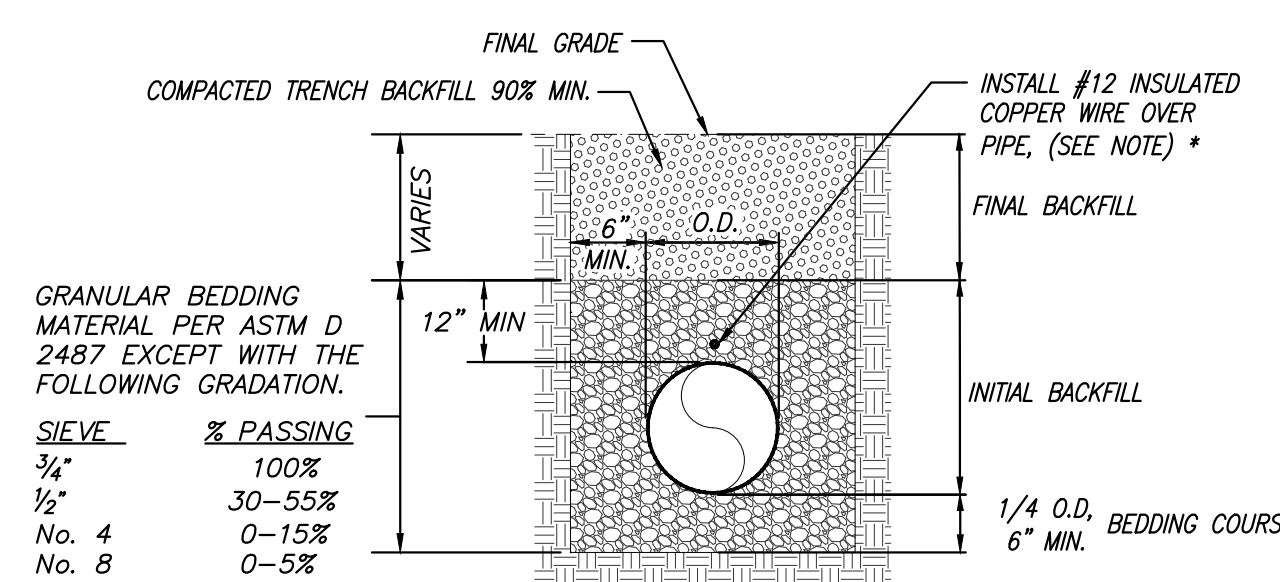
SHEET NUMBER:

C-501

10 OF 18 SHEETS
JANUARY 17, 2023



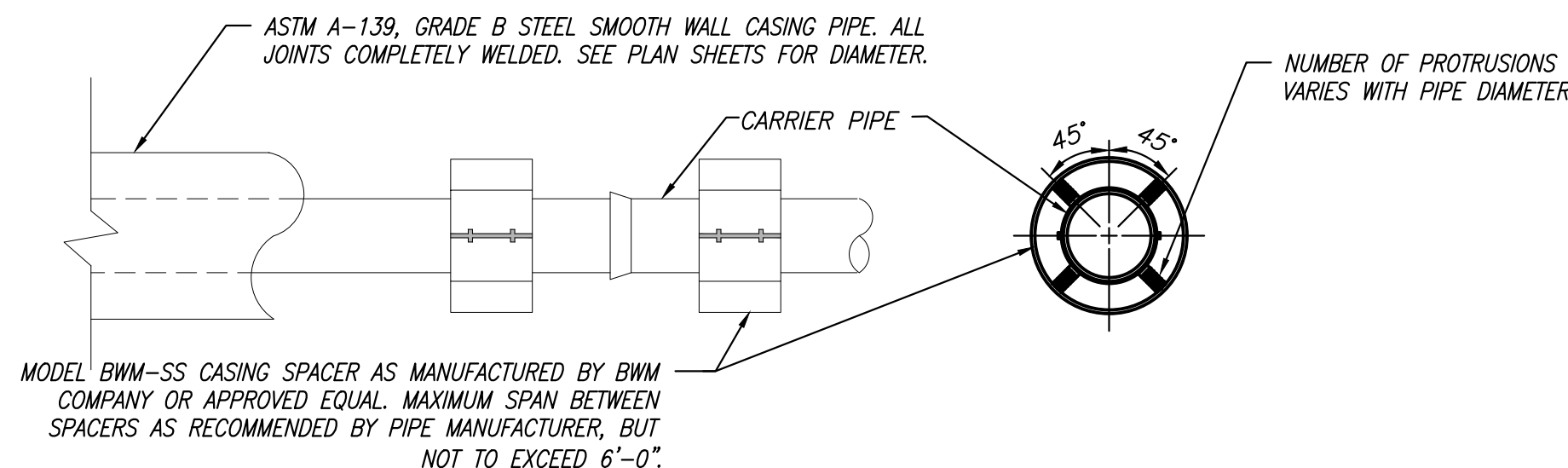
WATER/SEWER CROSSING
NOT TO SCALE



SINGLE PIPE IN TRENCH

* NOTE:
ENDS OF LOCATOR WIRE SHALL BE PLACED IN A 6" DIP RISER PIPE WITH CAST IRON LIDS AT 500' MIN. SPACING AND SHALL BE GROUNDED TO A 4x1/2" DIA. COPPER ROD AT RISERS. ALL WIRE SPLICES SHALL USE BRASS/COPPER SPLIT-BOLT CONNECTORS.

PIPE INSTALLATION DETAIL
NOT TO SCALE

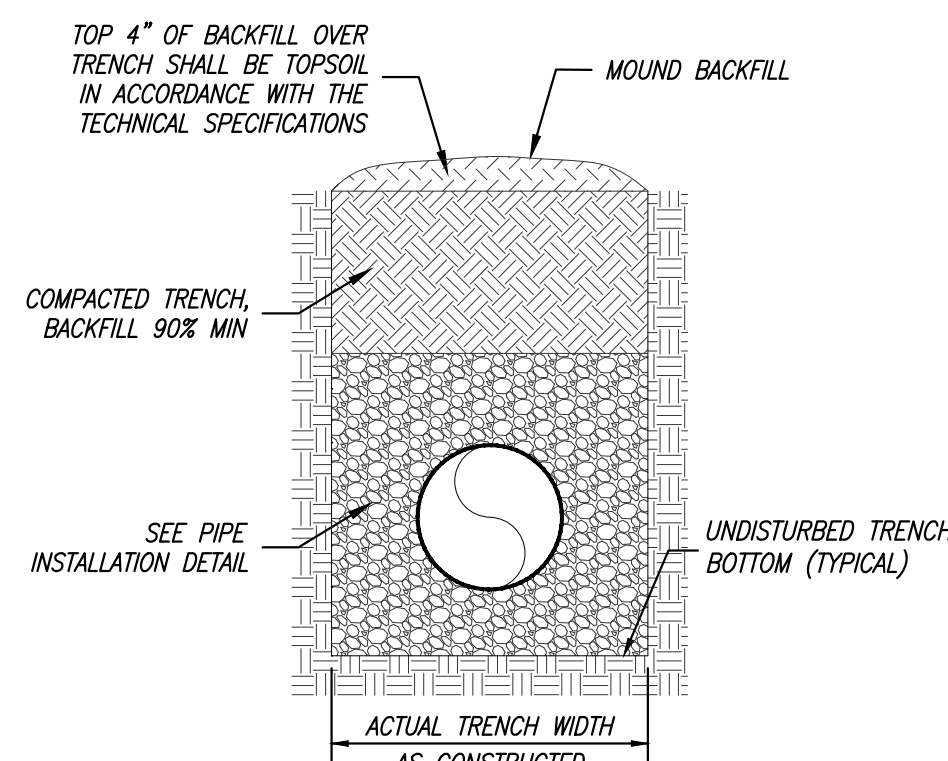


NOTES:

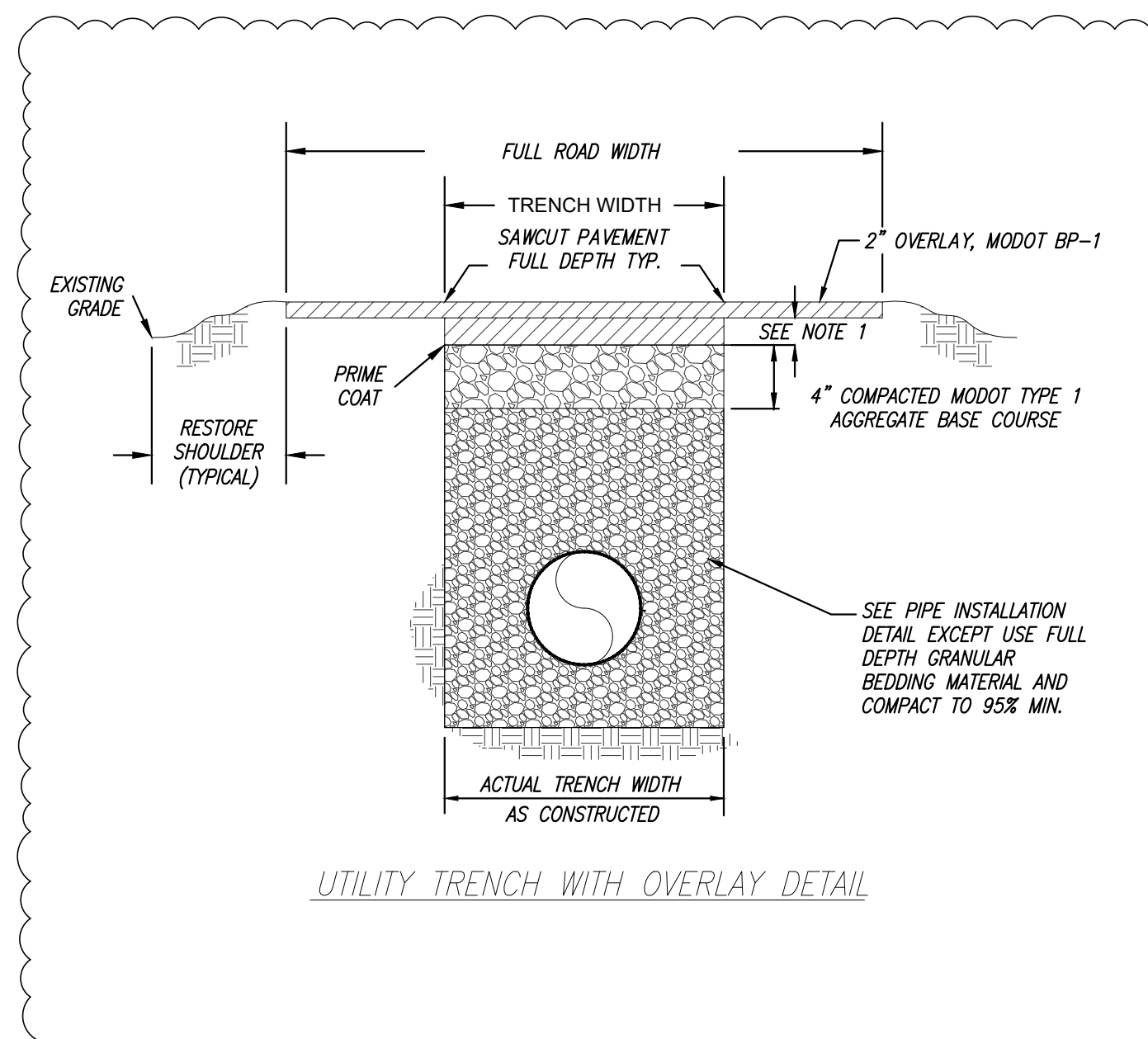
- STEEL CASING REQUIRED.
- EACH END OF CASING TO BE SEALED WITH END SEALS PROVIDED BY THE MANUFACTURER OF CASING SPACERS. END SEALS SHALL BE OF SUFFICIENT LENGTH TO PROVIDE A MINIMUM OF 6" OF LAP ON THE CASING PIPE AND 6" OF LAP ON THE CARRIER PIPE.
- CASING SHALL BE INSTALLED SIMULTANEOUSLY W/ BORING OPERATION. ALL AREAS DISTURBED DURING CONSTRUCTION AND TRENCHES SHALL BE COMPACTED, AND VEGETATED PER SPECIFICATIONS.
- CASING PIPE DIAMETER SHALL FOLLOW TABLE UNLESS SPECIFIED OTHERWISE.

| CARRIER PIPE DIA. (PVC) | CASING PIPE DIA. (STEEL) | MIN. WALL THICKNESS (IN.) |
|-------------------------|--------------------------|---------------------------|
| 2" | 4" | 0.188 |
| 2 1/2" | 4" | 0.188 |
| 3" | 6" | 0.188 |
| 4" | 10" | 0.188 |
| 6" | 12" | 0.188 |
| 8" | 14" | 0.219 |
| 10" | 16" | 0.281 |

TYPICAL ROAD BORING DETAIL
NOT TO SCALE



SEEDED AREA
NOT TO SCALE

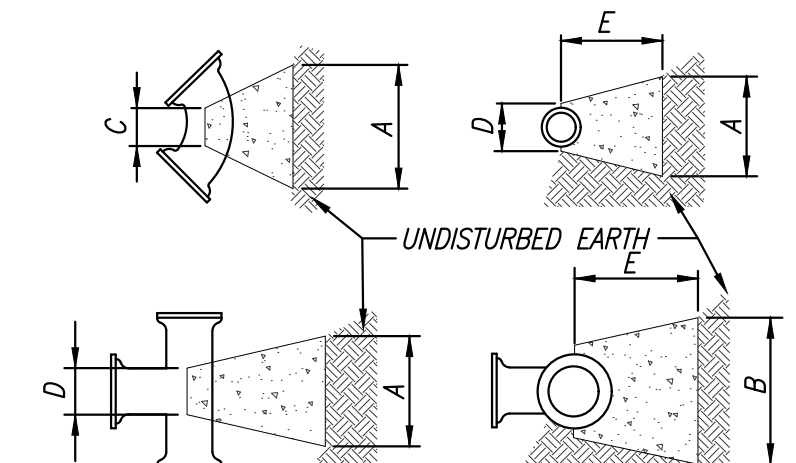


UTILITY TRENCH WITH OVERLAY DETAIL

ROAD REPLACEMENT AND TRENCHING BACKFILL METHODS DETAILS

NOT TO SCALE

- CONTRACTOR TO MATCH EXISTING BITUMINOUS PAVEMENT LEVEL. AFTER 2" ASPHALT MILL, WITH 6" CONCRETE. ROADWAY PROJECT AREA SHALL HAVE 2" ASPHALT OVERLAY AT THE COMPLETION OF PROJECT.
- CONTRACTOR TO MATCH EXISTING BITUMINOUS PAVEMENT AND EXISTING ASPHALT THICKNESS PLUS 1 INCH. ASPHALT SHALL BE A MINIMUM OF 3" THICKNESS AND A MAXIMUM OF 6" THICKNESS.
- PAYMENT FOR ROAD CROSSING REPLACEMENT SHALL BE TO THE LIMITS SHOWN IN THE DETAILS. ANY AREA DISTURBED BEYOND PAYMENT LIMITS SHALL BE RESTORED IN ACCORDANCE WITH DETAILS AND SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR TO RESHOULDER ROAD WITH TOPSOIL, SEED, AND MULCH OR BASE AS REQUIRED TO MATCH EXISTING SHOULDER.
- CONTRACTOR TO INSTALL FULL WIDTH BITUMINOUS SURFACE OVERLAY IN ALL AREAS REQUIRING FULL WIDTH ROAD REPLACEMENT UNLESS INSTALLING FULL WIDTH ROAD OVERLAY WILL CAUSE DRAINAGE ISSUES, THEN CONTRACTOR TO INSTALL FULL WIDTH ROAD REPLACEMENT PER DETAIL OR CAN USE COLD MILLING TO INSTALL OVERLAY TO ORIGINAL GRADE.



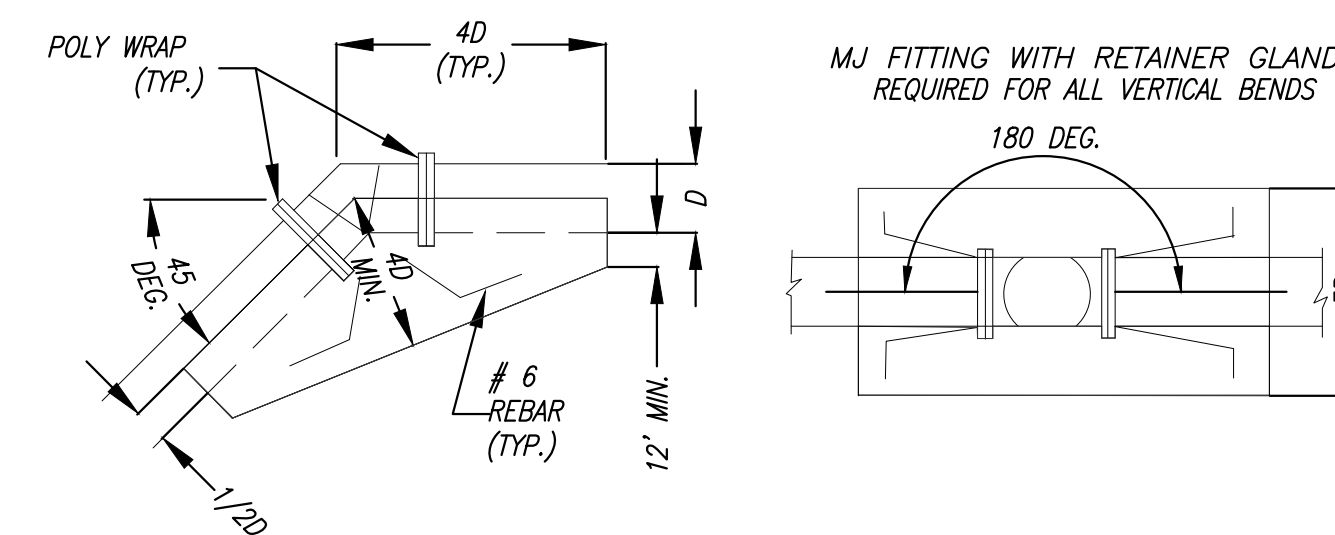
CONCRETE THRUST BLOCK
NOT TO SCALE

| PIPE SIZE | FITTING | DISTANCE IN INCHES | | | | |
|----------------|---------------|--------------------|----|---|----|----|
| | | A | B | C | D | E |
| 4" AND SMALLER | 11.25 & 22.5" | 9 | 9 | 8 | 8 | 6 |
| | 45" | 18 | 9 | 8 | 8 | 12 |
| | 90" | 21 | 12 | 8 | 8 | 12 |
| 6" | TEE/PLUG | 15 | 12 | 8 | 8 | 12 |
| | 11.25 & 22.5" | 12 | 12 | 8 | 10 | 12 |
| | 45" | 27 | 12 | 8 | 10 | 12 |
| 8" | 90" | 33 | 18 | 8 | 10 | 12 |
| | TEE/PLUG | 24 | 18 | 8 | 10 | 12 |
| | 11.25 & 22.5" | 18 | 15 | 8 | 10 | 12 |
| | 45" | 33 | 15 | 8 | 10 | 18 |
| | 90" | 42 | 24 | 8 | 10 | 18 |
| | TEE/PLUG | 30 | 24 | 8 | 10 | 18 |

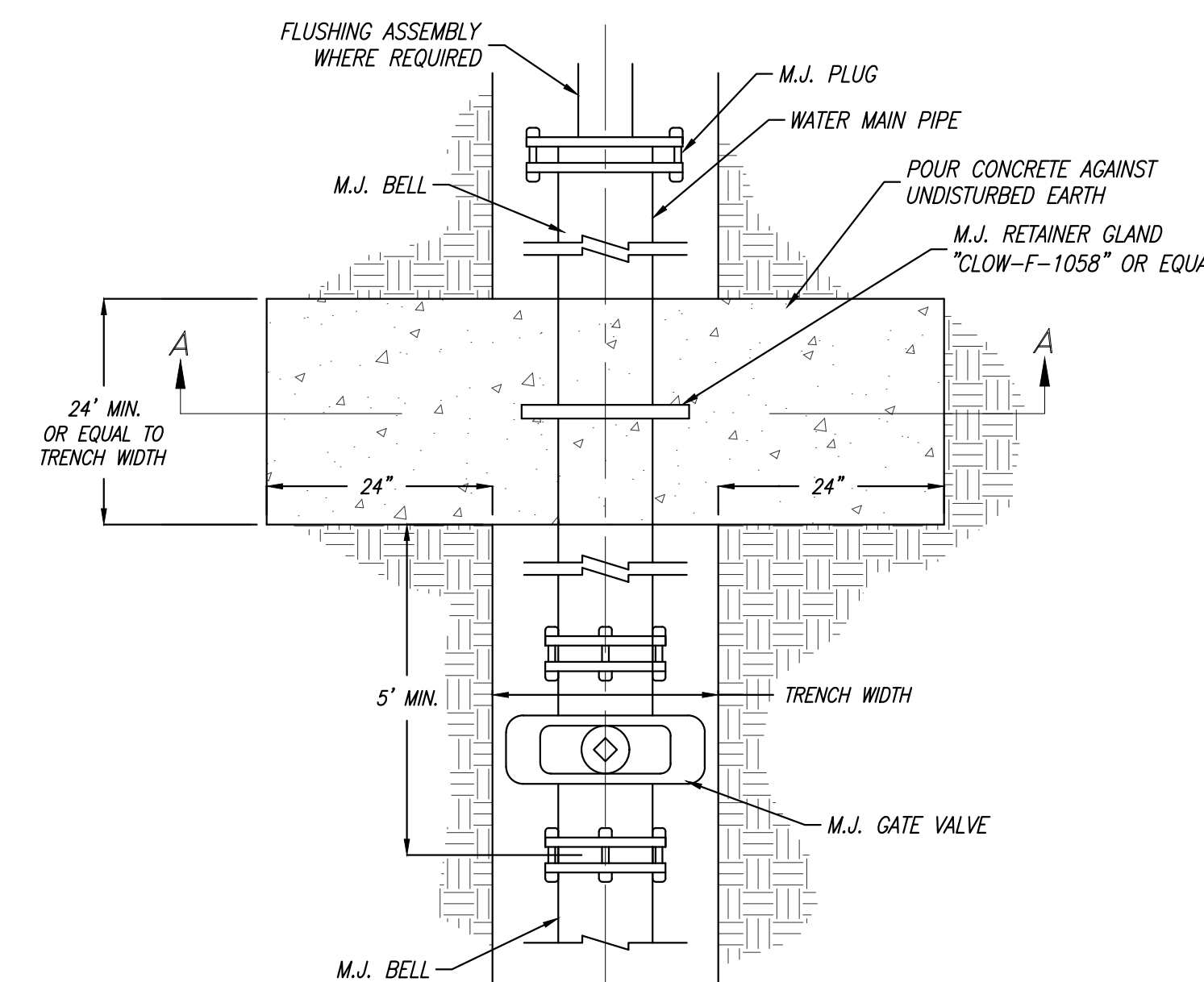
NOTES:

- THRUST BLOCKS ARE BASED ON A WORKING PRESSURE OF 200 P.S.I. PLUS 0% SURGE, & 2000 P.S.F. ALLOWABLE SOIL BEARING PRESSURE.
- FOR PIPE SIZES NOT SHOWN USE DIMENSIONS FOR NEXT LARGER SIZE.
- USE 3/8" PLYWOOD SEPARATOR BETWEEN BLOCKS AND PLUGS TO PROVIDE FOR FUTURE REMOVAL.
- WRAP ALL FITTINGS W/6 MIL POLY PRIOR TO PLACEMENT OF CONCRETE THRUST BLOCKING.

THRUST BLOCKING DETAIL
NOT TO SCALE

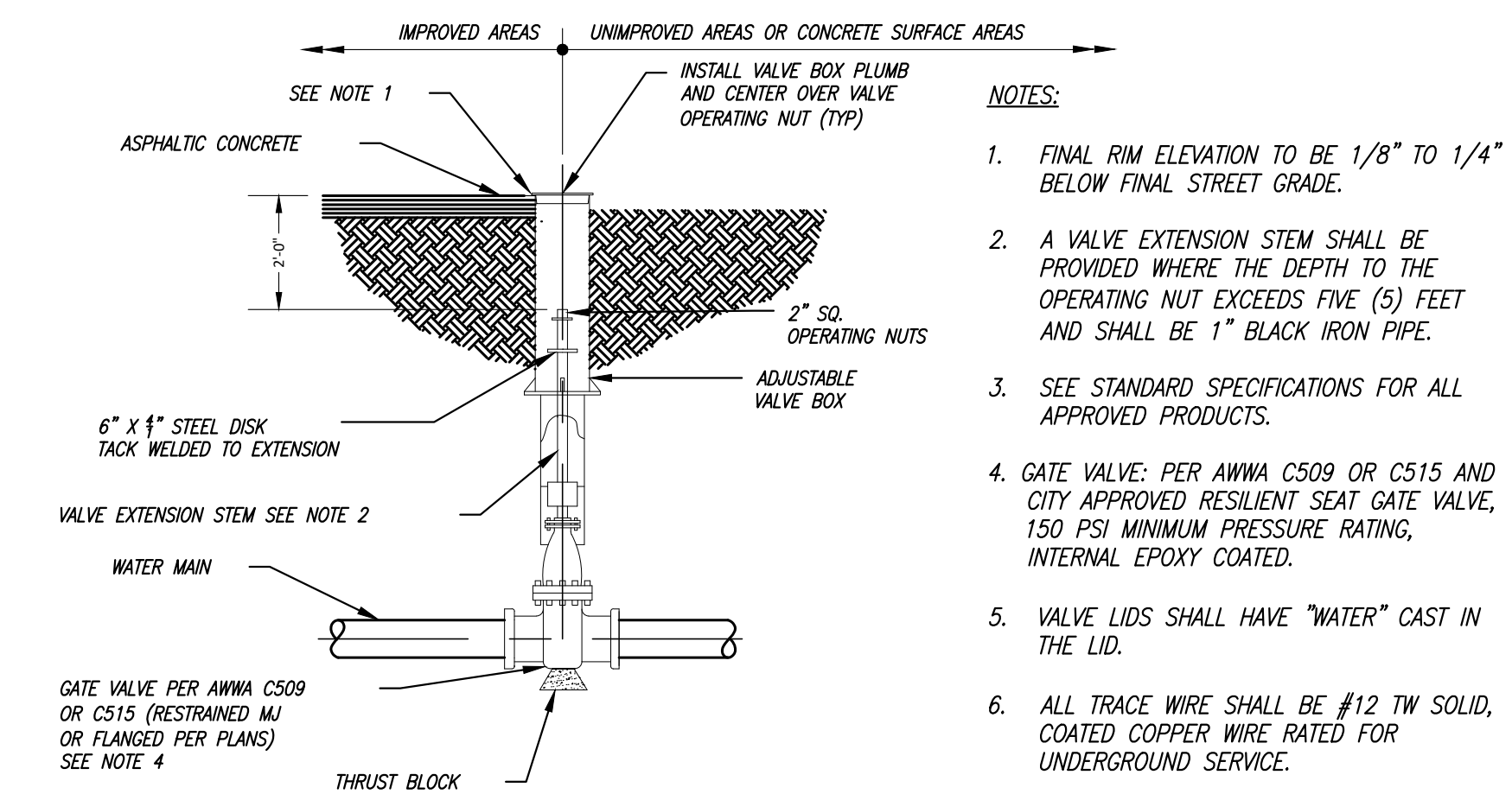


VERTICAL BEND CONCRETE THRUST BLOCK DETAIL
NOT TO SCALE



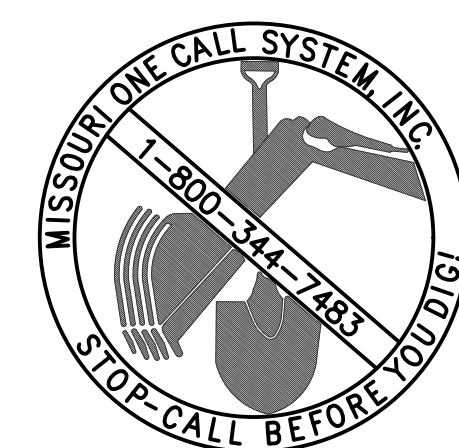
SECTION A-A

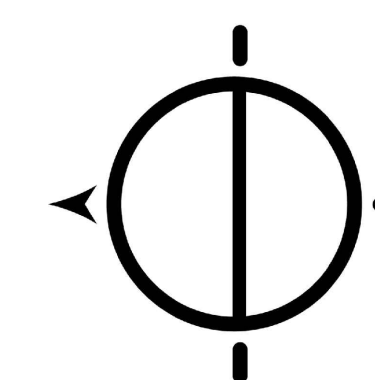
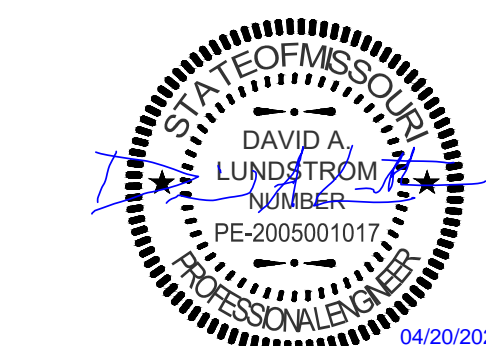
WATER MAIN END-OF-LINE ASSEMBLY
NOT TO SCALE



SECTION VIEW
NOT TO SCALE

TYPICAL GATE VALVE DETAIL





Missouri State Certificate of Authority Numbers:
Engineering: 2000156885, Land Surveying: 2001011476,
Landscape Architecture: 2007013673

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES
MISSOURI STATE PARKS

TABLE ROCK STATE PARK
REPLACE 22 ELECTRIC SITES
WITH 22 PREMIUM SITES

TABLE ROCK STATE PARK
CAMPGROUND #2
5272 STATE HWY 165
BRANSON, MISSOURI 65616

PROJECT # X2216-01
SITE # 5603
ASSET # 7815603018

REVISION: REV. 1 - ADDENDUM 1
DATE: 04/20/2023
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 01/17/2023

CAD DWG FILE: X2216-01_C-500
DRAWN BY: ALW
CHECKED BY: DAL
DESIGNED BY: ALW

SHEET TITLE:
CAMPSITE DETAILS

SHEET NUMBER:

C-502

11 OF 18 SHEETS
JANUARY 17, 2023

