CITY OF
OPELIKA
alabama

BID 26021

THE CITY OF OPELIKA

Engineering Department

Grade, Drain, Base & Pave Hi-Pack Drive

EDDIE SMITH, MAYOR

JOEY MOTLEY, CITY ADMINISTRATOR

LILLIE FINLEY, PURCHASING – REVENUE MANAGER

SCOTT PARKER, P.E., CITY ENGINEER

SPECIFICATIONS

PROPOSAL AND CONTRACT DOCUMENTS

FOR

GRADE, DRAIN, BASE & PAVE HI-PACK DRIVE

Prepared for:

CITY OF OPELIKA
LEE COUNTY, ALABAMA

Prepared by:

THREE NOTCH GROUP

October 2025

Three Notch Group, Inc. Project Number R071321196

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Standard Construction Specifications for The Water Works Board of the City of Opelika (Revised: February 19, 2024)

The Alabama Highway Department Standard Specifications for Highway Construction 2022 Edition will be the technical specifications for this project except as amended herein. In the case of conflict between the specifications of the Alabama Department of Transportation and the General Conditions contained herein, the General Conditions shall govern.

END OF SECTION

INVITATION TO BID
26021

Sealed bids for the construction of the

Grade, Drain, Base & Pave Hi-Pack Drive

shall be received at the Opelika City Hall IT Conference Room, 204 South Seventh Street, Opelika, Alabama, **until 2:00 p.m., local time, on Tuesday, June 23, 2026**, and then publicly opened and read aloud. All interested parties are invited to attend. Only bids from competent general contractors will be considered. At the time of contract award, the successful bidder must be a properly licensed general contractor. The attention of all bidders is called to the provisions of State law governing "General Contractors" as set forth in the Ala. Code §34-8-1, et. seq. (1975) and rules and regulations promulgated pursuant thereto. Bidders must be licensed by the Licensing Board for General Contractors when bids are submitted.

Bidders are required to have a State of Alabama General Contractor's License with a specialty of "Highways and Streets, Clearing and Grubbing, Earthwork, Erosion, Site Work, Grading or Municipal and Utility". All bidders must submit with their proposal, contractor's license number and a copy of the license. State law Ala. Code §34-8-8(b) requires all bids to be rejected which do not contain the contractor's current license number. Evidence of this license shall be documented on the outside of the sealed bid.

All bidders shall possess all other licenses and/or permits required by applicable law, rule or regulation for the performance of the work.

Drawings and Specifications may be examined at the Office of the City Engineer located at 700 Fox Trail, Opelika, Alabama, and phone number: 334-705-5450. Bid documents may be obtained from the office of Three Notch Group, Inc., 100 N Gay St, Suite #350, Auburn, AL 36830, (334) 466-9431 at no charge as an electronic file if the bidder supplies a storage drive or as an email attachment or electronic drop box.

The bidder's proposal must be submitted on the complete original proposal furnished to him/her by the City of Opelika. All information in the proposal must be completed by the bidder for the proposal to be accepted.

A Bid Bond in the amount of five (5) percent of the bid amount made payable to the City of Opelika must accompany each bid. Performance and Payment Bonds for the full contract sum will be required of the successful bidder. The right is reserved by the Owner to reject all Bids and to waive irregularities.

Contractor will be required to provide two (2) Owner's Protective Liability Policies. Named Insured shall be as follows:

1. **City of Opelika**
2. **Three Notch Group, Inc.**

See Section 00700 - General Conditions for full details

Envelopes containing bids must be sealed, marked, addressed as follows, and delivered to: Lillie Finley, Purchasing-Revenue Manager, City of Opelika, 204 South 7th Street, P.O. Box 390, Opelika, Alabama, 36803-0390. **Attn: Grade, Drain, Base & Pave Hi-Pack Drive**

LILLIE FINLEY- PURCHASING REVENUE MANAGER
CITY OF OPELIKA
204 SOUTH SEVENTH STREET (36801)
POST OFFICE BOX 390 (36803-0390)
OPELIKA, ALABAMA
PH: (334) 705-5120

END OF DOCUMENT

DOCUMENT 00200

INSTRUCTIONS TO BIDDERS

PART 1

1.1 SUMMARY

A. Document Includes:

- Bid submission
- Intent
- Definitions
- Availability of documents
- Examination of documents
- Inquiries and Addenda
- Product substitutions
- Site examination
- Prebid conference
- Bidder qualifications
- Bidder prequalification
- Subcontractors
- Submission procedure
- Bid ineligibility
- Security deposit
- Performance Assurance
- Bid Form requirements
- Bid Form signature
- Additional Bid information
- Selection and award of alternates
- Bid opening
- Duration of offer
- Acceptance of offer
- Laws and Regulations
- Certification of License

1.2 BID SUBMISSION

A. Bids signed, executed, and dated will be received by the Owner at the time and date as stipulated in the Invitation to Bid (Document 00105).

B. Bids received after the bid opening date and time will not be opened or returned.

C. Amendments to submitted Bids will be permitted when received in writing prior to bid closing and when endorsed by the same party or parties who signed and sealed the Bid.

D. Bidders may withdraw their Bid any time before bid closing.

1.3 INTENT

A. The intent of this Bid request is to obtain an offer to perform work to complete the Project as detailed on the corresponding Plans and Specifications for a Unit Price contract in accordance with the Contract Documents.

B. In the case of a discrepancy between a unit bid price and the extension amount, the unit price shall govern. The sum of the extension amounts will be the contract bid price.

C. The unit price for any Additive Alternates or Deductive Alternates shall be the same as the corresponding unit price in the Base Bid.

1.4 DEFINITIONS

A. Bidding Documents: Contract Documents supplemented with Advertisement for Bids, Invitation to Bid, Instructions to Bidders, Information Available to Bidders, Bid Form, Bid Form Supplements and Appendices, and bid securities, identified.

B. Bid: Executed Bid Form and required attachments submitted in accordance with these Instructions to Bidders.

1.5 AVAILABILITY OF DOCUMENTS

A. Bidding Documents may be obtained as stated in Invitation to Bid.

B. Partial sets of Bidding Documents will not be issued.

C. Bidding Documents are made available only for the purpose of obtaining offers for this Project. Their use does not grant a license for other purposes.

1.6 EXAMINATION OF DOCUMENTS

A. Bidding Documents may be viewed at the office of the Engineer.

B. Upon receipt of Bidding Documents verify documents are complete. Notify Engineer if documents are incomplete.

C. Immediately notify Engineer upon finding discrepancies or omissions in Bidding Documents.

1.7 INQUIRIES AND ADDENDA

A. Direct questions in writing to the office of the Engineer.

B. Verbal answers are not binding on any party.

C. Submit questions not less than 2 days before date set for receipt of Bids. Replies will be made by Addenda.

D. Addenda may be issued during bidding period. Addenda will be sent to known Bidders. Addenda become part of the Contract Documents. Include resultant costs in the Bid Price.

E. Contractor is to indicate receipt of Addenda in Section 5 of the Bid Form (Document 00412).

1.8 PRODUCT SUBSTITUTIONS

A. Requests for Product substitutions may be permitted before execution of Agreement. Refer to Section 01600 for substitution procedures.

B. With each substitution request, provide sufficient information for Engineer to determine acceptability of proposed products.

C. In submission of substitutions to Products specified, Bidders shall include in their request, changes required in the Work, changes to Contract Time and Contract Price to accommodate such approved substitutions. Later claims by the Bidder for an addition to the Contract Time or Contract Price because of changes in Work necessitated by use of substitutions will not be considered.

D. Provide complete information on required revisions to other Work to accommodate each substitution, the value of additions to or reductions from the Bid Price, including revisions to other Work.

E. Provide Products as specified unless substitutions are submitted in this manner and subsequently accepted.

F. Bidder to compensate Engineer for time spent in review of proposed substitutions at the Engineer's standard charge-out rate.

G. Approval to submit substitution requests prior to submission of Bids is not required.

1.9 SITE EXAMINATION

A. Examine Project site before submitting a Bid.

B. Contact Owner to arrange date and time to visit Project site.

1.10 PREBID CONFERENCE

A. If a prebid conference is scheduled it will take place on the date, time and location as referenced in the Invitation to Bid.

B. Representatives of the Owner and the Engineer will be in attendance.

C. Summarized minutes of this meeting will be circulated to attendees. These minutes will not form part of Contract Documents.

D. Information relevant to Bidding Documents will be issued by Addendum.

1.11 BIDDER QUALIFICATIONS

A. To demonstrate qualification for performing Work of this Contract, Bidders may be requested to submit written evidence of financial position, previous experience with Work of similar scope and magnitude to that of this Contract, current commitments, and license to perform work in the State of Alabama. Additionally, the Owner or Engineer may contact references to investigate the Bidder's successful completion of Work of similar scope and magnitude.

1.12 BIDDER PREQUALIFICATION

A. When specifically requested, complete and submit the prequalification form provided to Engineer on or before date referenced in the Invitation to Bid.

B. Unless stated otherwise in the Invitation to Bid, Owner will provide written notice of pre-qualification status within 10 days of deadline for submission of pre-qualification statement.

1.13 SUBCONTRACTORS

A. The Owner reserves the right to reject a proposed Subcontractor for reasonable cause.

B. The General Contractor may not utilize Subcontractors to perform more than 30% of the total Project.

C. Refer to the General Conditions Section 00700 - Articles 1 and 6.

1.14 SUBMISSION PROCEDURE

A. Bidders shall be solely responsible for delivery of Bids in manner and time prescribed.

B. Submit one copy of executed offer on Bid Forms provided, signed and sealed with required bid bond in a closed opaque envelope, clearly identified with Bidder's name, Project name, Alabama General Contractor's License number, and Owner's name on the outside.

C. Required documents to be included in the sealed envelope:
   1. Document 00410 – Bid Bond
   2. Document 00412 – Bid Form
   3. Document 00450 – Affidavit of Immigration Compliance with E-Verify Memorandum of Understanding.

D. Improperly completed information or irregularities in bid bond may be cause the Bid to be declared invalid or informal.

E. An abstract summary of submitted Bids will be made available to all Bidders following bid opening.

1.15 BID INELIGIBILITY

A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, will be declared unacceptable at Owner's discretion.

B. Bid Forms, Appendices, and enclosures which are improperly prepared may be declared unacceptable at Owner's discretion.

C. Failure to provide security deposit, bonds or insurance requirements may invalidate the Bid at the discretion of the Owner.

1.16 SECURITY DEPOSIT

A. Bids shall be accompanied by security deposit as follows:
   1. Bid Bond in the amount of a sum no less than five (5) percent of the bid price but not exceeding $50,000 on standard surety company form.

   2. A certified check in the amount listed above will be accepted in place of a bid bond.

B. Security deposit of accepted Bidder will be returned after delivery to the Engineer of the required Performance and Payment Bonds by the accepted Bidder.

C. Include the cost of security deposit in the Bid Price.

D. After a Bid has been accepted, security deposits will be returned to the respective Bidders, upon request.

E. If no contract is awarded, security deposits will be returned.

1.17 PERFORMANCE ASSURANCE

A. Accepted Bidder: Provide a Performance and Payment bond as described in Document 00700 – General Conditions.

B. Include the cost of performance assurance bonds in the Bid Price.

1.18 BID FORM REQUIREMENTS

A. Complete requested information in the Bid Form and Bid Form Supplements.

B. Refer to Document 00700 – General Conditions for inclusion of taxes, procedures for tax rebate claims by the Owner and tax-exempt Products.

1.19 BID FORM SIGNATURE

A. Sign Bid Form, as follows:
   1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature. [Affix seal.]

2. Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the word "Partner" under each signature. [Affix seal to each signature.]
3. Corporation: Signature of duly authorized signing officers in their normal signatures. Insert the officer's capacity in which the signing officer acts, under each signature. Affix the corporate seal. If the Bid is signed by officials other than the president and secretary of the company, or the president/secretary/treasurer of the company, submit a copy of the by-law resolution of their board of directors authorizing them to do so, with the Bid Form in the bid envelope.
4. Joint Venture: Signature of each party of the joint venture under their respective seals in a manner appropriate to such party as described above, similar to requirements for Partnerships.

1.20 ADDITIONAL BID INFORMATION

A. **Each Bidder, and each Subcontractor, is required to complete and submit Document 00450 – <u>Affidavit of Immigration Compliance</u> along with their E-Verify Program <u>Memorandum of Understanding</u> at the time of the Bid. No Contract will be awarded to any Bidder who does not submit the required Immigration Compliance documents.**

1.21 SELECTION AND AWARD OF ALTERNATES

A. Bids will be evaluated on base Bid Price and awarded to the lowest responsive, responsible bidder. After determination of accepted Bidder, consideration will be given to alternates and Bid Price adjustments.

1.22 BID OPENING

A. Bids will be opened publicly immediately after time for receipt of Bids. Bidders may be present.

1.23 DURATION OF OFFER

A. Bids shall remain open to acceptance and shall be irrevocable for a period of 60 days after bid closing date.

1.24 ACCEPTANCE OF OFFER

A. The Owner reserves the right to accept or reject any or all offers.

B. After acceptance by the Owner, the Engineer on behalf of the Owner will issue to the accepted Bidder, a written Notice of Award.

C. Notwithstanding delay in the preparation and execution of the Agreement, accepted Bidder shall be prepared, upon written Notice to Proceed, to commence work within seven days following receipt of official written order of the Owner to proceed, or on date stipulated in such order.

D. The accepted bidder shall assist and cooperate with the Owner to prepare the Agreement, and within 14 days following its presentation shall execute Agreement and return it to the Owner.

1.25 LAWS AND REGULATIONS

A. The bidder's attention is directed to the fact that all applicable Federal and State laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply.

1.26 CERTIFICATION OF LICENSE

A. All bidders must provide the following information on the outside of the bid envelope before his bid will be considered:

- NAME OF PROJECT
- NAME OF OWNER
- NAME, ADDRESS, AND TELEPHONE NUMBER OF CONTRACTOR
- ALABAMA GENERAL CONTRACTOR'S NUMBER

1. By responding to this solicitation, the Vendor will be held to have read and thoroughly examined the bid. Failure to read and thoroughly examine the bid will not excuse any failure to comply with the requirements of the bid and any resulting contract, nor will such failure be a basis for claiming additional compensation or breach of contract.

2. Vendor warrants acceptance and agreement with all terms and conditions presented in this bid and that all statements contained in the proposal are true and correct. The Vendor further certifies that Vendor is legally authorized to conduct business within the City of Opelika and capable of providing the services described. Any exceptions to the specified terms and conditions must be clearly set forth within Vendor's proposal and are subject to the acceptance of the City of Opelika. Vendor may be deemed non-responsive if its proposal contains exceptions to the terms and specifications of the bid.

3. Vendor warrants that neither Vendor nor any Vendor trustee, officer, director, employee, agent, servant, volunteer, subcontractor, or assign, is a current city official or employee or is a family or household member of an official or employee of the city and that no such individuals have been employed by the city within a two (2) year window preceding the issuance of this bid. During the term of any awarded contract, Vendor shall be responsible for ensuring compliance with this requirement and with the Code of Ethics for Public Officials, Employees, etc., in Chapter 25 of Title 36 of the Alabama Code, including disclosure requirements, where applicable.

4. For contracts requiring periodic inspections, maintenance and repairs of facilities, structures, vehicles, conveyances, equipment, and systems, whether mechanical or not, the bid/contract price will not be subject to alteration, modification, addition or increase in price of services rendered based upon any alleged preexisting condition(s) of said systems without prior written consent of the City of Opelika. Bids should be made with the understanding that a contract for systems maintenance, inspection, and repair will likely result in expenses for all conditions. Responsible vendors are encouraged to inspect systems maintenance records and schedules and measure them against manufacturer-recommended installation and maintenance schedules.

5. Following completion of required project improvements, the subdivider shall post with the City of Opelika a surety bond, effective for one (1) year, in an amount equal to ten (10%) percent of the street, sidewalks, crosswalks, buffers and utility improvements cost for the street, sidewalks, crosswalk, buffers, medians, roundabouts and other structures and systems for which acceptance is sought. Said bond is to guarantee the City that said street or project has been completed within specifications, is free from defects caused by faulty design, installation, material(s) or workmanship, and that said street, sidewalks, buffers and other structures will remain in acceptable condition for a period not to exceed one (1) calendar year, to include being fully compliant with the requirements of the Americans with Disabilities Act (ADA), where applicable. Accordingly, at the end of the one (1) calendar year period, the street, sidewalk, crosswalk, buffer, or other structure/subject matter of the project is unacceptable because of faulty workmanship, design, installation, or material; said defect shall be corrected and repaired at a cost to the subdivider up to the amount of the surety bond. Upon the failure or refusal by the subdivider to make

adequate repairs within ninety (90) days after demand is made of him by the City of Opelika, then the City shall make such repairs as are reasonably necessary and recover the cost with the bond redemption.

Bid Protest Procedures

1. **Purpose and Applicability.**

The bid protest procedures in this section shall apply to all purchases and contracts which are subject to the guidelines of the competitive bid law as outlined in Titles 39 and 41 of the *Code of Alabama* (1975) through the issuance of a Request for Bids or Request for Proposals.

The competitive bid law, as codified at Sections 41-16-50 thru 41-16-63, *Code of Alabama* (1975), generally provides that all expenditures of funds for labor, services, work, or for the purchase or lease of materials, equipment, supplies or other personal property involving $30,000 or more, shall be made under contractual agreement entered into by free and open competitive bidding. The public works bid law, as codified in Sections 39-2-1 thru 39-2-14, *Code of Alabama* (1975), generally provides that all public works projects involving expenditures of $100,000 or more are subject to the requirements of competitive bidding. These procedures have been established to ensure uniform, timely and equitable consideration of complaints from any actual or prospective bidder or offeror that may be aggrieved by the solicitation or award of a contract.

2. **Filing of Protest.**

The bid protest process begins with the filing of a written protest. Protestors may file a protest on any phase of solicitation or award including but not limited to specifications preparation, bid solicitation or award. To expedite the handling of protests, the envelope shall be labeled "Protest". The written protest shall include, at a minimum, the following:

a) The protestor's name, primary address, and the email address and telephone number of the protestor's authorized representative;
b) The name of the protestor's authorized representative;
c) Appropriate identification of the procurement, including the solicitation project name and the City-assigned solicitation number;
d) A statement of the grounds of the protest and relief requested with enough particularity to give notice of the issues to be decided; and
e) Supporting exhibits, evidence or documentation to substantiate any claims unless not available within the filing time in which case the expected availability date shall be indicated.

Additional information may be requested by the Purchasing/Revenue Manager.

3. **Deadline to Protest Bid Solicitation.**

Any bidder, proposer, offeror or contractor that seeks to protest the terms and conditions, requirements, evaluation criteria or specifications as outlined in the Request for Bids or Request for Proposals shall file a written protest with the Purchasing/Revenue Manager within fourteen (14) calendar days of the issuance of the solicitation or amendment being protested.

4. **Deadline to Protest Contract Award.**

Any bidder, proposer, offeror or contractor who seeks to protest a contract or purchase award to be made by the City shall file a written protest with the Purchasing/Revenue Manager within five (5) business days of the date of award or notification of intent to award, whichever is earlier.

5. **Stay of Procurements During Protest.**

When a protest has been timely filed and before an award has been made, the City shall make no award of the contract until the protest has been settled unless the Purchasing/Revenue Manager makes a written determination that the award of the contract without delay is necessary to protect substantial interests of the City.

6. **Decision by the Purchasing/Revenue Manager and Administrative Appeal.**

A decision on a protest shall be made by the Purchasing/Revenue Manager or appointed designee as expeditiously as possible after receiving all relevant, requested information. The Purchasing/Revenue Manager or appointed designee, at his or her discretion, prior to the issuance of the written decision, may investigate the protest, obtain additional information and/or documentation, provide an opportunity to settle the protest by mutual agreement and/or schedule meeting(s) with the protestor and others (as appropriate) to discuss the protest. A copy of the decision shall be mailed to the protestor or otherwise furnished electronically immediately to the protestor. The decision of the Purchasing/Revenue Manager shall be final and conclusive unless the protestor files a written administrative appeal within three (3) business days of the date of the Purchasing/Revenue Manager's written decision. The administrative appeal shall be filed with the City Administrator via mail or hand-delivery no later than 5:00 p.m. (CST) on the third business day following the date of the written decision.

The City Administrator shall perform an administrative review of the appeal and issue a written decision within five (5) business days of the receipt of the appeal. The written decision of the City Administrator shall be mailed to the protestor or otherwise furnished electronically immediately to the protestor. The decision of the City Administrator shall be final and conclusive unless the protestor elects to seek recourse through judicial proceedings in accordance with state law.

7. **Effect of Judicial Proceedings.**

If an action concerning the protest has commenced in court, the Purchasing/Revenue Manager shall not act on the protest.

8. **Waiver.**

Failure to file a written protest or appeal within the time frames outlined above shall constitute a waiver of right to protest and the City may proceed with the contract award.

Bid Appendix: Cybersecurity Compliance

Digital Accessibility and Cybersecurity Requirements (2026 Standard)

1. Purpose

The purpose of this Appendix is to establish minimum cybersecurity, digital accessibility, and identity assurance requirements for all technology, software, and digital services procured by the City of Opelika.

These requirements are intended to ensure that systems are provided to the City:

- Protect City data and infrastructure from cybersecurity threats
- Provide equitable access to City services for individuals with disabilities
- Align with nationally recognized cybersecurity and accessibility standards

All Vendors responding to this solicitation must demonstrate compliance with the requirements defined in this Appendix.

2. Applicable Standards

Solutions provided under this procurement shall align with the following standards and guidance:

Cybersecurity Standards

- National Institute of Standards and Technology Cybersecurity Framework (CSF) 2.0
- NIST Special Publication 800-53 Revision 5 – Security and Privacy Controls for Information Systems
- NIST Special Publication 800-63 Digital Identity Guidelines

Accessibility Standards

- Americans with Disabilities Act Title II
- Section 504 of the Rehabilitation Act
- Web Content Accessibility Guidelines 2.2 Level AA

These standards establish minimum expectations for cybersecurity protection and digital accessibility.

Sources:

NIST CSF 2.0 (2024)
https://nvlpubs.nist.gov/nistpubs/CSWP/NIST.CSWP.29.pdf

NIST SP 800-53 Rev.5
https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-53r5.pdf

WCAG 2.2
https://www.w3.org/TR/WCAG22/

3. Cybersecurity Requirements

3.1 Security Framework Alignment

All digital solutions and documentation provided to the City shall align with the core functions of the NIST Cybersecurity Framework 2.0, including:

- Govern (GV)
- Identify (ID)
- Protect (PR)
- Detect (DE)
- Respond (RS)
- Recover (RC)

Vendors shall demonstrate that appropriate security controls are implemented consistently with NIST SP 800-53 Revision 5.

Controls must be implemented in proportion to the system's impact level:

- Low Impact
- Moderate Impact
- High Impact

Impact levels will be determined by the city.

3.2 Data Protection

Systems provided to the City must implement safeguards, including:

- Encryption of data in transit using TLS 1.2 or higher
- Encryption of data at rest using FIPS-validated cryptographic modules
- Role-based access control
- Logging and audit capabilities
- Secure patch management processes

3.3 Security Verification

The City may require documentation demonstrating the implementation of cybersecurity controls, including but not limited to:

- System Security Plan (SSP)
- SOC 2 Type II report
- FedRAMP authorization
- Independent penetration testing reports
- Security architecture documentation

Failure to provide adequate documentation may result in the proposal being rejected.

4. Identity and Authentication Requirements

Where systems require user authentication, account creation, or identity verification, vendors shall comply with the NIST Digital Identity Guidelines (SP 800-63 series).

Authentication mechanisms shall support:

- Multi-factor authentication (MFA)
- Phishing-resistant authentication where feasible
- Secure identity proofing procedures

Authentication systems shall not rely exclusively on biometric verification. Vendors must

provide accessible authentication alternatives, including:

- Non-biometric authentication methods
- Alternative login processes
- Human-assisted identity verification procedures when automated verification fails

5. Digital Accessibility Requirements

5.1 Accessibility Compliance

All electronic and information technology (EIT) provided under this contract must comply with accessibility requirements established under:

- ADA Title II
- Section 504 of the Rehabilitation Act
- WCAG 2.2 Level AA

These requirements apply to:

- Websites
- Web applications
- Mobile applications
- Software interfaces
- Electronic documents
- Digital forms and services

5.2 Required Accessibility Features

Solutions must demonstrate compliance with relevant WCAG success criteria, including, but not limited to:

- Accessible Authentication

- Keyboard navigation
- Screen reader compatibility
- Text alternatives for images
- Proper color contrast
- Visible focus indicators
- Accessible form labels and error messaging
- Target size requirements for interactive elements

5.3 Accessibility Documentation

Vendors must submit an Accessibility Conformance Report (ACR) using the current Voluntary Product Accessibility Template (VPAT) format.

The VPAT must document compliance with WCAG 2.2 Level AA.

The City may request additional documentation or accessibility demonstrations.

6. Vendor Documentation Requirements

Proposals must include the following materials:

1. Accessibility Conformance Report (VPAT / ACR)
2. Security compliance documentation
3. Description of authentication methods used by the system
4. Documentation of accessibility testing conducted by the Vendor
5. Contact information for Vendor security and accessibility compliance personnel

Incomplete documentation may result in the proposal's disqualification.

7. Verification and Acceptance

The City reserves the right to perform independent cybersecurity and accessibility testing prior to final system/bid acceptance.

Testing may include:

- Vulnerability assessments
- Penetration testing
- Accessibility audits
- Manual accessibility testing with assistive technologies

If testing identifies deficiencies, the Vendor shall remediate such deficiencies at no additional cost to the City.

8. Remediation Requirements

Accessibility or cybersecurity deficiencies classified as Critical or High Severity must be corrected before final system/bid acceptance.

Moderate deficiencies must be addressed within a timeframe mutually agreed upon by the City and Vendor.

Failure to remediate identified deficiencies may result in:

- Withholding payment
- Rejection of deliverables
- Contract termination

9. Data Ownership and Use

All data generated through systems provided under this contract shall remain the property of the City of Opelika.

Vendors shall not:

- Sell City data
- Share City data with third parties
- Use City data for training machine learning models
- Use City data for analytics commercialization without explicit written authorization from the City

10. Compliance Certification

By submitting a proposal, the Vendor certifies that:

- The proposed solution complies with the requirements outlined in this Appendix
- The Vendor will cooperate with City cybersecurity and accessibility verification procedures
- The Vendor will remediate verified deficiencies in accordance with this Appendix

Failure to comply with these requirements may result in disqualification from procurement or termination of the contract.

Cybersecurity and Accessibility Requirements

Vendors responding to this solicitation must review and comply with the requirements contained in the attached Bid Appendix titled **"Cybersecurity Compliance – Digital Accessibility and Cybersecurity Requirements."** This appendix establishes minimum cybersecurity, digital accessibility, and identity assurance standards that apply to all technology or digital services provided to the City. Vendors shall submit all required documentation and certifications as outlined in the appendix. Failure to provide the required information may result in the proposal being deemed non-responsive.

Vendor Compliance Acknowledgment

By submitting a proposal, the Vendor acknowledges that the Appendix has been reviewed and that the proposed solution complies with the requirements described therein.

☐ Vendor has reviewed the **Cybersecurity and Accessibility Requirements Appendix.**

☐ Vendor will provide required documentation (VPAT/ACR, security documentation, authentication description, and accessibility testing documentation).

☐ Vendor certifies compliance with applicable accessibility and cybersecurity standards

Vendor Name: _____

Authorized Representative: _____

Title: _____

Signature: _____

Date: _____

DOCUMENT 00410

BID BOND

BIDDER (Name and Address):

_____

_____

_____

SURETY (Name and Address of Principal Place of Business):

_____

_____

_____

OWNER (Name and Address):

City of Opelika

P.O. Box 390

Opelika, Alabama 36803-0390

BID

BID DUE DATE: _____

PROJECT (Brief Description Including Location):

Grade, Drain, Base & Pave Hi-Pack Drive

Opelika, Alabama

BOND

BOND NUMBER: _____

DATE (Not later than Bid due date): _____

PENAL SUM: _____ _____

(Words) (Figures)

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER	SURETY
_____(Seal)	_____(Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature and Title	Signature and Title (Attach Power of Attorney)
Attest: _____	Attest: _____
Signature and Title	Signature and Title

Note: (1) Above addresses are to be used for giving required notice.

(2) Any singular reference to Bidder, Surety, OWNER or other party shall be considered plural where applicable.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to OWNER upon default of Bidder the penal sum set forth on the face of this Bond.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment Bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1. OWNER accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment Bonds required by the Bidding Documents, or

3.2. All Bids are rejected by OWNER, or

3.3. OWNER fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from OWNER, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of and any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by OWNER and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent or representative who executed this Bond on behalf of Surety to execute, seal and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer or proposal as applicable.

END OF DOCUMENT

DOCUMENT 00412

BID FORM

To: City of Opelika

Project: Grade, Drain, Base and Pave Hi-Pack Drive

Date: _____

Submitted by: _____
(full name)

(full address) _____

_____

1. OFFER

Having examined the Place of the Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by the Engineer for the above-mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Unit Prices listed in this bid form in lawful money of the United States of America.

We have included the Bid Bond as required by the Instruction to Bidders.

All applicable Federal and State of Alabama taxes are included in the Unit Prices.

Explanations of Bid Items are described in Section 01200 - Price and Payment Procedures.

2. ACCEPTANCE

This offer shall be open to acceptance and is irrevocable for sixty (60) days from the bid closing date.

If this bid is accepted by the Owner within the time period stated above, we will, unless otherwise allowed by the Owner:

- Execute the Agreement within seven (7) days of receipt of Notice of Award.
- Furnish the required bonds and insurance within fourteen (14) days of receipt of Notice of Award.
- Commence work within seven (7) days after written Notice to Proceed

If this bid is accepted within the time stated, and we fail to commence the Work, or we fail to provide the required bonds, the security deposit shall be forfeited as damages to the Owner by

GRADE, DRAIN BASE & PAVE HI-PACK DRIVE
16A-2 SCHEDULE OF VALUES

ITEM NO	DESCRIPTION	UNIT	QUANTITY	BID PRICE	TOTAL COST
107I000	INDIRECT COST (AS DIRECTED BY THE ENGINEER)	LUMP SUM	1	$ 25,000.00	
201A002	CLEARING AND GRUBBING (MAXIMUM ALLOWABLE BID $5,000 PER ACRE)(APPROXIMATELY 2 ACRES)	LUMP SUM	1		
206D000	REMOVING PIPE	LIN FT	300		
206D011	REMOVING FENCE	LINFT	311		
206E000	REMOVING HEADWALLS	EACH	5		
206E002	REMOVING JUNCTION BOXES	EACH	1		
209A000	MAILBOX RESET, SINGLE	EACH	1		
210A000	UNCLASSIFIED EXCAVATION	CUYD	12609		
201C000	MUCK EXCAVATION	CUYD	5628		
210D011	BORROW EXCAVATION (A4 OR BETTER)	CUYD	8071		
210F002	BORROW EXCAVATION (UNDERWATER BACKFILL) (ALDOT #57)	TON	2439		
214A000	STRUCTURE EXCAVATION	CUYD	1570		
214B001	FOUNDATION BACKFILL, COMMERCIAL	CUYD	994		
243A034	GEOSYNTHETIC REINFORCEMENT FOR SOFT SOIL STABILIZATION, TYPE 2	SQYD	5628		
301A012	CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED, 6" COMPACTED THICKNESS	SQYD	15335		
301E008	CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED	TON	1267		
401A000	BITUMINOUS TREATMENT A	SQYD	9707		
424A360	SUPERPAVE BITUMINOUS CONCRETE WEARING SURFACE LAYER, 1/2" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D	TON	684		
424B650	SUPERPAVE BITUMINOUS CONCRETE UPPER BINDER LAYER, 3/4" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D	TON	684		
424B681	SUPERPAVE BITUMINOUS CONCRETE LOWER BINDER LAYER, 1" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D	TON	1141		
530A001	18" ROADWAY PIPE (CLASS 3 R.C.)	LIN FT	201		
530A004	36" ROADWAY PIPE (CLASS 3 R.C.)	LINFT	29		
530A007	54" ROADWAY PIPE (CLASS 3 R.C.)	LINFT	99		
533A098	18" STORM SEWER PIPE (CLASS 3 R.C.)	LINFT	434		
533A101	36" STORM SEWER PIPE (CLASS 3 R.C.)	LINFT	90		
533A102	42" STORM SEWER PIPE (CLASS 3 R.C.)	LINFT	607		
533A104	54" STORM SEWER PIPE (CLASS 3 R.C.)	LINFT	50		
600A000	MOBILIZATION	LUMPSUM	1		
602A000	RIGHT OF WAY MARKERS	EACH	23		
602D000	CONCRETE VALVE MARKER	EACH	10		
610C000	LOOSE RIPRAP, CLASS 1	TON	3565		
610C001	LOOSE RIPRAP, CLASS 2	TON	52		
610D003	FILTER BLANKET, GEOTEXTILE	SQYD	725		
614A000	SLOPE PAVING	CUYD	68		
618A000	CONCRETE SIDEWALK, 4" THICK	SQYD	2717		
618B003	CONCRETE DRIVEWAY, 6" THICK (INCLUDES WIRE MESH)	SQYD	27		
618C001	DETECTABLE WARNING SURFACE	SOFT	88		
618D000	CURB RAMP	SQYD	38		
619A005	36" ROADWAY PIPE END TREATMENT, CLASS 1	EACH	2		
619A008	54" ROADWAY PIPE END TREATMENT, CLASS 1	EACH	2		
620A000	MINOR STRUCTURE CONCRETE	CUYD	1		
621A011	JUNCTION BOXES, TYPE 1 OR 1P	EACH	3		
621B011	JUNCTION BOX UNITS, TYPE 1 OR 1P	EACH	3		
621C015	INLETS, TYPE S1 OR S3 (1 WING)	EACH	11		
621C017	INLETS, TYPE S1 OR S3 (2 WING)	EACH	4		
621C062	INLETS, TYPE S3 (2 WING) (PARTIAL)	EACH	1		
621D015	INLET UNITS, TYPE S1 OR S3	EACH	5		
623A001	CONCRETE GUTTER (VALLEY)	LINFT	44		
623C003	COMBINATION CURB & GUTTER, TYPE C (MODIFIED)	LIN FT	4245		
641A514	1 INCH COPPER WATER SERVICE LINE LAID	LIN FT	198		
641A518	2 INCH COPPER WATER SERVICE LINE LAID	LIN FT	128		
641A612	6 INCH DUCTILE IRON WATER MAIN LAID	LIN FT	183		
641A614	8 INCH DUCTILE IRON WATER MAIN LAID	LIN FT	1792		
641A616	10 INCH DUCTILE IRON WATER MAIN LAID	LIN FT	664		
641D500	FIRE HYDRANT	EACH	3		
64M510	2 INCH GATE VALVE WITH BOX	EACH	2		
64M516	6 INCH GATE VALVE WITH BOX	EACH	6		
64M518	8 INCH GATE VALVE WITH BOX	EACH	14		
64M520	10 INCH GATE VALVE WITH BOX	EACH	4		
641N520	8 INCH X 6 INCH ANCHOR TEE	EACH	5		
641N530	10 INCH X 6 INCH ANCHOR TEE	EACH	1		
641N620	8 INCH X 8 INCH DUCTILE IRON ANCHOR TEE	EACH	3		
641N730	10 INCH X 10 INCH DUCTILE IRON ANCHOR TEE	EACH	1		

6410534	10 INCH X 8 INCH TAPPING VALVE AND SLEEVE	EACH	1		
641P520	1 INCH SERVICE TAP	EACH	4		
645A510	8 INCH DUCTILE IRON SANITARY SEWER GRAVITY PIPE LAID	LIN FT	250		
645E522	4 INCH P.V.C. STACKS AND LATERALS	LIN FT	150		
645G510	4 INCH SANITARY SEWER LATERAL CLEANOUT	EACH	1		
645H510	48 INCH MANHOLE	EACH	1		
645I500	48 INCH MANHOLE UNIT	EACH	2		
649A535	12 INCH STEEL ENCASEMENT PIPE, TYPE 1 INSTALLATION	LIN FT	94		
649A545	16 INCH STEEL ENCASEMENT PIPE, TYPE 1 INSTALLATION	LIN FT	78		
649A555	20 INCH STEEL ENCASEMENT PIPE, TYPE 1 INSTALLATION	LIN FT	42		
650B000	TOPSOIL FROM STOCKPILES	CU YD	1750		
652A100	SEEDING	ACRE	2		
656A010	MULCHING	ACRE	2		
659C002	EROSION CONTROL PRODUCT, TYPE S2	SQYD	10142		
665A000	TEMPORARY SEEDING	ACRE	6		
665B001	TEMPORARY MULCHING	TON	18		
665G000	SAND BAGS	EACH	50		
665J002	SILT FENCE	LIN FT	4230		
665N000	TEMPORARY COARSE AGGREGATE,ALDOT NUMBER 1	TON	300		
6650001	SILT FENCE REMOVAL	LIN FT	4230		
665P005	INLET PROTECTION, STAGE 3 OR 4	EACH	18		
680A001	GEOMETRIC CONTROLS	LUMP SUM	1		
701A227	SOLID WHITE, CLASS 2, TYPE A TRAFFIC STRIPE (5" WIDE)	MILE	2		
701A230	SOLID YELLOW, CLASS 2, TYPE A TRAFFIC STRIPE (5" WIDE)	MILE	1		
701A244	BROKEN YELLOW, CLASS 2, TYPE A TRAFFIC STRIPE (5" WIDE)	MILE	1		
701B207	DOTTED, CLASS 2, TYPE A TRAFFIC STRIPE (5" WIDE)	LIN FT	82		
701C002	BROKEN TEMPORARY TRAFFIC STRIPE (PAINT)	MILE	1		
701C003	SOLID TEMPORARY TRAFFIC STRIPE (PAINT)	MILE	2		
703A002	TRAFFIC CONTROL MARKINGS, CLASS 2, TYPE A	SQ FT	1647		
703D001	TEMPORARY TRAFFIC CONTROL MARKINGS	SQ FT	1647		
705A032	PAVEMENT MARKERS, CLASS A-H, TYPE 1-B	EACH	66		
705A037	PAVEMENT MARKERS, CLASS A-H, TYPE 2-D	EACH	42		
705A038	PAVEMENT MARKERS, CLASS A-H, TYPE 2-E	EACH	33		
710A153	CLASS 9, ALUMINUM FLAT SIGN PANELS (TYPE XI BACKGROUND)	SQ FT	24		
710A154	CLASS 9, ALUMINUM FLAT SIGN PANELS (TYPE XI BACKGROUND, FLUORESCENT)	SQ FT	44		
710A171	CLASS 4, ALUMINUM FLAT SIGN PANELS (TYPE IV BACKGROUND)	SQ FT	582		
710B021	ROADWAY SIGN POST (#3 U CHANNEL, GALVANIZED STEEL OR 2 ", 14 GA SQUARE TUBULAR STEEL)	LIN FT	467		
740B000	CONSTRUCTION SIGNS	SQ FT	697		
740D000	CHANNELIZING DRUMS	EACH	100		
740E000	CONES (36 INCHES HIGH)	EACH	50		
740F002	BARRICADES, TYPE III	EACH	14		
740I002	WARNING LIGHTS, TYPE B	EACH	7		
742A001	PORTABLE CHANGEABLE MESSAGE SIGN, TYPE 2	EACH	2		
				BID TOTAL	

Item numbers correspond to Alabama Department of Transportation Standard Specifications for Highway Construction, 2022 Edition

ALL ITEMS SHALL BE CONSIDERED IN-PLACE. PRICES SHALL INCLUDE ALL LABOR, EQUIPMENT,

COMPANY_____ SIGNATURE_____ DATE_____

DOCUMENT 00450

AFFIDAVIT OF IMMIGRATION COMPLIANCE

STATE OF _____

COUNTY OF _____

_____ being duly sworn deposes and says:
(print name)

1. I am over the age of twenty-one (21). I am employed as _____
(print title)

with _____
(print company name)

(hereinafter the "Company") who is a contractor, subcontractor, supplier, service provider or vendor with employees in the State of Alabama. In that capacity, I have personal knowledge of the facts stated in this Affidavit and a good faith belief that the Company is in compliance with the Immigration Reform and Control Act of 1986 and Beason-Hammon Alabama Taxpayer and Citizen Protection Act (hereinafter the "Act"). This Affidavit is given in connection with a good faith effort immigration compliance self review or an independent outside review, in accordance with the Immigration Reform and Control Act of 1986, of the Company's immigration compliance.

2. The Company has not and does not knowingly employ, hire for employment, or continue to employ any unauthorized aliens. Further, the Company has no reason to believe that it has employed, hired for employment, or continues to employ and unauthorized aliens. The Company hereby certifies that it has made a good faith effort in accordance with the Immigration Reform and Control Act of 1986 to verify the employment eligibility and identity of all current employees.

3. The Company is presently enrolled in the E-Verify Program and shall verify every employee that is required to be verified according to the Immigration Reform and Control Act of 1986 and the Act. Attached to this Affidavit is the E-Verify Program for Employment Verification Memorandum of Understanding establishing that the Company is enrolled in the E-Verify Program.

4. The Company has, in good faith, complied with the Act with respect to verifying that it has correctly completed an I-9 for each of its current employees and it is in compliance with the Immigration Reform and Control Act of 1986, as well as all other provisions of the Act.

5. The Company affirms that it is providing written notice to its contractors, subcontractors, suppliers, service providers or vendors (hereinafter referred to as "Subcontractors"), who are in any manner involved with the Company's Projects or Contracts in the State of Alabama, of their immigration compliance

obligations and will obtain from each Subcontractor and retain in its files, and Affidavit of Immigration Compliance with the attached E-Verify Program for Employment Verification Memorandum of Understanding establishing that the Subcontractor is enrolled in the E-Verify Program. If requested, the Company will make a copy of each Subcontractors Affidavit of Immigration Compliance available, or as may be required in any audit of the immigration compliance efforts of the Company.

I certify that the above **AFFIDAVIT OF IMMIGRATION COMPLIANCE** is true and correct to the best of my knowledge.

_____
(sign name)

STATE OF _____

COUNTY OF _____

I, the undersigned, Notary Public in and for said County in said State, hereby certify that

_____ who serves in the position of
(print name)

_____ for _____
(print title) (print company name)

has signed the foregoing instrument and who is known to me, acknowledged before me on this day that, being informed of the contents of the instrument, and with full authority, did execute the same voluntarily.

(SEAL) _____
NOTARY PUBLIC

My Commission Expires: _____

END OF DOCUMENT

DOCUMENT 00500

AGREEMENT
BETWEEN OWNER AND CONTRACTOR
ON THE BASIS OF A STIPULATED PRICE

THIS AGREEMENT is by and between City of Opelika (hereinafter called OWNER) and _____ (hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 - WORK

1.01 CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents.

ARTICLE 2 - ENGINEER

2.01 The Project has been designed by **Three Notch Group, Inc.** who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities, and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 3 - CONTRACT TIME

3.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

3.02 *Days to Achieve Substantial Completion and Final Payment*

A. The Work will be substantially completed within ninety (90) **working days** after the date when the Contract Time commences to run as provided in paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions within ninety (90) **working days** after the date when the Contract Time commences to run.

3.03 *Liquidated Damages*

A. CONTRACTOR and OWNER recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the Time specified in paragraph 3.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof,

OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay OWNER in accordance with the Liquidated Damages schedule specified in ALDOT Special Provision No. 22-LD0001(2).

ARTICLE 4 - CONTRACT PRICE

4.01 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraph 4.01.A below:

A. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in the Bid Form (Document 00412):

TOTAL OF ALL UNIT PRICES_____

(use words)

As provided in paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by ENGINEER as provided in paragraph 9.08 of the General Conditions. Unit prices have been computed as provided in paragraph 11.03 of the General Conditions.

ARTICLE 5 - PAYMENT PROCEDURES

5.01 *Submittal and Processing of Payments*

A. CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

5.02 *Progress Payments; Retainage*

A. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment on or about the 10th day of each month during performance of the Work as provided in paragraphs 5.02.A.1 and 5.02.A.2 below. All such payments will be measured by the schedule of values established in paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER may determine or OWNER may withhold, in accordance with paragraph 14.02 of the General Conditions:

a. 95% of Work completed (with the balance being retainage). If the Work has been 50% completed as determined by ENGINEER, and if the character and progress of the Work have been satisfactory to OWNER and ENGINEER, OWNER, on

recommendation of ENGINEER, may determine that as long as the character and progress of the Work remain satisfactory to them, there will be no additional retainage on account of Work subsequently completed, in which case the remaining progress payments prior to Substantial Completion will be in an amount equal to 100% of the Work completed less the aggregate of payments previously made; and

b. 95% of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

2. Upon Substantial Completion, OWNER shall pay an amount sufficient to increase total payments to CONTRACTOR to 97.5% of the Work completed, less such amounts as ENGINEER shall determine in accordance with paragraph 14.02.B.5 of the General Conditions and less 100% of ENGINEER's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

5.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with paragraph 14.07 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraph 14.07.

ARTICLE 6 - CONTRACTOR'S REPRESENTATIONS

6.01 In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

A. CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

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

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

D. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, including applying the specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract Documents to be employed by CONTRACTOR, and safety precautions and programs incident thereto.

E. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the

Contract Price, within the Contract Time, and in accordance with the other terms and conditions of the Contract Documents.

F. CONTRACTOR 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 Contract Documents.

G. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

H. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 7 - CONTRACT DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of the following:

1. CONTRACTOR's Bid;
2. Affidavit of Immigration Compliance;
3. This Agreement;
4. Notice of Award;
5. Documentation submitted by CONTRACTOR prior to Notice of Award;
6. Notice to Proceed;
7. Certificate by Owner;
8. Performance Bond;
9. Payment Bond;

10. Other Bonds;

    a. _____;

    b. _____;

11. General Conditions;

12. Drawings as listed on Cover Sheet Index bearing the Project name;

13. Addenda;

14. Technical specifications as listed in the Table of Contents and any appendices and/or attachments (if any) listed in the Table of Contents.

15. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

    a. Written Amendments;

    b. Change Order(s).

B. The documents listed in paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 7.

D. The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.04 of the General Conditions.

ARTICLE 8 - MISCELLANEOUS

8.01 *Terms*

A. Terms used in this Agreement will have the meanings indicated in the General Conditions.

8.02 *Assignment of Contract*

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

8.03 *Successors and Assigns*

A. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

8.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in duplicate. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or on their behalf.

This Agreement will be effective on _____, _____ (which is the Effective Date of the Agreement).

OWNER: City of Opelika	CONTRACTOR:
By: _____	By: _____
[CORPORATE SEAL]	[CORPORATE SEAL]
Attest _____	Attest _____
Address for giving notices:	Address for giving notices:
P.O. Box 390	_____
Opelika, Alabama 36803-0390	_____
(334) 705-5150	_____

END OF DOCUMENT

DOCUMENT 00510

NOTICE OF AWARD

Dated _____

TO _____
(BIDDER)

ADDRESS: _____

_____

PROJECT: Grade, Drain, Base & Pave Hi-Pack Drive

You are notified that your Bid dated _____ for the above Contract has been considered. You are the apparent Successful Bidder and have been awarded a Contract for

_____
(Indicate total Work, alternates or sections or Work awarded)

The Contract Price of your Contract is

_____

Dollars ($_____).

Four (4) copies of the Agreement accompany this Notice of Award. Each copy of the Agreement and the Notice of Award must be executed and returned to the Engineer. Also enclosed are the requirements for Insurance and the Performance and Payment Bonds for this project.

You must comply with the following conditions precedent within 15 days of the date you receive this Notice of Award.

1. Deliver to the Engineer four (4) fully executed counterparts of all required Documents. Each of the Documents must bear original signatures.

2. Deliver with the executed Contract Documents the Contract security (Bonds) as specified in the Instructions to Bidders (Article 18), and General Conditions (paragraph 5.01).

3. (List other conditions precedent).

_____

_____

_____

_____

Failure to comply with these conditions within the time specified will entitle OWNER to consider your Bid in default, to annul this Notice of Award and to declare your Bid security forfeited.

Within ten days after you comply with the above conditions, OWNER will return to you one fully executed counterpart of the Contract Documents.

City of Opelika

By: _____
Eddie Smith, Mayor

Accepted By:

_____
(Contractor)

_____
(Authorized Signature)

_____
(Title)

END OF DOCUMENT

EJCDC No. 1910-22 (1996 Edition)
Prepared by the Engineers Joint Contract Documents Committee and endorsed by The Associated General Contractors of America and the Construction Specifications Institute.

DOCUMENT 00520

NOTICE TO PROCEED

DATE: _____

TO: _____
(CONTRACTOR)

ADDRESS: _____

_____

_____

Project: Grade, Drain, Base & Pave Hi-Pack Drive

Project No. R071321196

You are notified that the Contract Time under the above contract will commence to run on _____. By that date, you are to start performing your obligations under the Contract Documents.

Before you may start any Work at the Site, paragraph 2.05.C of the General Conditions provides that you must deliver to the Owner (with copies to Engineer and other identified additional insured) certificates of insurance which you are required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must
(add other requirements)

_____

City of Opelika
(OWNER)

By: _____
(AUTHORIZED SIGNATURE)

Mayor
(TITLE)

Accepted By:

_____
(Contractor)

_____
(Authorized Signature)

_____
(Title)

END OF DOCUMENT

DOCUMENT 00530

CERTIFICATION BY OWNER

I, the undersigned, Eddie Smith the duly authorized and acting official representative of City of Opelika do hereby certify as follows:

This contract was let in compliance with the Alabama Competitive Bid Law, Act No. 97-225, and all other applicable provisions of law.

_____
Signature

Mayor
Title

_____
Date

END OF DOCUMENT

DOCUMENT 00610

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):
City of Opelika
P.O. Box 390
Opelika, Alabama 36803-0390

CONTRACT
Date:
Amount: **$**
Description (Name and Location): Grade, Drain, Base & Pave Hi-Pack Drive
Opelika, Alabama

BOND
Date (Not earlier than Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL
Company: (Corp. Seal)

Signature: _____
Name and Title:

SURETY
Company: (Corp. Seal)

Signature: _____
Name and Title:
(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL
Company: (Corp. Seal)

Signature: _____
Name and Title:

SURETY
Company: (Corp. Seal)

Signature: _____
Name and Title:

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Contract, which is incorporated herein by reference.

2. If the CONTRACTOR performs the Contract, the Surety and the CONTRACTOR have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.

3. If there is no OWNER Default, the Surety's obligation under this Bond shall arise after:

3.1. The OWNER has notified the CONTRACTOR and the Surety at the addresses described in paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and

3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided in paragraph 3.1; and

3.3. The OWNER has agreed to pay the Balance of the Contract Price to:

3.3.1. The Surety in accordance with the terms of the Contract;

3.3.2 Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

4. When the OWNER has satisfied the conditions of paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or

4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR Default; or

4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances;

4.4.1 After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefore to the OWNER; or

4.4.2 Deny liability in whole or in part and notify the OWNER citing reasons therefore.

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in paragraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied pliability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

6. After the OWNER has terminated the CONTRACTOR's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To a limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

6.1. The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and

6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. The Performance Bond shall be reissued by the Contractor’s Surety anytime the Contract amount is increased due to change order. The new Performance Bond shall be equal to the new Contract price as indicated in the Change Order and shall supersede all previous bonds issued.

13. Definitions.

13.1 Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other Claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Contract.

13.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

13.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

13.4. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

END OF DOCUMENT

DOCUMENT 00620

PAYMENT BOND

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):
City of Opelika
P.O. Box 390
Opelika, Alabama 36803-0390

CONTRACT
Date:
Amount:
Description (Name and Location): Grade, Drain, Base & Pave Hi-Pack Drive
Opelika, Alabama

BOND
Date (Not earlier than Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL
Company: (Corp. Seal)

Signature: _____
Name and Title:

SURETY
Company: (Corp. Seal)

Signature: _____
Name and Title:
(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL
Company: (Corp. Seal)

Signature: _____
Name and Title:

SURETY
Company: (Corp. Seal)

Signature: _____
Name and Title:

EJCDC No. 1910-28-B (1996 Edition)
Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractors Association, and the Associated Specialty Contractors.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER to pay for labor, materials and equipment furnished for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:

2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2. Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the addresses described in paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety, and provided there is no OWNER Default.

3. With respect to Claimants, this obligation shall be null and void if the CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.

4. The Surety shall have no obligation to Claimants under this Bond until:

4.1. Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the addresses described in paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2. Claimants who do not have a direct contract with the CONTRACTOR:

1. Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and

2. Have either received a rejection in whole or in part from the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR had indicated the claim will be paid directly or indirectly; and

3. Not having been paid within the above 30 days, have sent a written notice to the Surety and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.

5. If a notice required by paragraph 4 is given by the OWNER to the CONTRACTOR or to the Surety, that is sufficient compliance.

6. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

6.1. Send an answer to the Claimant, with a copy to the OWNER, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

6.2. Pay or arrange for payment of any undisputed amounts.

7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8. Amounts owed by the OWNER to the CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Contract are dedicated to satisfy obligations of the CONTRACTOR and the Surety under this Bond, subject to the OWNER's priority to use the funds for the completion of the Work.

9. The Surety shall not be liable to the OWNER, Claimants or others for obligations of the CONTRACTOR that are unrelated to the Contract. The OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by paragraph 4.1 or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the OWNER or the CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, the CONTRACTOR shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS

15.1. Claimant: An individual or entity having a direct contract with the CONTRACTOR or with a Subcontractor of the CONTRACTOR to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of the CONTRACTOR and the CONTRACTOR's Subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes pthereto.

15.3. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

END OF DOCUMENT

DOCUMENT 00700

GENERAL CONDITIONS

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between OWNER and CONTRACTOR covering the Work.

3. *Application for Payment*--The form acceptable to ENGINEER which is to be used by CONTRACTOR during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

7. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, Bid security form, if any, and the Bid form with any supplements.

8. *Bonds*--Performance and payment bonds and other instruments of security.

9. *Change Order*--A document recommended by ENGINEER which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by OWNER or CONTRACTOR seeking an adjustment of Contract Price or Contract Time, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the OWNER and CONTRACTOR concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*--The Contract Documents establish the rights and obligations of the parties and include the Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions (if applicable), the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by OWNER to CONTRACTOR are not Contract Documents.

13. *Contract Price*--The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.03 in the case of Unit Price Work).

14. *Contract Time*--The number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) complete the Work

so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment.

15. *CONTRACTOR*--The individual or entity with whom OWNER has entered into the Agreement.

16. *Cost of the Work*--See paragraph11.01A

17. *Drawings*--That part of the Contract Documents prepared or approved by ENGINEER which graphically shows the scope, extent, and character of the Work to be performed by CONTRACTOR. Shop Drawings and other CONTRACTOR submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *ENGINEER*--The individual or entity named as such in the Agreement.

20. *ENGINEER's Consultant*--An individual or entity having a contract with ENGINEER to furnish services as ENGINEER's independent professional associate or consultant with respect to the Project.

21. *Field Order*--A written order issued by ENGINEER which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Time.

22. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

23. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

24. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

25. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

27. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

28. *Notice of Award*--The written notice by OWNER to the apparent successful bidder stating that upon timely compliance by the apparent successful bidder with the conditions precedent listed therein, OWNER will sign and deliver the Agreement.

29. *Notice to Proceed*--A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform the Work under the Contract Documents.

30. *OWNER*--The individual, entity, public body, or authority with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be performed.

31. *Partial Utilization*--Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.

32. *PCBs*--Polychlorinated biphenyls.

33. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

33A. *Products*—Materials and equipment that the Contractor furnishes and provides, other than labor and equipment.

34. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part as may be indicated elsewhere in the Contract Documents.

35. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

36. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

37. *Resident Project Representative*--The authorized representative of ENGINEER who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work.

40. *Site*--Lands or areas indicated in the Contract Documents as being furnished by OWNER upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by OWNER which are designated for the use of CONTRACTOR.

41. *Specifications*--That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

42. *Subcontractor*--An individual or entity having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the Site.

43. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

44. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

45. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.

46. *Technical Data*—The specific times, locations, and depths/elevations identified in the reports and drawings contained in the Supplementary Conditions.

47. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

48. *Unit Price Work*--Work to be paid for on the basis of unit prices.

49. *Work*--The entire completed construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

50. *Work Change Directive*--A written statement to CONTRACTOR issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Time but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a

subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Time.

51. *Written Amendment*--A written statement modifying the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the non-engineering or non-technical rather than strictly construction-related aspects of the Contract Documents.

1.02 *Terminology*

A. *Intent of Certain Terms or Adjectives*

1. Whenever in the Contract Documents the terms "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of ENGINEER as to the Work, it is intended that such action or determination will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.10 or any other provision of the Contract Documents.

B. *Day*

1. The word "day" shall constitute a calendar day of 24 hours measured from midnight to the next midnight.

C. *Defective*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it does not conform to the Contract Documents or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.04 or 14.05).

D. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of CONTRACTOR, "provide" is implied.

E. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 *Delivery of* Bonds

A. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish.

2.02 *Copies of Documents*

A. OWNER shall furnish to CONTRACTOR up to three copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Time; Notice to Proceed*

A. The Contract Time will commence on the date established in the Notice to Proceed and continue for the

duration of the Project. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement.

2.04 *Starting the Work*

A. CONTRACTOR shall start to perform the Work on the date when the Contract Time commences to run. No Work shall be done at the Site prior to the date of the Notice to Proceed.

2.05 *Before Starting Construction*

A. *CONTRACTOR's Review of Contract Documents:* Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error, ambiguity, or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless CONTRACTOR knew or reasonably should have known thereof.

B. *Preliminary Schedules:* Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for its timely review:

1. A preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. A preliminary schedule of Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing, and processing such submittal; and

3. A preliminary schedule of values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

C. *Evidence of Insurance:* Before any Work at the Site is started, CONTRACTOR and OWNER shall each deliver to the other, with copies to each additional or named insured identified in Article 5, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which CONTRACTOR and OWNER respectively are required to purchase and maintain in accordance with Article 5.

2.06 *Preconstruction Conference*

A. Within 20 days after the Contract Time starts to run, but before any Work at the Site is started, a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.05.B, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to review for acceptability to ENGINEER as provided below the schedules submitted in accordance with paragraph 2.05.B. CONTRACTOR shall have an additional ten days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to CONTRACTOR until acceptable schedules are submitted to ENGINEER.

1. The progress schedule will be acceptable to ENGINEER if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Time. Such acceptance will not impose on ENGINEER responsibility for the progress schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility therefore.

2. CONTRACTOR's schedule of Shop Drawing and Sample submittals will be acceptable to ENGINEER if it provides a workable arrangement for reviewing and processing the required submittals.

3. CONTRACTOR's schedule of values will be acceptable to ENGINEER as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to OWNER.

C. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in Article 9.

D. Sections of Division 1 – General Requirements govern the execution of the work of all sections of the specifications.

3.02 Reference Standards

A. *Standards, Specifications, Codes, Laws, and Regulations*

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of OWNER, CONTRACTOR, or ENGINEER, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to OWNER, ENGINEER, or any of ENGINEER's Consultants, agents, or employees any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. If, during the performance of the Work, CONTRACTOR discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, CONTRACTOR shall report it to ENGINEER in writing at once. CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency as required by paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.04; provided, however, that CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity, or discrepancy unless CONTRACTOR knew or reasonably should have known thereof.

B. *Resolving Discrepancies*

1. The precedence for resolving discrepancies within the Contract Documents shall be as follows:

a. Stated dimensions shall govern over scaled dimensions unless determined to be obviously incorrect.

b. Plans shall govern over Specifications.

c. Special Provisions shall govern over Plans and Specifications.

2. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. The provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. The provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the

provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways: (i) a Written Amendment; (ii) a Change Order; or (iii) a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways: (i) a Field Order; (ii) ENGINEER's approval of a Shop Drawing or Sample; or (iii) ENGINEER's written interpretation or clarification.

3.05 *Reuse of Documents*

A. CONTRACTOR and any Subcontractor or Supplier or other individual or entity performing or furnishing any of the Work under a direct or indirect contract with OWNER: (i) shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER or ENGINEER's Consultant, including electronic media editions; and (ii) shall not reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaptation by ENGINEER. This prohibition will survive final payment, completion, and acceptance of the Work, or termination or completion of the Contract. Nothing herein shall preclude CONTRACTOR from retaining copies of the Contract Documents for record purposes.

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

4.01 *Availability of Lands*

A. OWNER shall furnish the Site. OWNER shall notify CONTRACTOR of any encumbrances or restrictions not of general application but specifically related to use of the Site with which CONTRACTOR must comply in performing the Work. OWNER will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If CONTRACTOR and OWNER are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Time, or both, as a result of any delay in OWNER's furnishing the Site, CONTRACTOR may make a Claim therefore as provided in paragraph 10.05.

B. Upon reasonable written request, OWNER shall furnish CONTRACTOR with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and OWNER's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

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

1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that ENGINEER has used in preparing the Contract Documents; and

2. Those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that ENGINEER has used in preparing the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER, or any of ENGINEER's Consultants with respect to:

1. The completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, and safety precautions and programs incident thereto; or

2. Other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. Any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any

such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If CONTRACTOR believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. Is of such a nature as to establish that any "technical data" on which CONTRACTOR is entitled to rely as provided in paragraph 4.02 is materially inaccurate; or

2. Is of such a nature as to require a change in the Contract Documents; or

3. Differs materially from that shown or indicated in the Contract Documents; or

4. Is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

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

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

C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Time, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in CONTRACTOR's cost of, or time required for, performance of the Work; subject, however, to the following:

a. Such condition must meet any one or more of the categories described in paragraph 4.03.A; and

b. With respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of paragraphs 9.08 and 11.03.

2. CONTRACTOR shall not be entitled to any adjustment in the Contract Price or Contract Time if:

a. CONTRACTOR knew of the existence of such conditions at the time CONTRACTOR made a final commitment to OWNER in respect of Contract Price and Contract Time by the submission of a Bid or becoming bound under a negotiated contract; or

b. The existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for CONTRACTOR prior to CONTRACTOR's making such final commitment; or

c. CONTRACTOR failed to give the written notice within the time and as required by paragraph 4.03.A.

3. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Time, or both, a Claim may be made therefore as provided in paragraph 10.05. However, OWNER, ENGINEER, and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by CONTRACTOR on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

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

1. OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and

2. The cost of all of the following will be included in the Contract Price, and CONTRACTOR shall have full responsibility for:

a. Reviewing and checking all such information and data,

b. Locating all Underground Facilities shown or indicated in the Contract Documents,

c. Coordination of the Work with the owners of such Underground Facilities, including OWNER, during construction, and

d. The safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility.

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

4.05 *Reference Points*

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

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the ENGINEER in the preparation of the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER or any of ENGINEER's Consultants with respect to:

1. The completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto; or

2. Other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. Any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

C. CONTRACTOR shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. CONTRACTOR shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.

D. If CONTRACTOR encounters a Hazardous Environmental Condition or if CONTRACTOR or anyone for whom CONTRACTOR is responsible creates a Hazardous Environmental Condition, CONTRACTOR shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by paragraph 6.16); and (iii) notify OWNER and ENGINEER (and promptly thereafter confirm such notice in writing). OWNER shall promptly consult with ENGINEER concerning the necessity for OWNER to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. CONTRACTOR shall not be required to resume Work in connection with such condition or in any affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Time, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by CONTRACTOR, either party may make a Claim therefore as provided in paragraph 10.05.

F. If after receipt of such written notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Time as a result of deleting such portion of the Work, then either party may make a Claim therefore as provided in paragraph 10.05. OWNER may have such deleted portion of the Work performed by OWNER's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, OWNER shall indemnify and hold harmless CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.E shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.F shall obligate CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of paragraphs 4.02, 4.03, and 4.04 are not intended to apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds

A. CONTRACTOR shall furnish performance and payment Bonds as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or

Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Contract Documents. The Performance Bond shall be in an amount at least equal to the Contract Price and the Payment shall be in an amount of 100% of the Contract Price.

B. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act. Furnish performance and payment bonds on standard surety bond forms.

C. If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.01.B, CONTRACTOR shall within 20 days thereafter substitute another Bond and surety, both of which shall comply with the requirements of paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All Bonds and insurance required by the Contract Documents to be purchased and maintained by OWNER or CONTRACTOR shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue Bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in these General Conditions.

5.03 *Certificates of Insurance*

A. CONTRACTOR shall deliver to OWNER, with copies to each additional insured, certificates of insurance (and other evidence of insurance requested by OWNER or any other additional insured) which CONTRACTOR is required to purchase and maintain. OWNER shall deliver to CONTRACTOR, with copies to each additional insured, certificates of insurance (and other evidence of insurance requested by CONTRACTOR or any other additional insured) which OWNER is required to purchase and maintain.

5.04 *CONTRACTOR's Liability Insurance*

A. CONTRACTOR shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR's performance of the Work and CONTRACTOR's other obligations under the Contract Documents, whether it is to be performed by CONTRACTOR, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. Claims under workers' compensation, disability benefits, and other similar employee benefit acts;
2. Claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;

3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;

4. Claims for damages insured by reasonably available personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (ii) by any other person for any other reason;

5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance so required by this paragraph 5.04 to be purchased and maintained shall:

1. With respect to insurance required by paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) OWNER, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified otherwise, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the

insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. Include at least the specific coverages and be written for not less than the limits of liability provided in this section, or required by Laws or Regulations, whichever is greater;

3. Include completed operations insurance;

4. Include contractual liability insurance covering CONTRACTOR's indemnity obligations under paragraphs 6.07, 6.11, and 6.20;

5. Contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the CONTRACTOR pursuant to paragraph 5.03 will so provide);

6. Remain in effect at least until final payment and at all times thereafter when CONTRACTOR may be correcting, removing, or replacing defective Work in accordance with paragraph 13.07; and

7. With respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and CONTRACTOR shall furnish OWNER and each other additional insured, to whom a certificate of insurance has been issued, evidence satisfactory to OWNER and any such additional insured of continuation of such insurance at final payment and one year thereafter).

C. The limits of liability for the insurance required by paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under paragraphs 5.04.A.1 and A.2 of the General Conditions shall be in strict accordance with the requirements of the current and applicable Workmen's Compensation Laws of the State. The insurance shall cover all of the Contractor's employees employed or associated with the project; and where any part of the work is subcontracted, the Contractor shall require the subcontractor to provide similar Workmen's compensation and Employer's liability Insurance for all employees of the subcontractor unless such employees are covered by the protection afforded by the Contractor.

2. Contractor's General Liability under paragraphs 5.04.A.3 through A.6 of the General Conditions, which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

a. General Aggregate - $2,000,000

b. Products - Completed Operations Aggregate -$1,000,000

c. Personal Injury - $1,000,000

d. Each Occurrence (Bodily Injury and property Damage) - $1,000,000

e. Property Damage liability insurance will provide Explosion, Collapse, and Underground coverages where applicable.

f. Excess or Umbrella Liability

1) General Aggregate - $2,000,000

2) Each Occurrence -$2,000,000

3. Automobile Liability under paragraph 5.04.A.6 of the General Conditions:

a. Bodily Injury:
Each person - $500,000
Each Accident - $1,000,000

b. Property Damage:
Each Accident - $250,000

c. Combined Single Limit of $1,000,000

4. The Contractual Liability coverage required by paragraph 5.04.B.4 of the General Conditions shall provide coverage for not less than the following amounts:

a. Bodily Injury:
Each Accident - $500,000
Annual Aggregate - $1,000,000

b. Property Damage:
Each Accident - $250,000
Annual Aggregate - $1,000,000

5. Special Hazards or Perils - The Liability and Property Damage Insurance Coverage of the Contractor's operations shall provide adequate protection against any death, any bodily injury or any property damage resulting from the blasting operations in connection with the Contractors work, or in connection with the work of his subcontractors.

Insurance carried by the Contractor on the insurable portions of the work shall not relieve the Contractor of the responsibility for the protection of all materials and all work until the project has been accepted by the Owner. Any loss suffered on the project by reason of the peril listed in SC-5.06 or in this sub-part of SC-5.04 shall be borne by the Contractor and/or the Insurance Company providing the coverage for the Contractor; and the Owner shall not be liable for any cost of replacement of lost or damaged work or material

6. Protection of the Owner and the Engineers: The Contractor hereby agrees to hold harmless, indemnify and defend the Owner, the Owner's agent, the Consulting Engineer, and the Owner's employees while acting within the scope of their duties from and against any and all liability, claims, damages, and cost of defense arising out of the Contractor's performance of the work described herein but not including the sole negligence of the Owner, its agents or employees. The Contractor will require any and all subcontractors to conform with the provisions of this clause prior to commencing any work.

The Contractor shall furnish two (2) Owner's Protective Liability Policies; Named Insureds shall be as follows:

1. **City of Opelika**
2. **Three Notch Group, Inc.**

This insurance coverage shall be provided in **two (2) different policies separate from the Contractor's insurance policies**, a copy of the policies shall be provided to the Engineer. The limits of liability shall not be less than $1,000,000.00.

5.05 *OWNER's Liability Insurance*

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

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, OWNER shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. Include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;

2. Be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. Include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. Cover materials and equipment stored at the Site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER;

5. Allow for partial utilization of the Work by OWNER;

6. Include testing and startup; and

7. Be maintained in effect until final payment is made unless otherwise agreed to in

writing by OWNER, CONTRACTOR, and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. OWNER shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with paragraph 5.07.

D. OWNER shall not be responsible for purchasing and maintaining any property insurance specified in this paragraph 5.06 to protect the interests of CONTRACTOR, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by CONTRACTOR, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

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

5.07 *Waiver of Rights*

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

B. OWNER waives all rights against CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for:

1. Loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to OWNER's property or the Work caused by, arising out of, or resulting from fire or other peril whether or not insured by OWNER; and

2. Loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by OWNER during partial utilization pursuant to paragraph 14.05, after Substantial Completion pursuant to paragraph 14.04, or after final payment pursuant to paragraph 14.07.

C. Any insurance policy maintained by OWNER covering any loss, damage or consequential loss referred to in paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against CONTRACTOR, Subcontractors, ENGINEER, or ENGINEER's Consultants and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by paragraph 5.06 will be adjusted with OWNER and made payable to OWNER as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.08.B. OWNER shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.

B. OWNER as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to OWNER's exercise of this power. If such objection be made, OWNER as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, OWNER as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, OWNER as fiduciary shall give bond for the proper performance of such duties.

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

A. If either OWNER or CONTRACTOR has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

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

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. CONTRACTOR shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of OWNER or ENGINEER in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

B. At all times during the progress of the Work, CONTRACTOR shall assign a competent resident superintendent thereto who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the Site and shall have authority to act on behalf of CONTRACTOR. All communications given to or received from the superintendent shall be binding on CONTRACTOR.

6.02 *Labor; Working Hour*

A. CONTRACTOR shall provide competent, suitably qualified personnel to survey, lay out, and construct the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday, or any legal holiday without OWNER's written consent (which will not be unreasonably withheld) given after prior written notice to ENGINEER.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the General Requirements, CONTRACTOR shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of OWNER. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.07 as it may be adjusted from time to time as provided below.

1. CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.07) proposed adjustments in the progress schedule that will not result in changing the Contract Time (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the progress schedule that will change the Contract Time (or Milestones) shall be submitted in accordance with the requirements of Article 12. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

6.05 *Substitutes and "Or-Equals"*

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

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

a. In the exercise of reasonable judgment ENGINEER determines that: (i) it is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;

b. CONTRACTOR certifies that: (i) there is no increase in cost to the OWNER; and (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. CONTRACTOR shall submit sufficient information as provided below to allow ENGINEER to determine that the item of

material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefore. Requests for review of proposed substitute items of material or equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR.

c. The procedure for review by ENGINEER will be as set forth in paragraph 6.05.A.2.d, as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances.

d. CONTRACTOR shall first make written application to ENGINEER for review of a proposed substitute item of material or equipment that CONTRACTOR seeks to furnish or use. The application shall certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The application will state the extent, if any, to which the use of the proposed substitute item will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute item and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute item from that specified will be identified in the application, and available engineering, sales, maintenance, repair, and replacement services will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change, all of which will be considered by ENGINEER in evaluating the proposed substitute item. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute item.

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and expressly required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by ENGINEER. CONTRACTOR shall submit sufficient information to allow ENGINEER, in ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in subparagraph 6.05.A.2.

C. *Engineer's Evaluation:* ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.05.A and 6.05.B. ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized until ENGINEER's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." ENGINEER will advise CONTRACTOR in writing of any negative determination.

D. *Special Guarantee:* OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.

E. *ENGINEER's Cost Reimbursement:* ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitute proposed or submitted by CONTRACTOR pursuant to paragraphs 6.05.A.2 and 6.05.B and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER approves a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute.

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

6.06 *Concerning Sub-contractors, Suppliers, and Others*

A. CONTRACTOR shall not employ any Sub-contractor, Supplier, or other individual or entity (including those acceptable to OWNER as indicated in paragraph 6.06.B), whether initially or as a replacement, against whom OWNER may have reasonable objection. CONTRACTOR shall not be required to employ any Sub-contractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Sub-contractors, Suppliers, or other individuals or entities to be submitted to OWNER in advance for acceptance by OWNER by a specified date prior to the Effective Date of the Agreement, and if CONTRACTOR has submitted a list thereof in accordance with the Supplementary Conditions, OWNER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Sub-contractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. CONTRACTOR shall submit an acceptable replacement for the rejected Sub-contractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued, or Written Amendment signed. No acceptance by OWNER of any such Sub-contractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.

C. CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Sub-contractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Sub-contractor, Supplier, or other individual or entity any contractual relationship between OWNER or ENGINEER and any such Sub-contractor, Supplier or other individual or entity, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Sub-contractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Sub-contractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR.

E. CONTRACTOR shall require all Sub-contractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with ENGINEER through CONTRACTOR.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Sub-contractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for CONTRACTOR by a Sub-contractor or Supplier will be pursuant to an appropriate agreement between CONTRACTOR and the Sub-contractor or Supplier which specifically binds the Sub-contractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER. Whenever any such agreement is with a Sub-contractor or Supplier who is listed as an additional insured on the property insurance provided in paragraph 5.06, the agreement between the CONTRACTOR and the Sub-contractor or Supplier will contain provisions whereby the Sub-contractor or Supplier waives all rights against OWNER, CONTRACTOR, ENGINEER, ENGINEER's Consultants, and all other individuals or entities to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and Sub-contractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Sub-contractor or Supplier, CONTRACTOR will obtain the same.

H. The CONTRACTOR shall not award work to subcontractor(s) in excess of thirty (30%) percent of the contract price, without prior written approval of the Owner.

6.07 *Patent Fees*

A. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees or agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto, such as plant investment fees.

6.09 *Laws and Regulations*

A. CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.

B. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve CONTRACTOR of CONTRACTOR's obligations under paragraph 3.03.

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

6.10 *Taxes*

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

B. OWNER will obtain an exemption certificate for the CONTRACTOR for taxes and duties on certain Products or items, for purchasing Products or items for the Work.

6.11 *Use of Site and Other Areas*

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

1. CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultant, and the officers, directors, partners, employees, agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, ENGINEER, or any other party indemnified hereunder to the extent caused by or based upon CONTRACTOR's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work CONTRACTOR shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work CONTRACTOR shall clean the Site and make it ready for utilization by OWNER. At the completion of the Work CONTRACTOR shall remove from the Site all tools, appliances, construction equipment and machinery, and

surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. CONTRACTOR shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to ENGINEER for OWNER.

6.13 *Safety and Protection*

A. CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. All persons on the Site or who may be affected by the Work;

2. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. Other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury, or loss to any property referred to in paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or ENGINEER's Consultant, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them). CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

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

6.15 *Hazard Communication Programs*

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

6.16 *Emergencies*

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

6.17 *Shop Drawings and Samples*

A. CONTRACTOR shall submit Shop Drawings to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. All submittals will be identified as ENGINEER may require and in the number of copies specified in the General Requirements. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show ENGINEER the services, materials, and equipment CONTRACTOR proposes to provide and to enable ENGINEER to review the information for the limited purposes required by paragraph 6.17.E.

B. CONTRACTOR shall also submit Samples to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers, and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.17.E. The numbers of each Sample to be submitted will be as specified in the Specifications.

C. Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER as required by paragraph 2.07, any related Work performed prior to ENGINEER's review and approval of the pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.

D. *Submittal Procedures*

1. Before submitting each Shop Drawing or Sample, CONTRACTOR shall have determined and verified:

a. All field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. All materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. All information relative to means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto; and

d. CONTRACTOR shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's obligations under the Contract Documents with respect to CONTRACTOR's review and approval of that submittal.

3. At the time of each submittal, CONTRACTOR shall give ENGINEER specific written notice of such variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to ENGINEER for review and approval of each such variation.

E. *ENGINEER's Review*

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

2. ENGINEER's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. ENGINEER's review and approval of Shop Drawings or Samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of each submittal as required by paragraph

6.17.D.3 and ENGINEER has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for complying with the requirements of paragraph 6.17.D.1.

F. *Resubmittal Procedures*

1. CONTRACTOR shall make corrections required by ENGINEER and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

6.18 *Continuing the Work*

A. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.04 or as OWNER and CONTRACTOR may otherwise agree in writing.

6.19 *CONTRACTOR's General Warranty and Guarantee*

A. CONTRACTOR warrants and guarantees to OWNER, ENGINEER, and ENGINEER's Consultants that all Work will be in accordance with the Contract Documents and will not be defective. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:

1. Abuse, modification, or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors, Suppliers, or any other individual or entity for whom CONTRACTOR is responsible; or

2. Normal wear and tear under normal usage.

B. CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents:

1. Observations by ENGINEER;

2. Recommendation by ENGINEER or payment by OWNER of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by ENGINEER or any payment related thereto by OWNER;

4. Use or occupancy of the Work or any part thereof by OWNER;

5. Any acceptance by OWNER or any failure to do so;

6. Any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by ENGINEER;

7. Any inspection, test, or approval by others; or

8. Any correction of defective Work by OWNER.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage:

1. Is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom; and

2. Is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of an individual or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such individual or entity.

B. In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of CONTRACTOR under paragraph 6.20.A shall not extend to the liability of ENGINEER and ENGINEER's Consultants or to the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them arising out of:

1. The preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. Giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

ARTICLE 7 - OTHER WORK

7.01 *Related Work at Site*

A. OWNER may perform other work related to the Project at the Site by OWNER's employees, or let other direct contracts therefore, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. Written notice thereof will be given to CONTRACTOR prior to starting any such other work; and

2. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Time that should be allowed as a result of such other work, a Claim may be made therefore as provided in paragraph 10.05.

B. CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (and OWNER, if OWNER is performing the other work with OWNER's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, CONTRACTOR shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

C. If the proper execution or results of any part of CONTRACTOR's Work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure to so report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If OWNER intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. The individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. The specific matters to be covered by such authority and responsibility will be itemized; and

3. The extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, OWNER shall have sole authority and responsibility for such coordination.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, OWNER shall issue all communications to CONTRACTOR through ENGINEER.

8.02 *Replacement of ENGINEER*

A. In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer to whom CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER.

8.03 *Furnish Data*

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

8.04 *Pay Promptly When Due*

A. OWNER shall make payments to CONTRACTOR promptly when they are due as provided in paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.01 and 4.05. Paragraph 4.02 refers to OWNER's identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by ENGINEER in preparing the Contract Documents.

8.06 *Insurance*

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

8.07 *Change Orders*

A. OWNER is obligated to execute Change Orders as indicated in paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. OWNER's responsibility in respect to certain inspections, tests, and approvals is set forth in paragraph 13.03.B.

8.09 *Limitations on OWNER's Responsibilities*

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

8.10 *Undisclosed Hazardous Environmental Condition*

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

8.11 *Evidence of Financial Arrangements*

A. If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *OWNER'S Representative*

A. ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and will not be changed without written consent of OWNER and ENGINEER.

9.02 *Visits to Site*

A. ENGINEER will make visits to the Site at intervals appropriate to the various stages of construction as ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of

CONTRACTOR's executed Work. Based on information obtained during such visits and observations, ENGINEER, for the benefit of OWNER, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. ENGINEER's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defective Work.

B. ENGINEER's visits and observations are subject to all the limitations on ENGINEER's authority and responsibility set forth in paragraph 9.10, and particularly, but without limitation, during or as a result of ENGINEER's visits or observations of CONTRACTOR's Work ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in providing more extensive observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.10. If OWNER designates another representative or agent to represent OWNER at the Site who is not ENGINEER's Consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Clarifications and Interpretations*

A. ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as ENGINEER may determine necessary, which shall be consistent with the intent of and reasonably inferable from the Contract Documents. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Time, or both, that should be allowed as a result of a written clarification or interpretation, a Claim may be made therefore as provided in paragraph 10.05.

9.05 *Authorized Variations in Work*

A. ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER and also on CONTRACTOR, who shall perform the Work involved promptly. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Time, or both, as a result of a Field Order, a Claim may be made therefore as provided in paragraph 10.05.

9.06 *Rejecting Defective Work*

A. ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be defective, or that ENGINEER believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER will also have authority to require special inspection or testing of the Work as provided in paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.07 *Shop Drawings, Change Orders and Payments*

A. In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraph 6.17.

B. In connection with ENGINEER's authority as to Change Orders, see Articles 10, 11, and 12.

C. In connection with ENGINEER's authority as to Applications for Payment, see Article 14.

9.08 *Determinations for Unit Price Work*

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

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

A. ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work, the quantities and classifications of Unit Price Work, the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, and Claims seeking changes in the Contract Price or Contract Time will be referred initially to ENGINEER in writing, in accordance with the provisions of paragraph 10.05, with a request for a formal decision.

B. When functioning as interpreter and judge under this paragraph 9.09, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to this paragraph 9.09 with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.07) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

9.10 *Limitations on ENGINEER's Authority and Responsibilities*

A. Neither ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by ENGINEER shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work. ENGINEER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

C. ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. ENGINEER's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this paragraph 9.10 shall also apply to ENGINEER's Consultants, Resident Project Representative, and assistants.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved, which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If OWNER and CONTRACTOR are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Time, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefore as provided in paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

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

10.03 *Execution of Change Orders*

A. OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by ENGINEER (or Written Amendments) covering:

1. Changes in the Work which are: (i) ordered by OWNER pursuant to paragraph 10.01.A, (ii) required because of acceptance of defective Work under paragraph 13.08.A or OWNER's correction of defective Work under paragraph 13.09, or (iii) agreed to by the parties;

2. Changes in the Contract Price or Contract Time which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. Changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Time) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR's responsibility. The amount of each applicable Bond will be adjusted to reflect the effect of any such change.

10.05 *Claims and Disputes*

A. *Notice:* Written notice stating the general nature of each Claim, dispute, or other matter shall be delivered by the claimant to ENGINEER and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. Notice of the amount or extent of the Claim, dispute, or other matter with supporting data shall be delivered to the ENGINEER and the other party to the Contract within 60 days after the start of such event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of such Claim, dispute, or other matter). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to ENGINEER and the claimant within 30 days after receipt of the claimant's last submittal (unless ENGINEER allows additional time).

B. *ENGINEER's Decision:* ENGINEER will render a formal decision in writing within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any. ENGINEER's written decision on such Claim, dispute, or other matter will be final and binding upon OWNER and CONTRACTOR unless:

1. An appeal from ENGINEER's decision is taken within the time limits and in accordance with the dispute resolution procedures set forth in Article 16; or

2. If no such dispute resolution procedures have been set forth in Article 16, a written notice of intention to appeal from ENGINEER's written decision is delivered by OWNER or CONTRACTOR to the other and to ENGINEER within 30 days after the date of such decision, and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction within 60 days after the date of such decision or within 60 days after Substantial Completion, whichever is later (unless otherwise agreed in writing by OWNER and CONTRACTOR), to exercise such rights or remedies as the appealing party may have with respect to such Claim, dispute, or other matter in accordance with applicable Laws and Regulations.

C. If ENGINEER does not render a formal decision in writing within the time stated in paragraph 10.05.B, a decision denying the Claim in its entirety shall be deemed to have been issued 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

D. No Claim for an adjustment in Contract Price or Contract Time (or Milestones) will be valid if not submitted in accordance with this paragraph 10.05.

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

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to CONTRACTOR will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Such employees shall include without limitation superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by OWNER.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

3. Payments made by CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER, who will then determine, with the advice of ENGINEER, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in this paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of CONTRACTOR.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressage, and similar petty cash items in connection with the Work.

i. When the Cost of the Work is used to determine the value of a Change Order or of a Claim, the cost of premiums for additional Bonds and insurance required because of the changes in the Work or caused by the event giving rise to the Claim.

j. When all the Work is performed on the basis of cost-plus, the costs of premiums for all Bonds and insurance CONTRACTOR is required by the Contract Documents to purchase and maintain.

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

1. Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by CONTRACTOR, whether at the Site or in CONTRACTOR's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.01.A.1 or specifically covered by paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the CONTRACTOR's fee.

2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the Site.

3. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.

4. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraphs 11.01.A and 11.01.B.

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

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

11.02 *Cash Allowances*

A. It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:

1. The allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. CONTRACTOR's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

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

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER subject to the provisions of paragraph 9.08.

B. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

C. OWNER or CONTRACTOR may make a Claim for an adjustment in the Contract Price in accordance with paragraph 10.05 if:

1. The quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. There is no corresponding adjustment with respect any other item of Work; and

3. if CONTRACTOR believes that CONTRACTOR is entitled to an increase in Contract Price as a result of having incurred additional expense or OWNER believes that OWNER is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIME

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraph 11.03); or

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 12.01.C.2); or

3. Where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in paragraph 11.01) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 12.01.C).

C. *CONTRACTOR's Fee:* The CONTRACTOR's fee for overhead and profit shall be determined as follows:

1. The Agreement identifies the following:

a. Overhead and profit fees applicable to Changes in the Work, whether additions to or deductions from the Work on which the Contract Price is based.

b. Fees for changes in subcontract work (both additions and deductions)

c. The Contractor shall apply fees as noted, to the Subcontractor's gross (net plus fee) costs on additional work.

2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. For costs incurred under paragraphs 11.01.A.1 and 11.01.A.2, the CONTRACTOR's fee shall be 15 percent;

b. For costs incurred under paragraph 11.01.A.3, the CONTRACTOR's fee shall be five percent;

c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. No fee shall be payable on the basis of costs itemized under paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. The amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease; and

f. When both additions and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Time*

A. The Contract Time (or Milestones) may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Time (or Milestones) shall be based on written notice submitted by the party making the claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. Any adjustment of the Contract Time (or Milestones) covered by a Change Order or of any Claim for an adjustment in the Contract Time (or Milestones) will be determined in accordance with the provisions of this Article 12.

12.03 *Delays Beyond CONTRACTOR's Control*

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Time (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Time (or Milestones) will be extended in an amount equal to the time lost due to such delay if a Claim is made therefore as provided in paragraph 12.02.A. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

12.04 *Delays Within CONTRACTOR's Control*

A. The Contract Time (or Milestones) will not be extended due to delays within the control of CONTRACTOR. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.

12.05 *Delays Beyond OWNER's and CONTRACTOR's Control*

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Time (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Time (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay.

12.06 *Delay Damages*

A. In no event shall OWNER or ENGINEER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from:

1. Delays caused by or within the control of CONTRACTOR; or

2. Delays beyond the control of both OWNER and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, or acts or neglect by utility owners or other contractors performing other work as contemplated by Article 7.

B. Nothing in this paragraph 12.06 bars a change in Contract Price pursuant to this Article 12 to compensate CONTRACTOR due to delay, interference, or disruption directly attributable to actions or inactions of OWNER or anyone for whom OWNER is responsible.

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

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which OWNER or ENGINEER has actual knowledge will be given to CONTRACTOR. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

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

13.03 *Tests and Inspections*

A. CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. OWNER shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. For inspections, tests, or approvals covered by paragraphs 13.03.C and 13.03.D below;

2. That costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.04.B shall be paid as provided in said paragraph 13.04.B; and

3. As otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish ENGINEER the required certificates of inspection or approval.

D. CONTRACTOR shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for OWNER's and ENGINEER's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to OWNER and ENGINEER.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by CONTRACTOR without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation.

F. Uncovering Work as provided in paragraph 13.03.E shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

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

B. If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is defective, CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and

other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefore as provided in paragraph 10.05. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a Claim therefore as provided in paragraph 10.05.

13.05 *OWNER May Stop the Work*

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

13.06 *Correction or Removal of Defective Work*

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

13.07 *Correction Period*

A. If within one year after the date of final payment to the CONTRACTOR or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for CONTRACTOR's use by OWNER or permitted by Laws and Regulations as contemplated in paragraph 6.11.A is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) repair such defective land or areas, or (ii) correct such defective Work or, if the defective Work has been rejected by OWNER, remove it from the Project and replace it with Work that is not defective, and (iii) satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or repaired or may have the rejected Work removed and replaced, and all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR.

B. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

C. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

D. CONTRACTOR's obligations under this paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, OWNER (and, prior to ENGINEER's recommendation of final payment, ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to OWNER's evaluation of and determination to accept such defective Work (such costs to be approved by ENGINEER as to reasonableness) and the diminished value

of the Work to the extent not otherwise paid by CONTRACTOR pursuant to this sentence. If any such acceptance occurs prior to ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and OWNER shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefore as provided in paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

13.09 *OWNER May Correct Defective Work*

A. If CONTRACTOR fails within a reasonable time after written notice from ENGINEER to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.06.A, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days written notice to CONTRACTOR, correct and remedy any such deficiency.

B. In exercising the rights and remedies under this paragraph, OWNER shall proceed expeditiously. In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Site, take possession of all or part of the Work and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees, OWNER's other contractors, and ENGINEER and ENGINEER's Consultants access to the Site to enable OWNER to exercise the rights and remedies under this paragraph.

C. All Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by OWNER in exercising the rights and remedies under this paragraph 13.09 will be charged against CONTRACTOR, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, OWNER may make a Claim therefore as provided in paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of CONTRACTOR's defective Work.

D. CONTRACTOR shall not be allowed an extension of the Contract Time (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies under this paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

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

14.02 *Progress Payments*

A. *Applications for Payments*

1. At least 20 days before the date established for each progress payment (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that OWNER has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect OWNER's interest therein, all of which must be satisfactory to OWNER.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of CONTRACTOR stating that all previous progress payments received on account of the Work have been applied on account to discharge

CONTRACTOR's legitimate obligations associated with prior Applications for Payment.

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

B. *Review of Applications*

1. ENGINEER will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

2. ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER's observations on the Site of the executed Work as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules, that to the best of ENGINEER's knowledge, information and belief:

a. The Work has progressed to the point indicated;

b. The quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.08, and to any other qualifications stated in the recommendation); and

c. The conditions precedent to CONTRACTOR's being entitled to such payment appear to have been fulfilled in so far as it is ENGINEER's responsibility to observe the Work.

3. By recommending any such payment ENGINEER will not thereby be deemed to have represented that: (i) inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents; or (ii) that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.

4. Neither ENGINEER's review of CONTRACTOR's Work for the purposes of recommending payments nor ENGINEER's recommendation of any payment, including final payment, will impose responsibility on ENGINEER to supervise, direct, or control the Work or for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for CONTRACTOR's failure to comply with Laws and Regulations applicable to CONTRACTOR's performance of the Work. Additionally, said review or recommendation will not impose responsibility on ENGINEER to make any examination to ascertain how or for what purposes CONTRACTOR has used the moneys paid on account of the Contract Price, or to determine that title to any of the Work, materials, or equipment has passed to OWNER free and clear of any Liens.

5. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make the representations to OWNER referred to in paragraph 14.02.B.2. ENGINEER may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:

a. The Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. The Contract Price has been reduced by Written Amendment or Change Orders;

c. OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.09; or

d. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraph 15.02.A.

C. *Payment Becomes Due*

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

D. *Reduction in Payment*

1. OWNER may refuse to make payment of the full amount recommended by ENGINEER because:

a. Claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;

c. There are other items entitling OWNER to a set-off against the amount recommended; or

d. OWNER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.02.B.5.a through 14.02.B.5.c or paragraph 15.02.A.

2. If OWNER refuses to make payment of the full amount recommended by ENGINEER, OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action and promptly pay CONTRACTOR any amount remaining after deduction of the amount so withheld. OWNER shall promptly pay CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by OWNER and CONTRACTOR, when CONTRACTOR corrects to OWNER's satisfaction the reasons for such action.

3. If it is subsequently determined that OWNER's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by paragraph 14.02.C.1.

14.03 *CONTRACTOR's Warranty of Title*

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

14.04 *Substantial Completion*

A. Substantial completion of project shall be defined as the time at which all pay items have been completed and OWNER can fully utilize the new facilities.

B. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Promptly thereafter, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons thereof. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within 14 days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefore. If, after consideration of OWNER's objections, ENGINEER considers the Work substantially complete, ENGINEER will within said 14 days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER in writing prior to ENGINEER's issuing the definitive certificate of Substantial Completion, ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

C. After substantial completion there shall be a 30-day maintenance period in which items shall be completed by the CONTRACTOR prior to final payment.

D. OWNER shall have the right to exclude CONTRACTOR from the Site after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Use by OWNER at OWNER's option of any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which OWNER, ENGINEER, and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER for its intended purpose without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following conditions.

1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefore. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

2. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

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

14.07 *Final Payment*

A. *Application for Payment*

1. After CONTRACTOR has, in the opinion of ENGINEER, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in paragraph 6.12), and other documents, CONTRACTOR may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by subparagraph 5.04; (ii) consent of the surety, if any, to final payment; and (iii) complete and legally effective releases or waivers (satisfactory to OWNER) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in paragraph 14.07.A.2 and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full and an affidavit of CONTRACTOR that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

B. *Advertisement Of Closing*

1. The Contractor shall attach to the final payment estimate an affidavit of publication (with clipping) from a newspaper of general circulation in the county where work was done, that completion has been advertised weekly for four consecutive weeks. First notice must be subsequent to completion. Employ the following copy:

"Notice is hereby given that (contractor and address) has completed all work on the (insert name of Project from contract documents). All persons having any claim for labor, materials, or otherwise in connection with this project should immediately notify the above named contractor and the Engineer.

C. *Review of Application and Acceptance*

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

D. *Payment Becomes Due*

1. Thirty days after the presentation to OWNER of the Application for Payment and accompanying documentation, the amount recommended by ENGINEER will become due and, when due, will be paid by OWNER to CONTRACTOR.

2. The 1-year warranty period (work and materials) shall commence on the date of final payment to the CONTRACTOR.

14.08 *Final Completion Delayed*

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

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

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

2. A waiver of all Claims by CONTRACTOR against OWNER other than those previously made in writing which are still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *OWNER May Suspend Work*

A. At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to CONTRACTOR and ENGINEER, which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an adjustment in the Contract Price or an extension of the Contract Time, or both, directly attributable to any such suspension if CONTRACTOR makes a Claim therefore as provided in paragraph 10.05.

15.02 *OWNER May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. CONTRACTOR's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.07 as adjusted from time to time pursuant to paragraph 6.04);

2. CONTRACTOR's disregard of Laws or Regulations of any public body having jurisdiction;

3. CONTRACTOR's disregard of the authority of ENGINEER; or

4. CONTRACTOR's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate the services of CONTRACTOR, exclude CONTRACTOR from the Site, and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by OWNER arising out of or relating to completing the Work, such excess will be paid to CONTRACTOR. If such claims, costs, losses, and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses, and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and, when so approved by ENGINEER, incorporated in a Change Order. When exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

C. Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

15.03 *OWNER May Terminate for Convenience*

A. Upon seven days written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy of OWNER, elect to terminate the Contract. In such case, CONTRACTOR shall be paid (without duplication of any items):

1. For completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. For expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. For all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. For reasonable expenses directly attributable to termination.

B. CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *CONTRACTOR May Stop Work or Terminate*

A. If, through no act or fault of CONTRACTOR, the Work is suspended for more than 90 consecutive days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within 30 days after it is submitted, or OWNER fails for 30 days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days written notice to OWNER and ENGINEER, and provided OWNER or ENGINEER do not remedy such suspension or failure within that time, terminate the Contract and recover from

OWNER payment on the same terms as provided in paragraph 15.03. In lieu of terminating the Contract and without prejudice to any other right or remedy, if ENGINEER has failed to act on an Application for Payment within 30 days after it is submitted, or OWNER has failed for 30 days to pay CONTRACTOR any sum finally determined to be due, CONTRACTOR may, seven days after written notice to OWNER and ENGINEER, stop the Work until payment is made of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude CONTRACTOR from making a Claim under paragraph 10.05 for an adjustment in Contract Price or Contract Time or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping the Work as permitted by this paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions. If no method and procedure has been set forth, and subject to the provisions of paragraphs 9.09 and 10.05, OWNER and CONTRACTOR may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

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

17.02 *Computation of Times*

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

17.03 *Cumulative Remedies*

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

17.04 *Survival of Obligations*

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

17.05 *Controlling Law*

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

17.06. *Domestic Products and Steel*

A. The Contractor to whom the Construction Contract is awarded shall use materials, supplies, and products manufactured, mined, processed, or otherwise produced in the United States or its territories, if the same are available at reasonable and competitive prices, and are not contrary to any sole source specification included in the Contract.

B. The Contractor shall use steel produced within the United States when the specifications require the use of steel, and do not limit its supply to a sole source.

C. The Contractor shall provide the Owner a certification that only domestic products and steel will be used in the completion of the work subsequent to the contract. The Certification shall be provided prior to the execution of the contract, and shall be executed by the same person who executes the Contract on behalf of the Contractor, and shall be notarized. The Contractor shall also provide copies of similar certifications from material and equipment suppliers as a part of any submittals presented to the Engineer for approval.

D. In the event the Contractor violates the agreement to use domestic or steel, and domestic products or steel are not used, there shall be a downward adjustment in the contract price equal to any realized savings or benefits to the Contractor.

END OF DOCUMENT

SUPPLEMENTARY CONDITIONS

1. *General*

1.1 These Supplementary Conditions amend or supplement the General Conditions of the Construction Contract and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings indicated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings indicated below, which are applicable to both the singular and plural thereof.

2. *Geotechnical Engineering Evaluation*

2.1 A report of subsurface conditions and a geotechnical evaluation have been prepared for this project and are available to each bidder upon request.

3. *Use of State Specifications*

3.1 The Alabama Highway Department Standard Specifications for Highway Construction 2022 Edition, will be the technical specifications for this project, except as amended herein. In the case of conflict between the specifications of the Alabama Department of Transportation and the General Conditions contained herein, the General Conditions shall govern.

3.2 Section 101 is amended as follows:

a. Where the term "State of Alabama" is used as a party to the contract, it shall be substituted with "City of Opelika". It shall be understood that the State of Alabama is not a party to the contract and that the City of Opelika as owner and the contractor are the respective parties to the contract.

b. The term "Department" or "Highway Department" shall mean the Engineering Department of the City of Opelika, except where it is used to identify a specification, testing procedure, or standard drawing, which is clearly not that of the City of Opelika.

c. The term "Director", "Engineer", or other like terms shall mean the Director of Engineering of the City of Opelika, or his duly authorized representative.

d. The term "Governor" shall be substituted with "Mayor of the City of Opelika."

4. *Superintendence by Contractor*

4.1 The Contractor shall give his personal superintendence to the work or have a competent superintendent on the work at all times during progress with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and expediting of his work.

5. *Subcontracts*

5.1 The Contractor shall not award any work to any Sub-Contractor without prior written approval of the Owner, which approval will not be given until the Contractor submits to it a written statement containing such information as the Owner may require concerning the proposed Sub-Contractor's non-collusion affidavit.

5.2 No proposed Sub-Contractor shall be disapproved except for cause.

5.3 The Contractor shall be as fully responsible to the Owner for the acts and omissions of his Sub-Contractors and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

5.4 The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind Sub-Contractors to the Contractor by the terms of the General Conditions, Special Conditions and other documents comprising the Contract insofar as they are applicable to the work of Sub-Contractors and to give the Contractor the same power as regards terminating any subcontract the Owner may exercise over the Contractor under any provisions of the Contract.

5.5 Nothing contained in the Contract shall create any contractual relation between any Sub-Contractor and the Owner.

5.6 LIMITATIONS: The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the contract or contracts or any portion thereof, or of his right, title, or interest therein, without written consent of the Engineer. If such consent is given, the Contractor will be permitted to sublet a portion of the work, but shall perform with his own organization, work amounting to not less than thirty percent (30%) of the total contract cost. Any items designated in the contract as "specialty items" may be performed by sub-contract and the cost of any such specialty items performed by contract may be deducted from the total cost before computing the amount of work required to be performed by the Contractor with his own organization. No subcontracts or transfer of contract shall relieve the Contractor of his liability under the contract and bonds.

6. *Other Contracts*

6.1 The Owner may award other contracts for additional work, and the Contractor shall fully cooperate with such other Contractors and carefully fit his own work to that provided under other contracts as may be directed by the Owner. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor. Where more than one prime Contractor is employed on the site, it shall be responsibility of the Owner to coordinate the work of all such prime Contractors unless otherwise expressly provided herein.

7. *Fitting and Coordination of the Work*

7.1 The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, Sub-Contractors, or materialmen engaged upon the work. The Contractor shall be prepared to guarantee to each of his Sub-Contractors the dimensions which they may require for the filling of their work to all surrounding work and shall do, or cause his agents to do, all cutting, fitting, adjusting, and patching necessary to make the several parts of the work come together properly and to fit the work to receive, or be received by, that of other Contractors.

END OF DOCUMENT

SECTION 01100

SUMMARY

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Contract description.

B. Work by Owner.

C. Owner supplied products.

D. Contractor's use of site and premises.

E. Future work.

F. Work sequence.

G. Owner occupancy.

H. Specification Conventions.

1.2 CONTRACT DESCRIPTION

A. Work of the Project is as described in Contract Drawings and Documents.

B. Perform Work of each Contract under separate contract with Owner in accordance with Conditions of Contract.

1.3 WORK BY OWNER OR OTHERS

A. Items to be furnished and installed by Owner and/or Others are as noted in the Drawings.

1.4 OWNER SUPPLIED PRODUCTS

A. Owner's Responsibilities:
   1. Arrange for and deliver Engineer-reviewed Shop Drawings, Product Data, and Samples, to Contractor.
   2. Arrange and pay for delivery to site.
   3. On delivery, inspect products jointly with Contractor.
   4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
   5. Arrange for manufacturers' warranties, inspections, and service.

B. Contractor's Responsibilities:
   1. Review Owner-reviewed Shop Drawings, Product Data, and Samples.

2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
3. Handle, store, install and finish products.
4. Repair or replace items damaged after receipt.

C. Products furnished to site and installed by Owner:
1. As noted on Drawings or Special Provisions

D. Items furnished by Owner for installation by Contractor:
1. As noted on Drawings or Special Provisions

1.5 CONTRACTOR'S USE OF SITE AND PREMISES

A. Limit use of site and premises to allow:
1. Owner occupancy.
2. Work by Others and Work by Owner.

B. Access to Site: Limited to construction activities

C. Construction Operations: Limited to work described in the Technical Specifications.

D. Time Restrictions for Performing Work: Limits of the Agreement.

1.6 WORK SEQUENCE

A. Construct Work in stages to accommodate Owner's occupancy requirements during construction period. Coordinate construction schedule and operations with Owner and Engineer. Additional sequences may be indicated in the Drawings.

1.7 OWNER OCCUPANCY

A. The Owner will occupy the site during the entire period of construction for the conduct of normal operations.

B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.

C. Schedule the Work to accommodate Owner occupancy.

1.8 SPECIFICATION CONVENTIONS

A. These specifications are written in imperative mood and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words “shall be” are included by inference where a colon (:) is used within sentences or phrases.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01200

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Schedule of values.

B. Applications for payment.

C. Change procedures.

D. Defect assessment.

E. Unit prices.

F. Alternates.

1.2 SCHEDULE OF VALUES

A. Submit printed schedule on Contractor's standard form or electronic media printout.

B. Submit Schedule of Values in duplicate within 15 days after date established in Notice to Proceed.

C. Include in each line item, amount of Allowances specified in this section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by unit cost to achieve total for each item.

D. Revise schedule to list approved Change Orders, with each Application for Payment.

1.3 APPLICATIONS FOR PAYMENT

A. Submit four copies of each application on Contractor's electronic media driven form.

B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.

C. Submit updated construction schedule with each Application for Payment.

D. Payment Period: Contractor to submit Pay Request, with the agreed upon quantities shown, on the first working day of the month for the previous month.

E. Submit with transmittal letter as specified for Submittals in Section 01330.

F. Substantiating Data: When submitting Pay Request that includes a pay request for stored materials, Contractor must also submit a paid invoice for all materials listed for reimbursement.

1.4 CHANGE PROCEDURES

A. Submittals: Submit name of individual authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.

B. The Engineer will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions.

C. Contractor may propose changes by submitting a request for change to Engineer, describing proposed change and its full effect on the Work. Include a statement describing reason for the change, and effect on Contract Sum/Price and Contract Time with full documentation and a statement describing effect on Work by separate or other Contractors.

D. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation.

E. Unit Price Change Order: For contract unit prices and quantities, the Change Order will be executed on fixed unit price basis.

F. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.

G. Correlation of Contractor Submittals:
   1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
   2. Promptly revise progress schedules to reflect change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
   3. Promptly enter changes in Project Record Documents.

1.5 DEFECT ASSESSMENT

A. Replace the Work, or portions of the Work, not conforming to specified requirements.

B. If, in the opinion of the Engineer, it is not practical to remove and replace the Work, the Engineer will direct appropriate remedy or adjust payment.

C. The defective Work may remain, but unit sum/price will be adjusted to new sum/price at discretion of Engineer.

D. Defective Work will be partially repaired to instructions of Engineer, and unit sum/price will be adjusted to new sum/price at discretion of Engineer.

E. Individual specification sections may modify these options or may identify specific formula or percentage sum/price reduction.

F. Authority of Engineer to assess defects and identify payment adjustments is final.

G. Non-Payment for Rejected Products: Payment will not be made for rejected products for any of the following:
   1. Products wasted or disposed of in a manner that is not acceptable.
   2. Products determined as unacceptable before or after placement.
   3. Products not completely unloaded from transporting vehicle.
   4. Products placed beyond lines and levels of required Work.
   5. Products remaining on hand after completion of the Work.
   6. Loading, hauling, and disposing of rejected products.

1.6 UNIT PRICES

A. Authority: Measurement methods are delineated in Section 1.7 of this Specification.

B. Measurement methods delineated in individual specification sections complement criteria of this section. In event of conflict, requirements of individual specification section govern.

C. Take measurements and compute quantities. Engineer will verify measurements and quantities.

D. Unit Quantities: Quantities and measurements indicated in Bid Form are for contract purposes only. Quantities and measurements supplied or placed in the Work shall determine payment.
   1. When actual Work requires more or fewer quantities than those quantities indicated, provide required quantities at unit sum/prices contracted.

E. Payment Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application or installation of item of the Work; overhead and profit.

F. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities accepted by Engineer multiplied by unit sum/price for Work incorporated in or made necessary by the Work.

1.7 EXPLANATION OF BID ITEMS

A. All proposal items in the Bid Form (and any change orders that are added to the project during construction) shall reference the Alabama Department of Transportation Standard Specifications for Highway Construction, 2022 Edition, for their respective information regarding Description, Materials, Construction Requirements, Methods of Measurement, and Basis of Payment.

1.8 ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement.

B. Coordinate related work and modify surrounding work.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01300

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Coordination and project conditions.

B. Field engineering.

C. Preconstruction meeting.

D. Progress meetings.

E. Pre-installation meetings.

1.2 COORDINATION AND PROJECT CONDITIONS

A. Coordinate scheduling, submittals, and Work of various sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.

B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, operating equipment.

C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

D. In finished areas, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.

E. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion.

F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.3 FIELD ENGINEERING

A. The Contractor shall employ a Land Surveyor registered in State of Alabama for construction stakeout services. The Engineer can be employed by the Contractor to provide control points if requested.

B. Locate and protect survey control and reference points. Promptly notify Engineer of discrepancies discovered.

C. Control datum for survey is that shown on Drawings.

D. Verify setbacks and easements; confirm drawing dimensions and elevations.

E. Provide field engineering services. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.

F. Submit copy of site drawing signed by Land Surveyor certifying elevations and locations of the Work are in conformance with Contract Documents.

G. Maintain complete and accurate log of control and survey work as Work progresses.

H. On completion of foundation walls and major site improvements, prepare certified survey illustrating dimensions, locations, angles, and elevations of construction and site work.

I. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

J. Promptly report to Engineer loss or destruction of reference point or relocation required because of changes in grades or other reasons.

K. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect/Engineer.

1.4 PRECONSTRUCTION MEETING

A. Owner will schedule meeting after Notice of Award.

B. Attendance Required: Owner, Engineer, and Contractor.

C. Agenda:
1. Execution of Owner-Contractor Agreement.
2. Submission of executed bonds and insurance certificates.
3. Distribution of Contract Documents.
4. Submission of list of Subcontractors, list of products, schedule of values, and progress schedule.
5. Designation of personnel representing parties in Contract, and Engineer.
6. Procedures and processing of field decisions, submittals, and substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
7. Scheduling.
8. Scheduling activities of Geotechnical Engineer.

D. Record minutes and distribute copies within five (5) days after meeting to participants, with copies to Engineer, Owner, and those affected by decisions made.

1.5 PROGRESS MEETINGS

A. Schedule and administer meetings throughout progress of the Work at maximum monthly intervals.

B. Engineer will make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings.

C. Attendance Required: Job superintendent, major subcontractors and suppliers, Owner, Engineer, as appropriate to agenda topics for each meeting.

D. Agenda:
1. Review minutes of previous meetings.
2. Review of Work progress.
3. Field observations, problems, and decisions.
4. Identification of problems impeding planned progress.
5. Review of submittals schedule and status of submittals.
6. Review of off-site fabrication and delivery schedules.
7. Maintenance of progress schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding work period.
10. Coordination of projected progress.
11. Maintenance of quality and work standards.
12. Effect of proposed changes on progress schedule and coordination.
13. Other business relating to Work.

E. Record minutes and distribute copies within five (5) days after meeting to participants, with copies to Engineer, Owner, and those affected by decisions made.

1.6 PRE-INSTALLATION MEETINGS

A. When required in individual specification sections, convene pre-installation meetings at Project site prior to commencing work of specific section.

B. Require attendance of parties directly affecting, or affected by, Work of specific section.

C. Prepare agenda and preside at meeting:
1. Review conditions of installation, preparation and installation procedures.
2. Review coordination with related work.

D. Record minutes and distribute copies within five (5) days after meeting to participants, with copies to Engineer, Owner, and those affected by decisions made.

PART 2 PRODUCTS

Not Used.

END OF SECTION

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submittal procedures.

B. Construction progress schedules.

C. Proposed products list.

D. Product data.

E. Shop drawings.

F. Samples.

G. Design data.

H. Test reports.

I. Certificates.

J. Manufacturer's instructions.

K. Manufacturer's field reports.

L. Erection drawings.

M. Construction photographs.

1.2 SUBMITTAL PROCEDURES

A. Transmit each submittal with Engineer accepted form.

B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.

C. Identify Project, Contractor, subcontractor and supplier; pertinent drawing and detail number, and specification section number, appropriate to submittal.

D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents.

E. Schedule submittals to expedite Project, and deliver to Engineer at business address. Coordinate submission of related items.

F. Provide submittals in both hard copy and electronic media format compatible with Owner and Engineer's viewing software.

G. For each submittal for review, allow 15 days excluding delivery time to and from Contractor.

H. Identify variations from Contract Documents and product or system limitations, which may be detrimental to successful performance of completed Work.

I. Allow space on submittals for Contractor and Engineer review stamps.

J. When revised for resubmission, identify changes made since previous submission.

K. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.

L. Submittals not requested will not be recognized or processed.

1.3 CONSTRUCTION PROGRESS SCHEDULES

A. Submit initial schedules within 15 days after date established in Notice to Proceed. After review, resubmit required revised data within 10 days.

B. Submit revised Progress Schedules with each Application for Payment.

C. Distribute copies of reviewed schedules to Project site file, subcontractors, suppliers, and other concerned parties.

D. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

E. Submit computer generated horizontal bar chart with separate line for each major portion of Work or operation, identifying first work day of each week.

F. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate early and late start, early and late finish, float dates, and duration.

G. Indicate estimated percentage of completion for each item of Work at each submission.

H. Submit separate schedule of submittal dates for shop drawings, product data, and samples, including Owner furnished products and products identified under Allowances, and dates reviewed submittals will be required from Engineer. Indicate decision dates for selection of finishes.

I. Indicate delivery dates for Owner furnished products and products identified under Allowances.

J. Revisions To Schedules:
   1. Indicate progress of each activity to date of submittal, and projected completion date of each activity.

2. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
3. Prepare narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect.

1.4 PROPOSED PRODUCTS LIST

A. Within 15 days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.5 PRODUCT DATA

A. Product Data: Submit to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.

B. Submit number of copies Contractor requires, plus four copies Engineer will retain.

C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

E. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents described in Section 01700.

1.6 SHOP DRAWINGS

A. Shop Drawings: Submit to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.

B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

C. Submit in form of one reproducible transparency.

D. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents described in Section 01700.

1.7 SAMPLES

A. Samples: Submit to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.

B. Samples For Selection as Specified in Product Sections:

1. Submit to Engineer for aesthetic, color, or finish selection.
2. Submit samples of finishes from full range of manufacturers' standard colors, textures, and patterns for Engineer selection.

C. Submit samples to illustrate functional and aesthetic characteristics of Products, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

D. Include identification on each sample, with full Project information.

E. Submit number of samples specified in individual specification sections; Engineer will retain one sample.

F. Reviewed samples which may be used in the Work are indicated in individual specification sections.

G. Samples will not be used for testing purposes unless specifically stated in specification section.

H. After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents purposes described in Section 01700.

1.8 DESIGN DATA

A. Submit for Engineer's knowledge as contract administrator or for Owner.

B. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.9 TEST REPORTS

A. Submit for Engineer's knowledge as contract administrator or for Owner.

B. Submit test reports for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.10 CERTIFICATES

A. When specified in individual specification sections, submit certification by manufacturer, installation/application subcontractor, or Contractor to Engineer, in quantities specified for Product Data.

B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.

1.11 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Engineer for delivery to Owner in quantities specified for Product Data.

B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.12 MANUFACTURER'S FIELD REPORTS

A. Submit reports for Engineer's benefit as contract administrator or for Owner.

B. Submit report within 30 days of observation to Engineer for information.

C. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.13 ERECTION DRAWINGS

A. Submit drawings for Engineer's benefit as contract administrator or for Owner.

B. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

C. Data indicating inappropriate or unacceptable Work may be subject to action by Engineer or Owner.

1.14 CONSTRUCTION PHOTOGRAPHS

A. Provide photographs of site prior to beginning construction and monthly throughout progress of Work.

B. Identify each print on back with name of Project, project number, orientation of view, and date and time of view.

C. If digital photography is used, submit photographs to Engineer on CD media.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

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SECTION 01400

QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Quality control and control of installation.

B. Tolerances

C. References.

D. Mock-up requirements.

E. Testing and inspection services.

F. Manufacturers' field services.

G. Examination.

H. Preparation.

1.2 QUALITY CONTROL AND CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. When manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform Work by persons qualified to produce required and specified quality.

F. Verify field measurements are as indicated on Shop Drawings or as instructed by manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

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1.3 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. When manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

A. For products or workmanship specified by association, trades, or other consensus standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard by date of issue current on date of Contract Documents, except where specific date is established by code.

C. Obtain copies of standards where required by product specification sections.

D. When specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.

E. Neither contractual relationships, duties, nor responsibilities of parties in Contract nor those of Engineer shall be altered from Contract Documents by mention or inference otherwise in reference documents.

1.5 MOCK-UP REQUIREMENTS

A. Tests will be performed under provisions identified in this section and identified in respective product specification sections.

B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.

C. Accepted mock-ups shall be comparison standard for remaining Work.

D. Where mock-up has been accepted by Engineer and is specified in product specification sections to be removed; remove mock-up and clear area when directed to do so by Engineer.

1.6 TESTING AND INSPECTION SERVICES

A. Employ and pay for services of an independent testing agency or laboratory acceptable to Owner to perform specified testing.
   1. Three Notch Group, Inc. can perform the required material testing and geotechnical evaluation for this project.
   2. Prior to start of Work, submit testing laboratory name, address, and telephone number if Three Notch Group, Inc. is not selected.

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3. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of deficiencies reported by inspection.

B. The independent firm will perform tests, inspections and other services specified in individual specification sections and as required by Engineer.
   1. Laboratory: Authorized to operate in State of Alabama
   2. Laboratory Staff: Maintain full time registered Engineer on staff to review services.
   3. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to National Bureau of Standards or accepted values of natural physical constants.

C. Testing, inspections and source quality control may occur on or off project site. Perform off-site testing as required by Engineer or Owner.

D. Reports will be submitted by independent firm to Engineer and Contractor, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

E. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
   1. Notify Engineer and independent firm 24 hours prior to expected time for operations requiring services.
   2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.

F. Testing and employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

G. Re-testing or re-inspection required because of non-conformance to specified requirements shall be performed by same independent firm on instructions by Engineer. Payment for re-testing or re-inspection will be charged to Contractor by deducting testing charges from Contract Price.

H. Agency Responsibilities:
   1. Test samples of mixes submitted by Contractor.
   2. Provide qualified personnel at site. Cooperate with Engineer and Contractor in performance of services.
   3. Perform specified sampling and testing of products in accordance with specified standards.
   4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
   5. Promptly notify Engineer and Contractor of observed irregularities or non-conformance of Work or products.
   6. Perform additional tests required by Engineer.
   7. Attend preconstruction meetings and progress meetings.

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I. Agency Reports: After each test, promptly submit two copies of report to Engineer and to Contractor. When requested by Engineer, provide interpretation of test results. Include the following:
   1. Date issued.
   2. Project title and number.
   3. Name of inspector.
   4. Date and time of sampling or inspection.
   5. Identification of product and specifications section.
   6. Location in Project.
   7. Type of inspection or test.
   8. Date of test.
   9. Results of tests.
   10. Conformance with Contract Documents.

J. Limits On Testing Authority:
   1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
   2. Agency or laboratory may not approve or accept any portion of the Work.
   3. Agency or laboratory may not assume duties of Contractor.
   4. Agency or laboratory has no authority to stop the Work.

1.7 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment and training as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to Engineer 30 days in advance of required observations.

C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

D. Refer to Section 01330 - SUBMITTAL PROCEDURES, MANUFACTURERS' FIELD REPORTS article.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.

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B. Verify existing substrate is capable of structural support or attachment of new Work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Verify utility services are available, of correct characteristics, and in correct locations.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

END OF SECTION

SECTION 01600

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Products.

B. Product delivery requirements.

C. Product storage and handling requirements.

D. Product options.

E. Product substitution procedures.

1.2 PRODUCTS

A. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise.

B. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.

C. Furnish interchangeable components from same manufacturer for components being replaced.

1.3 PRODUCT DELIVERY REQUIREMENTS

A. Transport and handle products in accordance with manufacturer's instructions.

B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.

C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

A. Store and protect products in accordance with manufacturers' instructions.

B. Store with seals and labels intact and legible.

C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

D. For exterior storage of fabricated products, place on sloped supports above ground.

E. Provide off-site storage and protection when site does not permit on-site storage or protection.

F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

G. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.

H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Products of one of manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit request for substitution for any manufacturer not named in accordance with the following article.

1.6 PRODUCT SUBSTITUTION PROCEDURES

A. Engineer will consider requests for Substitutions only within 10 days after date established in Notice to Proceed.

B. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.

C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.

D. A request constitutes a representation that Contractor:
   1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
   2. Will provide same warranty for Substitution as for specified product.
   3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
   4. Waives claims for additional costs or time extension which may subsequently become apparent.
   5. Will reimburse Owner and Engineer for review or redesign services associated with re-approval by authorities having jurisdiction.

E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals, without separate written request, or when acceptance will require revision to Contract Documents.

F. Substitution Submittal Procedure:
   1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
   2. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
   3. Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01700

EXECUTION REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Closeout procedures.

B. Final cleaning.

C. Starting of systems.

D. Demonstration and instructions.

E. Testing, adjusting and balancing.

F. Protecting installed construction.

G. Project record documents.

H. Operation and maintenance data.

I. Manual for materials and finishes.

J. Manual for equipment and systems.

K. Spare parts and maintenance products.

L. Product warranties and product bonds.

M. Maintenance service.

1.2 CLOSEOUT PROCEDURES

A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's review.

B. Provide submittals to Engineer required by authorities having jurisdiction.

C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.3 FINAL CLEANING **(If Applicable)**

A. Execute final cleaning prior to final project assessment.

B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

C. Clean equipment and fixtures to sanitary condition with cleaning materials appropriate to surface and material being cleaned.

D. Replace filters of operating equipment.

E. Clean debris from roofs, gutters, downspouts, and drainage systems.

F. Clean site; sweep paved areas, rake clean landscaped surfaces.

G. Remove waste and surplus materials, rubbish, and construction facilities from site.

1.4 STARTING OF SYSTEMS

A. Coordinate schedule for start-up of various equipment and systems.

B. Notify Engineer seven days prior to start-up of each item.

C. Verify each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.

D. Verify tests, meter readings, and specified electrical characteristics agree with those required by equipment or system manufacturer.

E. Verify wiring and support components for equipment are complete and tested.

F. Execute start-up under supervision of applicable manufacturer's representative in accordance with manufacturers' instructions.

G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

H. Submit a written report in accordance with Section 01330 that equipment or system has been properly installed and is functioning correctly.

1.5 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of Substantial Completion.

B. Demonstrate Project equipment and instructed by qualified manufacturer's representative who is knowledgeable about the Project.

C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time, at equipment location.

F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

G. Required instruction time for each item of equipment and system is specified in individual sections.

1.6 TESTING, ADJUSTING AND BALANCING

A. Owner will appoint and employ services of independent firm to perform testing, adjusting, and balancing.

B. Reports will be submitted by independent firm to Engineer indicating observations and results of tests and indicating compliance or non-compliance with requirements of Contract Documents.

1.7 PROTECTING INSTALLED CONSTRUCTION

A. Protect installed Work and provide special protection where specified in individual specification sections.

B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

E. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

F. Prohibit traffic from landscaped areas.

1.8 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
   5. Reviewed Shop Drawings, Product Data, and Samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress, not less than weekly.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by Addenda and modifications.

F. Record Drawings : Legibly mark each item to record actual construction including:
   1. Measured depths of foundations in relation to finish floor datum.
   2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
   3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   4. Field changes of dimension and detail.
   5. Details not on original Contract drawings.

G. Submit documents to Engineer with claim for final Application for Payment.

1.9 OPERATION AND MAINTENANCE DATA

A. Submit data bound in 8-1/2 x 11 inch (A4) text pages, capacity expansion binders with durable plastic covers.

B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.

C. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.

D. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

E. Contents: Prepare Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
   1. Part 1: Directory, listing names, addresses, and telephone numbers of Engineer, Contractor, Subcontractors, and major equipment suppliers.
   2. Part 2: Operation and maintenance instructions arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
      a. Significant design criteria.
      b. List of equipment.
      c. Parts list for each component.
      d. Operating instructions.
      e. Maintenance instructions for equipment and systems.
      f. Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
   3. Part 3: Project documents and certificates, including the following:
      a. Shop drawings and product data.
      b. Air and water balance reports.
      c. Certificates.
      d. Originals of warranties.

1.10 MANUAL FOR MATERIALS AND FINISHES

A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Engineer will review draft and return one copy with comments.

B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.

C. Submit one copy of completed volumes 15 days prior to final inspection. Draft copy be reviewed and returned after final inspection, with Engineer comments. Revise content of document sets as required prior to final submission.

D. Submit two sets of revised final volumes in final form within 10 days after final inspection.

E. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Include information for re-ordering custom manufactured products.

F. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

G. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Include recommendations for inspections, maintenance, and repair.

H. Additional Requirements: As specified in individual product specification sections.

I. Include listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.11 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Engineer will review draft and return one copy with comments.

B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.

C. Submit one copy of completed volumes 15 days prior to final inspection. Draft copy be reviewed and returned after final inspection, with Engineer comments. Revise content of document sets as required prior to final submission.

D. Submit two sets of revised final volumes in final form within 10 days after final inspection.

E. Each Item of Equipment and Each System: Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.

F. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; by label machine.

G. Include color coded wiring diagrams as installed.

H. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and special operating instructions.

I. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

J. Include servicing and lubrication schedule, and list of lubricants required.

K. Include manufacturer's printed operation and maintenance instructions.

L. Include sequence of operation by controls manufacturer.

M. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

N. Include control diagrams by controls manufacturer as installed.

O. Include Contractor's coordination drawings, with color coded piping diagrams as installed.

P. Include charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

Q. Include list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

R. Include test and balancing reports as specified in Section 01400.

S. Additional Requirements: As specified in individual product specification sections.

T. Include listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.

1.12 SPARE PARTS AND MAINTENANCE PRODUCTS

A. Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.

B. Deliver to Project site and place in location as directed by Owner; obtain receipt prior to final payment.

1.13 PRODUCT WARRANTIES AND PRODUCT BONDS

A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.

B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.

C. Verify documents are in proper form, contain full information, and are notarized.

D. Co-execute submittals when required.

E. Include Table of Contents and assemble in binder with durable plastic cover.

F. Submit prior to final Application for Payment.

G. Time Of Submittals:
   1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
   2. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.

3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty or bond period.

1.14 MAINTENANCE SERVICE

A. Furnish service and maintenance of components indicated in specification sections during warranty period.

B. Examine system components at frequency consistent with reliable operation. Clean, adjust, and lubricate as required.

C. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by manufacturer of original component.

D. Do not assign or transfer maintenance service to agent or Subcontractor without prior written consent of Owner.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

CITY OF
OPELIKA
ENGINEERING
Stormwater Division

Erosion Control Policies for City Contracts

1. General Requirements.

Soil erosion and sediment control is an integral part of protecting water quality during construction. Small contracts and those that do not require environmental permits are still required to protect water quality. Erosion and sediment control is required on all construction contracts with soil disturbance, including temporary disturbances from staging areas, storage areas, etc. The Contractor shall conform to and comply with all of the provisions of the City of Opelika's erosion and sediment control ordinance codified as Article III of Chapter 7 of the City Code, as well as all ADEM-NPDES regulations. *By accepting the contract or agreement, the vendor/contractor(s) accepts the following:*

2. Erosion and Sediment Control Plan.

Erosion and Sediment Control (E&SC) requirements are frequently based on environmental permits from various agencies. *The permits should be reviewed in detail, as requirements may be stated in the permits that are not shown in the contract documents*. Water Quality Protection is a JOINT RESPONSIBILITY of the Contractor and the City of Opelika. To the extent a permit has been issued by the City Engineer, a land development permit in accordance with applicable ordinances, the Contractor shall conform to and abide by all terms and conditions of such permit. All erosion control measures shall be performed in accordance with an Erosion and Sediment Control (E&SC) Plan presented to and approved by the City Engineer. *The Contractor will perform all erosion control measures necessary to prevent silt and soil from leaving the construction area and entering private property or the "waters of the state".* Erosion control measures shall be in strict accordance with minimum standards outlined in The Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites in Urban Areas. **Failure to comply** with such standards **may result in delay of contract progress payments**. E&SC Plan revisions after the construction starts must be reviewed and approved by the City Engineer, Stormwater Coordinator, and the Designer, if necessary. All erosion control must be effective, otherwise upgraded BMPs are required **until effective.**

3. Protection Prior to Disturbances.

Erosion and sediment control measures (primarily sediment control) **must be installed around the perimeter prior** to grubbing, stripping or other operations that create soil disturbances. Disturbed areas may be protected by mulching slopes, temporary seeding, installing silt fences, check dams, erosion control blankets, etc. The Contractor should not clear the entire site, but grub and strip only those areas required to facilitate construction operations, in order to minimize the area and time of disturbances.

4. Temporary BMPs in Erosion Control.

In accordance with Best Management Practices, temporary erosion control work shall involve the construction of temporary berms, dikes, dams, fences, drains, etc., with the use of temporary seeding, mulching, erosion control netting, hay bales, sandbags, check dams, etc., as necessary in order to prevent silt and soil from leaving the construction site and entering private property or from washing into drainage structures located on City or state rights-of-way. Erosion control measures shall be maintained by the Contractor **through the warranty period** of the contract. If additional measures are required to correct problems which occur, these shall be performed **by the Contractor at no additional expense to the City**. Materials used for erosion control measures shall be in accordance with The Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites in Urban Areas. Earth material left unworked or exposed more than thirteen days (13) shall be seeded and mulched per ordinances. Slopes brought to final grade shall be stabilized with **permanent** grasses as soon as possible.

Direct inquiries concerning soil and sediment control measures to:
Opelika Stormwater Coordinator Telephone: 334-705-5454
700 Fox Trail Opelika, AL 36801 3-2023

SECTION 03200

CONCRETE REINFORCEMENT

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Reinforcing bars.
   2. Welded wire fabric.
   3. Reinforcement accessories.

B. Related Sections:
   1. Drawings and general provisions of the Contract including General and Supplemental General Conditions, and Technical Specifications.

1.2 REFERENCES

A. American Concrete Institute:
   1. ACI 301 - Specifications for Structural Concrete.
   2. ACI 318 - Building Code Requirements for Structural Concrete.
   3. ACI SP-66 - ACI Detailing Manual.

B. ASTM International:
   1. ASTM A82 - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
   2. ASTM A184/A184M - Standard Specification for Fabricated Deformed Steel Bar Mats for Concrete Reinforcement.
   3. ASTM A497 - Standard Specification for Steel Welded Wire Fabric, Deformed, for Concrete Reinforcement.
   4. ASTM A615/A615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
   5. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
   6. ASTM A704/A704M - Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement.
   7. ASTM A706/A706M - Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement.
   8. ASTM A767/A767M - Standard Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement.
   9. ASTM A775/A775M - Standard Specification for Epoxy-Coated Reinforcing Steel Bars.
   10. ASTM A884/A884M - Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Fabric for Reinforcement.
   11. ASTM A934/A934M - Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars.
   12. ASTM A996/A996M - Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement.

13. ASTM D3963/D3963M - Standard Specification for Fabrication and Jobsite Handling of Epoxy-Coated Reinforcing Steel Bars.

C. American Welding Society:
1. AWS D1.4 - Structural Welding Code - Reinforcing Steel.

D. Concrete Reinforcing Steel Institute:
1. CRSI - Manual of Standard Practice.
2. CRSI - Placing Reinforcing Bars.

1.3 SUBMITTALS

A. Section 01330 - Submittal Procedures.

B. Shop Drawings: Indicate bar sizes, spacings, locations, and quantities of reinforcing steel and welded wire fabric, bending and cutting schedules.

C. Certificates: Submit AWS qualification certificate for welders employed on the Work.

D. Submit certified copies of mill test report of reinforcement materials analysis.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with CRSI - Manual of Standard Practice and ACI 301.

1.5 QUALIFICATIONS

A. Welders: AWS qualified within previous 12 months.

1.6 COORDINATION

A. Section 01300 - Administrative Requirements.

B. Coordinate with placement of formwork, formed openings and other Work.

PART 2 PRODUCTS

2.1 REINFORCEMENT

A. Reinforcing Steel: ASTM A615/A615M, 60 ksi yield grade; deformed billet steel bars, unfinished.

B. Reinforcing Steel Plain Bar and Rod Mats: ASTM A704/A704M, ASTM A615/A615M, Grade 60; steel bars or rods, unfinished.

C. Stirrups Steel: ASTM A82, unfinished.

D. Welded Steel Wire Fabric: ASTM A497 Deformed Type; in flat sheets or coiled rolls; galvanized finish.

2.2 ACCESSORY MATERIALS

A. Tie Wire: Minimum 16 gage annealed type.

B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions including load bearing pad on bottom to prevent vapor retarder puncture.

C. Special Chairs, Bolsters, Bar Supports, Spacers Adjacent to Weather Exposed Concrete Surfaces: Plastic tipped steel type; size and shape to meet Project conditions.

D. Reinforcing Splicing Devices: Exothermic welding type; full tension and compression; sized to fit joined reinforcing.

2.3 FABRICATION

A. Fabricate concrete reinforcement in accordance with CRSI Manual of Practice.

PART 3 EXECUTION

3.1 PLACEMENT

A. Place, support and secure reinforcement against displacement. Do not deviate from required position.

B. Do not displace or damage vapor retarder.

C. Accommodate placement of formed openings.

D. Maintain concrete cover around reinforcement as follows:

Item	Coverage
Concrete in contact with soil	3 inches
Exterior concrete	
Bars larger than No. 5	2 inches
No. 5 bars and smaller	1-1/2 inches
Interior concrete	
Bars larger than No. 11	1-1/2 inches
No. 11 bars and smaller	3/4 inch
Stirrups	1-1/2 inches

E. Conform to applicable code for all other conditions.

F. Splice reinforcing in accordance with splicing device manufacturer’s instructions.

G. Lap length shall be as follows unless otherwise noted on the Drawings:

Bar Size	Lap Length
No. 3	12 inches
No. 4	12 inches
No. 5	15 inches
No. 6	18 inches
No. 7	24 inches
No. 8	30 inches

3.2 FIELD QUALITY CONTROL

A. Section 01400 - Quality Requirements; Section 01700 - Execution Requirements.

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SUMMARY

A. Section includes:
1. Cast-in-place concrete.
2. Formwork.
3. Reinforcing.
4. Mix Design.
5. Control, expansion and contraction joint devices.
6. Placement procedures.
7. Finishes.
8. Testing requirements.

B. Related Documents:
1. Drawings and general provisions of the Contract including General and Supplemental General Conditions, and Technical Specifications.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

A. Cast-in-Place Structures:
1. Basis of Measurement: Cubic Yard or Lump Sum.
2. Basis of Payment: Includes all labor, material, and equipment required to construct the concrete structures shown on the Plans and/or reflected in the Bid Form. Includes placing and compacting of base material, formwork, underground piping, drains, conduit, reinforcement, pouring and finishing of concrete, removal of forms, water stops, water proofing, expansion and control joints, cleanup and all related items.

B. Concrete Driveway Replacement:
1. Basis of Measurement: Square Yard or Cubic Yard.
2. Basis of Payment: Includes all labor, materials, and equipment required to place concrete surface at the thickness and cured strength shown in the Plans and/or reflected in the Bid Form. Includes saw cutting and removal of existing surface, backfill materials per the Plans, wire mesh, pouring and finishing concrete drive, cleanup and all related work. Also, shall include coordination with any residents to provide an alternate entrance to their driveway while concrete is curing. The maximum width for payment shall be as noted on the Plans.

C. Minor Concrete Structures:
1. Basis of Measurement: Cubic Yard.
2. Basis of Payment: Includes all labor, material, and equipment required to replace or construct any minor or miscellaneous structures as indicated in the Plans, directed by the Engineer, and/or reflected in the Bid Form. Items could include curb and gutters, sidewalks, and small slabs.

1.3 REFERENCES

A. American Concrete Institute:
   1. ACI 301 - Specifications for Structural Concrete.
   2. ACI 305 - Hot Weather Concreting.
   3. ACI 306.1 - Standard Specification for Cold Weather Concreting.
   4. ACI 318 - Building Code Requirements for Structural Concrete.

B. ASTM International:
   1. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
   2. ASTM C33 - Standard Specification for Concrete Aggregates.
   3. ASTM C94 - Standard Specification for Ready-Mixed Concrete.
   4. ASTM C150 - Standard Specification for Portland Cement.
   5. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
   6. ASTM C330 - Standard Specification for Lightweight Aggregates for Structural Concrete.
   7. ASTM C494 - Standard Specification for Chemical Admixtures for Concrete.
   8. ASTM C595 - Standard Specification for Blended Hydraulic Cements.
   9. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete.
   10. ASTM C1017 - Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete.
   11. ASTM C1107 - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
   12. ASTM C1116 - Standard Specification for Fiber-Reinforced Concrete and Shotcrete.
   13. ASTM D994 - Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
   14. ASTM D1190 - Standard Specification for Concrete Joint Sealer, Hot-Applied Elastic Type.
   15. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
   16. ASTM D1752 - Standard Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.
   17. ASTM E1643 - Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs.
   18. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.

1.4 SUBMITTALS

A. Section 01330 - Submittal Procedures.

B. Product Data: Submit data on joint devices, attachment accessories, and admixtures.

C. Design Data:
   1. Submit concrete mix design for each concrete strength. Submit separate mix designs when admixtures are required for the following:

a. Hot and cold weather concrete work.
b. Air entrained concrete work.

2. Identify mix ingredients and proportions, including admixtures.

D. Manufacturer's Installation Instructions: Submit installation procedures and interface required with adjacent Work.

1.5 CLOSEOUT SUBMITTALS

A. Section 01700 - Execution Requirements.

B. Project Record Documents: Accurately record actual locations of embedded utilities and components concealed from view in finished construction.

1.6 QUALITY CONTROL / QUALITY ASSURANCE

A. Perform Work in accordance with ACI 301.

B. Maintain one copy of each document on site.

C. Acquire cement and aggregate from one source for Work.

D. Conform to ACI 305 when concreting during hot weather.

E. Conform to ACI 306.1 when concreting during cold weather.

F. Concrete Testing Service: Contractor shall employ Three Notch Group, Inc. to provide quality assurance testing during construction. Contractor is responsible to provide suitable quality control of materials, procedures, and of the mix design process to ensure the concrete conforms to the project plans and specifications. Submit quality control plan and proposed concrete mix designs to Engineer prior to concrete placement.

1.7 COORDINATION

A. Section 01300 - Administrative Requirements.

B. Coordinate placement of joint devices with erection of concrete formwork and placement of form accessories.

PART 2 PRODUCTS

2.1 FORM MATERIALS

A. Forms for Exposed Finish Concrete: Plywood, metal, metal-framed plywood faced, or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces.

1. Use overlaid plywood complying with U.S. Product Standard PS-1 “A-C or B-B High Density Overlaid Concrete Form”, Class 1.

2. Use plywood complying with U.S. Product Standard PS-1 "B-B (Concrete Form) Plywood", Class 1, Exterior Grade or better, mill-oiled and edge sealed, with each piece bearing legible inspection trademark.

B. Forms for Unexposed Finish Concrete: Plywood, lumber, metal, or other acceptable material. Provide lumber dressed on at least 2 edges and one side for a tight fit.

C. Form Coatings: Provide commercial formulation form coating compounds with a maximum VOC of 350 mg/l that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

D. Form Ties: Factory fabricated, adjustable length, removable or snap-off metal form ties, designed to prevent form deflection and to prevent spalling concrete upon removal.

2.2 REINFORCING MATERIALS

A. Reinforcing Bars: ASTM A615, Grade 60, deformed.

B. Welded Wire Fabric: ASTM A185 welded steel wire fabric.

C. Supports for Reinforcement: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place. Use wire-bar type supports complying with CRSI specifications.
1. For slabs-on-grade use supports with sand plates or horizontal runners where base material will not support chair legs.
2. For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with legs that are plastic protected (CRSI, class 1) or stainless steel protected (CRSI, class 2).
3. For sand blasted or intentionally roughened concrete surfaces, provide supports of stainless steel (CRSI, class 2).

D. Reinforcing Bars to be Welded: ASTM A706, "Specifications for Low Alloy Steel Deformed Bars for Concrete Reinforcement".

E. Bar and Rod Mats: ASTM A184 "Specifications for Fabricated Deformed Steel Bar Mats for Concrete Reinforcement".

F. Threaded Dowels: Continuous Threaded high-strength steel bars. Provide inserts compatible with dowels, designed for ultimate pull-out force indicated on the Drawings.

G. Mechanical Splices: Equal to "Cadweld Rebar Splices", as manufactured by Erico Products, Inc., "C" Series, for developing 125% of minimum ASTM specified yield strengths, unless otherwise noted on Drawings.

H. Steel Shapes, Plates and Rods: Conform to ASTM A36 "Specifications for Structural Steel".

I. Do not weld reinforcing steel unless specifically noted on Drawings. If welding is shown, conform to latest revision of AWS D12.1, "Reinforcing Steel Welding Code of the

American Welding Society". Perform all welding with certified welders qualified per AWS.

2.3 CONCRETE MATERIALS

A. Cement: ASTM C150, Type I – Normal, Portland type for all applications other than structures used in conjunction with wastewater projects. All wastewater related structures shall use Type V – Sulfate Resistant, Portland Cement.

B. Fly Ash: ASTM C618, Type C or Type F.
   1. Limit use of fly ash to not exceed 20 percent of cement content by weight.

C. Normal Weight Aggregate: ASTM C33 and as herein specified. Provide aggregates from a single source for exposed concrete.
   1. For exterior exposed surfaces, do not use fine or coarse aggregates containing spalling-causing deleterious substances.

D. Water: Clean, potable.

E. Admixtures, General: Provide admixtures for concrete that contain not more than 0.1 percent chloride ions.

F. Air-Entraining Admixtures: ASTM C260, certified by manufacturer to be compatible with other required admixtures.

G. Water Reducing Admixtures: ASTM C494, Type A.

H. High Range Water Reducing Admixtures (Super Plasticizer): ASTM C494, Type F or Type G.

I. Water Reducing, Non-Chloride Accelerating Admixture: ASTM C494, Type E.

J. Water Reducing, Retarding Admixture: ASTM C494, Type D.

K. All admixtures shall be supplied by the same manufacturer.

2.4 ACCESSORIES

A. Vapor Retarder: ASTM E1745 Class A; 6 mil thick fabric-reinforced plastic film, 0.03 perms; rated for below grade application. Furnish joint tape recommended by manufacturer.

B. Non-Shrink Grout: ASTM C1107, premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2,400 psi in 48 hours and 7,000 psi in 28 days.

C. Concrete Reinforcing Fibers: ASTM C1116, high strength industrial-grade fibers specifically engineered for secondary reinforcement of concrete. Tensile strength 130 ksi; toughness 15 ksi; 3/4 inch long fibers, 34 million/lb fiber count.

D. Waterstops: Provide flat, dumbbell-type or centerbulb-type waterstops at construction joints and other joints as shown on the Drawings.

E. Granular Base: Evenly graded mixture of fine and course aggregates to provide, when compacted, a smooth and even surface below slabs on grade.

F. Sand Cushion: Clean, manufactured or natural sand.

G. Nonslip Aggregate Finish: Provide fused aluminum oxide granules or crushed emery as abrasive aggregate for nonslip finish. Material shall be factory graded, rustproof, non-glazing, and is unaffected by freezing, moisture, and cleaning materials.

H. Colored Wear Resistant Finish: Packaged, dry, combination of materials consisting of Portland cement, graded quartz aggregate, coloring pigments, and plasticizing admixture. Use coloring pigments that are finely ground, nonfading mineral oxides, interground with cement. Color as selected by Engineer.

I. Bonding Compound: Polyvinyl acetate or acrylic base.

J. Epoxy Adhesive: ASTM C881, two-component material suitable on dry or damp surfaces. Provide material type, grade and class to suit project requirements.

2.5 JOINT DEVICES AND FILLER MATERIALS

A. Joint Filler Type A: ASTM D994; Asphalt impregnated fiberboard or felt, thickness as indicated on the drawings; tongue and groove profile.

B. Joint Filler Type B: ASTM D1751; cellular bonded fiber material, non-extruding, resiliency recovery of 70 percent if not compressed more than 50 percent of original thickness.

C. Construction Joint Devices: Integral galvanized steel, formed to tongue and groove profile, with removable top strip exposing sealant trough, knockout holes spaced at 6 inches, ribbed steel spikes with tongue to fit top screed edge.

D. Expansion and Contraction Joint Devices: ASTM B221 alloy, extruded aluminum; resilient neoprene filler strip with Shore A hardness of 35 to permit plus or minus 25 percent joint movement with full recovery; extruded aluminum of longest manufactured length at each location, flush mounted.

E. Joint Sealant: ASTM C920, Type S; single component, self leveling, premium grade polyurethane sealant, equal to Sikaflex-1C SL.

2.6 CONCRETE MIX

A. Mix concrete in accordance with ACI 301. Deliver concrete in accordance with ASTM C94.

B. Select proportions for normal weight concrete in accordance with ACI 301 trial mixtures.

C. Provide concrete to the following criteria:

Unit	Measurement
Compressive Strength (f'c at 28 day)	As Indicated in Plans
Aggregate Size (maximum)	1 inch
Air Entrainment	4 to 6 percent
Slump	3 to 5 inches

D. Prepare design mixes for each type and strength of concrete by either laboratory trial mixture or field experience methods as specified in ACI 318-89 Section 5.3.

E. Mix design based on historical performances in accordance with ACI 318-89 Section 5.3, may be provided by a qualified concrete supplier or precast concrete manufacturer for concrete designs. Mix design shall be certified by an independent testing laboratory.

F. All concrete mix designs shall include the following information:
1. Proportions of cement, fine and course aggregates and water.
2. Water/cement ratio, design strength, slump and air content.
3. Type and source of cement and aggregates.
4. Type and dosage of all admixtures.
5. Any special characteristics of the mix which require precautions in the mixing, placing or finishing techniques to achieve the finished product specified.

G. Engineer to review and approve mix designs prior to start of concrete production.

H. Design mixes to provide normal weight concrete.

I. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant, as accepted by Engineer.

J. All mix design information and data shall not be older than 18 months from the date of the submittal.

2.7 ADMIXTURES

A. Use water reducing admixture or high range water reducing admixture (superplasticizer) in concrete as required for placement and workability.

B. Use high range water reducing admixture in pumped concrete, concrete required to be watertight, and concrete with water/cement ratio below 0.50.

C. Use nonchloride accelerating admixture in concrete slabs placed at ambient temperatures below 50 degrees F.

D. Use air-entraining admixture in concrete unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete having an air content of 4% to 6% at the point of placement.

E. Use admixtures for water reduction and set control in strict compliance with manufacturer's directions.

F. Temperature Limit: Do not place concrete if the concrete temperature exceeds 90ºF or the ambient temperature is 40ºF or less and falling.

G. Slump Limit: Proportion and design mixes to result in concrete slump of 3 to 5 inches at point of placement.

2.8 CONCRETE MIXING

A. Provide batch ticket for each batch used on the project. Batch ticket must indicate project name, contractor's name, date, mix type, mix time, batch time, quantity, and amount of water introduced.

B. Ready-Mix Concrete: Comply with requirements of ASTM C94, and as specified.
1. Addition of water to batch for material with insufficient slump will be permitted in accordance with ACI 301.
2. When air temperature is between 85 degrees F. and 90 degrees F., reduce mixing and delivery time from 1-1/2 hours to 75 minutes. When air temperature exceeds 90 degrees F. reduce mixing and delivery time to 60 minutes.
3. Concrete shall only be placed when the air temperature is above 40 degrees F. and rising.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01300 - Administrative Requirements.

B. Verify requirements for concrete cover over reinforcement.

C. Verify anchors, seats, plates, reinforcement, and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with placing concrete.

3.2 FORMS

A. General: Design, erect, support, brace, and maintain formwork to support vertical and lateral, static and dynamic loads that might be applied until concrete structure can support such loads.

B. Maintain formwork construction tolerances complying with ACI 301 Table 4.3.1.

C. Construct forms to sizes, shapes, lines, and dimensions shown and to obtain accurate alignment, location, grades, level, and plumb work in finished structures. Provide for openings, offsets, sinkages, keyways, recesses, moldings, chamfers, blocking, bulkheads, anchorages, and other features required in work.

D. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces.

E. Provide temporary openings where interior area of formwork is inaccessible for cleanout, for inspection before concrete placement, and for placement of concrete. Securely brace temporary openings and set tightly to forms to prevent loss of concrete mortar.

F. Chamfer exposed edges and corners as indicated using wood, metal, PVC, or rubber chamfer strips fabricated to produce uniform smooth lines and tight edge joints.

G. Provisions for Other Trades: Provide openings in concrete formwork to accommodate work of other trades. Determine size and location of openings, recesses, and chases from trades providing such items.

H. Cleaning and Tightening: Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, or other debris just before concrete is placed.

3.3 VAPOR BARRIER

A. General: Following leveling and tamping of granular base for slabs-on-grade, place vapor barrier sheeting with longest dimension parallel with direction of pour.

B. Lap joints 6 inches and seal vapor barrier joints with manufacturer's recommended mastic and pressure-sensitive tape.

C. After placement of vapor barrier, cover with sand cushion and compact to depth as shown on Drawings.

3.4 PLACING REINFORCEMENT

A. General: Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars," for details and methods of reinforcement placement and supports and as herein specified.
   1. Avoiding cutting or puncturing vapor retarder during reinforcement placement and concreting operations.

B. Clean reinforcement of loose rust and mill scale, earth ice, and other materials that reduce or destroy bond with concrete.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, and hangers, as required.

D. Place reinforcement to obtain at least minimum coverages for concrete protection. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.

E. Install welded wire fabric in as long lengths as practicable. Lap adjoining pieces at least one full mesh and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

3.5 JOINTS

A. Construction Joints: Locate and install construction joints as indicated or, if not indicated, locate so as not to impair strength and appearance of the structure.

B. Provide keyways at least 1-1/2 inches deep in construction joints in walls, slabs, beams and between walls and footings.

C. Place construction joints perpendicular to main reinforcement. Continue reinforcement across construction joints except as otherwise indicated.

D. Use bonding agent on existing concrete surfaces that will be joined with fresh concrete.

E. Waterstops: Provide waterstops in construction joints as indicated. Install waterstops to form continuous diaphragm in each joint. Make provisions to support and protect exposed waterstops during progress of work. Field-fabricate joints in waterstops according to manufacturer's printed instructions.

F. Isolation Joints in Slabs-on-Ground: Construct isolation joints in slabs-on-ground at points of contact between slabs-on-ground and vertical surfaces, such as column pedestals, foundation walls, grade beams, and elsewhere as indicated.

G. Contraction (Control) Joints in Slabs-On-Grade: Construct contraction joints in slabs-on-ground to form panels of patterns as shown. Use saw cuts 1/8 inch wide by 1/4 slab depth or approved inserts, unless otherwise indicated. Make saw cuts as soon as possible after slab finishing as may be safely done without dislodging aggregates.
   1. With prior approval from Engineer contraction joints may be formed by inserting premolded plastic, hardboard, or fiberboard strip into fresh concrete until top surface of strip is flush with slab surface. Tool slab edges round on each side of insert. After concrete has cured, remove inserts and clean groove of loose debris.
   2. Refer to drawings for scoring pattern as shown. If joint pattern not shown, provide joints not exceeding 15 feet in either direction and located to conform to bay spacing wherever possible.

3.6 PREPARATION OF FORM SURFACES

A. Clean re-used forms of concrete matrix residue, repair and patch as required to return forms to acceptable surface condition.

B. Coat contact surfaces of forms with an approved, noresidual, low-VOC, form-coating compound before reinforcement is placed. Do not allow excess form-coating material to accumulate in forms or to come into contact with in-place concrete surfaces against which fresh concrete will be placed. Apply in compliance with manufacturer's instructions.

C. Coat steel forms with a nonstaining, rust-preventative material. Rust-stained steel formwork is not acceptable.

3.7 CONCRETE PLACEMENT

A. Inspection: Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast in.

B. General: Comply with ACI 304, "Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete."

C. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete that has hardened sufficiently to cause the formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete to avoid segregation at its final location.

D. Placing Concrete in Forms: Deposit concrete in forms in horizontal layers not deeper than 24 inches and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.

E. Consolidate full depth of placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI 309.

F. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than visible effectiveness of machine. Place vibrators to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to set. At each insertion, limit duration of vibration time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing segregation of mix.

G. Placing Concrete Slabs: Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until the placing of a panel or section is completed.
   1. Consolidate concrete during placing operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.
   2. Bring slab surfaces to correct level with straightedge and strike off. Use bull floats or derbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations
   3. Maintain reinforcing in proper position during concrete placement.

H. Cold-Weather Placing: Comply with provisions of ACI 306 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
   1. When placing concrete in cold weather, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F (10 deg C) and not more than 80 deg F (27 deg C) at point of placement.
   2. Concrete shall only be placed when the air temperature is above 40 degrees F. and rising.
   3. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
   4. Do not use calcium chloride, salt, and other materials containing antifreeze agents or chemical accelerators unless otherwise accepted in mix designs.

I. Hot-Weather Placing: When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI305 and as herein specified.

1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 deg F (32 deg C). Mixing water may be chilled, or chopped ice may be used to control temperature provided water equivalent of ice is calculated to total amount of mixing water. Use of liquid nitrogen to cool concrete is Contractor's option.
2. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel temperature will not exceed the ambient air temperature immediately before embedment in concrete.
3. Fog spray forms, reinforcing steel, and subgrade just before concrete is placed.
4. Use water-reducing retarding admixture when required by high temperatures, low humidity, or other adverse placing conditions, when acceptable to Engineer.

3.8 FINISH OF FORMED SURFACES

A. Rough Form Finish: For formed concrete surfaces not exposed to view in the finish work or concealed by other construction. This is the concrete surface having texture imparted by form-facing material used, with tie holes and defective areas repaired and patched. Fins and other projections exceeding 1/4 inch in height shall be rubbed down or chipped off.

B. Smooth Form Finish: For formed concrete surfaces exposed to view or to be covered with a coating material applied directly to concrete, or a covering material applied directly to concrete, such as waterproofing, dampproofing, veneer plaster, painting, or other similar system. This is an as-cast concrete surface obtained with selected form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch defective areas with fins and other projections completely removed and smoothed.

C. Smooth Rubbed Finish: Provide smooth rubbed finish to scheduled concrete surfaced, which have received smooth form finish treatment, not later than one day after form removal.

1. Moisten concrete surfaces and rub with carborundum brick or other abrasive until a uniform color and texture is produced. Do not apply cement grout other than that created by the rubbing process.

D. Grout-Cleaned Finish: Provide grout-cleaned finish to scheduled concrete surfaces that have received smooth form finish treatment.

1. Combine one part Portland dement to 1-1/2 parts fine sand by volume, and a 50:50 mixture of acrylic or styrene butadiene-based bonding admixture and water to consistency of thick paint. Blend standard Portland cement and white Portland cement, amount determined by trial patches, so that final color of dry grout will match adjacent surfaces.
2. Thoroughly wet concrete surfaces apply grout to coat surfaces, and fill small holes. Remove excess grout by scraping and rubbing with clean burlap. Keep damp by fog spray for at least 36 hours after rubbing.

E. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces occurring adjacent to formed surfaces, strike-off smooth and finish with a texture

matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

F. Unless otherwise noted on the Drawings, all exposed surfaces shall receive a smooth rubbed finish.

3.9 SLAB FINISHES

A. After placing slabs, plane surface to tolerances for floor flatness (Ff) of 15 and floor levelness (Fl) of 13. Slope surfaces uniformly to drains where required. After leveling, roughen surface before final set with stiff brushed, brooms, or rakes, as required.

B. Float Finish: Apply float finish to slab surfaces to receive trowel finish and other finishes as hereinafter specified; slab surfaces to be covered with membrane or elastic waterproofing, membrane or elastic roofing, or sand-bed terrazzo; and as otherwise indicated.

1. After screeding, consolidating, and leveling concrete slabs, do not work surface until ready for floating. Begin floating, using float blades or float shoes only, when surface water has disappeared, when concrete has stiffened sufficiently to permit operation of power-driven floats, or both. Consolidate surface with power-driven floats or by hand floating if area is small or inaccessibly to power units. Check and level surface plane to tolerances of Ff 18-Fl 15. Cut down high spots and fill low spots. Uniformly slope surfaces to drains. Immediately after leveling, refloat surface to a uniform, smooth, granular texture.

C. Trowel Finish: Apply trowel finish to slab surfaces to be exposed to view and slab surfaces to be covered with resilient flooring, carpet, ceramic or quarry tile, paint, or other thin film finish coating system.

1. After floating, begin first trowel finish operation using a power-driven trowel. Being final troweling when surface produces a ringing sound as trowel is moved over surface. Consolidate concrete surface by final hand-troweling operation, free of trowel marks, uniform in texture and appearance, and with surface leveled to tolerances of Ff 20-Fl 17. Grind smooth surface defects that would telegraph through applied floor covering system.

D. Nonslip Broom Finish: Apply nonslip broom finish to exterior concrete platforms, steps, and ramps, and elsewhere as indicated.

1. Immediately after float finishing, slightly roughen concrete surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Engineer before application.

E. Nonslip Aggregate Finish: Apply nonslip aggregate finish to concrete stair treads, platforms, ramps, sloped walks, and elsewhere as indicated.

F. After completion of float finishing and before starting trowel finish, uniformly spread 25 lbs. of dampened nonslip aggregate per 100 sq. ft. of surface. Tamp aggregate flush with surface using a steel trowel, but do not force below surface. After broadcasting and tamping, apply trowel finishing as herein specified.

G. After curing, lightly work surface with a steel wire brush, or an abrasive stone, and water to expose nonslip aggregate.

3.10 CONCRETE CURING AND PROTECTION

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. In hot, dry, and windy weather, protect concrete from rapid moisture loss before and during finishing operations with an evaporation-control material. Apply in accordance with manufacturer's instructions after screeding and bull floating, but before power floating and troweling.

B. Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Weather permitting; keep continuously moist for not less than 7 days.

C. Curing Methods: Perform curing of concrete by curing and sealing compound, b moist curing, by moisture-retaining cover curing, and by combinations thereof, as herein specified.

D. Provide moisture curing by following methods.
   1. Keep concrete surface continuously wet by covering with water.
   2. Use continuous water-fog spray.
   3. Cover concrete surface with specified absorptive cover, thoroughly saturate cover with water, and keep continuously wet. Place absorptive cover to provide coverage of concrete surfaces and edges, with 4-inch lap over adjacent absorptive covers.

3.11 REMOVAL OF FORMS

A. General: Formwork not supporting weight of concrete, such as sides of beams, walls columns, and similar parts of the work, may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form-removal operations, and provided curing and protection operations are maintained.

B. Formwork supporting weight of concrete, such as beam soffits, joists, slabs, and other structural elements, may not be removed until approved by the structural engineer.

C. Form-facing material may be removed 4 days after placement only if shores and other vertical supports have been arranged to permit removal of form-facing material without loosening or disturbing shores and supports.

3.12 CONCRETE SURFACE REPAIRS

A. General: No surface shall be patched or repaired until the Engineer had reviewed the defective condition and approved the Contractor's submitted repair and/or patching materials and procedures.

B. Patching Defective Areas: Repair and patch defective areas with cement mortar immediately after removal of forms, when acceptable to Engineer.
   1. Cut of honeycomb, rock pockets, and voids over 1/4 inch in any dimension, and holes left by tie rods and bolts, down to solid concrete but in no case to a depth of

less than 1 inch. Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water, and brush-coat the area to be patched with specified bonding agent. Place patching mortar before bonding compound has dried.

2. For exposed-to-view surfaces, blend white portland cement and standard portland cement so that, when dry, patching mortar will match color surrounding. Provide test areas at inconspicuous location to verify mixture and color match before proceeding with patching. Compact mortar in place and strike-off slightly higher than surrounding surface.

C. Repair of Formed Surfaces: Remove and replace concrete having defective surfaces if defects cannot be repaired to satisfaction of Engineer. Surface defects, as such, include color and texture irregularities, cracks, spalls, air bubbles, honeycomb, rock pockets, fins and other projections on surface, and stains and other discolorations that cannot be removed by cleaning. Flush out form tie holes, fill with dry-pack mortar, or precast cement cone plugs secured in place with bonding agent.

1. Repair concealed formed surfaces, where possible, that contain defects that affect the durability of concrete. If defects cannot be repaired, remove and replace concrete.

D. Test unformed surfaces, such as monolithic slabs, for smoothness and verify surface plane to tolerances specified for each surface and finish. Correct low and high areas as herein specified. Test unformed surfaces sloped to drain for trueness of slope and smoothness by using a template having required slope.

1. Repair finished unformed surfaces that contain defects that affect durability of concrete. Surface defects, as such, include crazing and cracks in excess of 0.01 in wide or that penetrate to reinforcement or completely through nonreinforced sections regardless of width, spalling, popouts, honeycomb, rock pockets, and other objectionable conditions.
2. Correct high areas in unformed surfaces by grinding after concrete has cured at least 14 days.
3. Correct low areas in unformed surfaces during or immediately after completion of surface finishing operations by cutting out low areas and replacing with patching compound. Finish repaired areas to blend into adjacent concrete. Proprietary underlayment compounds may be used when acceptable to Engineer.
4. Repair defective areas, except random cracks and single holes not exceeding 1 inch in diameter, when acceptable to Engineer by cutting out and replacing with fresh concrete. Remove defective areas to sound concrete with clean, square cuts and expose reinforcing steel with at least 3/4-inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding compound. Mix patching concrete of same materials to provide concrete of same type or class as original concrete. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.

E. Repair isolated random cracks and single holes not over 1 inch in diameter by dry-pack method when acceptable to Engineer. Groove top of cracks and cut out holes to sound concrete and clean of dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding compound. Mix dry-pack, consisting of one part Portland cement to 2-1/2

parts fine aggregate passing a No. 16 mesh sieve, using only enough water as required for handling and placing.

F. Perform structural repairs with prior approval of Structural Engineer for method and procedure, using specified epoxy adhesive and mortar.

G. Repair methods not specified above may be used, subject to acceptance of Engineer.

3.13 FIELD QUALITY ASSURANCE, CONTROL AND TESTING DURING CONSTRUCTION

A. General: The Owner may employ the Engineer or another professional firm to perform quality assurance testing during construction. The Contractor will notify the Engineer at least 24 hours prior to requiring tests. The Contractor is responsible to provide equipment to allow sampling and testing of the concrete at the point of placement.

B. Sampling Fresh Concrete: ASTM C 172, except modified for slump to comply with ASTM C 94. Perform the following tests.

1. Slump: ASTM C 143; one test at point of placement for each set of compression test specimens; additional tests when concrete properties appear to have changed.
2. Air Content: ASTM C 173 (volumetric method for lightweight or normal weight concrete) or ASTM C 231 (pressure method for normal weight concrete); one test at point of placement for each set of compression test specimens; additional tests when concrete properties appear to have changed.
3. Concrete Temperature: ASTM C 1064; test hourly when air temperature is 40ºF and below or 80ºF and above, and each time a set of compression test specimens is made.
4. Compression Test Specimen: ASTM C 31; one set of 4 cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory-cured test specimens except when field-cure test specimens are required.
5. Compressive Strength Tests: ASTM C 39; one set for each 50 cubic yards or fraction thereof for each concrete class placed in any one day. One specimen tested at 7 days, two specimens tested at 28 days, and one specimen retained in reserve for later testing, if required.
6. When frequency of testing will provide fewer than 5 strength tests for a given class of concrete, conduct testing from at least 5 randomly selected batches or from each batch if fewer than 5 are used.

C. Test results will be reported in writing to Engineer, Ready-Mix Producer, and Contractor within 24 hours after tests. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete supplier and testing agency, concrete type and class, location of concrete placed in structure, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7-day tests and 28-day tests.

D. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted but **shall not** be used as the sole basis for acceptance or rejection.

E. Additional Tests: The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been

attained in the structure, as directed by Engineer. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed. Contractor shall pay for such tests when unacceptable concrete is verified.

F. Quality Assurance consisting of testing and observation of a limited sampling of construction materials will be provided by the Owner for acceptance purposes. Passing test results are not a warranty, guarantee, or certification by the testing agency, Engineer, or Owner that all work was performed in conformance with the plans and specifications. Therefore, the Contractor should not rely solely on test results generated by the quality assurance process as an indication of the suitability of the construction.

G. It is entirely the Contractor's responsibility to perform quality control as necessary to construct the project in conformance with the plans and specifications. Deviations from the plans and specifications, whether identified during construction or following the completion of construction, must be corrected by the Contractor at no cost to the Owner.

3.14 DEFECTIVE CONCRETE

A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.

B. Repair or replacement of defective concrete will be determined by Engineer.

C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Engineer for each individual area.

END OF SECTION

ALABAMA DEPARTMENT OF TRANSPORTATION

General Application Special Provision

DATE: September 8, 2022 GASP No. 22-GA0008

EFFECTIVE DATE: May 1, 2023

SUBJECT: Asphalt Pavement

Alabama Standard Specifications, 2022 Edition, SECTION 106, SECTION 401, SECTION 410, SECTION 420, SECTION 423, SECTION 424, and SECTION 804 shall be revised as follows:

SECTION 106
CONTROL OF MATERIALS

106.09 Quality Control and Quality Assurance (QC/QA) Requirements for Hot Mix Asphalt (HMA) Pavement.

(b) Quality control.

The following note shall be added after Table I and will apply to all types of asphalt mixes.

Note: For asphalt paving jobs that are 1000 feet or less in length, such as those at bridge or culvert replacements, the Contractor, as part of his QC plan, shall establish a rolling pattern using the nondestructive testing devices approved in Section 306 of the Specifications. The device shall either be calibrated to roadway cores or gage counts and shall be used to determine the rolling pattern producing maximum density. Contractor QC personnel shall be on site throughout each day to perform periodic checks and verify that the rolling pattern continually produces the maximum density that is achievable.

(c) Quality Assurance.

4. Testing and Lot Verification.

Item 106.09(c)4 shall be replaced by the following:

4. Testing and Lot Verification.

Air voids shall be computed on the Contractor's sample by using the running average of the Contractor's last four maximum specific gravities and the individual bulk specific gravity. If slag is used as an aggregate in the mixture, the running average of the Contractor's four most recent determinations for the bulk specific gravity of the compacted mixture shall be used in the computation of the air voids for the Contractor's sample. The calculation of the running averages of both maximum specific gravity and bulk specific gravity shall start with the first LOT. The test strip is independent of the LOTs. Air voids shall be computed on the Department's sample by using the Department's individual maximum specific gravity and individual bulk specific gravity. The Department and the Contractor shall compare test results with each other for the above mentioned testing increments. If there are no differences or if the differences are within the tolerances listed in Tables V or VI, Section 410, for each parameter, no further testing and analysis will be necessary and the Contractor's test values will be used in the computation of the appropriate LOT pay factor.

If the Contractor's air voids do not compare with the Department's test results, the Contractor shall re-compute test results using the individual maximum specific gravity and the individual bulk specific gravity for that particular testing increment and re-compare with the verification test result. If the results compare within the tolerances in Table V, Section 410, using the individual maximum

specific gravities and the individual bulk specific gravity, no further testing will be required and the Contractor's running average of the last four maximum specific gravities and the last four maximum specific gravities and individual bulk specific gravities will be used to compute air voids for pay factor determination.

Also, if the Contractor's air voids do not compare with the Department's test results, and the Contractor is using slag as an aggregate, the Contractor shall re-compute test results using the individual bulk specific gravity for that particular testing increment and the running average of the Contractor's last four maximum specific gravities and re-compare with the verification test result. If the results compare within the tolerances in Table V, Section 410, using the individual bulk specific gravity, no further testing will be required and the Contractor's running average of the last four bulk specific gravities and the last four maximum specific gravities will be used to compute air voids for pay factor determination.

If the results of the Department's verification test and the Contractor's test do not compare within the tolerances in Tables V or VI, Section 410, but yield the same pay factor for the LOT when the Department's result is substituted for the Contractor's result, no further testing will be required. Where the Contractor's test results and the Department's test results do not compare and cannot be resolved by the above mentioned methods but the pay factor dispute is between 1.00 and 1.02 the Contractor may elect to accept the 1.00 pay factor and waive referee testing.

When differences between test results of the verification samples are not within the tolerances listed in Tables V or VI, Section 410, and cannot be resolved by the above mentioned methods, referee testing will be required.

All referee samples will be tested by the Bureau of Materials and Tests, Central Laboratory, 3704 Fairground Road, Montgomery, AL 36110. The Bureau of Materials and Tests Central Laboratory is an AASHTO accredited laboratory (see AASHTO R 18, Recommended Practice for Establishing and Implementing a Quality System for Construction Materials Testing Laboratories).

5. Referee Testing

a. Laboratory:

Subitem 106.09(c)5a shall be replaced by the following:

a. Laboratory:

All testing increments of the referee samples for the entire LOT shall be tested in the Bureau of Materials and Tests Hot Mix Laboratory for the pay factor parameter(s) (liquid asphalt binder content, laboratory compacted air voids, or gradation) in question. The Contractor's results (using the individual air voids, individual bulk specific gravities and running average of maximum specific gravities) will be compared to the Bureau of Materials and Tests results (using Materials and Tests individual bulk and maximum specific gravities) for each testing increment in the LOT. When the Contractor's results and the Bureau of Materials and Tests results are within the tolerances listed in Tables V or VI, Section 410, the Contractor's results will be used. When the Contractor's results are not within the tolerances listed in Tables V or VI, Section 410, the Bureau of Materials and Tests Central Laboratory results will be used for final pay factors. The Bureau of Materials and Tests Central Laboratory will record the Contractor's field results and the Central Laboratory's results of the parameter(s) in question on form BMT-135.

For each testing increment these results, either the Contractor's or the Bureau of Materials and Tests', will be used in the computation of the appropriate LOT pay factor.

Should differences between test results, that are not within the tolerances listed in Table V or VI, Section 410, for liquid asphalt binder content, air voids, or gradation continue for two consecutive days, operations shall be halted until testing discrepancies can be resolved. The Bureau of Materials and Tests will monitor testing procedures by Department and Contractor technicians until consistent test results are achieved.

SECTION 401
BITUMINOUS SURFACE TREATMENTS

401.01 Description.

(b) Bituminous Treatment Table.

Article 401.01(b) shall be replaced with the following:

(b) Bituminous Treatment Table.

The following table shows the amount of bituminous material and the size and amount of cover aggregate required for the various types of bituminous treatments. The types are designated in the table by letters of the alphabet such as A, B, C, D, etc. The proposal will designate in the pay item description which of the various types are to be used. The kind of bitumen may also be specified or, if none is specified, the Contractor may select one of the kinds, if not in conflict with other provisions of these Specifications, permitted by the table. All other requirements of the tabular line opposite the type designation shall apply.

(Example: A bituminous treatment Type AKG, specifies a prime coat with the quantities specified on line "A", covered by a single surface treatment with the quantities specified on line "K", covered in turn by a seal treatment with the quantities shown on line "G".)

Bituminous materials shall be placed within the tolerance specified by the table for the type treatment involved, unless otherwise ordered by the Engineer in writing. Any variation outside of the designated limits shall be cause for ordering the treatment to be removed and replaced or corrected as directed by the Engineer, all without additional cost to the Department.

The rate of aggregate coverage shown by the table is the approximate rate found to produce an acceptable coverage when properly applied. Regardless of the rate shown, the Contractor shall provide aggregate in sufficient quantities and so spread the aggregate that the bitumen is uniformly and evenly covered.

The Engineer will notify the Contractor in writing should it become advisable to change the amounts of any material from the limits specified in the table. In such event an adjustment in the contract unit price will be made as specified in Subarticle 401.06(a).

BITUMINOUS TREATMENT TABLE SUBARTICLE 401.01(b)					
Designated Letter	Type Treatment	Aggregates ****		Gallons {Liters} of Bituminous Material per square yard {m²} of Treatment **	
		Size	cu. ft./ sq. yd. {m³/m²}	Liquid Asphalt Binder	Emulsified Petroleum Resin, Cutback or Emulsified Asphalt
A	Prime Coat				0.10 – 0.25* {0.45 - 1.13}*
B	Flush Coat "B"	Sand	0.15 {0.0051}		0.16 – 0.19 {0.72 - 0.86}
C	Flush Coat "C"	9	0.20 {0.0068}		0.16 – 0.19 {0.72 - 0.86}
D	Liquid Seal "D"	78 or 89	0.25 {0.0085}	0.18 – 0.21 {0.81-0.95}	0.20 – 0.23 {0.90 - 1.04}
E	Liquid Seal "E"	78	0.25 {0.0085}	0.22 – 0.25 {1.00-1.13}	0.25 – 0.28 {1.13 - 1.27}
F	Liquid Seal "F"	78	0.27 {0.0091}	0.26 – 0.29 {1.18-1.31}	0.31 – 0.34 {1.40 - 1.54}
G	Liquid Seal "G"	7 or 78	0.27 {0.0091}	0.31 – 0.34 {1.40-1.54}	0.35 – 0.38 {1.58 - 1.72}
H	Liquid Seal "H"	6	0.40 {0.0135}	0.31 – 0.34 {1.40-1.54}	0.35 – 0.38 {1.58 - 1.72}
J	Surface Treatment "J"	6	0.42 {0.0142}	0.33 – 0.36 {1.49-1.63}	0.38 – 0.41 {1.72 - 1.86}
K	Surface Treatment "K"	5	0.50 {0.0169}	0.35 – 0.38 {1.58-1.72}	0.40 – 0.43 {1.81 - 1.95}
L ***	Surface Treatment "L"				
	1st Application	4	0.9 {0.0305}	0.35 – 0.38 {1.58-1.72}	0.40 – 0.43 {1.81 - 1.95}
	Dry Choke	78	0.20 {0.0068}		
	2nd Application	78	0.25 {0.0085}	0.55 – 0.58 {2.49-2.63}	0.62 – 0.65 {2.81 - 2.94}

* Appropriate rate will be set by engineer within the maximum and minimum range
** For shoulders, different amounts of aggregate and bitumen may be shown on plans or in the proposal.
*** Aggregate for this treatment shall be crushed aggregate.
**** Approximate rate of application for uniform coverage. Minor adjustments to these rates may be ordered by the Engineer to fit the physical properties of aggregates furnished for use.

Multipurpose and Cationic Emulsified Asphalts shall be in the same quantities as shown above for Emulsified Asphalt. Conversion of aggregate volume to weight {mass}, when required, shall be in accordance with AASHTO T 19.

The application rates of Bituminous Materials shown above are based on the material being at 60 °F {16 °C}.

401.03 Construction Requirements.

(a) Equipment.

2. Pressure Distributor.

Item 401.03(a)2 shall be replaced by the following:

2. Pressure Distributor.

A pressure distributor shall be required and shall be so designed and operated that it will distribute the contents in a uniform spray for the full width of the treatment area without

atomization, at the rate and within the limits specified. Heating equipment shall be provided. Distributors shall be capable of circulating or agitating the bitumen throughout the heating process providing a uniform temperature, with the ranges specified herein, and suitable means shall be provided for determining such temperatures. Suitable measuring equipment for accurately measuring the volume of the contents shall be provided. The distributor shall be equipped with a spray bar of adjustable height, hand hose, and nozzle.

Heating equipment will not be required for the application of Emulsified Petroleum Resin prime.

SECTION 410
ASPHALT PAVEMENTS

410.01 Description.

Article 410.01 shall be replaced by the following:

410.01 Description.

The work under this Section covers the general requirements that are applicable to all types of hot and warm mix asphalt pavements of the plant mix type. Deviations from these general requirements will be indicated in the specific requirements for various types of mixes noted in the following sections of these Specifications.

This work shall consist of one or more courses of hot and warm mix asphalt plant mix constructed in accordance with these specifications and the specific requirements of the type of mixture required and in reasonably close conformity with the lines, grades, thicknesses, and typical cross sections shown on the plans or established by the Engineer. The Contractor may use either hot mix or warm mix for all Superpave ESAL Range mixes in Sections 420, 423, and 424. Warm mix asphalt shall be defined as the use of an approved warm mix technology in the plant mix at the time of production.

This work shall also include the preparation of the underlying surface on which the plant mix is to be placed, including patching and/or leveling as shown on the plans or directed by the Engineer.

In addition, this work shall also include the placing of widening at locations shown on the plans and/or directed by the Engineer. In general, widening shall consist of (1) narrow width build-ups, three feet or less {one meter or less}, required for widening existing pavement, (2) paving for turn-outs beyond three feet {one meter} from the edge of pavement, (3) pavement crossovers, and (4) turning lanes of less than 200 feet {60 m} for crossovers. Paving used on turn-outs for intersecting paved roads and shoulder paving will not be considered as widening unless shown on the plans.

Surface layers and wearing layers are defined as those layers where the pay item contains the wording “Wearing Surface”.

All ALDOT procedures referenced are applicable to both hot and warm mix asphalt.

410.03 Construction Requirements.

(c) Preparation of Underlying Surface.

3. Leveling.

Item 410.03(c)3 shall be replaced by the following:

3. Leveling.

When leveling of an existing pavement or base is provided by the plans, the surface shall be brought to required grade and cross section with plant mix material. The surface to be treated shall be prepared as noted herein and approved before placing the new material. The plant mix material shall be spread in accordance with the provisions of Item 410.03(f)2 and shall be compacted in accordance with section 410.03(g).

Leveling shall include the placement of asphalt plant mix layers to correct superevelation when directed.

SECTION 420
POLYMER MODIFIED OPEN GRADED FRICTION COURSE

420.02 Materials.

(e) Tack Coat Materials

Subarticle 420.02(e) shall be replaced by the following:

(e) Tack Coat Materials

Tack coat materials shall either be a CQS-1hp asphalt emulsion used in conjunction with the spray paver equipment as required in Subarticle 420.04 (d) or "PG Asphalt for Trackless Tack" including DOTC-10, eTac HB, or Ultrafuse with conventional paving equipment. All tack coat materials shall meet the requirements given in Section 804 except as modified by the requirements given herein. The CQS-1hp shall be smooth and homogeneous and shall meet the requirements shown in the following table:

CQS-1hp MODIFIED ASPHALT EMULSION			
TEST OF EMULSION			
Parameter	Test Method	Value	
Viscosity @ 77° F, SF	AASHTO T 59	20 Min.	150 Max.
Sieve Test, %	AASHTO T 59	-	0.1 Max.[1]
24-Hour Storage Stability, %	AASHTO T 59	-	1.0 Max. [2]
Residue By Distillation	AASHTO T 59	60 Min.	-
Oil Distillate, by Volume of Emulsion, %	AASHTO T 59	-	-
Particle Charge	AASHTO T 59	Positive [3]	
TEST OF RESIDUE FROM EMULSION			
Solubility in TCE, %	AASHTO T 44 [4]	97.5 Min.	-
Elastic Recovery @ 50 °F	AASHTO T 301	60.0 Min.	-
Penetration @ 77 °F	AASHTO T 49	60 Min.	110 Max.
Ductility @ 77.0 °F	AASHTO T 51	40 Min.	-

1. Sieve test may be waived based on successful application in the field.
2. After standing undisturbed for 24 hours, the surface shall show no white, milky-colored substance, but shall be a smooth homogeneous color throughout the sample.
3. If the Particle Charge Test is inconclusive, a pH test (AASHTO T 200) shall be used with a maximum of 6.7 allowable.
4. ASTM D 5546 may be used when polymers block the filter during the test.

The original "PG Asphalt for Trackless Tack" (no RTFO or PAV testing) shall conform to the physical requirements shown in the following table:

SPECIFICATIONS FOR PG ASPHALT FOR TRACKLESS TACK		
Parameter	Specification	Test Method
Rotational Viscosity	Maximum 3 Pa•s @ 135 °C	AASHTO T 316
Penetration	Maximum 25 @ 77 °F {25 °C}, 100 g. 5s	AASHTO T49
Softening Point (°C)	Minimum 70	AASHTO T 53
Dynamic Shear, G*/sin δ	Minimum 1.0 kPa @ 82 °C	AASHTO T 315

SECTION 423
STONE MATRIX ASPHALT (SMA)
(FIBER STABILIZED ASPHALT CONCRETE)

423.02 Materials.

(c) Blend of Aggregates.

In Subarticle 423.02(c) the table "Allowable Carbonate Stone Criteria for SMA" shall be replaced by the following:

ALLOWABLE CARBONATE STONE CRITERIA FOR SMA	
BPN 9 Value of Aggregate Source *	Maximum Allowable Percentage Of Carbonate Stone
≤ 20	Not Allowed
21 through 25	30
26 through 28	35
29 through 31	40
32 through 34	45
≥ 35	50
* This value, BPN 9, is made using the British Pendulum Tester on aggregate source specimen polished for 9 hours on an accelerated polishing machine known as the British Wheel as per ASTM D 3319, ASTM E 303 and BMTP-382.	

SECTION 424
SUPERPAVE BITUMINOUS CONCRETE BASE, BINDER, AND WEARING SURFACE LAYERS

424.02 Materials.

(c) Blend of Aggregates.

4. Restrictions in the use of Carbonate Stone for blend of Aggregates.

Item 424.02(c)4 shall be replaced by the following:

4. Restrictions in the use of Carbonate Stone for blend of Aggregates.

The restrictions for the use of carbonate stone are given in the following table. These restrictions do not apply to widening as defined in Article 410. 01, shoulder paving, underlying layers, and layers that are to be covered by Polymer Modified Open Graded Friction Course (Section 420) mix in this contract.

CRITERIA FOR THE USE OF CARBONATE STONE IN SUPERPAVE	
BPN 9 Value Of Aggregate Source *	Maximum Allowable Percentage Of Carbonate Stone
≤ 20	Not Allowed
21 through 25	30
26 through 28	35
29 through 31	40
32 through 34	45
≥ 35	50
* This value, BPN 9, is made using the British Pendulum Tester on aggregate source specimen polished for 9 hours on an accelerated polishing machine known as the British Wheel as per ASTM D 3319, ASTM E 303 and ALDOT-382.	

In no case shall the total amount of virgin carbonate stone in the combined mixture used as actual wearing surface layers that are exposed to traffic exceed the percentage shown in the above table. When parts of the carbonate stone used in the mix are from differing strata of material or coming from multiple sources that are represented by different BPN 9 values, the lowest BPN 9 value will be used.

SECTION 804
ASPHALT MATERIALS

804.07 Tables of Asphalt Materials.

Article 804.07 shall be replaced by the following:

804.07 Tables of Asphalt Materials.

(a) Asphalt Materials Table Number 1, Grade PG 58-22.

ASPHALT MATERIALS TABLE NO. 1 SPECIFICATIONS FOR PERFORMANCE GRADED ASPHALT BINDER		
Property	**Grade PG 58-22**	
	Specification	Test Method
Original Binder		
Flash Point Temperature	Minimum 230 °C	AASHTO T 48
Rotational Viscosity	Maximum 3 Pa•s @ 135 °C	AASHTO T 316
Dynamic Shear, G*/sin δ	Minimum 1.00 kPa @ 58 °C	AASHTO T 315
Rolling Thin Film Oven Residue (AASHTO T 240)		
Mass Loss (RTFO)	Maximum 1.00 %	AASHTO T 240
Dynamic Shear, G*/sin δ	Minimum 2.20 kPa @ 58 °C	AASHTO T 315
Pressure Aging Vessel Residue (AASHTO R 28)		
Dynamic Shear, G*•sin δ	Maximum 6000 kPa @ 22 °C	AASHTO T 315
Phase Angle, δ	Minimum 42° @ 22°C	AASHTO T315
Creep Stiffness, S	Maximum 300 MPa @ -12 °C	AASHTO T 313
m-value	Minimum 0.300 @ -12 °C	AASHTO T 313

(b) Asphalt Materials Table Number 2, Grade PG 64-22.

ASPHALT MATERIALS TABLE NO. 2 SPECIFICATIONS FOR PERFORMANCE GRADED ASPHALT BINDER		
Property	**Grade PG 64-22**	
	Specification	**Test Method**
Original Binder		
Flash Point Temperature	Minimum 230 °C	AASHTO T 48
Rotational Viscosity	Maximum 3 Pa•s @ 135 °C	AASHTO T 316
Dynamic Shear, G*/sin δ	Minimum 1.00 kPa @ 64°C	AASHTO T 315
Rolling Thin Film Oven Residue (AASHTO T 240)		
Mass Loss (RTFO)	Maximum 1.00 %	AASHTO T 240
Dynamic Shear, G*/sin δ	Minimum 2.20 kPa @ 64 °C	AASHTO T 315
Pressure Aging Vessel Residue (AASHTO R 28)		

Dynamic Shear, G*•sin δ	Maximum 6000 kPa @ 25 °C	AASHTO T 315
Phase Angle, δ	Minimum 42° @ 25°C	AASHTO T315
Creep Stiffness, S	Maximum 300 MPa @ -12 °C	AASHTO T 313
m-value	Minimum 0.300 @ -12 °C	AASHTO T 313

The binder shown in Table No. 2 shall be made by adding polymer to a refined grade of PG 58-22 or shall be blended from PG 76-22 using an ALDOT approved blending procedure at the refinery. Air blown and oxidized asphalt shall not be used.

All PG 64-22 shall contain a minimum of 1.5 %, by weight, polymer solids.

A sample and infrared scan (Fourier Transform Infrared, FTIR) using the ALDOT 408 test method to determine the styrene and butadiene peaks and polymer percentage at the appropriate polymer loading shall be submitted to the Materials and Tests Engineer for laboratory evaluation prior to use.

All polymers shall conform to Section 811 for polymer additives.

All Polymer Modified Asphalt Binder manufacturers shall submit the information required in Article 811.01 annually or upon request by the Department.

(c) Asphalt Materials Table Number 3, Grade PG 67-22.

ASPHALT MATERIALS TABLE NO. 3 SPECIFICATIONS FOR PERFORMANCE GRADED ASPHALT BINDERS (NOT SHOWN IN AASHTO M-320)		
Property	**Grade PG 67-22**	
	Specification	Test Method
Original Binder		
Flash Point Temperature	Minimum 230 °C	AASHTO T 48
Rotational Viscosity	Maximum 3 Pa•s @ 135 °C	AASHTO T 316
Dynamic Shear, G*/sin δ	Minimum 1.00 kPa @ 67 °C	AASHTO T 315
Rolling Thin Film Oven Residue (AASHTO T 240)		
Mass Loss (RTFO)	Maximum 1.00 %	AASHTO T 240
Dynamic Shear, G*/sin δ	Minimum 2.20 kPa @ 67 °C	AASHTO T 315
Pressure Aging Vessel Residue (AASHTO R 28)		
Dynamic Shear, G*•sin δ	Maximum 6000 kPa @ 26.5 °C	AASHTO T 315
Phase Angle, δ	Minimum 42° @ 26.5°C	AASHTO T315
Creep Stiffness, S	Maximum 300 MPa @ -12 °C	AASHTO T 313
m-value	Minimum 0.300 @ -12 °C	AASHTO T 313

(d) Asphalt Materials Table Number 4, Grade PG 76-22.

ASPHALT MATERIALS TABLE NO. 4 **SPECIFICATIONS FOR PERFORMANCE GRADED ASPHALT BINDER**		
Property	**Grade PG 76-22**	
	Specification	Test Method
Original Binder		
Flash Point Temperature	Minimum 230 °C	AASHTO T 48
Rotational Viscosity	Maximum 3 Pa•s @ 135 °C	AASHTO T 316
Dynamic Shear, G*/sin δ	Minimum 1.00 kPa @ 76°C	AASHTO T 315
Rolling Thin Film Oven Residue (AASHTO T 240)		
Mass Loss (RTFO)	Maximum 1.00 %	AASHTO T 240
Dynamic Shear, G*/sin δ	Minimum 2.20 kPa @ 76 °C	AASHTO T 315
Elastic Recovery	Minimum 50 %@ 10°C	AASHTO T 301[1]
Pressure Aging Vessel Residue (AASHTO R 28)		
Dynamic Shear, G*•sin δ	Maximum 6000 kPa @ 26.5 °C	AASHTO T 315
Phase Angle, δ	Minimum 42° @ 31°C	AASHTO T315
Creep Stiffness, S	Maximum 300 MPa @ -12 °C	AASHTO T 313
m-value	Minimum 0.300 @ -12 °C	AASHTO T 313
[1]The following exceptions shall be made to the requirements given in AASHTO T 301: The statement given in Section 4.5 that reads "Attach the clips to the pins or hooks of the force adapter and the testing machine…" shall be disregarded. The mold shall be in accordance with the requirements given in ASTM D 6084 with dimensions noted in this method. All Elastic Recovery failures will be subject to FTIR scans for acceptability.		

All binders used in Table 4 shall be made by the addition of polymer to refined grades of PG 67-22 without using air blown or oxidized asphalt.

All PG 76-22 shall contain a minimum of 2.5 %, by weight, polymer solids.

A sample and infrared scan (Fourier Transform Infrared, FTIR) using the ALDOT 408 test method to determine the styrene and butadiene peaks along with the percentage of polymer added at the appropriate polymer loading shall be submitted to the Materials and Tests Engineer for laboratory evaluation prior to use. All polymers shall conform to Section 811 for polymer additives.

All Polymer Modified Asphalt Binder manufacturers shall submit the information required in Article 811.01 annually or upon request by the Department.

(e) Asphalt Materials Table Number 5, Emulsified Asphalts.

ASPHALT MATERIALS TABLE NO. 5
SPECIFICATIONS FOR EMULSIFIED ASPHALTS

	VISCOSITY GRADE												
	NTSS-1HM	NTQS-1HL	CMS-2, CMS-2h, CSS-1, CSS-1h, CRS-2 CRS-2p* CRS-2l*	AE-P	CMS-1hp	CRS-1h	CBC-1HT BC-1HT	CRS-2h CRS-2hp*	CQS-1h CQS-1hp*	CNTT-1hs	AASHTO TESTS
	Min-Max	Min-Max		Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	
AASHTO M 208			Meet								T 59
Elastic Recovery Minimum 50 % @ 50°F {10°C}	--		50 % for CRS-2p and CRS-2l	--	50%	--	--	50% for CRS-2hp	50% for CQS-1hp	--	T 301 **
Viscosity, Saybolt Furol: @ 77 °F {25 °C}, Sec	25 500	100	-- --	10 50	30 400	-- 15-100	-- 10 - 100	200 500	20 150	0 100	T 59
@ 122 °F {50 °C}, Sec	-- --		-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	T 59 *See Note #4
Settlement, 5 days, %	-- 5		--	-- 5		-- --	-- --	-- --	-- --		T 59
Storage Stability Test 24 hr., %	-- 1.0	-- 1.0	--	-- --	-- 1.0	-- 1.0	-- 1.0	-- 1.0	-- 1.0	1.0	T 59
Demulsibility, 35 m/0.8% Sod. Dioctyl Sulfosuccinate, %	--		--	-- --	--	-- --	-- --	60 --	-- --	-- --	T 59
Particle Charge	Negative	Non-ionic	Positive	-- --	Positive	Positive	Positive	Positive	Positive	Positive	T 59
Sieve Test, %	--	-- 0.10	--	-- 0.10	-- 0.10	-- 0.10	-- 0.30	-- 0.10	-- 0.10	0.10	T 59
Distillation: Oil Distillate or Naphtha, by Volume of Emulsion, %	-- 1.0		--	-- 12	-- 3.0	-- 3.0	--	-- 3.0	-- --	3.0	T 59
Residue by Distillation, %	50 --	60 --	--	45 --	50 --	55 --	50 -	65 --	60 --	50 --	T 59
Stone Coating Test, % Coated	--	--	--	-- --	-- --	-- --	-- --	-- --	-- --	-- --	See Note #1
Modified Sand Coating	--	--	--	-- --	-- --	-- --	-- --	-- --	-- --	-- --	See Note #2
Tests on Residue from Distillation:				20 --							See Note #3
Float Test @ 140 °F {60 °C}, Sec.	--	--	--	97.5 --				-- --	-- --	-- --	T 44
Solubility in CLCH:CCL2, %	--	--	--	-- --				97.5 --	97.5 --	-- --	T 51
Ductility @ 77 °F {25 °C}, cm	--	--	--	-- --				60 --	40 --	-- --	T 111
Ash, % by Mass	--	--	--	-- --				-- --	-- --	-- --	T 228
Specific Gravity, 77 °F/ 77 °F {25 °C/25 °C}	--	--	--	-- --				-- --	-- --	-- --	
Softening Point	65°C --	60°C --	-- --	-- --	40°C -	49°C --		-- --	-- --	49°C --	T 53
Dynamic Shear@67°C (G*/sinδ), 10rad/s), kPa	-- --	1.0 --	-- --	-- --	-- --	-- --		-- --	-- --	-- --	T 315
MSCR@67°C, J_{nr} @3.2/kPa	-- --	-- --	-- --	-- --	-- --	-- --	- 2.0	-- --	-- --	-- --	T 350
Penetration 77 °F {25 °C}, 100 g, 5s	-- 20	20 --	-- --	-- --	45-90	40 90		70 100	60 110	40 90	T 49

* All CRS-2p, CRS-2hp, CRS-2l, and CQS-1hp shall contain a minimum of 3.0 % polymer by volume. CRS-2p shall meet the requirements given in AASHTO M 316 with the exception of polymer content. All polymers shall conform to the requirements given in Section 811. All Elastic Recovery failures will be subject to FTIR scans for acceptability.
** The following exceptions shall be made to the requirements given in AASHTO T 301: The statement given in Section 4.5 that reads "Attach the clips to the pins or hooks of the force adapter and the testing machine..." shall be disregarded. The mold shall be in accordance with the requirements given in ASTM D 6084 with dimensions noted in this method.

ALABAMA DEPARTMENT OF TRANSPORTATION

General Application Special Provision

DATE: May 30, 2024 GASP No. 22-GA0009

EFFECTIVE DATE: December 1, 2024

SUBJECT: Topsoil.

Alabama Standard Specifications, 2022 Edition, SECTION 650 shall be amended as follows:

SECTION 650
TOPSOIL

650.03 Construction Requirements.

(b) Application of Topsoil.

Subarticle 650.03(b) shall be replaced by the following:

(b) Application of Topsoil.

Topsoil shall be applied to the depth shown on the plans or as directed by the Engineer. Applied topsoil shall be compacted by tracking. Tracking shall be accomplished by the operation of a tracked vehicle leaving ridges perpendicular to the direction flow of water down the slope. The topsoil shall then be prepared in accordance with the requirements given in 652.03. Ground preparation and vegetation establishment operations shall commence as soon as possible after the application of topsoil per 210.03(a) to reduce the potential for the erosion of the topsoil.

ALABAMA DEPARTMENT OF TRANSPORTATION

General Application Special Provision

DATE: February 14, 2022 GASP No. 22-GA0010

EFFECTIVE DATE: April 1, 2022

SUBJECT: Mobilization.

Alabama Standard Specifications, 2022 Edition, SECTION 600 shall be amended as follows:

SECTION 600
MOBILIZATION

600.04 Method of Measurement.

Subarticle 600.04(a) shall be replaced with the following:

(a) Partial Payment.

Measurement of the item of Mobilization will be on a unit basis for each project or combination of projects included in a single contract. When more than one project is included in one contract, the amount of payment to be made will be based on the percent complete and amount of the entire contract, not the percent complete and amount of each individual project. Once the amount of payment is determined, based on the entire contract, this amount will then be prepared for payment on each individual project based on the percentage of the total contract of which the project is a part.

Partial Payments for mobilization are based on the amount bid for mobilization and the total original contract amount for all items of work. Payments will be made at the time, and in the amounts shown in the following schedules.

SCHEDULE OF PARTIAL PAYMENTS FOR MOBILIZATION WHEN THE CONTRACT BID PRICE FOR MOBILIZATION IS LESS THAN, OR EQUAL TO 12 % OF THE ORIGINAL CONTRACT AMOUNT (Partial Payments are a % of the Contract Amount for Mobilization)		
TIME OF PAYMENT	AMOUNT OF PAYMENT	ACCUMULATED PAYMENT
First Estimate	20 % of the Bid Price for Mobilization	20 % of the Bid Price for Mobilization
After the First Estimate and Upon Completion of 5 % of the Original Contract Amount Excluding Prior Payment for Mobilization	50 % of the Bid Price for Mobilization	70 % of the Bid Price for Mobilization
After the First Estimate and Upon Completion of 50 % of the Original Contract Amount Including Prior Payment for Mobilization	30 % of the Bid Price for Mobilization	100 % of the Bid Price for Mobilization
Note: If 50 % or more of the original contract amount is completed by the first estimate, a payment of 75 % of the Bid Price for Mobilization will be made on the first estimate. The remainder of the Bid Price for Mobilization will be paid on the following estimate.		

SCHEDULE OF PARTIAL PAYMENTS FOR MOBILIZATION WHEN THE CONTRACT BID PRICE FOR MOBILIZATION IS GREATER THAN 12 % OF THE ORIGINAL CONTRACT AMOUNT (Partial Payments are a % of the Original Contract Amount, Except the Final Payment)		
TIME OF PAYMENT	AMOUNT OF PAYMENT	ACCUMULATED PAYMENT
First Estimate	2 % of the Original Contract Amount	2 % of Total Contract Amount
After the First Estimate and Upon Completion of 5 % of the Original Contract Amount Excluding Prior Payment for Mobilization	6 % of the Original Contract Amount	8 % of Total Contract Amount
After the First Estimate and Upon Completion of 50 % of the Original Contract Amount Including Prior Payment for Mobilization	4 % of the Original Contract Amount	12 % of Total Contract Amount
At Acceptance for Maintenance per Item 105.15(c)3.	Remainder of Contract Amount for Mobilization	100 % of Contract Amount for Mobilization

The total sum of all payments shall not exceed the original contract amount bid for the item of Mobilization, regardless of the fact that the Contractor may have, for any reason, shut down his work on the project or moved equipment away from the project and then back again.

ALABAMA DEPARTMENT OF TRANSPORTATION

General Application Special Provision

DATE: December 15, 2023 GASP No. 22-GA0013(2)

EFFECTIVE DATE: June 1, 2024

SUBJECT: Roadway Signs, Construction Signs, and Cones.

Alabama Standard Specifications, 2022 Edition, SECTION 710, SECTION 740, and SECTION 880 shall be amended as follows:

SECTION 710
ROADWAY SIGNS

710.01 Description.

(b) Types and Classes of Signs

The table "Classes and Descriptions of Signs" shall be replaced with the following:

CLASSES AND DESCRIPTIONS OF SIGNS	
Class 1	Obsolete
Class 1A	Obsolete
Class 2	Type IV Reflectorized Sheeting Background with the same Type Reflectorized Sheeting Cut-Out Copy. Type IV Reflectorized Sheeting Background with Digital Printing is also allowable.
Class 2A	Type IV Reflectorized Sheeting Background with Non-Reflectorized Cut-Out Copy For Multiple Extruded Panels, Type XI Reflectorized Sheeting Background with Digital Printing is also allowable.
Class 3	Obsolete
Class 4	Type IV Reflectorized Background with Screen Copy. Type IV Reflectorized Sheeting Background with Digital Printing is also allowable
Class 5	Obsolete
Class 6	Type IV Reflectorized Sheeting Background with Type XI Reflectorized Sheeting Cut-out Copy For Multiple Extruded Panels, Type XI Reflectorized Sheeting Background with Digital Printing is also allowable.
Class 7	Obsolete
Class 8	Obsolete
Class 9	Type XI Reflectorized Sheeting Background with the same Type Reflectorized Sheeting Cut-Out Copy or Digital Printing.
Class 10	Type XI with Screen Copy or Digital Printing

(c) Methods of Fabrication.

The first paragraph of Subarticle 710.01(c) shall be replaced with the following:

In addition to the Classes noted above, signs will be designated by the method of fabrication as follows. At the Contractor's discretion multiple panel signs may be made of multiple flat panels or multiple extruded sections.

710.05 Basis of Payment.

(b) Payment will be made under Item No.:

Subarticle 710.05(b) shall be replaced with the following:

(b) Payment will be made under Item No.:

710-A Class * Sign Panels - per square foot {square meter}
710-B Roadway Sign Post (Description & Size) - per linear foot {meter}
710-C Removal of Existing Roadway Signs - per lump sum
* Appropriate Class

SECTION 740
TRAFFIC CONTROL DEVICES
FOR CONSTRUCTION WORK ZONES

740.02 Materials.

(b) Crashworthiness of Devices.

Subarticle 740.02(b) shall be replaced by the following:

(b) Crashworthiness of Devices.

The Contractor shall be responsible for ensuring that all devices that are used for work zone traffic control meet "crashworthy" requirements given in the National Cooperative Highway research Program (NCHRP) Report 350 for the appropriate category of device.

(d) Materials for Fabrication, Construction, and Installation.

Subarticle 740.02(d) shall be replaced by the following:

(d) Materials for Fabrication, Construction, and Installation.

Materials used in the fabrication, construction and installation of the construction signs, barricades and other devices shall conform to the requirements of Article 104.04, plan details, the MUTCD and the details noted in this Section:

Sign panels may be fabricated from one of the types of material shown below:

Material	Min. Panel Thickness	* Sign Face Area
Aluminum Flat Sheets	0.080 inches {2.00 mm}	All sizes
Aluminum Composite	0.080 inches {2.00 mm}	All sizes

*NOTE: Any sign panel installation using Standard Mounting procedures, which in the opinion of the Engineer does not provide a reasonably rigid sign installation, shall be strengthened by the use of additional supports and/or backing stringers.

Sign background and messages shall be formed using materials noted for such in Articles 880.02 and 880.03. To permit visual verification of proper use, each type sheeting shall display an identifiable symbol, on the face of the sheeting, in a repeat pattern.

When no pre-requirements are specified for units, they shall comply with the manufacturer's specifications as approved by the Department under the provisions of Section 32-5-36 of the Alabama Code.

Items are not required to be new. Used items may be acceptable provided the following conditions are met:

Units are in good repair, clean and structurally sound.
Reflective sheeting on any unit is clean and in good repair.
All legends and messages are sharp, clean and legible.
Reflectivity of said units during the hours of darkness shall provide acceptable, clear and uniform delineation without dead spots.

No test reports are required, but the Engineer shall visually inspect all units and accessories for compliance with the various dimensional and material stipulations noted before approving their use in

the work. The approval of any unit for use is subject to satisfactory field performance and does not preclude the Engineer ordering replacements of units; said replacements for these previously approved units shall be without additional compensation.

(e) Pilot Car, Flaggers, and Flagging Equipment.

Subarticle 740.02(e) shall be replaced with the following:

(e) Pilot Car, Flaggers, Flagging Equipment, and AFAD.

The pilot car, flaggers, flagging equipment, and AFAD shall meet the requirements of the MUTCD. The pilot car shall be a registered motor vehicle designed for use upon a highway. "Off-road" type vehicles will not be allowed.

Automatic Flagger Assistance Devices (AFAD) must be selected from List IV-3 of the Department's MSDSAR.

740.03 Construction Requirements.

(a) Traffic Control Personnel, Devices, Equipment and Training.

Item 740.03(a)3 shall be replaced with the following:

3. Moving and Covering Traffic Control Signs and Other Devices While Not in Use.

During periods when signs and other devices are not being used for traffic control, they shall be removed from the work area, covered with the specified material or otherwise positioned so they do not convey their message to the traveling public. If covered, the covering material shall be 1/2 inch {13 mm} (nominal size) exterior plywood or aluminum composite material cut to fit the shape of the sign panel. The covering material shall be installed in accordance with the plan details and in such manner that no damage will occur to the sign panel during installation. Covering material shall be maintained in a neat and workmanlike manner during its use.

740.04 Method of Measurement.

Article 740.04 shall be modified by the deletion of the following paragraph

~~Ballasts for cones will be measured per each for each weight {mass} ordered, accepted, and used.~~

740.05 Basis of Payment.

Article 740.05 shall be replaced by the following:

740.05 Basis of Payment.

(a) General.

Payment for Construction Signs and Special Construction Signs measured as noted above will be paid for at the contract unit price bid which shall be full compensation for fabrication of sign panel with proper sheeting and legend, furnishing and erecting on proper supports, furnishing all mounting hardware, covering when not in use, handling and maintaining until project completion.

Payment for drums, barricades, cones, delineators, warning lights, and vertical panels, measured as noted above, will be paid for at the contract unit price bid which shall be full compensation for fabrication, erection at designated locations whenever required, furnishing continuous power source for lights, handling and maintenance until project completion. Payment for cones shall include ballasts.

Electric incandescent or fluorescent lights measured as noted above will be paid for at the contract unit price bid which shall be full compensation for furnishing all materials and mounting hardware, wiring, erecting, maintaining and investigating, procuring and bearing the expense of continuous power supply.

Area Lights measured as noted above will be paid for at the contract unit price bid which shall be full compensation for furnishing all materials and mounting hardware including 250 watt mercury vapor lamp or equivalent luminaire and luminaire mounting arm and Class 7 wood pole, wiring, erecting, maintaining and investigating, procuring and bearing the expense of continuous power supply.

Item 740-O, Pilot Car, measured as noted above will be paid for at the contract unit price bid which shall be full compensation for furnishing and operating the pilot car, for furnishing the pilot car driver and flaggers, for all equipment and materials necessary to complete the work.

Item 740-P, Portable Rumble Strips, measured as noted above will be paid for at the contract unit price bid which shall be full compensation for fabrication, for installation at designated locations whenever required, and for handling and maintenance until project completion.

Payment for Items 740-B - L and 740-P will further include all costs in relocating, removing and returning these Items to the project when required to provide a complete traffic control system throughout the life of the project. No payment will be made beyond the maximum quantity of signs, barricades or other traffic control devices installed at any one time except when alternate sign panels are required for proper handling of the traffic, in such case both alternate panels will be measured for payment.

The Lump Sum payment for traffic control devices specified by plan details shall be full compensation for furnishing all materials, power sources and mounting hardware, erecting, handling, relocating signs and devices within the indicated "Traffic Handling Scheme" and maintaining all traffic control devices until project completion. If traffic control devices are deleted from the traffic handling scheme that is to be paid on a lump sum basis, deductions for the items deleted will be made from the lump sum cost in the amount of the contract unit prices bid for the quantity of individual traffic control items so deleted. Traffic control items which are added to the lump sum traffic handling scheme will be paid for at the contract unit price for the item added. A lump sum payment will be considered as full compensation for "traffic handling scheme". Once construction signs or other warning devices are no longer needed within the designated limits of the lump sum "traffic handling scheme", they may be used in other areas of traffic control and payment will be made under the appropriate pay item.

Unless otherwise designated on the construction plans, all signs, barricades, and other traffic control devices covered by this Section shall become the property of the Contractor at the completion of the project. The salvage value for these items shall be reflected in the contract unit prices bid.

No payment will be made for stored materials under this Section unless the material in storage was either manufactured or purchased new for specific use on the project.

No payment will be made for devices installed solely for the protection of the Contractor's work and which serve no useful purpose in protecting the safety of the public or workmen such as traffic cones for paint protection, devices installed to protect fresh concrete presenting no hazard, etc.

The Contractor will be expected to submit a balanced bid for all traffic control items. The submission of unbalanced bid prices may result in loss of contract award.

(b) Payment will be made under Item No.:

740-A Traffic Control Scheme - per lump sum
740-B Construction Signs - per square foot {square meter}
740-C Special Construction Signs - per square foot {square meter}
740-D Channelizing Drums - per each
740-E Cones (36 inches {900 mm} high) - per each
740-F Barricades, Type ____ - per each
740-G Barricades, Type I, (Portable, 24 inches {600 mm} wide) - per each
740-H Delineators - per each
740-I Warning Lights, Type ____ - per each
740-J Electric Incandescent or Fluorescent Light - per each
740-K Area Light - per each
740-L Vertical Panel Type ___* , ___** Sided – per Each
740-O Pilot Car - per each
740-P Portable Rumble Strips - per lump sum

* Specify either I or II

** Specify either Single or Double

SECTION 880
SIGN MATERIALS

880.01 Sign Panels.

(a) Aluminum Sign Materials.

Subarticle 880.01(a) shall be replaced with the following:

(a) Aluminum Sign Materials.

1. General.

Aluminum sign materials shall conform to the details shown on the plans and the following:

The materials used, unless otherwise noted by plan details, shall meet the requirements noted below and, in addition, the material used shall be free from corrosion, white rust, water stains, dirt, and grease with the panels processed as noted in Item 2 below.

ALUMINUM SIGN MATERIALS	
USE	ALLOY & TEMPER DESIGNATION
Sign Panels	ASTM B 209 Alloy 5052-H38 or 6061-T6
Extruded Shapes (sign panels), Bars or Rods	ASTM B 221 Alloy 6063 – T6
Angles, Structural Shapes (including Stiffeners)	ASTM B 308 Alloy 6061-T6
*Bolts	ASTM B 211 Alloy 2024-T4
Tamper Proof Nuts ≤ ¼"	ASTM B 211 Alloy 2024 – T4
*Spring Lock Washers	ASTM B 211 Alloy 7075-T6
Washers	ASTM B 209 Alloy Alclad 2024 – T4
Rivets	ASTM B 316 Alloy 6053 – T6
Shims	ASTM B 209 Alloy 1100-0
Flange Splicing Material	ASTM B 209 Alloy 6061 – T6
Weld Filler Wire	ASTM B 285 Alloy ER 5356 or ER 5556
*Hex. Nuts (Plain)	ASTM B 211 Alloy 6262-T9
*Hex. Lock Nuts	ASTM B 211 Alloy 2017-T4
* Unless otherwise specified	

Aluminum Sign Panel Thickness	
Class 4, 9, and 10 Flat	0.080 inches {2.00 mm}
Class 2, 2A, and 6 Multiple Flat or Multiple Extruded Panels	0.125 inches {3.00 mm}

Aluminum bolts, nuts, and washers shall have an anodic coating of at least 0.0002 inch {0.0051 mm} in thickness and shall be chromate sealed.

Galvanized bolts, nuts, and washers as specified under Galvanized Signs, or stainless steel hardware meeting the requirements of ASTM F 593, will be acceptable in lieu of the above.

2. Special Treatment of Aluminum Sign Material.

Each panel shall receive a chemical conversion treatment that will produce an acceptable etched surface suitable for either porcelainizing or attachment of reflectorized or non-reflectorized sheeting.

3. Tests and Samples.

The Contractor shall furnish certified test reports confirming compliance with the requirements noted and, in addition, shall furnish samples of all materials used in the signs in accordance with current Departmental policy for evaluation and verification tests.

4. Recycled Aluminum Sign Panels.

Recycled aluminum sign panels will be allowed for installation in accordance with the following requirements.

Recycled sign panels shall be the same alloy and temper required for new sign panels. They shall be free of corrosion and white rust and shall meet the required tolerances for flatness and thickness for new sign panels. The process for removing the old reflectorized or non-reflectorized sheeting shall not damage the chromate coating. Smelting, sanding, and chemical stripping processes for recycling will not be allowed.

Recycled signs will be inspected, sampled, and tested in accordance with current Departmental policy, except certified test reports will not be required. The Contractor shall furnish a materials guaranty that the materials conform to the requirements for recycling the sign panels.

(d) Porcelain Enamel Signs.

Subarticle 880.01(d) shall be replaced with the following:

(d) Blank.

ALABAMA DEPARTMENT OF TRANSPORTATION

General Application Special Provision

DATE: October 13, 2022 GASP No. 22-GA0018

EFFECTIVE DATE: April 1, 2023

SUBJECT: Roadway Pipe.

Alabama Standard Specifications, 2022 Edition, shall be amended as follows:

SECTION 530
ROADWAY PIPE CULVERTS

530.03 Construction Requirements.

(a) General.

1. Pipe Inspection.

Item 530.03(a)1 shall be replaced by the following:

1. Pipe Inspection.

Pipe shall be laid only in the presence of the Engineer or his authorized representative and shall not be covered until approved. Pipe installed contrary to this requirement will be rejected and shall be replaced by the Contractor without additional compensation.

Precast concrete pipe will be evaluated at delivery and any time prior to installation according to the criteria in AASHTO R 73.

(d) Placing Pipe.

3. Joining Pipe.

a. Rigid Pipe (Concrete, C.I.)

Subitem 530.03(d)3a shall be replaced by the following:

a. Rigid Pipe (Concrete, C.I.)

Rigid pipe may be of bell and spigot, tongue and groove, or other approved design unless a specific type is specified (joint configuration for round rigid pipe shall accommodate the use of a rubber gasket seal). The method of joining pipe sections shall be such that the ends are fully entered, and the inner surfaces are reasonably flush and even.

Joints for non-round rigid pipe shapes shall be sealed with bituminous plastic cement, preformed flexible sealant, rubber gaskets (when joint configuration can accommodate the use of a rubber gasket)., or other type sealers that may be approved. Joints shall be thoroughly cleaned before being sealed and shall be sealed for the full circumference of the joint unless otherwise directed.

When joining round R.C. pipe, only rubber gaskets shall be used unless otherwise approved by the Engineer.

When bituminous plastic cement is used, the interior surface of the hub, beginning at the lip of the normal interior surface of the pipe, shall be coated with a layer of sealing material that will cover at least 0.33 times the distance, measured along the surface of the hub, parallel to the normal length of the pipe. The thickness of the mastic placed shall be such that it will provide a uniform seal between the edges of the pipe sections being joined (approximately 1/2 of an inch {10 mm} on the inside shoulder of the hub and approximately 1/8 of an inch {3 mm} of material on the remaining area to be covered).

When Pre-formed flexible sealant is used it shall be placed according to the manufacturer's requirements.

No joint shall be considered satisfactory when the space between the edges of the pipes being joined exceeds 1/2 of an inch {10 mm} for more than 0.33 times the circumference of the pipe. The inside of the joint shall be wiped and finished smooth.

Rubber or other types of gaskets shall be installed as recommended by the manufacturer, rubber gaskets installation shall include gasket equalization and application of lubricant.

SECTION 831
PRECAST CONCRETE PRODUCTS

831.01 Description.

All precast concrete products, except precast non-prestressed concrete bridge members, shall be furnished from an approved producer that is participating in, and meeting the requirements given in ALDOT-364. ALDOT 364 is the "Procedure for Inspection of Concrete Pipe, Precast Manholes, Precast Box Culverts, and Miscellaneous Precast Concrete Products".

Producers of precast concrete products shall be shown in List I-8, PRODUCERS OF PRE-CAST CONCRETE PRODUCTS, of the Department's "Materials, Sources, and Devices with Special Acceptance Requirements" Manual. Information concerning this list is given in Subarticle 106.01(f) and ALDOT-355.

Precast products will be evaluated at delivery according to the criteria in AASHTO R 73.

SECTION 846
PIPE CULVERT JOINT SEALERS

846.01 Rigid Pipes.

(d) Rubber Gaskets.

Subarticle 846.01(d) shall be replaced by the following:

(d) Rubber Gaskets.

Rubber gaskets shall be used on all round pipe joints. This material shall meet the latest requirements of ASTM C443 “Standard Specification for Joints for Concrete Pipe and Manholes Using Rubber Gaskets”. The material shall be installed per the manufacturer’s recommendations including gasket equalization and application of lubricant.

SECTION 850
ROADWAY PIPE

850.01 Concrete Pipe.

(f) Handling and Storage.

Subarticle 850.01(f) shall be replaced by the following:

(f) Handling and Storage.

Pipe shall be handled, transported, delivered, and stored in a manner that will not injure or damage the pipe. Pipe shall not be shipped before it has been inspected and approved. Pipe that is damaged during shipment or handling will be rejected even though satisfactory before shipment. Pipe dropped from platforms or vehicles or in the pipe trench will be rejected.

Pipe will be evaluated at delivery and any time prior to installation according to the criteria in AASHTO R 73.

ALABAMA DEPARTMENT OF TRANSPORTATION

General Application Special Provision

DATE: December 18, 2024 GASP No. 22-LD0001(2)

EFFECTIVE DATE: January 1, 2025

SUBJECT: Liquidated Damages.

Alabama Standard Specifications, 2022 Edition, SECTION 108 shall be amended as follows:

SECTION 108
PROSECUTION AND PROGRESS

108.11 Schedule of Liquidated Damages.

Article 108.11 shall be replaced by the following:

108.11 Schedule of Liquidated Damages.

Original Contract Amount		Liquidated Damages Daily Charge	
More Than	To and Including	Calendar Day or Fixed Date	Work Day
$ 0	$ 500,000	$1,850	$3,700
$ 500,000	$ 2,000,000	$2,550	$5,100
$ 2,000,000	$10,000,000	$2,650	$5,300
$10,000,000	------	$3,350	$6,700

When the contract time is on the calendar day or date basis, the schedule for calendar days shall be used. When the contract time is on a work day basis, the schedule for work days shall be used.

STANDARD CONSTRUCTION SPECIFICATIONS

FOR

THE WATER WORKS BOARD OF THE CITY OF OPELIKA

WATER DISTRIBUTION SYSTEM

Revised: February 19, 2024

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APPENDIX A: DESIGN & CONSTRUCTION SPECIFICATIONS FOR DUCTILE IRON PIPE RESTRAINT OF EXISTING PIPE CONNECTIONS TO NEW CONSTRUCTION UNDER 12” DIAMETER

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SECTION 1: GENERAL

A. The purpose of this document is to set forth the policies, regulations, and procedures governing the design, construction, use and operation of the Opelika Water Board water distribution system. Opelika Water shall review and approve the design and inspect the installation of the water distribution systems that will be owned and maintained upon completion of the project. The Designer/Contractor shall notify Opelika Water immediately of any conflicts between the information contained within these specifications and/or the plans and miscellaneous details. It shall be the sole responsibility of the Designer/Contractor closely coordinate all aspects of the work within these specifications. Opelika Water reserves the right to modify these specifications at any time as deemed necessary by Opelika Water. As such, it shall be the sole responsibility of the Designer/Contractor to verify with Opelika Water the date of the latest/issue of these specifications.

SECTION 2: GOVERNING STATE AND FEDERAL STANDARDS

A. The standards set forth in these specifications are not intended to supersede any Federal or State Law regulating potable water distribution, supply, and/or treatment. In the event of a conflict between Federal, State and these specifications, the more stringent requirement shall apply.
B. All products permanently incorporated into the water system shall be manufactured of lead-free materials.
C. All products and materials intended for potable water service shall be NSF 61 certified.
D. All materials and methods for each respective item of work shall meet or exceed applicable requirements as published by the American Water Works Association (AWWA).

SECTION 3: DEVELOPMENT DESIGN REVIEW

A. Opelika Water encourages project contractors to request a Conceptual Design Meeting prior to the submittal of any design materials by calling (334) 705-5500 and asking for the Opelika Water Project Coordinator.
B. Opelika Water maintains its Standard Details at www.owwb.com under the Engineering Services tab.
C. Construction plans shall consist of plans stamped by a licensed professional engineer registered in the State of Alabama. Plans shall meet criteria set forth in the Drawing Submittal Checklist at www.owwb.com.
D. Plan submittals for development review must be provided in Adobe PDF electronic format and submitted at www.owwb.com as part of the Development Review Form under the Engineering Services tab. Plans will not be reviewed unless submitted as part of the Development Review Form and until a Backflow Information Form has been completed.
E. Material submittals shall be submitted at www.owwb.com as part of the Material

Submittals form. Submittals will be considered "approved" upon review and approval by an Opelika Water Project Coordinator, as demonstrated by the affixing of their official stamp on an original copy of the design materials, sealed by the project's licensed Professional Engineer.

F. Final Submittal of design materials are required to be submitted to Opelika Water. Upon approval of the Final Submittal of Design Materials, digital copy of the Approved Design Materials shall be maintained by Opelika Water and one paper copy shall be maintained on-site at the project location as detailed in these specifications.

SECTION 4: SUBMITTAL PROCEDURES

A. Submittal Development and Contractor Review: Designer/Contractor shall develop and submit submittals as required to allow adequate time for review without delaying/affecting the schedule for the Work. Contractor shall thoroughly review and familiarize himself with the existing facilities and shall obtain/incorporate all necessary field dimensions into the submittals prior to submitting and prior to beginning Work. The Contractor shall be solely responsible for coordinating preparation and review/processing of the submittals with manufacturers and suppliers and for ensuring completeness with respect to the approved manufacturers, models, and materials outlined in the specifications.

B. Submittals shall be delivered in digital Adobe PDF format. Submittals shall be divided into sections with each section containing a cover sheet identifying the materials that are included.

C. Product Data: Submittals shall be provided for each component of the work and shall include, at a minimum, Manufacturer's catalogue cuts, product specifications, statement of compliance with specified referenced standards, testing data and any other relevant information. One (1) complete submittal which includes all equipment/materials to be incorporated into the project shall be submitted to Opelika Water.

D. The Contractor and all manufacturers and suppliers shall thoroughly review the materials, products and equipment being supplied and shall familiarize themselves with the existing and proposed/new facilities, as well as connections to existing facilities/Water. This shall include field verification of the location, nature, size/dimensions, current and intended future use, etc. Prior to ordering and installation, the Contractor shall coordinate with all manufacturers and suppliers to provide all needed information including field dimensions, photographs, information on related materials and equipment, etc. The Contractor and all manufacturers and suppliers shall confirm the following:

    a. The materials, products, and equipment being supplied are of the correct size, materials and type.
    b. The materials, products and equipment being supplied do not conflict with existing or proposed/new facilities.
    c. The products/equipment being supplied are intended for use in this application.
    d. All manufacturer(s) and supplier(s) shall provide (either with submittals or

separately) written concurrence/acknowledgement of their review/coordination and concurrence with the items above.

E. The Construction Materials Submittal shall be considered "approved" upon review and approval by an Opelika Water Project Coordinator, as demonstrated by the affixing of their official stamp on an original copy of the Construction Materials Submittal.

SECTION 5: PROJECT RECORD DOCUMENTS

A. Maintain one set of marked-up hard copies of the approved Plans. Mark-ups should show where actual installation was different than what was shown on Construction Drawings. Note any and all changes and include/attach photos if needed. Record Drawings and any photos are required to be submitted directly to developmentsubmittals@owwb.com at Substantial Completion with the Project Name as the subject.

B. Geospatial Data Collection: Opelika Water will collect geospatial data on all installed infrastructure. Data collection will occur on a daily basis as the work proceeds. Daily work shall remain exposed until Opelika Water has collected that data. However, excavations are not to remain open overnight. Excavations shall be reopened at Opelika Water request if the contractor fails to schedule collection of data in a timely manner. It shall be the sole responsibility of the Contractor to schedule and coordinate the collection of this data with the Opelika Water Project Coordinator and/or the Project Inspector.

SECTION 6: INSPECTION

A. Opelika Water will provide an on-site inspector to oversee the installation of the Work. The inspector must review and approve all materials before work begins on any new construction. Any change or deviation from the approved plans must be approved in writing by the inspector prior to proceeding with the change. The responsibility of the Contractor shall not be lessened by the presence of the inspector.

SECTION 7: PROTECTION OF INSTALLED WORK

A. The Contractor shall protect and maintain the Work in new condition (without damage or degradation) until Final Completion. This includes maintaining cleanliness of adjacent areas of new and/or existing construction (i.e. roads, sidewalks, curbs, etc.). The Contractor shall be solely responsible for maintaining and/or cleaning to achieve a new finish, even if it requires resurfacing/recoating and/or replacing the affected Work.

SECTION 8: LIMITED USE OF EXISTING WATER SYSTEM AND APPURTENANCES

A. The Contractor shall under no circumstances operate, alter, or modify the appurtenances and accessories of the existing system without written permission from Opelika Water. This

shall include, but not be limited to, valves, meters, fire hydrants, blow-offs or other in place appurtenances.

B. Metered use of water through a fire hydrant is available upon request and rental of a fire hydrant meter from Opelika Water. All unauthorized use of water from the distribution system shall be considered theft and is punishable under Alabama State Law.

SECTION 9: CONNECTIONS TO EXISTING WATER SYSTEM

A. All connections to the existing water system shall be made by means of cutting-in of ductile iron fittings and valves. Under no circumstances shall existing water mains be tapped ("hot tapped"). Cut-in ductile iron fittings, specifically ductile iron tees, shall be surrounded by three valves matching the sizes of the branch and run of the tee. Valves shall be in accordance with these specifications.

SECTION 10: DUCTILE IRON PIPE AND FITTINGS (WATER SYSTEM)

A. All ductile iron pipe shall be manufactured, lined, coated, and tested in the United States of America. Pipe manufacturer shall provide a sworn certificate that the source manufacturing facility has been producing DIP domestically of the specified diameters, pressures and dimensions for a period of not less than 10 years. Approved manufacturers are American, US Pipe, and McWane only.

B. Ductile iron fittings shall be provided by one of the following approved manufacturers: American (ACIPCO), U.S. Pipe, Tyler Union, and McWane Ductile (Coshocton, Ohio plant). The only approved, non-domestically manufactured ductile iron fittings shall be manufactured by Sigma Corporation. All other fittings shall be domestically manufactured.

C. Pipe and fittings shall be stored on the project site in a manner acceptable to the manufacturer. Pipe and fittings shall be transported within the project site by means of a sling made of materials that will prevent damage to the exterior of product being transported. At no time will it be permissible to drag or roll materials to the installation location. It shall not be permissible for a Contractor to transport or lift pipe by inserting the forks of a forklift into the pipe.

D. It shall be the sole responsibility of the installing Contractor to carefully examine all pipe, piping material, and fittings before placing them in the Work. If materials are found to be defective, the Contractor shall promptly notify the Manufacturer and arrange for replacement materials. Materials found to be defective shall be marked and discarded.

E. Ductile Iron pipe shall be manufactured in accordance with requirements of ANSI A21.51 / AWWA C151. Where ductile iron pipe and fittings are equipped with push-on joints, such joints shall conform to the requirements of ANSI A21.11 / AWWA C111 latest revision. Where ductile iron pipe and fittings are equipped with mechanical joints, such joints shall conform to the requirements of ANSI A21.11 / AWWA C111 latest revision.

F. Gaskets for flanged, mechanical joint, restrained joint, and push-on ductile iron pipe shall meet the requirements of ANSI/AWWA Specification ANSI A21.11/AWWA C111, latest

revision. Gasket materials for potable water service up to 120° F shall be manufactured of vulcanized styrene butadiene rubber (SBR). All gaskets shall be domestically manufactured.

G. Ductile iron fittings shall have mechanical joint connection flanges. Fittings shall have compact bodies and shall conform to the requirements of NSIA21.53/AWWA C153, latest revision.
H. All ductile iron pipe and fittings shall be furnished with cement lining in accordance with NSI A21.4/AWWA C104 latest revision; standard thickness. Cement lining shall be certified for use with potable water. All below grade piping and fittings shall receive a 1 mil thick asphaltic coating on the exterior of the pipe/fitting in accordance with ANSI 21.51/AWWA C151, latest revision.

SECTION 11: RESTRAINT OF DUCTILE IRON PIPE AND FITTINGS (4-INCH THRU 12-INCH)

A. ALL INSTALLED PIPE JOINTS, FITTINGS, VALVES, AND OTHER APPURTENANCES SHALL BE FULLY RESTRAINED BY MEANS OF APPROVED RESTRAINT SPECIFIED HEREIN.
B. New Push-on Joints: All new push on joints shall be restrained by use of a domestically manufactured rubber gasket containing stainless steel gripping segments (teeth) vulcanized into the gasket. Approved products are American Fast-Grip, U.S. Pipe Field-Lok 350, McWane Sure Stop 350 and Romac Piranha.
C. New Mechanical Joints (Pipe to Fitting): All pipe to mechanical joint fitting connections shall be made by using a combination of gripping gasket identified above and ductile iron follower gland. Approved products are U.S. Pipe MJ Field-Lok, and Romac Grip Ring.
D. Mechanical Joints (Valves to Fittings): All connections between valves and fittings or between multiple fittings shall be made by use of a manufactured ductile iron component intended for close coupling of fittings and valves. Approved products are ductile iron foster adapters and 12-inch long ductile iron anchor couplings. Whenever possible in new construction, valves should be separated from fittings by 40 feet of pipe.
E. Where new piping meets/connects to the existing water system, the effected portions of the existing water system shall be adequately restrained in accordance with *Appendix A: Design & Construction Specifications for Ductile Iron Pipe Restrain of Existing Pipe Connections to New Construction Under 12" Diameter.*

SECTION 12: INSTALLATION OF DUCTILE IRON PIPE (WATER SYSTEM)

A. Installation and joining of ductile iron water pipe shall be completed in accordance with the requirements of AWWA C600, latest revision, and/or additional recommendations from the manufacturer of the pipe.
B. Minimum permissible depth of vertical cover over new water mains shall be 36". Maximum permissible depth of vertical cover over new water mains shall be 48". Variance from the depth of cover identified above must be approved in writing by Opelika Water.
C. Minimum permissible depth of horizontal cover (when paralleling slopes or ditch lines) shall be 36".

D. All backfill around pipe and fittings shall be compacted to 95% Standard Proctor as defined by ASTM D698-07.
E. At no time shall water Water be installed under existing or proposed roadways, sidewalks, curbs, gutters, storm sewers or any other permanent or proposed impervious surfaces. Exceptions to this requirement are locations where it is necessary to cross perpendicular to proposed or existing impervious surfaces.
F. Electronic ball markers, as specified herein, shall be placed at every fitting location prior to backfilling.

SECTION 13: CONSTRUCTION-RELATED ACTIVITIES

A. Each contractor and subcontractor performing installation of infrastructure to be turned over to Opelika Water must be licensed as a Municipal & Utility Contractor under the provisions of Title 34, Chapter 8, Code of Alabama, 1975, as established by the Alabama Licensing Board for General Contractors.
B. Contractors must Notify OW one week bef
C. ore performing any work that requires inspection.
D. The System Development Fee associated with work being performed must be paid in full prior to work beginning on the water system.
E. All installations must be in accordance with the project's Approved Design Materials.
F. All craftsmanship must meet American Water Works Association (AWWA) standards.
G. An original copy of the Approved Design Materials must be maintained on-site throughout the construction process until the Final Inspection is complete and the infrastructure is assumed by Opelika Water.
H. Construction materials received on-site throughout the construction process must be reviewed upon receipt to confirm that they comply with the approved Construction Materials Submittal. Evidence of the review and confirmation of materials must be maintained on-site for review by Opelika Water staff, upon request, until the Final Inspection is completed and the infrastructure is assumed by Opelika Water.
I. In order to prevent the use of unnecessary deflection and fittings, the alignment of water mains 4-inch in larger in diameter must be laid out and confirmed by a licensed surveyor.
J. The interior of all pipe, fittings, valves and accessories shall be kept free from dirt and foreign material. Suitable bulkheads shall be used to block or plug ends of piping at the close of each work day or when work on a particular section of piping is temporarily discontinued. Suitable bulkheads shall be plugs, caps, and similar items that provide a watertight seal. Plywood, buckets, and similar materials that do not provide a watertight connection are not allowed. Should dirt, mud, or other foreign materials be allowed to enter the piping, such piping or section of piping shall immediately be cleaned.
K. Compacting of all backfill around pipe shall be verified to 95% Standard Proctor as defined by ASTM D698-07. Verification must be by a licensed Geotechnical Professional Engineer registered by the Alabama Board of Engineers and Land Surveyors. Geotechnical Report

must be submitted to the Opelika Water Project Coordinator when it is reasonably available.

L. For water mains installed in rock, the trench area of removed rock must be a minimum 12 inches wider than the outside wall of the pipe installed on both sides and must extend at least one foot below the pipe invert. Pipe bedding and pipe zone materials shall be as detailed in Appendix B, DT-01, with no rock larger than ALDOT No. 57 stone to be used over the pipe for backfill.

SECTION 14: DUCTILE IRON PIPELINE TESTING PROCEDURES (WATER SYSTEM)

A. All water supply mains and other water lines underground (including service pipe up to curb stop) shall be tested by the installing contractor in accordance with the requirements of ANSI/AWWA C600 (for ductile iron pipe) and in accordance with the requirements of these Specifications. The Contractor shall familiarize himself with the requirements of this AWWA standard prior to initiating the pressure test.

B. Should any pipeline, or any section of the pipeline, fail to meet the criteria established herein below, any deficiencies shall be corrected and the testing repeated until the specified test results have been achieved.

C. Sections of mains placed under test shall be 1,200 feet or less in length.

D. The duration of the test shall not be less than 4 hours, and the test pressure shall be 150 psi or 1½ times the normal working pressure, whichever is greater. Contractor shall verify system static pressure from Opelika Water.

E. Pressure shall be recorded on a 24-hour pressure recorder satisfactory to Opelika Water and test charts shall be provided to Opelika Water prior to acceptance of testing.

F. Allowable leakage rates will be calculated by Opelika Water based upon the requirements/procedures outlined in AWWA C600, latest revision.

G. The installing contractor shall furnish all meters, gauges, pressure recorders, test plugs, valves, couplings, pitot gauges, test piping and fittings, pumps, compressors, receivers, motors, engines, electric power, fuel, water, supplies, labor tools, materials, equipment and supervision necessary to perform the tests required and shall make all connections necessary to perform the tests required.

SECTION 15: HIGH DENSITY POLYETHYLENE (HDPE) WATER MAIN

A. HDPE water main pipe shall be manufactured in accordance with the requirements set forth in AWWA C901, AWWA C906, and ASTM D3350.

B. Materials shall be stabilized against ultraviolet deterioration and shall be suitable for unprotected outdoor storage up to 4 years.

C. Piping shall be black in color with a coextruded blue stripe for water service. Piping shall be permanently marked on the exterior using heat indent printing to include:
    a. Nominal size and sizing system (IPS or DIPS)
    b. DR rating

c. NSF-61 or NSFpw mark certifying suitability for water service
d. Extrusion production record.
e. Manufacturer's trademark or trade name.

SECTION 16: DISINFECTION OF WATER MAINS

A. All disinfection shall be in accordance with AWWA C651, latest revision.
B. The Contractor shall disinfect the pipe, pipe fittings, valves, service lines, and hydrants installed within the limits of Work.
C. Prior to disinfection, the Contractor shall flush the installed mains to achieve a velocity of at least 3.0 feet per second. At no time during flushing activities shall chlorinated water be allowed to enter storm drains or waters of the United States. The Contractor shall be responsible for dechlorinating flushing water prior to discharge.
D. The mains shall be chlorinated (after flushing) with sufficient liquid chlorine, or powdered chlorine, to provide at least 50 mg/L available chlorine to the water in the mains.
E. The chlorine solution shall remain in the pipe at least 24 hours and then flushed until main is filled with water having normal chlorine residual.
F. Samples for bacteriological examination will be obtained by Opelika Water. Opelika Water will perform sampling for bacteriological testing and will inform the Contractor of the results of the tests.

SECTION 17: VALVES FOR WATER SERVICE

A. Gate Valves (2" – 12")
    a. Gate valves shall be provided by one of the following approved manufacturers: American, Mueller, or M&H Valves.
    b. Gate valves shall be resilient seated solid wedge gate valves, shall be rated for 250 psi cold working pressure, shall be bi-directional, and shall be manufactured in accordance with AWWA C509, latest revision.
    c. Valves shall be iron body construction, full opening, non-rising stem. Stem shall be brass, bronze or stainless steel and shall have a minimum of three O-ring seals. The top seals shall be replaceable with the valve fully open and while under full operating pressure. Thrust collar and bearing surfaces shall be isolated from the waterway and provided with continuous lubrication. Alternatively, non-corrosive thrust bearings shall be furnished above and below the collar. Wedge shall be encapsulated with EPDM rubber. Bolting materials shall be 304 stainless steel.
    d. Valves shall be equipped with mechanical joint ends.
    e. All gate valves 2" – 12" shall be equipped with a 2-inch square operating nut constructed of ductile iron.
    f. Ferrous metal surfaces shall have a 12 mil, fusion bonded, NSF 61 certified coating applied in accordance with AWWA C550, latest revision.
B. All buried valves shall be equipped with a valve box. Valve boxes shall be cast iron, screw

type, with cast iron extension pieces as required to make up length of box from surface of ground to top of valve body. Valve box covers shall be marked "WATER".

C. Concrete valve markers shall be furnished and installed for all valves or groups of valves installed. Markers shall be equipped with brass or aluminum discs (as for monuments or benchmarks) set monolithically in tops of the post. After the post has been set, there shall be die-stamped on the face of the disc an arrow indicating the location of the valve with respect to the marker, and there shall also be stamped on the disc the measured distance of the valve(s) from the marker.
D. Final locations of each valve marker shall be agreed upon by the Opelika Water inspector prior to installation of markers. Under no circumstance should the valve markers be set on private property.
E. The Opelika Water Inspector will perform a final walk through with the Contractor once all valves, valve boxes and grade rings have been installed. The Contractor shall demonstrate to the Opelika Water Inspector that the valve nut can be accessed with a valve wrench, that the valve can be operated, and that the valve is in its correct orientation (open or closed). Difficulty finding the valve nut with the wrench, maintaining a secure connection between the wrench socket and valve nut, shaft lean of the valve wrench when fully engaged with the operating nut, or problems with operating the valve will require the Contractor to make an adjustment to the valve, valve box and/or grade ring. In some cases, this may require complete excavation and re-installation of the valve, valve box and grade ring.
F. An electronic ball barker shall be placed at each valve location and attached to the valve box except at those locations where more than one valve surround a fitting which has already received an electronic ball marker.
G. When installed at ductile iron fittings, valves shall be direct coupled to fittings by use of a ductile iron foster adapter or 12-inch ductile iron anchor coupling. Coupling of valves to fittings using short sections of pipe will not be allowed.

SECTION 18: FIRE HYDRANTS

A. Fire hydrants shall be provided by one of the following approved manufacturers: Mueller Super-Centurion 250, or American-Darling B84B.
B. Fire Hydrants shall be manufactured in accordance with AWWA C502, latest revision and have the following characteristics:
    a. Fire hydrants shall be the 3-way with two (2) 2½" nozzles and pump nozzle. Nozzles shall have National Standard Hose Coupling Threading and shall be equipped with caps and chains.
    b. Hydrant shall be "Safety" or "Traffic" Model with safety flanges and safety stem couplings so that hydrant valve will remain tightly closed after upper section has been broken.
    c. Shall have oil reservoir and oiling system or permanent lubrication system incorporated in bonnet assembly.

d. Shall have not less than 5¼" valve opening
e. Shall have 6" inlet opening with mechanical joint connection
f. Shall have National Standard "Pentagon" operating nut

C. Fire hydrants shall set such that the “bury” line is at the surface of the expected final grade. Each fire hydrant shall be purchased specifically for the expected depth at its intended location, however, no more than one 12-inch hydrant extension may be used per hydrant. In the event that a hydrant extension is required, the Contractor shall properly orient the extension (including stem) such that the traffic break away lines match ad are set at final grade.
D. Hydrants shall be set plumb and true with pumper nozzles facing the street.
E. Broken stone (#57 unless specified otherwise) shall be placed at a depth of 8” below the foot of the hydrant to 8” above the weep holes. Volume of stone shall not be less than five (5) cubic feet.
F. Fire hydrants shall be installed by using a combination of fire hydrant tee, valve, valve box, and anchor coupling (length as required.)

SECTION 19: WATER SERVICE INSTALLATIONS

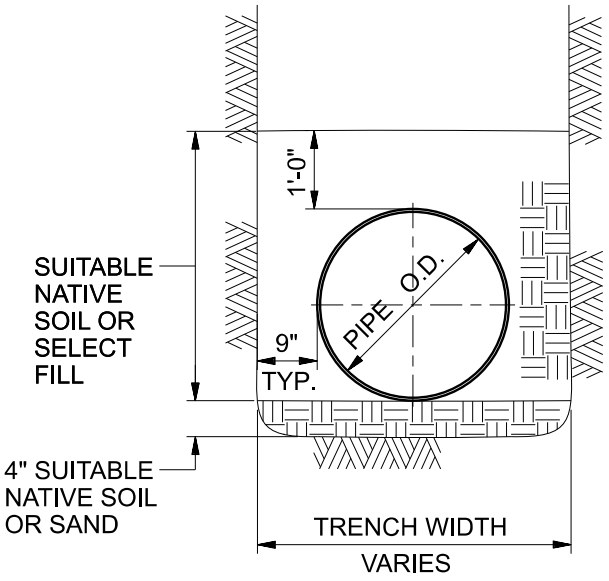
A. Water service connections for residential ¾-inch water meters shall consist of the following:
   a. Connection to water main, 1-inch direct tap
   b. One (1) brass corporation stop, 1-inch
   c. Length as required of 1-inch Type K Copper water service pipe
   d. One (1) brass curb stop, 1-inch
   e. One (1) barrel lock (for curb stop), Dewalch DT 1000
   f. One (1) signpost indicating location of curb stop
   g. Two (2) electronic locator balls. One at main tap and one at curb stop.
B. Water main taps shall be separated by a minimum of 3’-0”.
C. Water meters, backflow preventers, meter boxes and initiation of service will be installed/established by Opelika Water once a request for water service has been made for each specific address.

SECTION 20: ELECTRONIC MARKER SYSTEM (EMS)

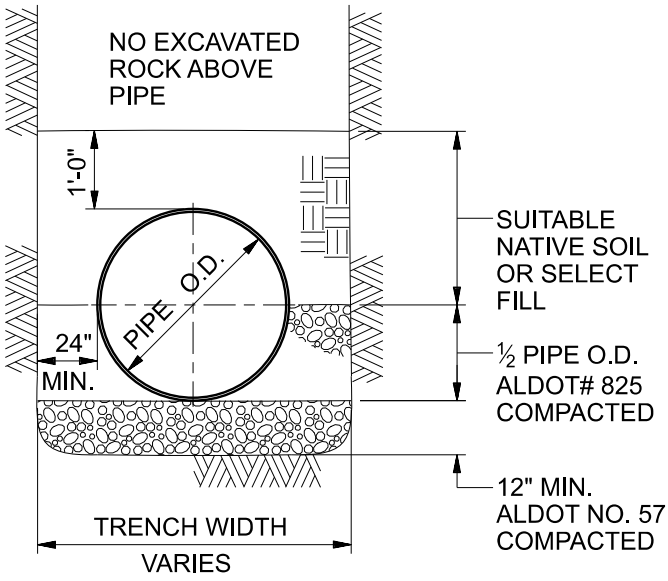
A. Electronic markers shall be model 1403-XR as manufactured by 3M.
B. Electronic ball markers shall be furnished and installed at each service tap installation, at fittings, valves, and at curb stops as indicated in the details.
C. EMS ball markers shall be self-leveling type with a passive antenna encased in water resistant polyethylene shell.
D. Ball markers shall be installed at depths per the manufacturer’s recommendation but no deeper than 5-feet.

END OF SPECIFICATIONS

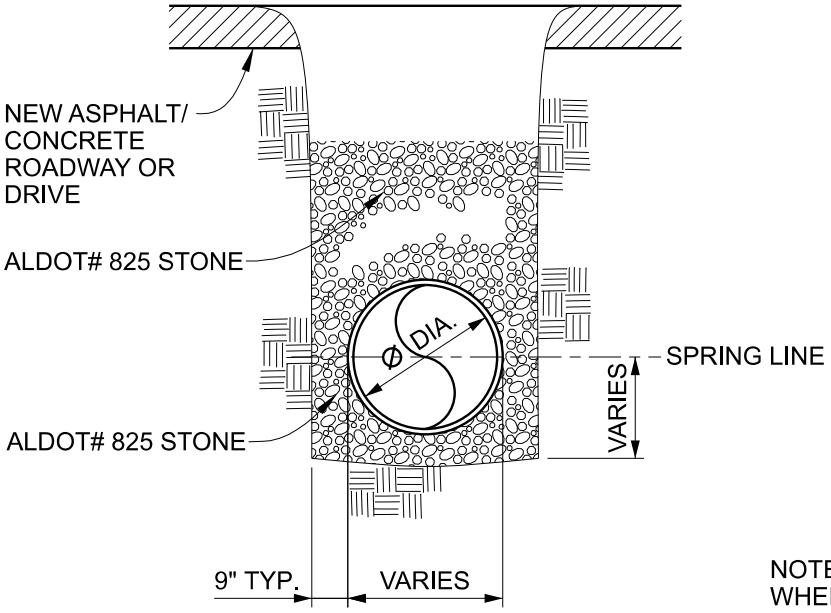
TRENCH EXCAVATED IN SOIL



TRENCH EXCAVATED IN ROCK



PIPE TRENCH UNDER EX. PAVEMENT



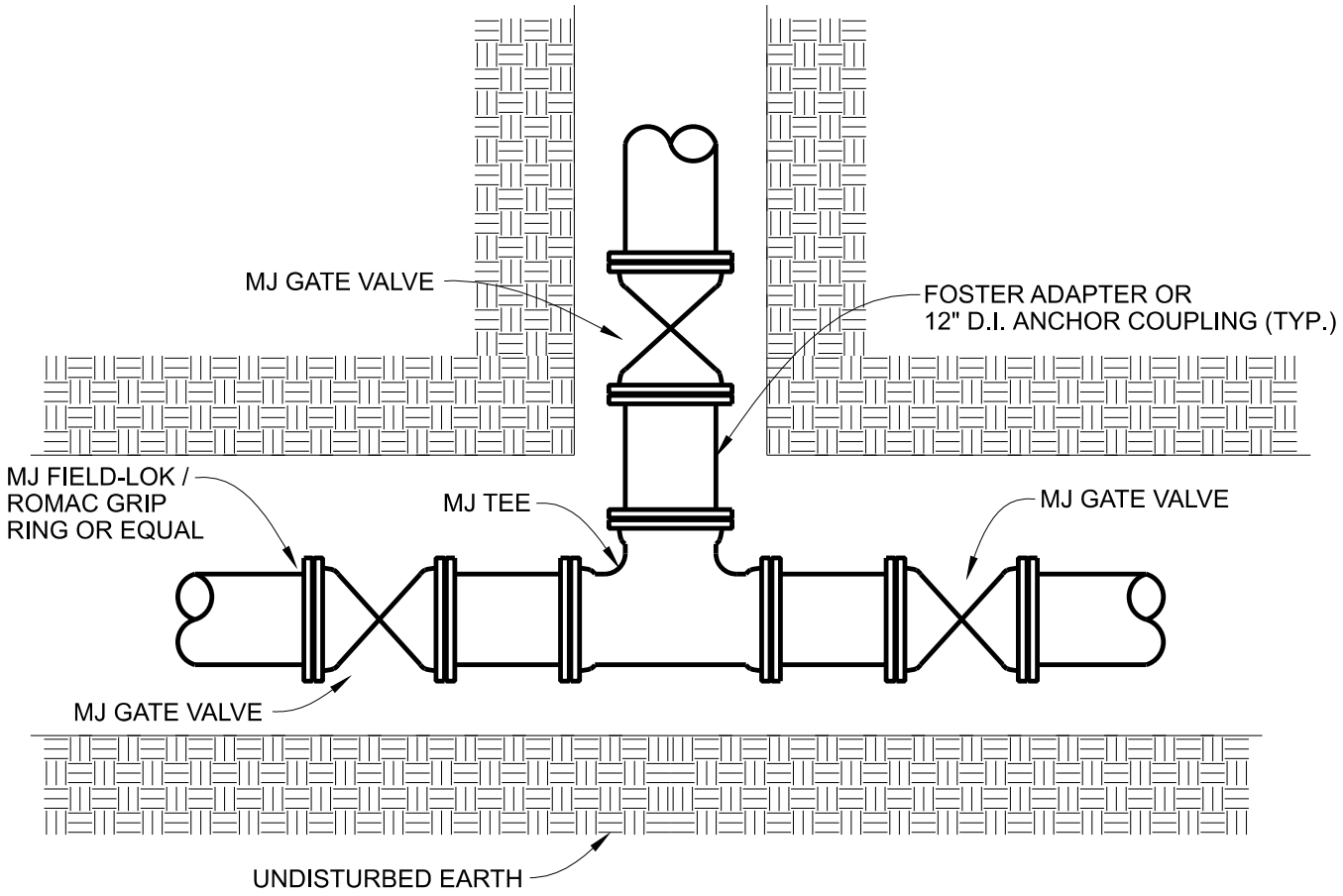
NOTE:
WHERE INSTALLED UNDER ASPHALT, STONE SHALL BE COMPACTED IN 4" LIFTS TO 95% STANDARD PROCTOR DENSITY. COMPACTION SHALL BE VERIFIED BY USE OF COMBINATION SAND CONE/NUCLEAR DENSITY TESTING BY A LICENSED GEOTECHNICAL ENGINEER.

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SHEET TITLE	PIPE BEDDING & BACKFILL
SHEET NO.	DT-01
PROJECT NO.	2024-SD
SCALE	NO SCALE
DATE	JANUARY 2024

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER



NOTES:

1. GATE VALVES REQUIRED FOR 12" & SMALLER APPLICATIONS.
   BUTTERFLY VALVES REQUIRED FOR 14" & LARGER APPLICATIONS.

2. PIPE SHALL BE CONNECTED TO MJ VALVES & FITTINGS BY AN APPROVED METHOD OR RESTRAINT. (MJ FIELD-LOK OR EQUAL)

3. WHEN POSSIBLE IN NEW CONSTRUCTION, VALVES SHALL BE SEPARATED FROM TEES AT INTERSECTIONS BY A MINIMUM OF 40 FEET OF RESTRAINED PIPE.

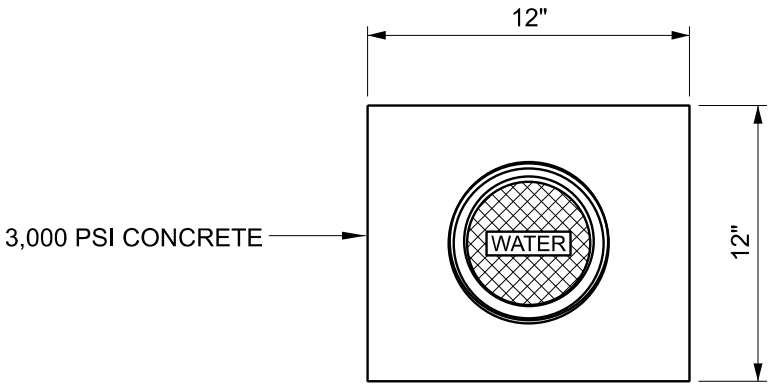
© 2024 OPELIKA WATER

SHEET TITLE	
TYPICAL VALVE ARRANGEMENT	
SHEET NO. DT-02	PROJECT NO. 2024-SD
	SCALE NO SCALE
	DATE JANUARY 2024

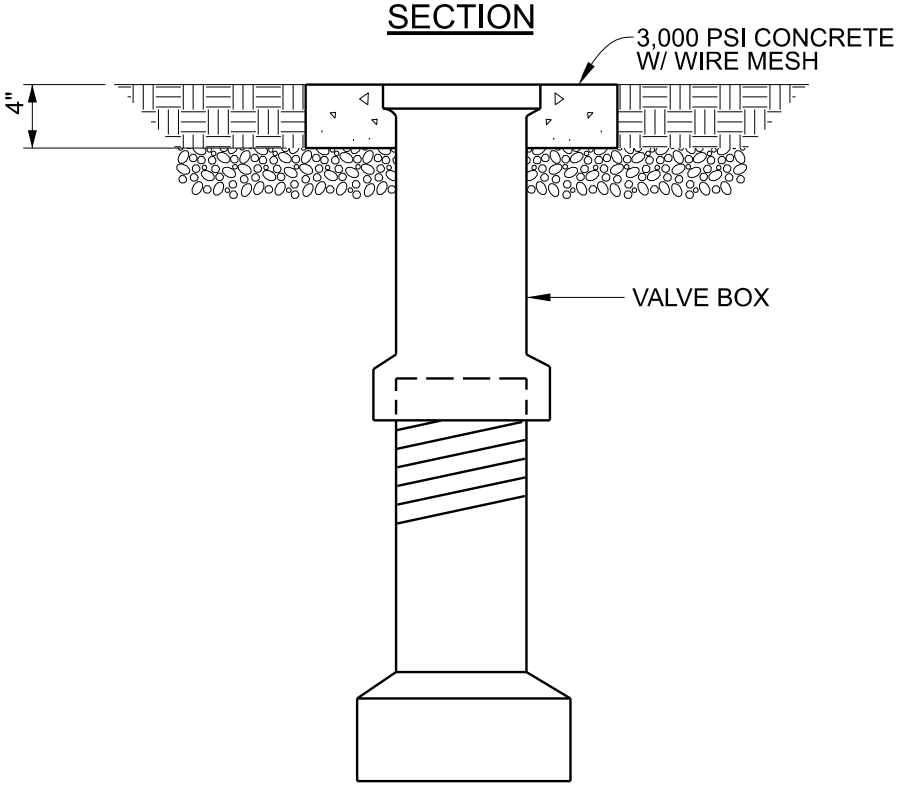
THE WATER WORKS BOARD OF
THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER

PLAN



SECTION



NOTES:

1. VALVE BOX AND EXTENSION MATERIAL SHALL BE CAST IRON. DUCTILE IRON PIPE SHALL NOT BE USED AS AN EXTENSION. MULTIPLE EXTENSIONS ARE NOT ALLOWED.
2. PRECAST CONCRETE RINGS ARE ACCEPTABLE IN LIEU OF POURED-IN-PLACE.
3. VALVE STEM EXTENSIONS SHOULD BE PROVIDED IF REQUIRED DUE TO DEPTH.
4. CONCRETE GRADE RING NOT REQUIRED IF INSTALLED IN ASPHALT.

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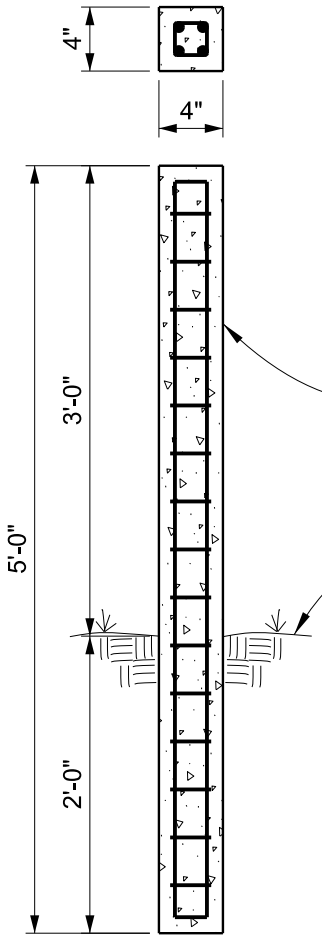
SHEET TITLE	VALVE BOX
SHEET NO.	DT-03
PROJECT NO.	2024-SD
SCALE	NO SCALE
DATE	JANUARY 2024

THE WATER WORKS BOARD OF THE CITY OF OPELIKA

STANDARD CONSTRUCTION DETAILS

OPELIKA, ALABAMA

OPELIKA WATER



CAST IN THIS FACE AND THE OPPOSITE FACE LETTERS 2" HIGH AS FOLLOWS:

FOR AIR RELEASE VALVES	FOR BUTTERFLY VALVES	FOR GATE VALVES
A R V	B F V	G V

MARKER WITH APPROPRIATE LETTERING SHALL BE PLACED AT ALL VALVE LOCATIONS AS DESIGNATED BY THE OWNER'S RESIDENT INSPECTOR.

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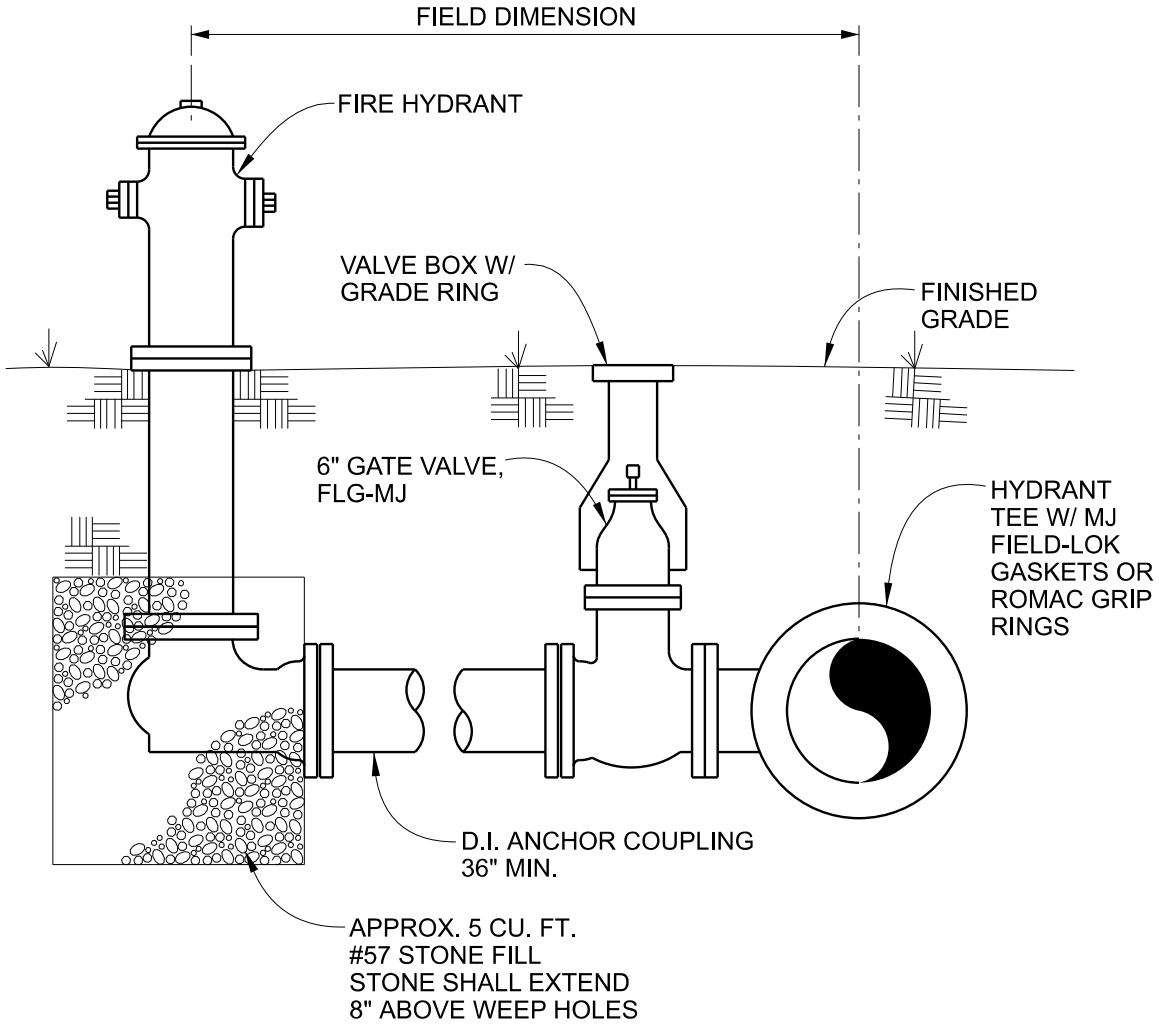
SHEET TITLE	CONCRETE VALVE MARKER
SHEET NO.	DT-04
PROJECT NO.	2024-SD
SCALE	NO SCALE
DATE	JANUARY 2024

THE WATER WORKS BOARD OF THE CITY OF OPELIKA

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OPELIKA, ALABAMA

OPELIKA WATER



SECTION

NOTES:

1. ADJUST LENGTH OF ANCHOR COUPLING AND LENGTH OF HYDRANT BARREL FOR EACH SPECIFIC LOCATION. IN NO CASE SHALL MORE THAN ONE (1) HYDRANT EXTENSION BE USED PER HYDRANT.
2. HYDRANT SHALL BE INSTALLED SUCH THAT BURY LINE NOTED ON HYDRANT IS AT FINISHED GRADE.

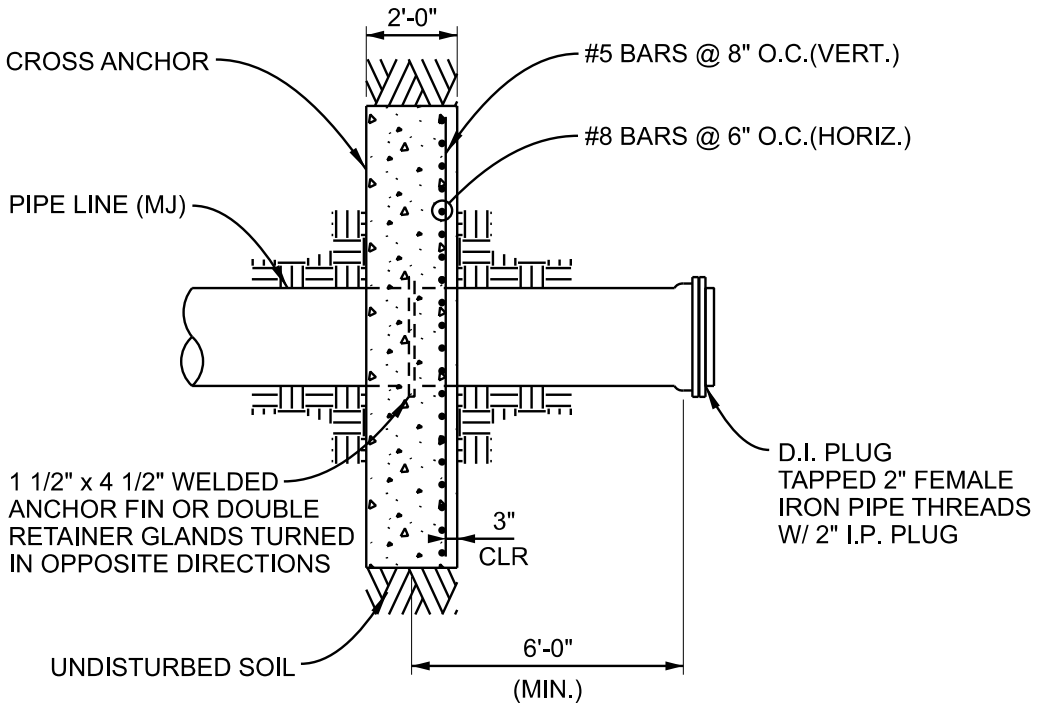
© 2024 OPELIKA WATER

SHEET TITLE	
FIRE HYDRANT	
SHEET NO. DT-05	PROJECT NO. 2024-SD
	SCALE NO SCALE
	DATE JANUARY 2024

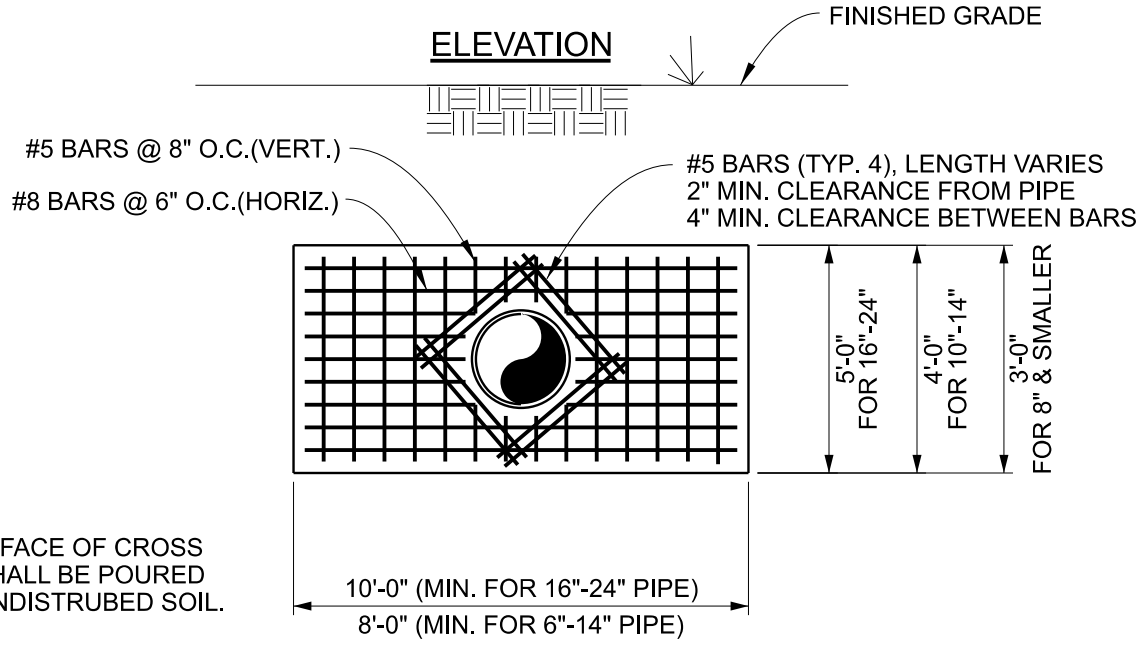
THE WATER WORKS BOARD OF
THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER

PLAN



ELEVATION



NOTE:

1. RESISTING FACE OF CROSS ANCHOR SHALL BE POURED AGAINST UNDISTRUBED SOIL.

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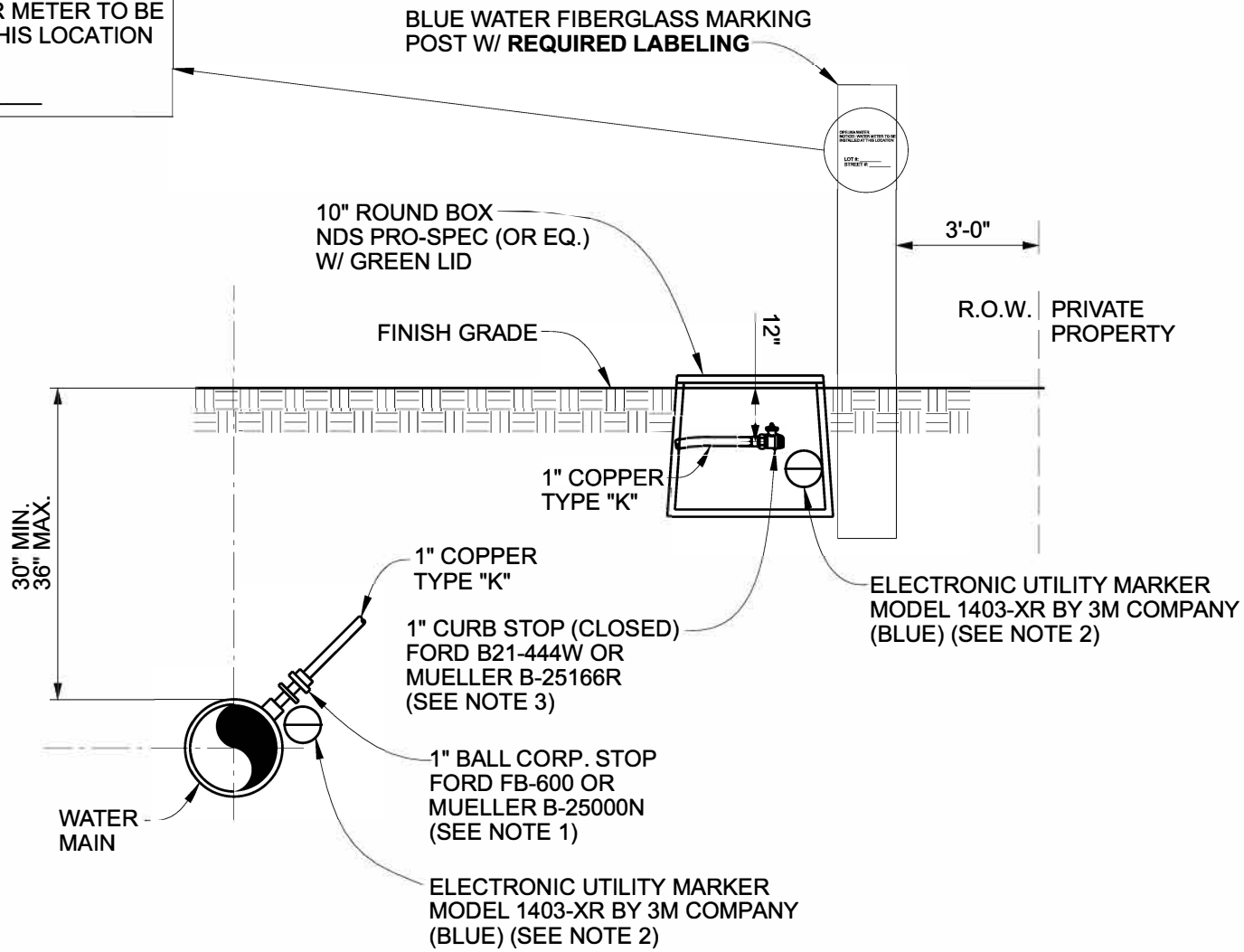
SHEET TITLE	CONCRETE CROSS ANCHOR
SHEET NO.	DT-06
PROJECT NO.	2024-SD
SCALE	NO SCALE
DATE	JANUARY 2024

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
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OPELIKA, ALABAMA

OPELIKA WATER

LABEL MUST READ AS FOLLOWS:

OPELIKA WATER
NOTICE!: WATER METER TO BE INSTALLED AT THIS LOCATION
LOT #: _____
STREET #: _____



NOTE:

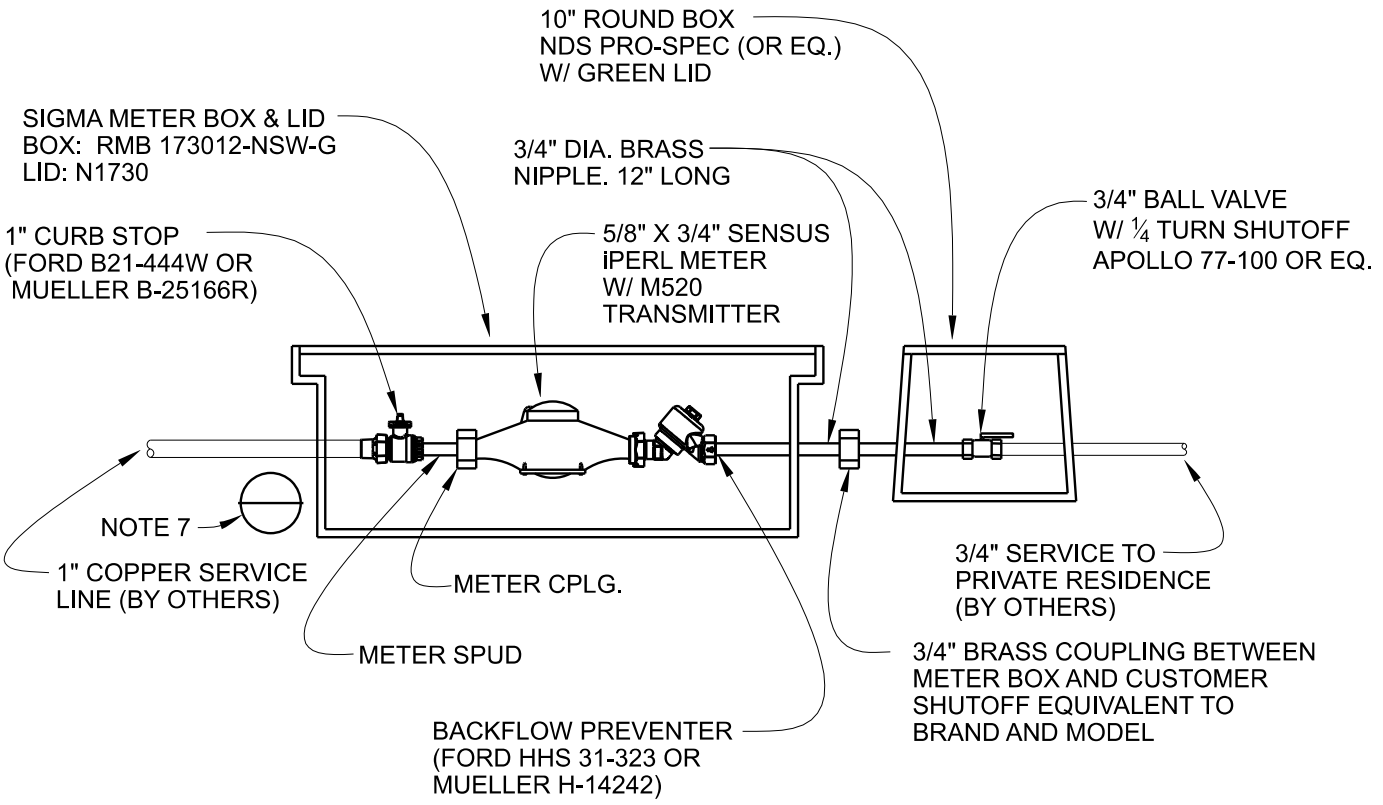
1. INSERTION THREADS OF CORPORATION STOP SHALL BE DOUBLE WRAPPED WITH TEFLON TAPE (1/2 x 3 MILS); AND STOPS SHALL BE TORQUED IN AT 30 - 50 FOOT-POUNDS
2. ELECTONIC UTILITY MARKER BALLS SHALL BE SECURELY FASTENED TO BOTH THE CORPORATION STOP AND THE CURB STOP VIA STAINLESS STEEL WIRE OR BY OTHER MEANS APPROVED BY THE OWNER.
3. UPON COMPLETION OF WATER SERVICE INSTALLATION; CLOSE CURB STOP, INSTALL BRASS PLUG, AND LOCK WITH A CAPPED #5 BARREL LOCK.
4. MINIMUM AND MAXIMUM DEPTHS OF COVER SHOWN ABOVE CORRESPONDS TO SOIL COVERAGE AND SHALL NOT INCLUDE THE THICKNESS OF ANY INSTALLED ASPHALT, CONCRETE, OR OTHER PERMANENT OR TEMPORARY SURFACE FINISHING.

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OPELIKA WATER

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

SHEET TITLE: 3/4" OR 1" SERVICE INSTALLATION
SHEET NO.: DT-07
PROJECT NO.: 2024-SD
SCALE: NO SCALE
DATE: AUG 2024



NOTES:

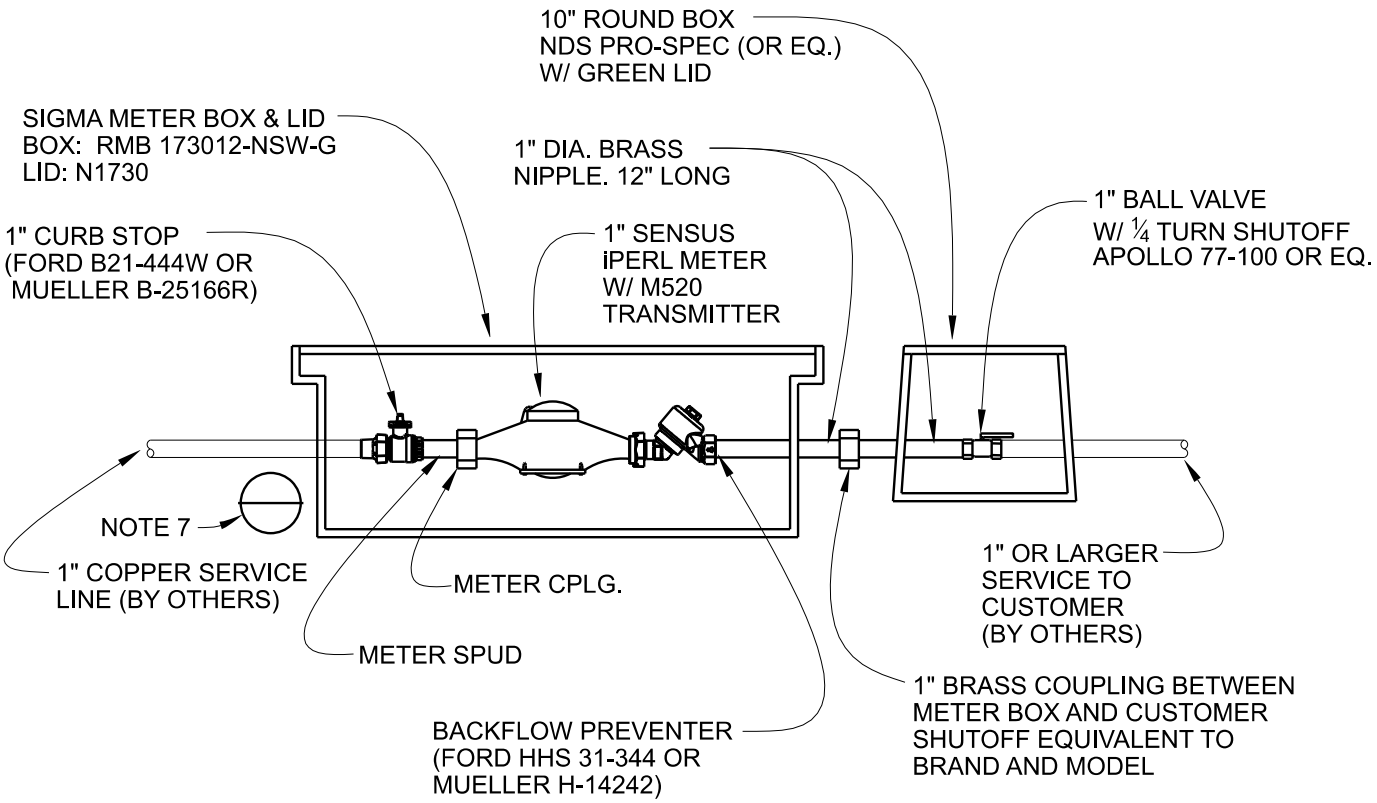
1. BACKFLOW DEVICE SHALL BE DIRECT COUPLED TO THE WATER METER USING A METER SWIVEL NUT.
2. METER BOX AND 10" ROUND SHUTOFF BOX SHALL BE INSTALLED FLUSH WITH FINAL GRADE. IF SOD AND GRASSING HAS NOT BEEN INSTALLED, BOXES SHALL BE SET PROUD OF ANY AND ALL BACKFILL SUCH THAT INSTALLATION OF SOD WILL RESULT IN BOXES BEING SET FLUSH WITH FINAL GRADE.
3. METER BOXES AND 10" ROUND SHUTOFF BOX SHALL BE INSTALLED ON A 6" BED OF CLEAN STONE, LEVELED. BRICKS OR OTHER MEANS OF SUPPORT BELOW THE METER BOX OR 10" SHUTOFF BOX WILL NOT BE ALLOWED.
4. ALL ITEMS SHOWN WITHIN THIS ARRANGEMENT SHALL BE INSTALLED STRAIGHT AND IN A WORKMANLIKE MANNER. ALL ITEMS SHOWN SHALL BE CENTERED ABOUT THE VERTICAL AXIS. VALVES, METERS AND BACKFLOW PREVENTERS WHICH ARE INSTALLED OUT OF ROTATION WILL NOT BE ACCEPTED.
5. A MINIMUM OF CABLE LENGTH OF 6-FEET SHALL BE PROVIDED BETWEEN THE WATER METER AND M520 TRANSMITTER.
6. UPON COMPLETION OF WATER SERVICE INSTALLATION; CLOSE CURB STOP AND LOCK WITH A CAPPED #5 BARREL LOCK (DeWALCH DT 1000). CURB STOP SHALL REMAIN LOCKED UNLESS/UNTIL AN ACTIVE WATER SERVICE ACCOUNT HAS BEEN ESTABLISHED THROUGH OPELIKA WATER.
7. ELECTRONIC UTILITY MARKER, MODEL 1403-XR BY 3M COMPANY (BLUE).

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SHEET TITLE		
3/4" METER INSTALLATION		
SHEET NO.	PROJECT NO.	2024-SD
DT-08	SCALE	NO SCALE
	DATE	JANUARY 2024

THE WATER WORKS BOARD OF
THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER



NOTES:

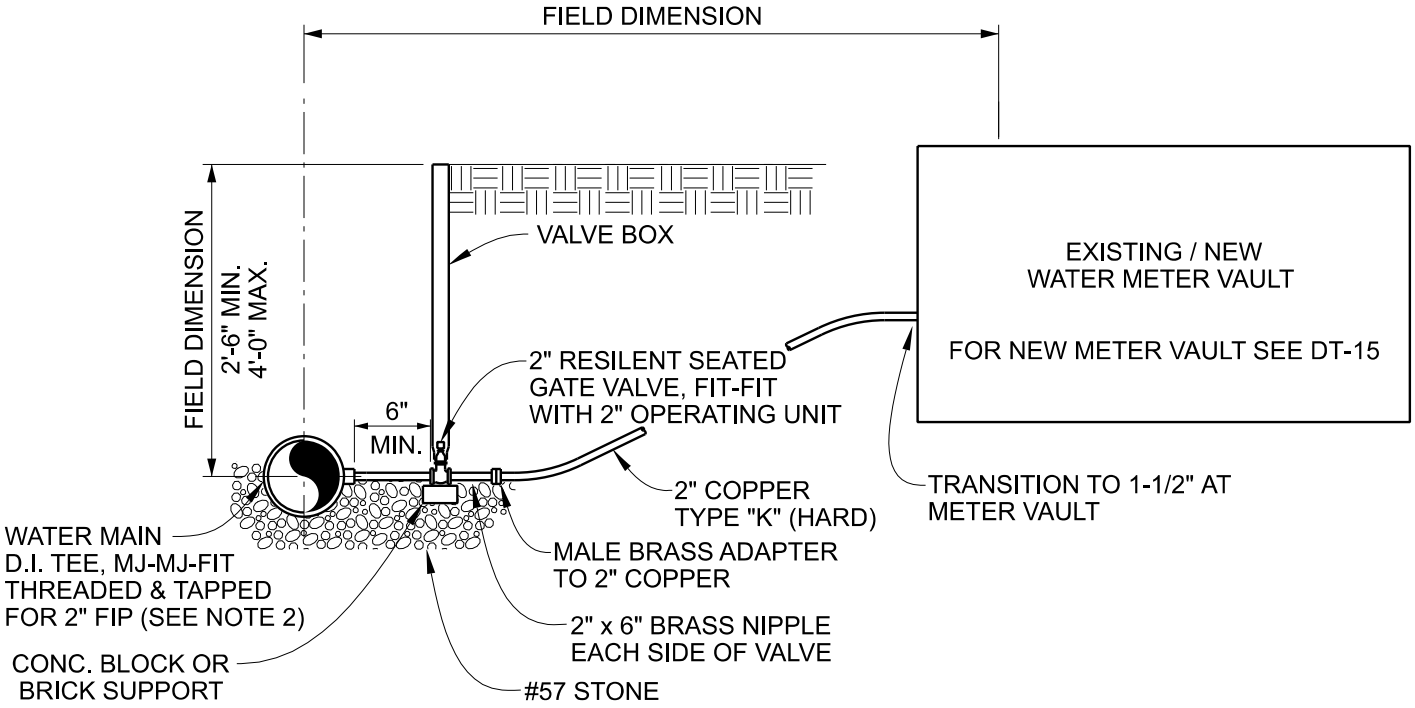
1. BACKFLOW DEVICE SHALL BE DIRECT COUPLED TO THE WATER METER USING A METER SWIVEL NUT.
2. METER BOX AND 10" ROUND SHUTOFF BOX SHALL BE INSTALLED FLUSH WITH FINAL GRADE. IF SOD AND GRASSING HAS NOT BEEN INSTALLED, BOXES SHALL BE SET PROUD OF ANY AND ALL BACKFILL SUCH THAT INSTALLATION OF SOD WILL RESULT IN BOXES BEING SET FLUSH WITH FINAL GRADE.
3. METER BOXES AND 10" ROUND SHUTOFF BOX SHALL BE INSTALLED ON A 6" BED OF CLEAN STONE, LEVELED. BRICKS OR OTHER MEANS OF SUPPORT BELOW THE METER BOX OR 10" SHUTOFF BOX WILL NOT BE ALLOWED.
4. ALL ITEMS SHOWN WITHIN THIS ARRANGEMENT SHALL BE INSTALLED STRAIGHT AND IN A WORKMANLIKE MANNER. ALL ITEMS SHOWN SHALL BE CENTERED ABOUT THE VERTICAL AXIS. VALVES, METERS AND BACKFLOW PREVENTERS WHICH ARE INSTALLED OUT OF ROTATION WILL NOT BE ACCEPTED.
5. A MINIMUM OF CABLE LENGTH OF 6-FEET SHALL BE PROVIDED BETWEEN THE WATER METER AND M520 TRANSMITTER.
6. UPON COMPLETION OF WATER SERVICE INSTALLATION; CLOSE CURB STOP AND LOCK WITH A CAPPED #5 BARREL LOCK (DeWALCH DT 1000). CURB STOP SHALL REMAIN LOCKED UNLESS/UNTIL AN ACTIVE WATER SERVICE ACCOUNT HAS BEEN ESTABLISHED THROUGH OPELIKA WATER.
7. ELECTRONIC UTILITY MARKER, MODEL 1403-XR BY 3M COMPANY (BLUE).

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SHEET TITLE		
1" METER INSTALLATION		
SHEET NO.	PROJECT NO.	2024-SD
DT-08A	SCALE	NO SCALE
	DATE	JANUARY 2024

THE WATER WORKS BOARD OF
THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER



NOTE:

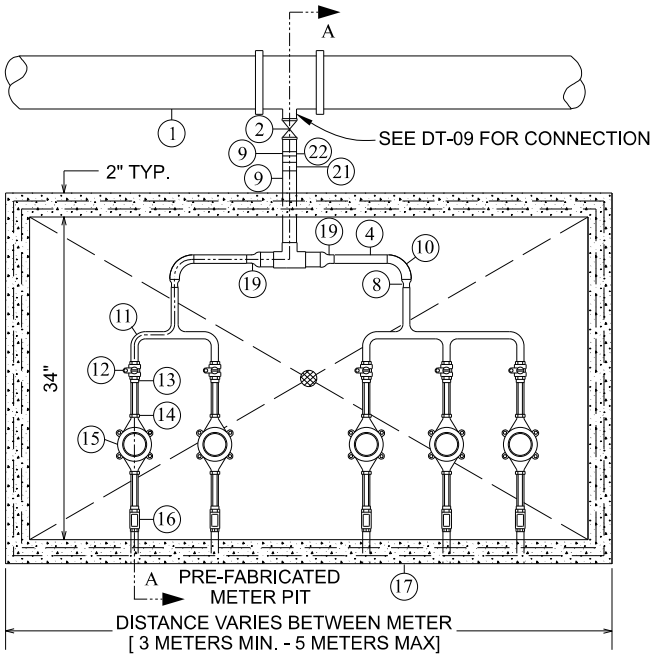
1. ELECTRONIC UTILITY MARKER TO BE PLACED AT TAP AND AT 2" GATE VALVE.
2. WHEN ACCEPTABLE, A TAPPING SADDLE MAY BE USED. MUST BE ROMAC 202NSSU, FORD202, OR APPROVED EQUIVALENT.

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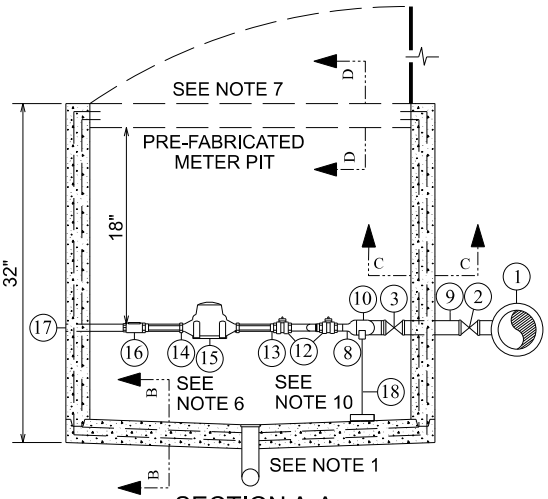
SHEET TITLE	
1 1/2" TO 2" SERVICE CONNECTION	
SHEET NO. DT-09	PROJECT NO. 2024-SD
	SCALE NO SCALE
	DATE OCT 2024

THE WATER WORKS BOARD OF
THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER



MULTIPLE METER BOX DETAIL
NO SCALE



SECTION A-A
NO SCALE

SECTION -B
NO SCALE

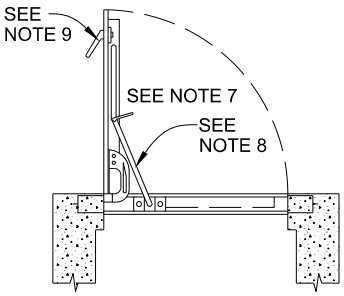
B-B: PIT FLOOR; 3" THICK

SECTION C-C
NO SCALE

C-C: WALL SECTION; 2" THICK

SECTION D-D
NO SCALE

D-D: TOP OF PIT; 2" THICK



ALUMINUM ACCESS DOOR
NO SCALE

PIPE SIZE TABLE	
1	3 THRU 4 METERS USE 2" COPPER

CALL OUT LEGEND

1. D.I. PIPE SIZE VARIES
2. GATE VALVE
3. F.I.P. BALL VALVE
4. 2" x 2" x 1" COPPER TEE
5. 2" COPPER TEE
6. 1" COPPER PIPE
7. 1" TREADED MALE ADAPTOR
8. 2" x 1" COPPER REDUCER
9. COPPER PIPE (FOR SIZE SEE TABLE)
10. COPPER 90° BEND
11. 1" x (2) 1/4" MIP. BRANCH CONNECTOR
12. 1" CURB STOP
13. 1" x 3/4" BRASS BUSHING
14. 3/4" METER COUPLING
15. 5/8" x 3/4" WATER METER (SEE NOTE 4)
16. 3/4" BACK FLOW PREVENTOR
17. CUSTOMER CUT OFF (SEE NOTE 2)
18. PIPE STAND (SEE NOTE 10)
19. 2" COPPER REDUCER
20. 2" COPPER TEE
21. 2" FEMALE ADAPTER
22. 2" BRASS NIPPLE

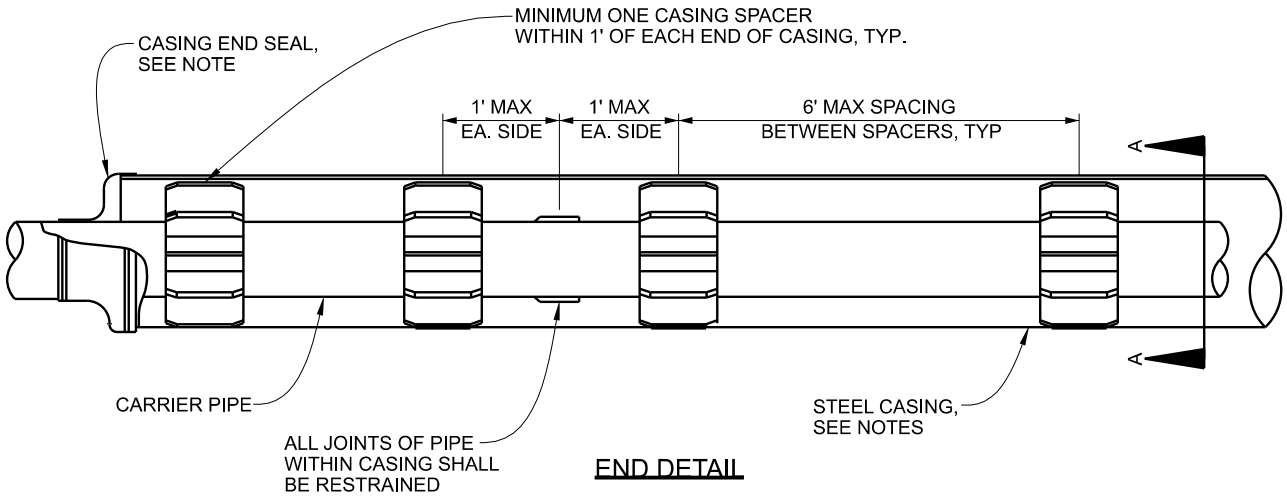
NOTES:
1. FLOOR DRAIN MUST BE TIED INTO POSITIVE DRAINAGE.
2. CUSTOMER CUT OFF SHALL BE INSTALLED OUTSIDE OF BOX.
3. METER PIT TO BE LOCATED IN A NON TRAFFIC AREA.
4. 5/8"x3/4" SENSUS IPERL W/ M520 TRANSMITTER
5. THIS DETAILS FOR DOMESTIC USE ONLY.
6. FLOOR SLOPE = 1/4" PER FOOT.
7. HALLIDAY PRODUCTS WIS 30" x 70" ALUMINUM HATCH WITH LOCK (OR APPROVED EQUAL); DIMENSIONS DETERMINED BY METER PIT SIZE AS APPROVED BY O.W.W.B.
8. AUTOMATIC HOLD-OPEN DOOR DEVICE.
9. REMOVABLE KEY WRENCH
10. PIPE STANDS SHALL BE PLACED UNDER EACH SIDE OF COPPER PIPE.
11. ALL SOLDER SHALL BE SILVALOY. PROPRESS FITINGS ALSO ALLOWED.
12. ALL CONNECTIONS TO DUCTILE IRON SHALL BE DIRECT TAP.
13. PROVIDE DURABLE NAME TAGS INSIDE VAULT TO IDENTIFY EACH SERVICE ADDRESS. PROVIDE VAULT ACCESS STEPS AS NEEDED.
14. COPPER PIPE SHALL NOT BE ENCASED IN GROUT OR CONCRETE MIXTURE. COPPER SHALL ENTER VAULT THROUGH PVC CASING IN CONCRETE WALL AND BE SEALED INSIDE CASING WITH HIGH-QUALITY POLYURETHANE OR NEUTRAL CURE SILICONE SEALANT.

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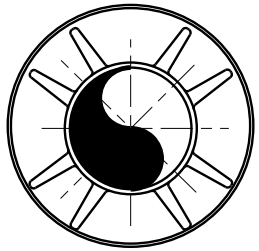
SHEET TITLE		
MULTIPLE METER BOX DETAILS		
SHEET NO.	PROJECT NO.	2024-SD
DT-10	SCALE	NO SCALE
	DATE	MAY 2024

THE WATER WORKS BOARD OF
THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER



END DETAIL



SECTION A-A

NOTES:

1. BORING SHALL BE AT 90 DEGREES TO ALL CROSSINGS UNLESS OTHERWISE APPROVED. THE BORING OF THE HOLE AND INSTALLATION OF THE CASING PIPE SHALL BE SIMULTANEOUS. BORE HOLE DIAMETER SHALL ESSENTIALLY BE THE SAME AS THE OUTSIDE DIAMETER OF THE CASING PIPE TO BE INSTALLED.
2. AERIAL CROSSINGS SHALL BE AS INDICATED.
3. JOINTS SHALL CONFORM TO THE REQUIREMENTS OF AWWA C206. JOINTS BETWEEN SECTIONS SHALL BE COMPLETELY WELDED TO THE PRECEDING SECTIONS. PRIOR TO WELDING JOINTS, THE CONTRACTOR SHALL ENSURE THAT BOTH ENDS OF THE CASING SECTIONS BEING WELDED ARE SQUARE.
4. STEEL PIPE CASING WALL THICKNESS SHALL BE AS INDICATED. VERIFY CASING SIZES PRIOR TO ORDERING AND SIZING CASING INSULATORS.
5. CASING SPACERS SHALL BE RESTRAINED-TYPE BOLTED SPACERS AND SHALL HAVE A MAXIMUM SPACING AS SHOWN, OR AS RECOMMENDED BY MANUFACTURER, WHICHEVER IS CLOSER. PIPE CASING SPACERS SHALL BE AS MANUFACTURED BY PIPELINE SEAL AND INSULATOR, INC., ADVANCE PRODUCTS AND SYSTEMS, INC., OR APPROVED EQUAL.
6. CASING END SEALS FOR AERIAL OR EXPOSED ENDS SHALL BE SYNTHETIC NEOPRENE RUBBER PULL-ON TYPE END SEALS WITH STAINLESS STEEL BANDS AS MANUFACTURED BY THE ABOVE MANUFACTURERS, OR APPROVED EQUAL. CASING END SEALS FOR BURIED APPLICATIONS SHALL BE MASONRY BULKHEADS FOR CASINGS LARGER THAN 16" IN DIAMETER. CASINGS 16" DIAMETER AND SMALLER MAY USE SYNTHETIC NEOPRENE RUBBER SEALS OR MASONRY BULKHEADS.

MINIMUM STEEL CASING SIZES

CARRIER PIPE		CASING SPACER		STEEL CASING		
NOMINAL PIPE DIAMETER	PIPE O.D.	O.D. OVER SPACER RUNNERS	BAND WIDTH	MINIMUM CASING THICKNESS	CASING I.D.	MINIMUM CASING O.D.
4	4.8	9.2	4	0.25	11.5	12
6	6.9	11.3	6	0.25	13.5	14
8	9.05	13.45	8	0.25	15.5	16
10	11.1	15.5	10	0.25	17.5	18
12	13.2	18.6	12	0.25	23.5	24
14	15.3	20.7	14	0.25	23.5	24
16	17.4	22.8	16	0.3125	29.375	30
18	19.5	24.9	18	0.3125	29.375	30
20	21.6	27	20	0.3125	29.375	30
24	25.8	31.2	24	0.3125	35.375	36
30	32	37.4	30	0.5	41	42
36	38.3	43.7	36	0.5	47	48
42	44.5	49.9	42	0.5	53	54

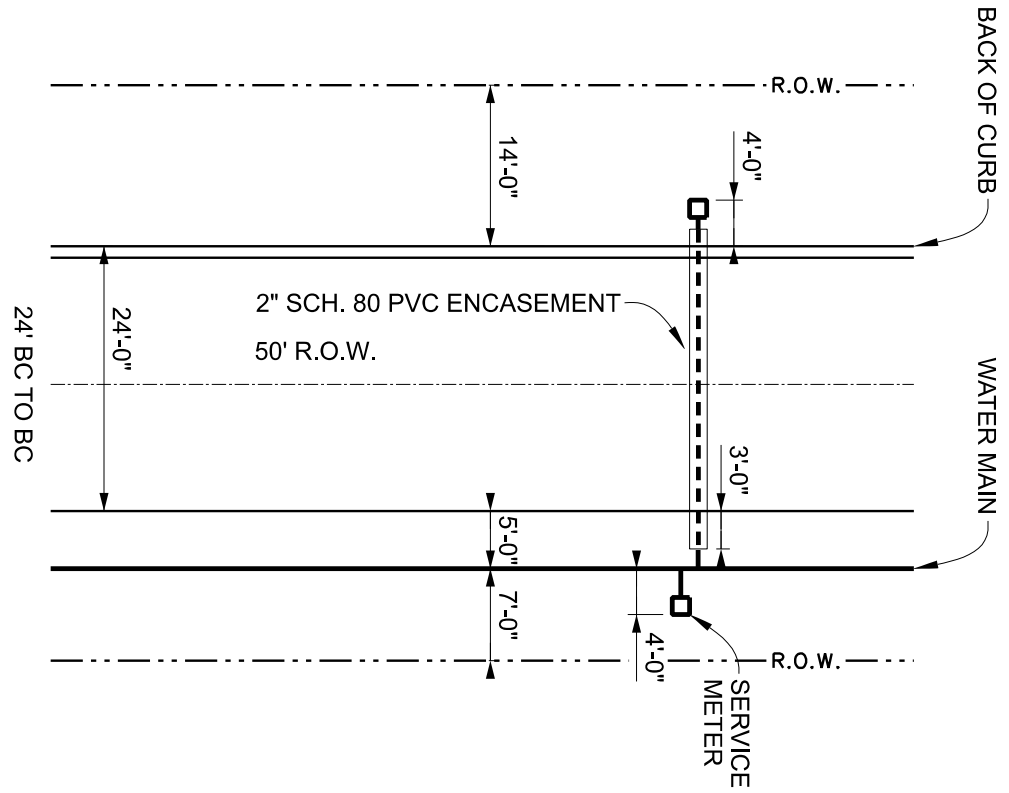
OPELIKA WATER

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

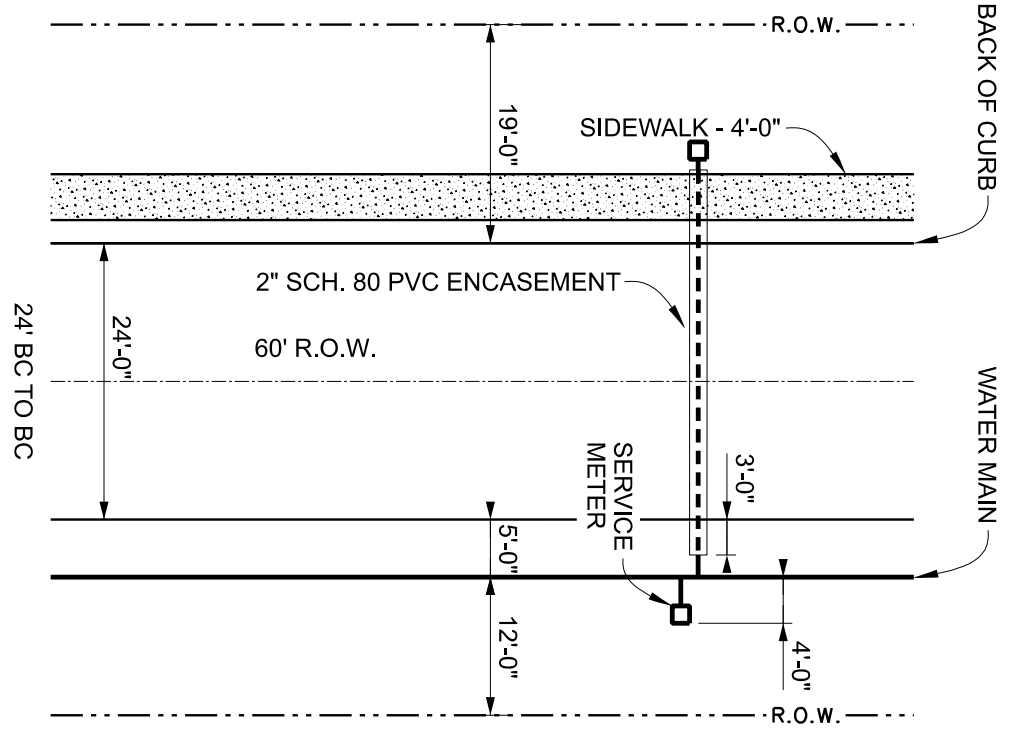
SHEET TITLE: PIPE CASING INSTALLATION
SHEET NO.: DT-11
PROJECT NO.: 2024-SD
SCALE: NO SCALE
DATE: JANUARY 2024

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DETAIL OF METER PLACEMENT
50' R.O.W.



DETAIL OF METER PLACEMENT
60' R.O.W. WITH 4' SIDEWALK

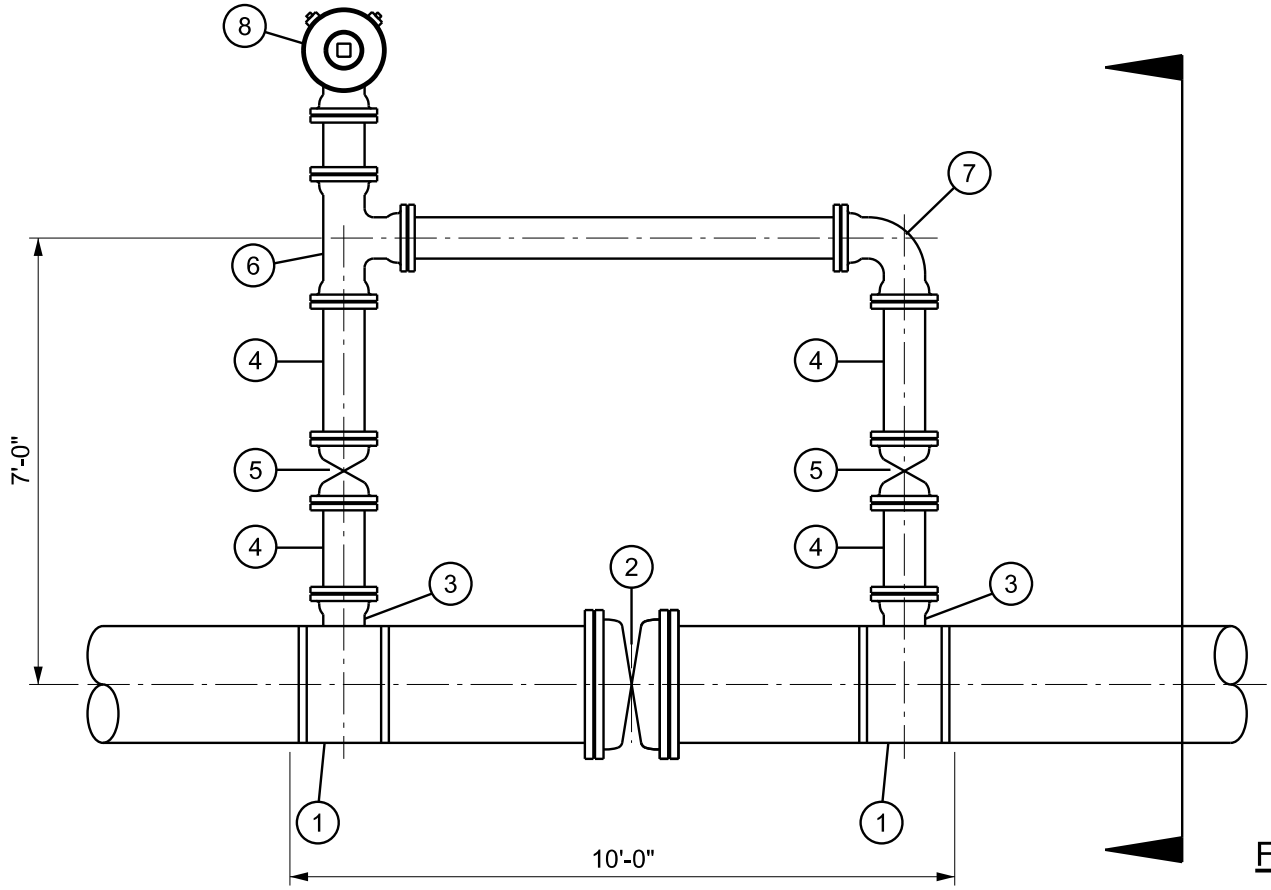


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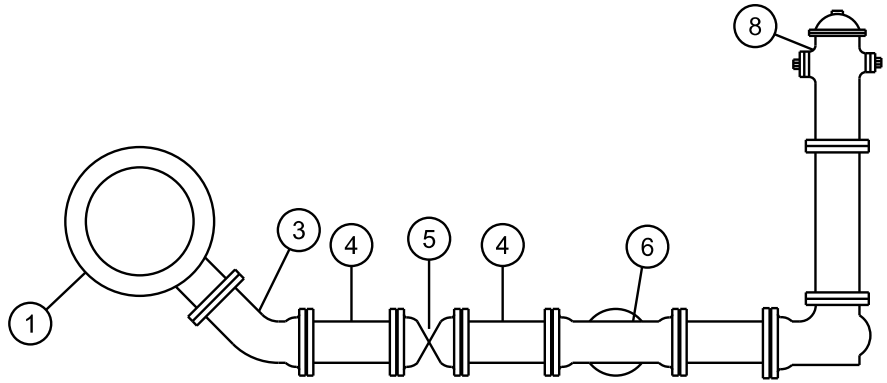
SHEET TITLE	TYPICAL METER PLACEMENT
SHEET NO.	DT-12
PROJECT NO.	2024-SD
SCALE	NO SCALE
DATE	JANUARY 2024

THE WATER WORKS BOARD OF
THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER



PLAN



SECTION

FITTINGS LIST

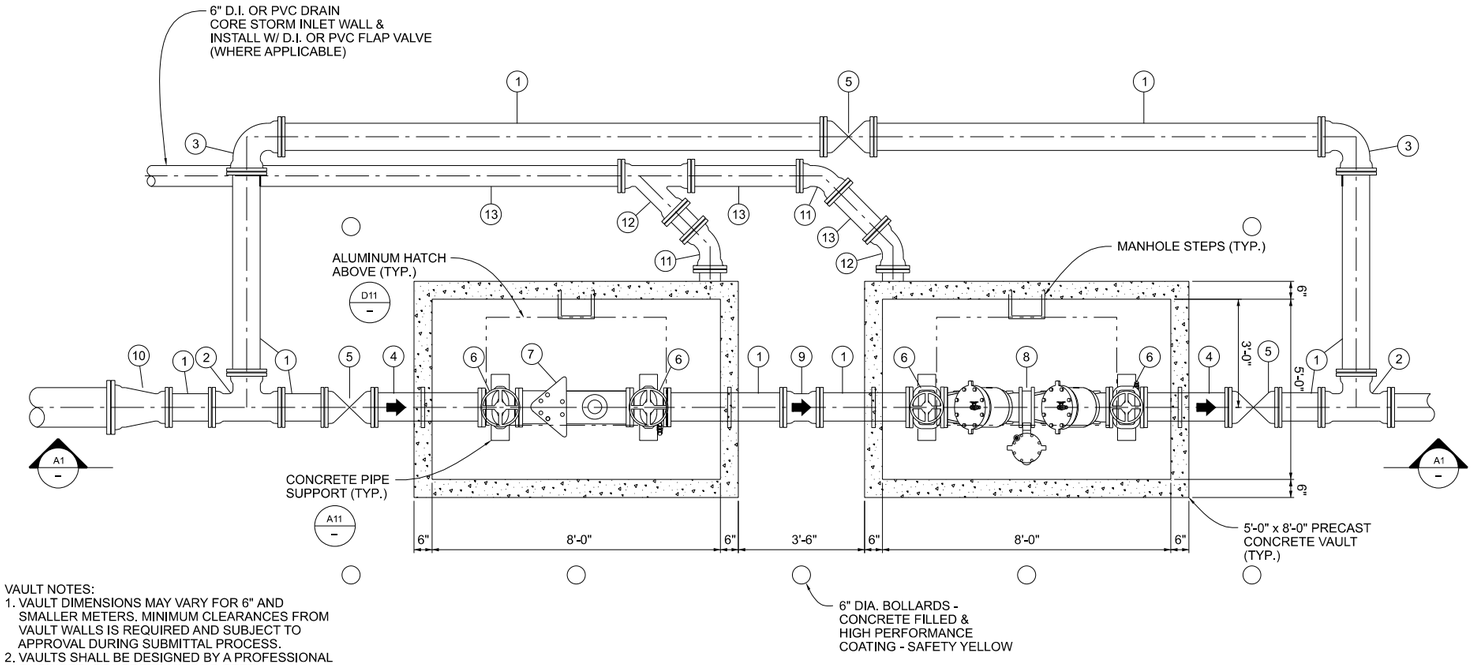
1. X"x6" D.I. TEE, RJ-RJ
2. X" BUTTERFLY VALVE, RJ-RJ, WITH EXTENSION AND VALVE BOX
3. 6" 45° BEND, PERJ-RJ
4. 6" DIA. PIPE NIPPLE, 2-0" LG.
5. 6" GATE VALVE, RJ-RJ, WITH EXTENSION, VALVE BOX, AND MJ FIELD LOKS
6. 6"x6"x6" TEE, ALL RJ, WITH MJ FIELD LOKS
7. 6" 90° BEND, RJ-RJ
8. FIRE HYDRANT ASSEMBLY

OPELIKA WATER

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

SHEET TITLE: BLOW OFF HYDRANT
SHEET NO.: DT-13
PROJECT NO.: 2024-SD
SCALE: NO SCALE
DATE: JANUARY 2024

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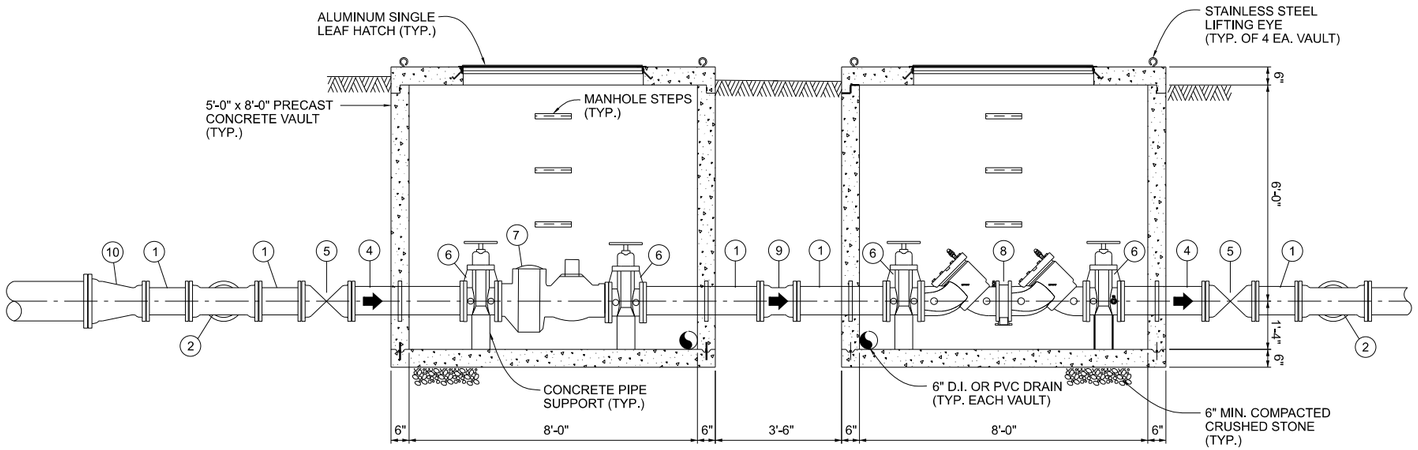
VAULT NOTES:
1. VAULT DIMENSIONS MAY VARY FOR 6" AND SMALLER METERS. MINIMUM CLEARANCES FROM VAULT WALLS IS REQUIRED AND SUBJECT TO APPROVAL DURING SUBMITTAL PROCESS.
2. VAULTS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER. CONCRETE MIX AND STEEL REINFORCEMENT DRAWINGS SHALL BE SUBMITTED FOR APPROVAL. CONNECTIONS AT RISERS AND BETWEEN TOP AND BOTTOM SECTIONS SHALL BE KEYED.

G1 | SECTIONAL PLAN | NO SCALE

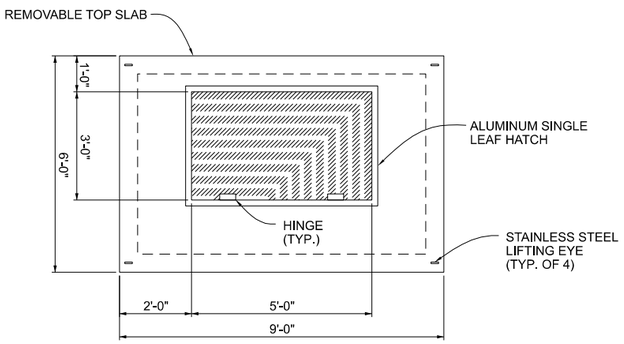
1. D.I. PIPE, RJ-RJ
2. D.I. TEE, ALL MJ
3. D.I. 90°BEND, MJ-MJ
4. D.I. WALL PIPE, FLG-MJ
5. D.I. RESILIENT SEAT GATE VALVE, MJ-MJ
6. D.I. RESILIENT SEAT GATE VALVE, NRS, FLG-FLG
7. SENSUS OMNI C2 OR F2 WATER METER
8. BACKFLOW PREVENTION DEVICE
9. D.I. SOLID SLEEVE, MJ-MJ
10. D.I. REDUCER, MJ-MJ (IF REQUIRED)
11. 6" D.I. (MJ-MJ) OR PVC 45° BEND
12. 6" D.I. (MJ-MJ) OR PVC WYE
13. 6" D.I. OR PVC DRAIN

NOTES:
1. ALL MECHANICAL JOINT BENDS, AND FITTINGS UNDER PRESSURE SHALL BE FURNISHED WITH MJ FIELD LOK GASKET AND GLAND OR ROMAC GRIP RING.

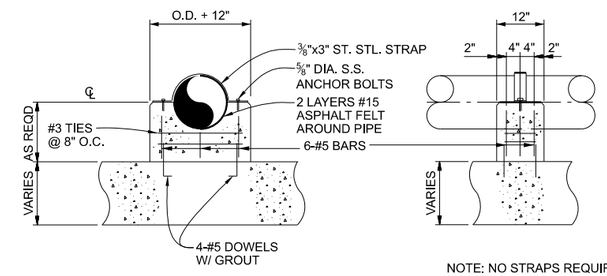
G11 | FITTINGS LIST



A1 | SECTION | NO SCALE



D11 | TYPICAL TOP PLAN | NO SCALE



NOTE: NO STRAPS REQUIRED AT TEES.

A11 | CONCRETE PIPE SUPPORT | NO SCALE

OPELIKA WATER

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

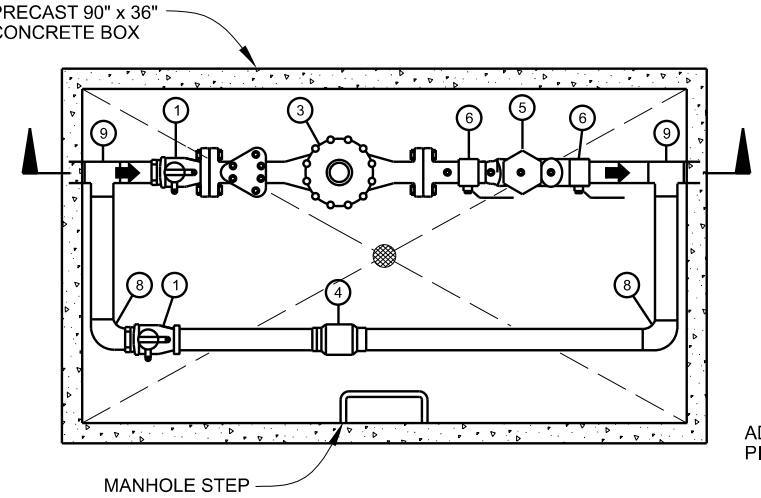
LARGE METER DETAIL

PROJECT NO. 2024-SD
SCALE NOT TO SCALE
DATE JANUARY 2024

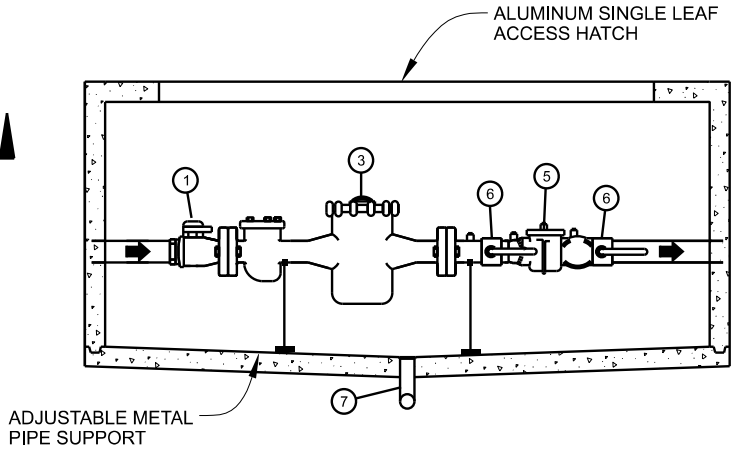
SHEET TITLE

SHEET NO. DT-14

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PLAN



SECTION

TYPICAL 1-1/2" & 2" SERVICE CONNECTION

NOTES: (FOR TYPICAL SERVICE CONNECTION)

1. PIPING TO MATCH METER SIZE UNLESS SPECIFICALLY STATED OTHERWISE.
2. 3" SIDE WALL OR FLOOR DRAIN TO BE TIED INTO A STORM DRAIN SYSTEM OR PIPED THROUGH CURBING AS GROUND SURFACE PERMITS.
   OPTION A: SUMP DRAIN - IS TO BE SAME DIMENSIONS AS THE METER VAULT ITSELF. (LxWxH)
   OPTION B: FRENCH DRAIN - LENGTH OF DRAIN TO BE NO LESS THAN THE WIDTH OF THE PIT MULTPLIED BY ITS LENGTH. (LxW) WIDTH AND HEIGHT IF DRAIN TRENCH BE 2' BY 2'. SLOPE OF DRAIN TO BE AWAY FROM BOX.
3. METER PIT TO BE LOCATED IN A NON TRAFFIC AREA.
4. SENSUS OMNI + R² W/ 520M TRANSMITTER (CONTRACTOR INSTALLED).
5. THIS DETAIL FOR DOMESTIC OR COMMERCIAL USE.
6. FLOOR SLOPE = 1/4 INCH PER FOOT.
7. HATCH SHALL BE HALLIDAY PRODUCTS W1S 30" X 70" ALUMINUM HATCH (OR APPROVED EQUAL). HATCH SHALL BE EQUIPPED WITH TRANSMITTER ANTENNA MOUNTING HOLE
8. DOUBLE CHECK BACKFLOW PREVENTER SHALL BE ZURN 950XLT.
9. SINGLE CHECK BACKFLOW PREVENTER SHALL BE WATTS LF600.
10. FOR CONNECTION TO WATER MAIN SEE STANDARD DETAIL DT-09.

FITTINGS LIST

1. CURB STOP
2. OMITTED
3. WATER METER AND STRAINER (SEE NOTE 4)
4. SINGLE CHECK BACK FLOW PREVENTOR (SEE NOTE 9)
5. DOUBLE CHECK BACK FLOW PREVENTOR (SEE NOTE 8)
6. TEST COCK
7. 3" PVC FLOOR DRAIN
8. 90° BEND, SWEAT OR PROPRESS
9. TEE, SWEAT OR PROPRESS
10. METER COUPLING, FORD CF35-66-NL

NOTE:

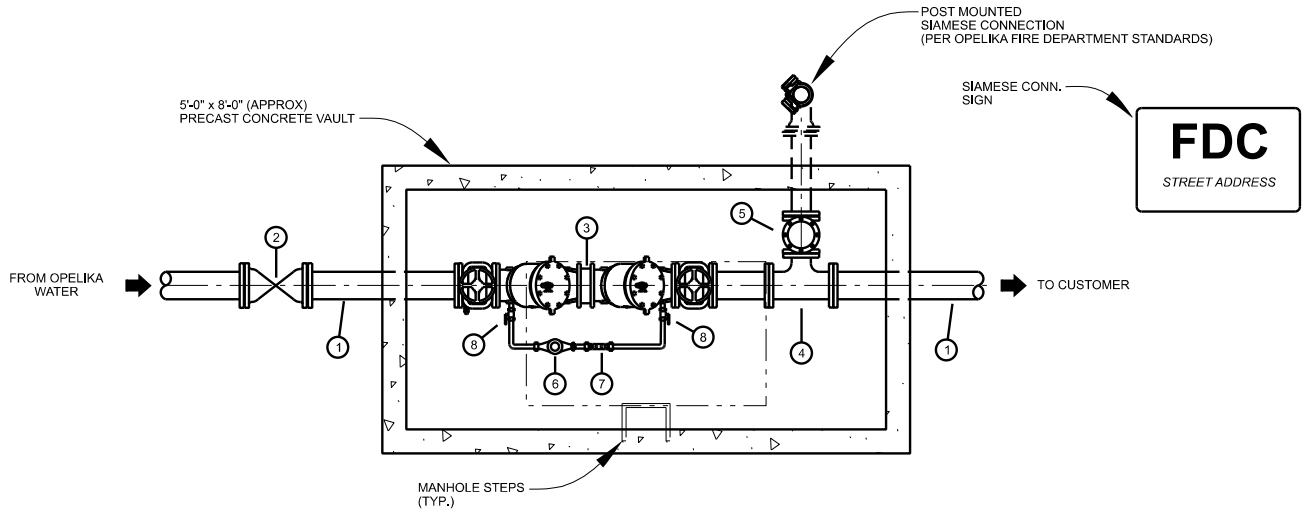
1. CONTRACTOR MAY SUBSTITUTE THREADED BRASS NIPPLES AND FITTINGS IN LIEU OF COPPER.
2. COPPER PIPE SHALL NOT BE ENCASED IN GROUT OR CONCRETE MIXTURE. COPPER SHALL ENTER VAULT THROUGH PVC CASING IN CONCRETE WALL AND BE SEALED INSIDE CASING WITH HIGH-QUALITY POLYURETHANE OR NEUTRAL CURE SILICONE SEALANT.

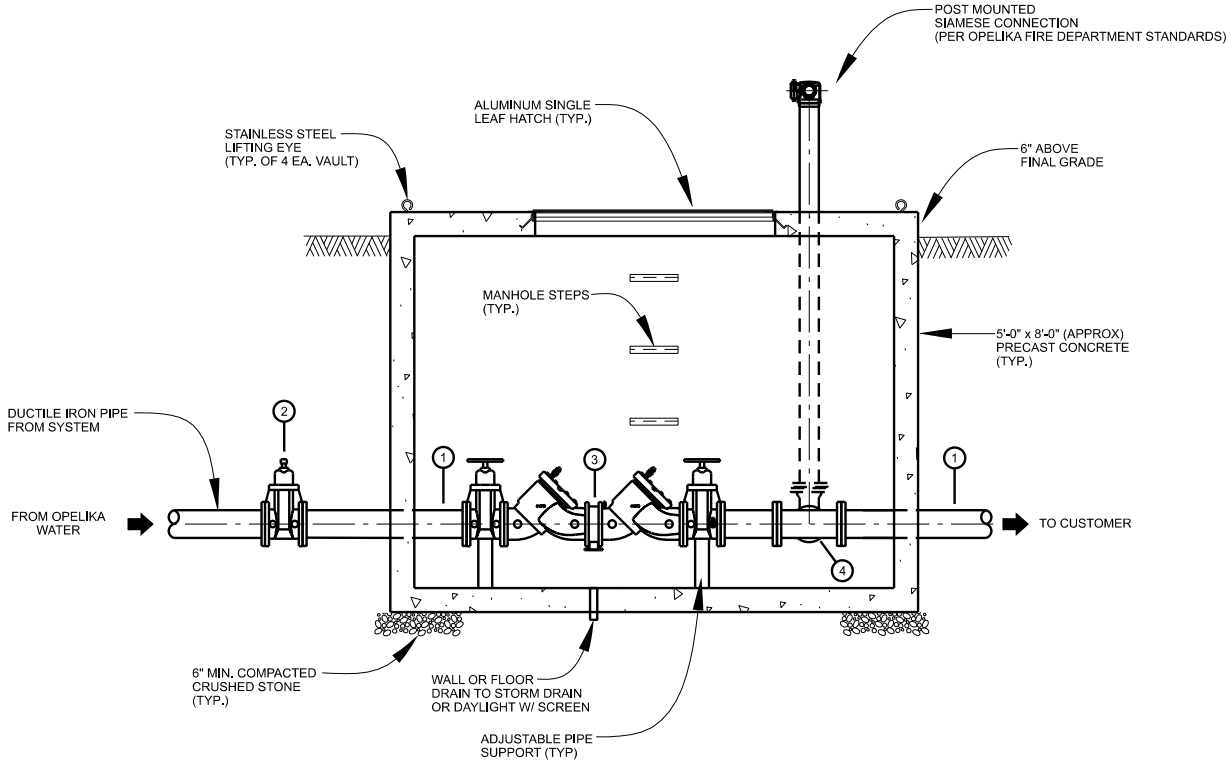
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OPELIKA WATER

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

SHEET TITLE: 1 1/2" & 2" METER VAULT
PROJECT NO.: 2024-SD
SCALE: NO SCALE
DATE: JANUARY 2024
SHEET NO.: DT-15





NOTE:

1. ALL MECHANICAL JOINT BENDS, AND FITTINGS UNDER PRESSURE SHALL BE FURNISHED WITH APPROVED DUCTILE IRON FOLLOWER GLAND. APPROVED PRODUCTS ARE U.S. PIPE MJ FIELD-LOK AND ROMAC GRIP RING. MEGA-LUGS ARE NOT ALLOWED ON PIPE AND FITTINGS 12-INCH OR SMALLER.
2. CONTRACTOR MAY NEED TO ADJUST VAULT SIZE DEPENDING ON PIPING SIZE AND / OR DETECTOR CHECK MAKE / MODEL. THE ABOVE LAYOUT IS BASED UPON 6-INCH PIPING AND A WATTS MODEL 709DCDA.
3. THE CONTRACTOR MAY BE REQUIRED TO PROVIDE A TRAFFIC RATED VAULT LID AND HATCH UNDER CERTAIN INSTALLATIONS. OPELIKA WATER WILL EVALUATE THE NEED FOR THESE ITEMS ON A CASE BY CASE BASIS.

FITTINGS LIST

1	D.I. PIPE, PE-FLG
2	D.I. RESILIENT SEAT GATE VALVE, MJ-MJ
3	WATTS 709DCDA OR AMES 3000SS W/ GATE VALVES
4	SIZE x 4" D.I. TEE, ALL-FLG
5	4" CHECK VALVE W/ BALL DRIP, FLG-FLG
6	5/8" x 3/4" SENSUS iPERL METER WITH M520 TRANSMITTER
7	TESTABLE DETECTOR CHECK
8	1/4 TURN ISOLATION VALVE

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SHEET TITLE
DOUBLE DETECTOR CHECK ASSY.

SHEET NO.
DT-16

PROJECT NO. 2024-SD

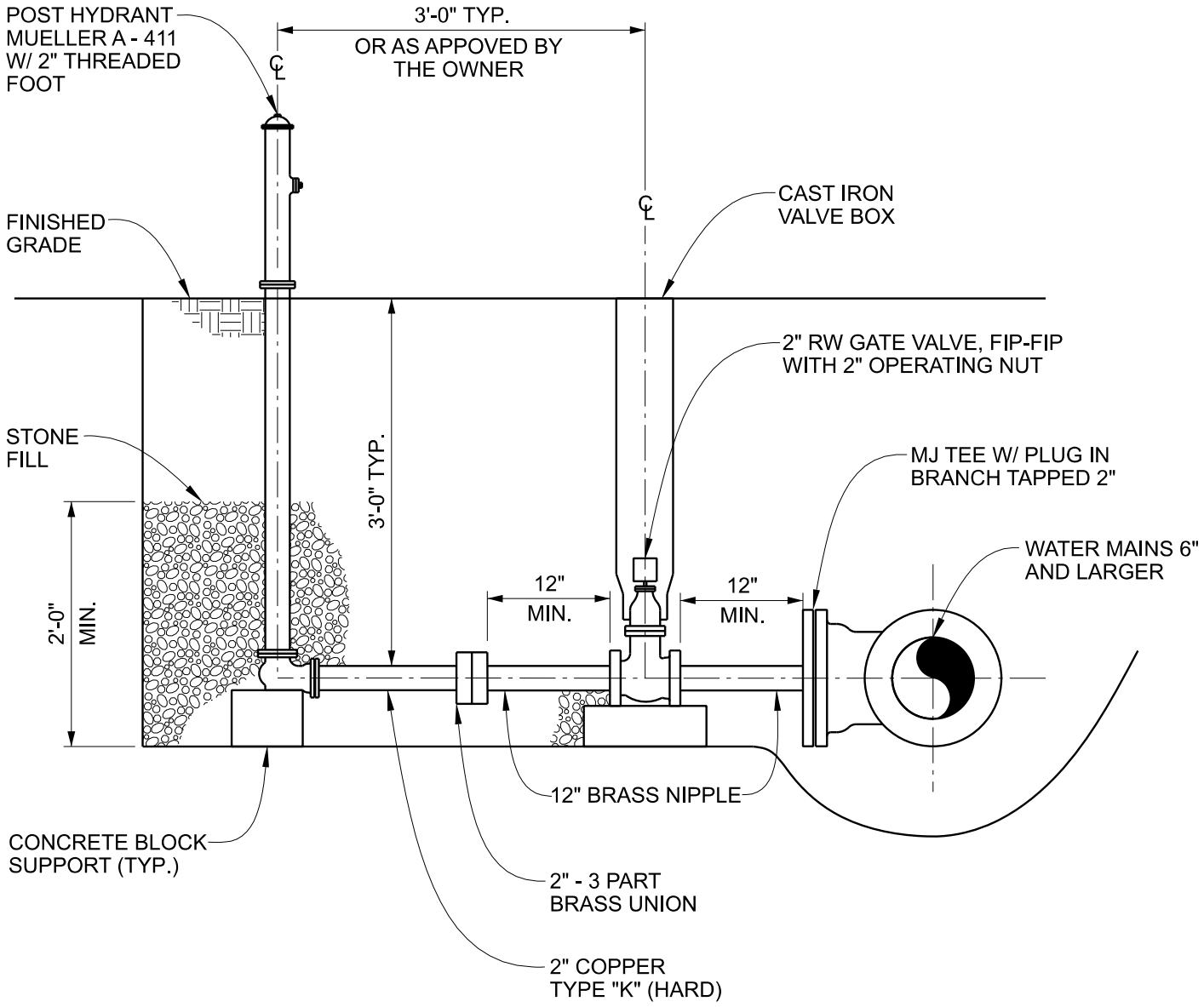
SCALE NOT TO SCALE

DATE JANUARY 2024

THE WATER WORKS BOARD OF
THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER

NOTE:
FOR 2-INCH WATER MAINS,OMIT MJ TEE AND ADD 2-INCH FITTINGS AS REQUIRED TO CONNECT TO GATE VALVE.



POST TYPE FLUSHING ASSEMBLY SECTION VIEW

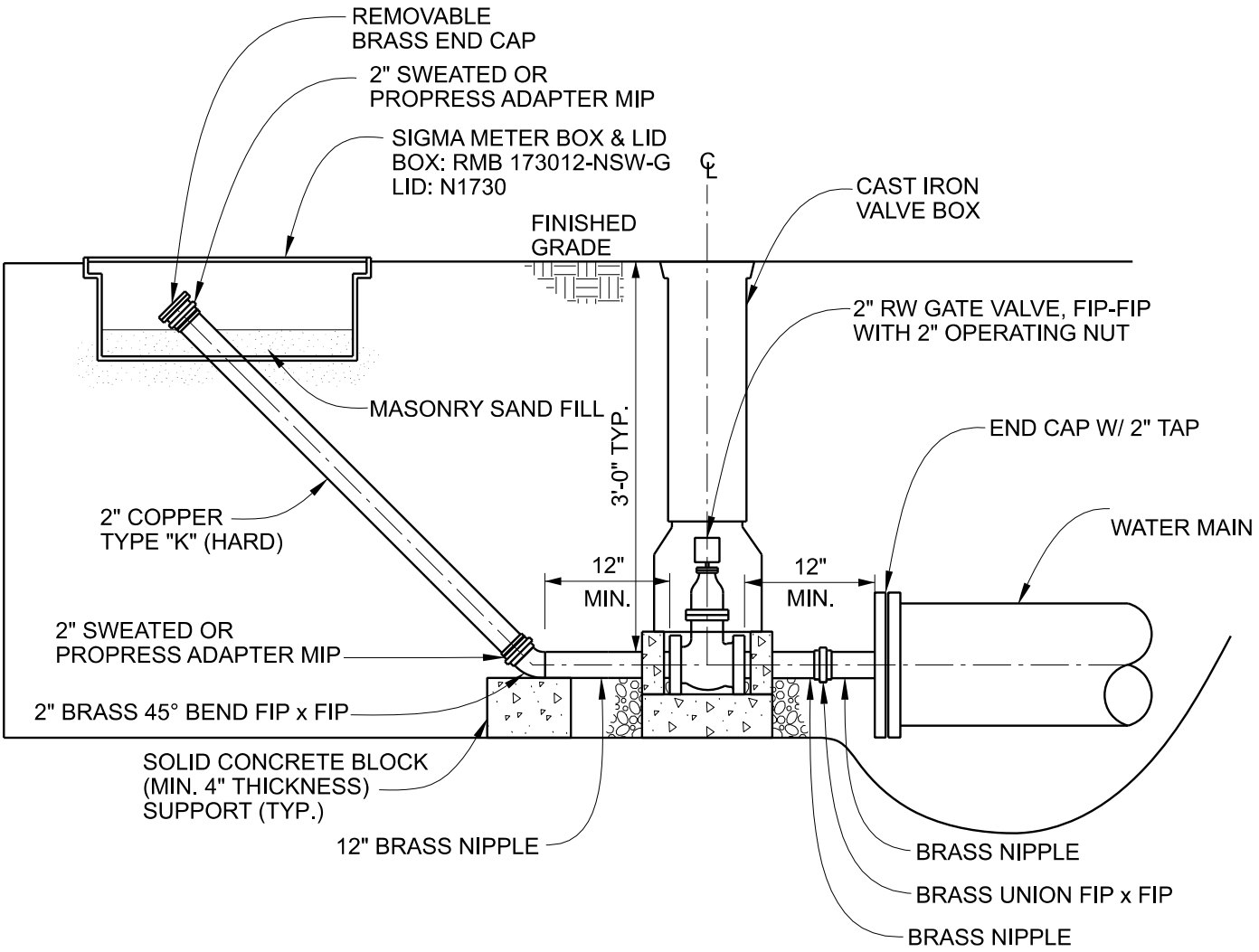
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SHEET TITLE	FLUSHING CONNECTION
SHEET NO.	DT-17
PROJECT NO.	2024-SD
SCALE	NOT TO SCALE
DATE	JANUARY 2024

THE WATER WORKS BOARD OF
THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER

1. FOR 2-INCH WATER MAINS,OMIT END CAP AND ADD 2-INCH FITTINGS AS REQUIRED TO CONNECT TO GATE VALVE.
2. CONCRETE BLOCKING MUST BE PROVIDED SO THAT THE VALVE BOX DOES NOT REST ON PIPING.



2" FLUSHING ASSEMBLY SECTION VIEW

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SHEET TITLE	2" FLUSHING CONNECTION
SHEET NO.	DT-18
PROJECT NO.	20007
SCALE	NO SCALE
DATE	5/30/2024

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER

Cybersecurity and Accessibility Requirements

Vendors responding to this solicitation must review and comply with the requirements contained in the attached Bid Appendix titled **"Cybersecurity Compliance – Digital Accessibility and Cybersecurity Requirements."** This appendix establishes minimum cybersecurity, digital accessibility, and identity assurance standards that apply to all technology or digital services provided to the City. Vendors shall submit all required documentation and certifications as outlined in the appendix. Failure to provide the required information may result in the proposal being deemed non-responsive.

Vendor Compliance Acknowledgment

By submitting a proposal, the Vendor acknowledges that the Appendix has been reviewed and that the proposed solution complies with the requirements described therein.

☐ Vendor has reviewed the **Cybersecurity and Accessibility Requirements Appendix.**

☐ Vendor will provide required documentation (VPAT/ACR, security documentation, authentication description, and accessibility testing documentation).

☐ Vendor certifies compliance with applicable accessibility and cybersecurity standards

Vendor Name: _____

Authorized Representative: _____

Title: _____

Signature: _____

Date: _____

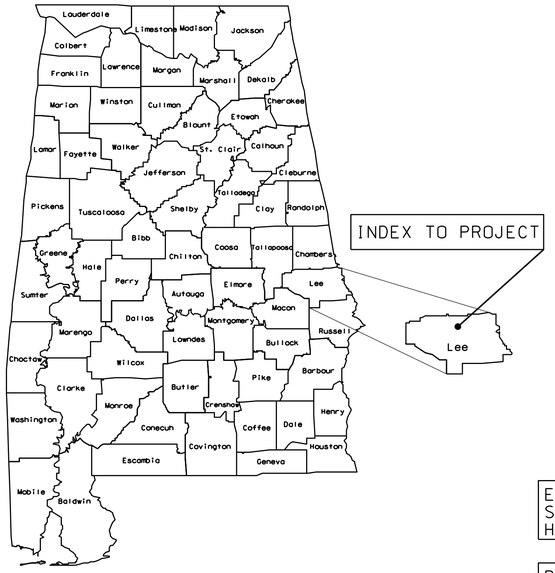
CITY OF OPELIKA

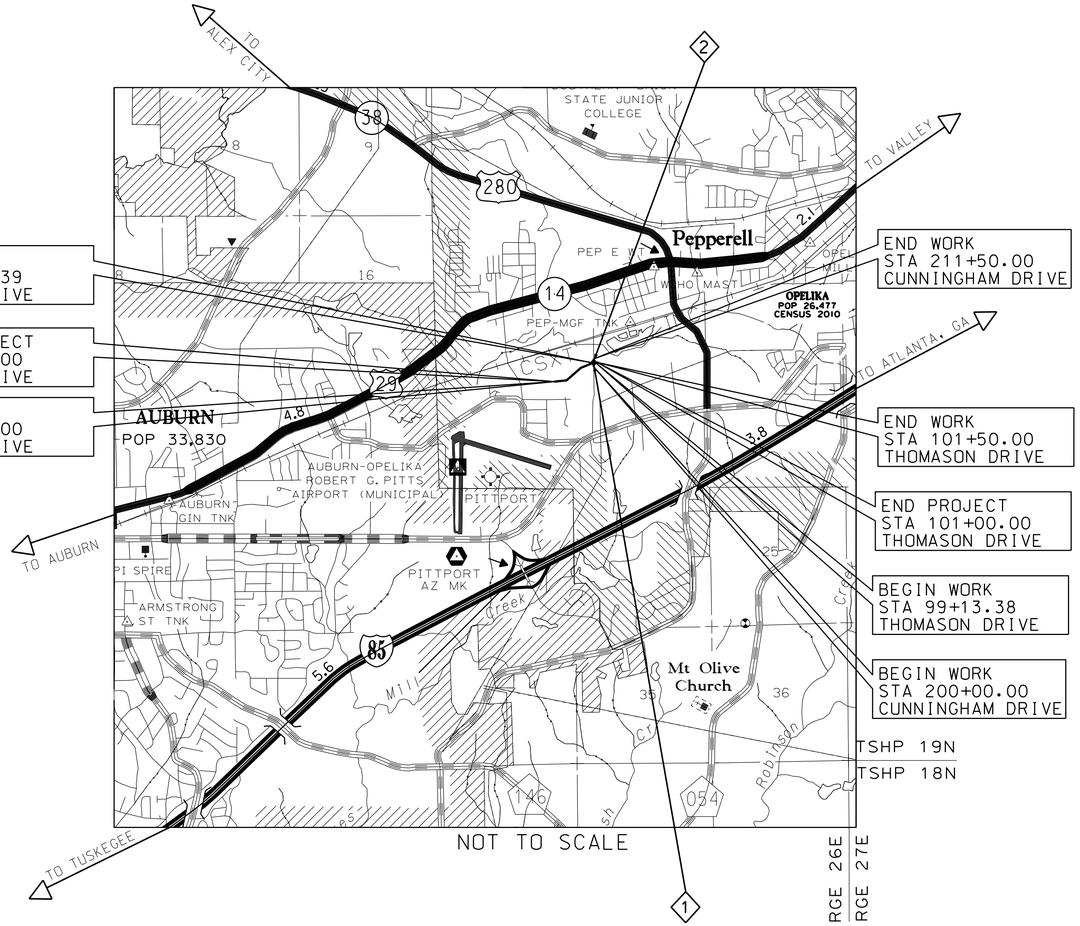
GRADE, DRAIN, BASE, & PAVE HI-PACK DRIVE
THE CITY OF OPELIKA
LEE COUNTY

STATE	REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO	LAST SHEET NO
AL	R071321196	2026	1	110

Design Designation	HI-PACK	CUNNINGHAM
ADT (2025)	XX	4722
ADT (2035)	XX	5757
K		
D		
TDHV		
TADT	2.8%	2.8%
V (Design Speed)	35 MPH	45 MPH
Min Stopping Sight Dist	250 FT	360 FT

THESE PLANS HAVE BEEN PREPARED TO CONFORM WITH THE ALABAMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2022 EDITION.





Existing Bridge
NONE

Required Bridge
NONE

Exceptions

1. STA 201+29.27 ℄ CUNNINGHAM (SOUTH APPROACH)
   STA 303+00.00 ℄ CIRCULAR TIE
2. STA 210+00.00 ℄ CUNNINGHAM (NORTH APPROACH)
   STA 300+96.00 ℄ CIRCULAR TIE

	HI-PACK FEET	HI-PACK MILES	CUNNINGHAM FEET	CUNNINGHAM MILES	THOMASON FEET	THOMASON MILES	CIRCULAR BASELINE FEET	CIRCULAR BASELINE MILES	TOTAL FEET	TOTAL MILES
TOTAL STATIONING OF PROJECT	1629.39		279.97		186.62		408.41		2504.39	
EQUATIONS & EXCEPTIONS	0.00		0.00		0.00		0.00		0.00	
NET LENGTH OF PROJECT	1629.39	0.309	279.97	0.053	186.62	0.035	408.41	0.077	2504.39	0.474
NET LENGTH OF BRIDGES	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
NET LENGTH OF ROADWAYS	1629.39	0.309	279.97	0.053	186.62	0.035	408.41	0.077	2504.39	0.474

APPROVED BY:

2/6/2026

OPELIKA CITY ENGINEER — Date

ALABAMA LICENSED No. 50232 PROFESSIONAL ENGINEER TIMOTHY JACK KELLEY 10/27/2025

PREPARED BY: THREE NOTCH GROUP

INDEX TO SHEETS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	1A

1	TITLE
1A	INDEX TO SHEETS
1B	INDEX TO SPECIAL & STANDARD HIGHWAY DRAWINGS
1C	PLANS LEGEND SHEET
1D	PLANS LEGEND SHEET ABBREVIATIONS
1E-1F	GEOMETRIC LAYOUT
2-2F	TYPICAL SECTIONS
2G	OMITTED
2H	SLOPE PAVED ISLAND DETAILS
2-I	SPECIAL PROJECT DETAILS
2J	PROJECT NOTES
2K	GENERAL TRAFFIC CONTROL PLAN NOTES
3-3A	SUMMARY OF QUANTITIES
3B-3E	SUMMARY OF QUANTITIES BOX SHEETS
4	PLAN & PROFILE - HI-PACK DRIVE
5	PLAN & PROFILE - HI-PACK DRIVE, CUNNINGHAM DRIVE & THOMASON DRIVE
6	PROFILE SHEET
7	CURB RETURN PLAN & PROFILE
8	PAVING LAYOUT
9	SIGNING & STRIPING LAYOUT
10-11	OMITTED
12	UTILITY LAYOUT
13-13A	UTILITY DETAILS
14-29	OMITTED
30	EROSION AND SEDIMENT CONTROL PLAN LEGEND
31	EROSION & SEDIMENT CONTROL PLAN - INITIAL PHASE
32	OMITTED
33	EROSION & SEDIMENT CONTROL PLAN - INTERMEDIATE PHASE
34	OMITTED
35	EROSION & SEDIMENT CONTROL PLAN - FINAL PHASE
36-49	OMITTED
50	TRAFFIC CONTROL PLAN SUMMARY
51-54	TEMPORARY TRAFFIC CONTROL DETAILS
55	TRAFFIC CONTROL PLAN SHEET - PHASE III
56	TRAFFIC CONTROL PLAN - PHASE III DETOUR
57	TRAFFIC CONTROL PLAN SHEET - PHASE IV
58	TRAFFIC CONTROL PLAN - PHASE IV DETOUR
59	OMITTED
60-63	DRAINAGE CROSS SECTIONS
64	DRAINAGE PROFILE
65-79	OMITTED
80-88	CROSS SECTIONS - HI-PACK DRIVE
89-99	OMITTED
100-101	CROSS SECTIONS - CUNNINGHAM DRIVE
102-104	OMITTED
105	CROSS SECTIONS - THOMASON DRIVE
106	CROSS SECTIONS - CIRCULAR BASELINE
107-109	OMITTED
110	EARTHWORK SUMMARY

PLAN SUBMITTAL		NOT TO SCALE	SHEET TITLE	ROUTE
FINAL	THREE NOTCH GROUP		INDEX TO SHEETS	HI-PACK DRIVE

INDEX TO SPECIAL AND STANDARD HIGHWAY DRAWINGS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	1B

THE FOLLOWING ARE SPECIAL OR STANDARD DRAWINGS CONTAINED IN THE ALABAMA DEPARTMENT OF TRANSPORTATION SPECIAL & STANDARD HIGHWAY DRAWINGS BOOK (US CUSTOMARY UNITS OF MEASUREMENT) DATED 2025 WHICH APPLY TO THIS PROJECT:

INDEX NO.	DRAWING NO.		DESCRIPTION
53001	HEP-1		HYDRAULICALLY EQUIVALENT ROUND PIPE (STORM SEWER)
53004	RPC-530	(SHEET 1 OF 3)	BEDDING AND FILL HEIGHTS FOR ALL ROADWAY PIPE CULVERTS (RCP AND CMP)
53005	RPC-530	(SHEET 2 OF 3)	BEDDING AND FILL HEIGHTS FOR ALL ROADWAY PIPE CULVERTS (CMP AND RCP)
53006	RPC-530	(SHEET 3 OF 3)	BEDDING AND FILL HEIGHTS FOR ALL ROADWAY PIPE CULVERTS (H.D.P.E. PIPE)
60201	M-602		DETAILS OF MONUMENTS TO BE USED FOR REFERENCE OF CARDINAL POINTS OF HIGHWAY R.O.W. LINE AND LAND SURVEY CORNERS
61801	SW-618	(SHEET 1 OF 4)	CURB RAMP DETAIL CALLOUTS, GENERAL NOTES FOR CURB RAMPS & SIDEWALKS, AND DETAILS
61802	SW-618	(SHEET 2 OF 4)	CORNER CURB RAMPS
61804	SW-618	(SHEET 4 OF 4)	SIDEWALKS & CURB RAMPS AT DRIVEWAYS, RAILROAD, MEDIAN, & ISLAND CROSSINGS
61901	FE-619	(SHEET 1 OF 2)	DETAILS OF CONCRETE FLARED END SECTION W/ GRATE FOR CONCRETE AND METAL PIPE
61902	FE-619	(SHEET 2 OF 2)	DETAILS OF CONCRETE FLARED END SECTION W/ GRATE FOR CONCRETE AND METAL PIPE
61909	HW-614-B	(SHEET 1 OF 2)	SLOPE PAVED HEADWALL DETAILS FOR REINFORCED CONCRETE AND CORRUGATED METAL ROADWAY PIPE
61910	HW-614-B	(SHEET 2 OF 2)	SLOPE PAVED HEADWALL DETAILS FOR REINFORCED CONCRETE AND CORRUGATED METAL ROADWAY PIPE
61913	HW-614-SP		CONCRETE SLOPE PAVED HEADWALL AND GRATE FOR SIDEDRAIN PIPE
62133	I-621-S		REINFORCED CONCRETE STORM SEWER INLET TYPES S3 AND S4
62137	I-621-S(PC)	(SHEET 1 OF 3)	PRECAST CONCRETE STORM SEWER INLET TYPES S1 AND S2
62138	I-621-S(PC)	(SHEET 2 OF 3)	PRECAST CONCRETE STORM SEWER INLET TYPES S1 AND S2
62139	I-621-S(PC)	(SHEET 3 OF 3)	PRECAST CONCRETE STORM SEWER INLET TYPES S1 AND S2
62160	JB-620-B		DETAILS OF JUNCTION BOX TYPE - 1 FOR 15" - 60" PIPE (0 - 10' FILL HEIGHT)
62163	JB-621-P(PC)	(SHEET 1 OF 2)	DETAILS OF PRECAST ROUND JUNCTION BOX TYPES - 1P & 2P
62164	JB-621-P(PC)	(SHEET 2 OF 2)	DETAILS OF RECTANGULAR PRECAST JUNCTION BOX TYPES - 1P & 2P
62180	MH-621-1		MANHOLE MODIFICATION DETAILS FOR INCREASING OR REDUCING HEIGHTS OF EXISTING MANHOLES
62301	623-N SPEC		DETAILS OF MEDIAN OPENING AND SAFETY GORES AT TRAFFIC CHANNEL ISLANDS
62307	623-XY		DETAILS OF CONCRETE CURBS AND CONCRETE CURB & GUTTER COMBINATIONS, SLOPING AND VERTICAL TYPES
65401	SS-654		SOD TERRACE OUTLETS AND SOD FLUMES
65402	SS-654-1		SOD TERRACE OUTLETS AND SOD FLUMES
65901	ESC-509		DETAILS OF ROLLED AND HYDRAULIC EROSION CONTROL PRODUCT INSTALLATION
66001	RP-660		DETAILS FOR PLANTING AND STAKING
66501	ESC-100-1		BEST MANAGEMENT PRACTICE REFERENCE MATRIX
66502	ESC-100-2		BEST MANAGEMENT PRACTICE REFERENCE MATRIX
66505	ESC-200-1		TYPICAL TEMPORARY EROSION / SEDIMENT CONTROL APPLICATIONS
66506	ESC-200-2		DETAILS OF TEMPORARY SLOPE DRAIN, BERMS, AND ENERGY DISSIPATOR
66508	ESC-200-4		DETAILS OF SILT FENCE INSTALLATION
66519	ESC-300-8		DETAILS OF SILT FENCE DITCH CHECKS
66522	ESC-400-1		INLET PROTECTION TYPICAL APPLICATIONS AND DETAILS
66523	ESC-400-2		INLET PROTECTION DETAILS FOR COARSE AGGREGATE ON GRADES AND SAGS
66524	ESC-400-3		INLET PROTECTION DETAILS OF WATTLES
66525	ESC-400-4		INLET PROTECTION DETAILS OF SILT FENCE
66526	ESC-400-5		INLET PROTECTION DETAILS OF SAND BAGS
66532	ESC-502		STABILIZED CONSTRUCTION ENTRANCE
68001	GN-2 NOTES		STANDARD DESIGN NOTES FOR PLAN ASSEMBLIES
68004	TO-107		DETAILS OF INTERSECTIONS AND TURNOUTS

INDEX NO.	DRAWING NO.		DESCRIPTION
68016	SSEC-1	(SHEET 1 OF 14)	STANDARD SUPERELEVATION OF CURVES
68017	SSEC-1	(SHEET 2 OF 14)	STANDARD SUPERELEVATION OF CURVES
68018	SSEC-1	(SHEET 3 OF 14)	STANDARD SUPERELEVATION OF CURVES
68019	SSEC-1	(SHEET 4 OF 14)	STANDARD SUPERELEVATION OF CURVES
68020	SSEC-1	(SHEET 5 OF 14)	STANDARD SUPERELEVATION OF CURVES
68021	SSEC-1	(SHEET 6 OF 14)	STANDARD SUPERELEVATION OF CURVES
68022	SSEC-1	(SHEET 7 OF 14)	STANDARD SUPERELEVATION OF CURVES
68023	SSEC-1	(SHEET 8 OF 14)	STANDARD SUPERELEVATION OF CURVES
68024	SSEC-1	(SHEET 9 OF 14)	STANDARD SUPERELEVATION OF CURVES
68025	SSEC-1	(SHEET 10 OF 14)	STANDARD SUPERELEVATION OF CURVES
68026	SSEC-1	(SHEET 11 OF 14)	STANDARD SUPERELEVATION OF CURVES
68027	SSEC-1	(SHEET 12 OF 14)	STANDARD SUPERELEVATION OF CURVES
68028	SSEC-1	(SHEET 13 OF 14)	STANDARD SUPERELEVATION OF CURVES
68029	SSEC-1	(SHEET 14 OF 14)	STANDARD SUPERELEVATION OF CURVES
70101	PS-701-6		DETAILS OF TRAFFIC STRIPING FOR 2 LANE HIGHWAYS
70104	197-NPL		DETAILS NO PASSING LINES FOR TWO LANE, TWO DIRECTION ROADWAY
70110	IPS-701-12		DETAILS OF TWO-WAY TRAFFIC STRIPE MARKINGS FOR THREE LANE TRAFFIC
70301	TCM-703	(SHEET 1 OF 2)	PAVEMENT LEGENDS AND MARKINGS
70302	TCM-703	(SHEET 2 OF 2)	PAVEMENT LEGENDS AND MARKINGS
70308	CW-703		TYPICAL CROSSWALK LAYOUTS AND DETAILS
70311	SC-703		TYPICAL SCHOOL ZONE CROSSING PROTECTION SIGNING AND MARKINGS
70501	PM-705-1		DETAILS OF PAVEMENT MARKERS CLASS A, A-H, AND B
70504	PM-705-2		DETAILS SHOWING APPLICATION OF PAVEMENT MARKERS
70507	PM-705-3	(SHEET 1 OF 3)	DETAILS OF RAISED PAVEMENTS MARKERS, MARKINGS, AND STRIPE AT RAMPS, RAMP GORES, AND MAINLINE
70508	PM-705-3	(SHEET 2 OF 3)	DETAILS OF RAISED PAVEMENTS MARKERS, MARKINGS, AND STRIPE AT RAMPS, RAMP GORES, AND MAINLINE
70509	PM-705-3	(SHEET 3 OF 3)	DETAILS OF RAISED PAVEMENTS MARKERS, MARKINGS, AND STRIPE AT RAMPS, RAMP GORES, AND MAINLINE
70511	PM-705-6		DETAILS SHOWING APPLICATION OF PAVEMENT MARKERS FOR 5 LANE ROADWAYS
71001	IHS-710-1	(SHEET 1 OF 2)	WIND VELOCITY CHART FOR ROADSIDE SIGNS
71002	IHS-710-1	(SHEET 2 OF 2)	DESIGN CHARTS FOR BEAM SIGN SUPPORTS AND FOOTINGS
71017	IHS-710-12		DETAILS OF ROADWAY SIGN POST (SMALL CHANNEL AND TUBULAR SECTION)
71020	IHS-710-13		HIGHWAY SIGN MOUNTING FOR STANDARD SIGNS ON LIGHT STANDARDS
71023	IHS-710-14		HIGHWAY SIGN MOUNTING FOR STANDARD SIGNS
71026	IHS-710-18		TYPICAL MOUNTING OF STANDARD ASSEMBLIES ON PIPE OR BEAM POST
71032	IHS-710-21		DETAILS FOR LOCATION AND MOUNTING OF STANDARD FLAT PANEL SIGNS ON U-CHANNEL AND TUBULAR POSTS
71041	SL-710		TYPICAL STOP AND YIELD SIGN LOCATIONS
71050	SHS-0	(SHEET 1 OF 4)	STANDARD HIGHWAY SIGNS INDEX
71051	SHS-0	(SHEET 2 OF 4)	STANDARD HIGHWAY SIGNS INDEX
71052	SHS-0	(SHEET 3 OF 4)	STANDARD HIGHWAY SIGNS INDEX
71053	SHS-0	(SHEET 4 OF 4)	STANDARD HIGHWAY SIGNS INDEX
71060	SHS-1		STANDARD HIGHWAY SIGNS
71062	SHS-3		STANDARD HIGHWAY SIGNS
71075	SHS-13		STANDARD HIGHWAY SIGNS
74201	PCMS-710	(SHEET 1 OF 3)	DETAILS OF PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)
74202	PCMS-710	(SHEET 2 OF 3)	DETAILS OF PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)
74203	PCMS-710	(SHEET 3 OF 3)	DETAILS OF PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)

PLAN SUBMITTAL		NOT TO SCALE	SHEET TITLE	ROUTE
FINAL	THREE NOTCH GROUP		INDEX TO SPECIAL AND STANDARD HIGHWAY DRAWINGS	HI-PACK DRIVE

PLANS LEGEND SHEET

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	1C

ROADWAY

CENTER LINE ..... 55+00

STATE BOUNDARY LINE .....

COUNTY BOUNDARY LINE .....

CITY OR TOWN LIMITS .....

SECTION LINES ..... SEC 22 / SEC 23

QUARTER-SECTION LINES .....

RANGE-TOWNSHIP LINES ..... R-17-E / R-18-E

PROPERTY LINES ..... PL

PRESENT ROW .....

ACQUIRED ROW .....

DENIED ACCESS .....

REQUIRED FENCE .....

CONSTRUCTION LIMITS ..... CONST LIM

CLEARING LIMITS .....

RAILROAD .....

EXISTING WOOD FENCE .....

EXISTING BARBED WIRE FENCE .....

EXISTING CHAIN LINK FENCE .....

EXISTING ELECTRIC FENCE .....

EXISTING HOG WIRE FENCE .....

TREES .....

WOODS LINE .....

MARSH .....

EXISTING DITCH .....

REQUIRED DITCH.....

GRAVEL ROAD .....

EXISTING GUARDRAIL .....

REQUIRED GUARDRAIL .....

SATELLITE DISH .....

TRAFFIC LIGHT .....

BENCH MARK .....

SURVEY POINT .....

ENVIRONMENTAL CLEARED LIMITS ..... ENV

EXISTING PIPE .....

REQUIRED PIPE (WITH PIPE END TREATMENT).....

REQUIRED PIPE END TREATMENT.....

EXISTING BOX CULVERT .....

REQUIRED BOX CULVERT .....

EXTENDED CULVERT .....

DROP INLET OR JUNCTION BOX (SEE PLANS DESCRIPTION).....

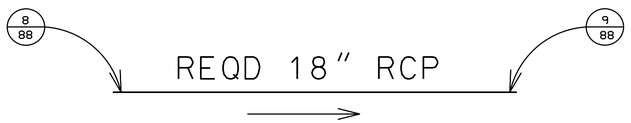
BRIDGE .....

PIPE CULVERT (ELEVATION VIEW) .... FL=410.25

BOX CULVERT (ELEVATION VIEW) ..... FL=420.55

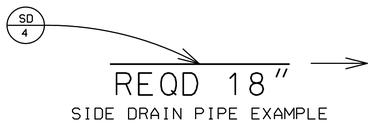
DRAINAGE STRUCTURE INDEX NUMBERS

DRAINAGE STRUCTURE WRITE-UPS ARE LOCATED ON THE DRAINAGE CROSS-SECTION SHEETS. STRUCTURES WITH WRITE-UPS ARE INDEXED AT EACH END, WITH NUMBERS ASSIGNED BY DIRECTION OF FLOW. THE NUMBER IN THE UPPER HALF OF THE CIRCLE (EXAMPLE 8 OR 9) IS THE DRAINAGE STRUCTURE INDEX NUMBER. THE NUMBER IN THE LOWER HALF (EXAMPLE 88) IS THE SHEET REFERENCE NUMBER.



ROADWAY PIPE EXAMPLE

ALL INFORMATION CONCERNING THE DISPOSITION OF SIDE DRAIN PIPE IS SHOWN ON THE SUMMARY OF QUANTITIES BOX SHEET. THE TOP LETTERS (SD) ARE FOR SIDE DRAIN AND THE BOTTOM NUMBER IS THE DRAINAGE STRUCTURE INDEX NUMBER.



SIDE DRAIN PIPE EXAMPLE

DIRECTION OF FLOW .....

UTILITIES

	EXISTING	PROPOSED
POWER POLE		
LIGHT POLE		
TELEPHONE POLE		
ANCHOR		
STUB (POWER)		
STUB (TELEPHONE)		
ELECTRIC DUCT	EL 4MTD	EL 4MTD
BURIED ELECTRIC CABLE	BE	BE
OVERHEAD ELECTRIC CABLE	OE	OE
ELECTRIC MANHOLE	E	E
TOWER		
TELEPHONE PEDESTAL	T	T
TELEPHONE DUCT	TP 4MTD	TP 4MTD
BURIED TELEPHONE CABLE	BTC	BTC
OVERHEAD TELEPHONE CABLE	OTC	OTC
TELEPHONE MANHOLE	TMH	TMH
SANITARY SEWER	S	SS
WATER LINE	W	W
WATER MAIN	WM	WM
WATER VALVE		
FIRE HYDRANT		
WATER METER		
GAS LINE	G	G
GAS MAIN	GM	GM
GAS VALVE		
GAS REGULATOR		
BURIED CABLE TELEVISION	BTV	BTV
OVERHEAD CABLE TELEVISION	OTV	OTV

EXISTING PAVEMENT (RETAIN).....

EXISTING PAVEMENT (REMOVE).....

EXISTING PAVEMENT (RETAIN AND OVERLAY)..

CONCRETE (EXISTING OR REQUIRED).....

EXISTING CONCRETE (REMOVE).....

RIP RAP (EXISTING OR REQUIRED).....

	PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
	FINAL			PLANS LEGEND SHEET	HI-PACK DRIVE

PLANS LEGEND SHEET ABBREVIATIONS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	1D

ABANDON(ED)	ABAN
ABUTMENT	ABUT
ACCELERATION	ACCL
ACQUIRED	ACQD
ACRE	AC
AHEAD	AH
ALABAMA	AL
ALABAMA DEPARTMENT OF TRANSPORTATION	ALDOT
ALTERNATE	ALT
APPROXIMATE(LY)	APP
AREA	A
ASPHALT	ASP
AVERAGE ANNUAL DAILY TRAFFIC	AADT
BACK	BK
BACK OF GUARDRAIL	BK-GR
BACKSIGHT	BS
BARBED WIRE	B/W
BARREL	BBL
BARRIER	BAR
BASE LINE	BL or ℄
BEARING	BRNG
BEGIN	BEG
BEGINNING OF PROJECT	BOP
BETWEEN	BTW
BILLBOARD	BBD
BENCH MARK	BM
BITUMINOUS	BIT
BITUMINOUS COATED CORRUGATED METAL PIPE	BCCMP
BOUNDARY	BDY
BRIDGE	BRG
BRIDGE END SLAB	BES
CAPACITY	CAPY
CAST IRON	CI
CAST IN PLACE	CIP
CATCH BASIN	CB
CENTER LINE	℄
CHAIN LINK	C/L
CLASS	CLS
CONCRETE	CONC
CONNECTION	CONN
CONSTRUCTION LIMITS	CONST LIM
CORNER	COR
CORRECTION	CORR
CORRUGATED IRON	CORI
CORRUGATED METAL	CM
CORRUGATED METAL PIPE	CMP
CORRUGATED PLASTIC PIPE	CPP
COUNTY	CO
COUNTY ROAD	CO-RD
CREEK	CK
CROSS SECTION	X-SECT
CROWN REMOVED	CR
CUBIC FEET	FT3 or CU FT
CUBIC FEET PER SECOND	CFS
CUBIC YARD	YD3 or CU YD
CUBIC METERS	M3
CULVERT	CULV
CULTIVATED	CULT
CURB FACE	CF
CURB AND GUTTER	C&G
CUT	C
CURVE TO SPIRAL	CS
DECELERATION	DECEL
DECLINATION	DECL
DEGREE OF CURVE	D
DENIED ACCESS	D/A
DEPARTURE	DEP
DIAMETER	DIA
DIRECTION	DIR
DISTANCE	DIST
DOUBLE	DBL
DOUBLE BARREL CULVERT	CD
DRAINAGE AREA	DA
DRIVE	DR
DROP INLET	DI
EACH	EA
EASEMENT	ESMT
EAST	E
EAST BOUND ROADWAY	EBR
EDGE OF PAVEMENT	EP
ELEVATION	EL or ELEV
END OF RETURN	ER
END ANCHOR	E/A
END OF PROJECT	EOP
EQUATION	EQ
EROSION CONTROL PRODUCTS	ECP
EXCAVATION	EXCAV
EXISTING	EX
EXPANSION	EXP
EXTENSION	EXT
EXTERNAL	E
EXTRA STRENGTH	EXT STR
FEET	FT
FILL	F
FILTER BLANKET	FLT BLNK
FINISHED GRADE	FG
FINISHED SURFACE	FS
FISCAL YEAR	FY
FIXED	FIX
FLAT BOTTOM	FB
FLOW LINE	FL or ℄
FORESIGHT OR FRONTSIGHT	FST
FRACTIONAL	FRAC
FULL SUPERELEVATION	FS
GALLON	GAL
GASOLINE PUMPS	GPP
GARAGE	GAR
GAUGE	GA
GIRDER	GDR
GOVERNMENT	GOV
GRASS	GRS
GRADE CHANGE	GC
GRADE POINT	GP
GRADE ROD	GRD
GRAVEL	GRV
GUARDRAIL	GR
HEADWALL	HDWL
HECTARE	HA
HIGH WATER MARK	HWM
HEIGHT	HT
HEIGHT OF INSTRUMENT	HI
HIGH WATER	HW
HIGHWAY	HWY
HOGWIRE	H/W
HORIZONTAL	HOR
HUB & TACK	H&T
HYDRANT	HYD
IMPACT ATTENUATOR	IA
IN ACCORDANCE WITH	I/A/W
IN PLACE	IN-PL
INCHES	IN
INCLUDING	INCL
INCORPORATED	INC
INSTRUMENT	INST
ISLAND	ISL
JOINT	JT
JUNCTION	JCT
JUNCTION BOX	JB
KILOMETER	KM
KILOMETER POST	KMP
KILOMETERS PER HOUR	KPH
LANE	LN
LATITUDE	LAT
LEFT	LT
LEFT AHEAD	LA
LEFT BACK	LB
LENGTH OF CURVE	L
LINK	LK
LIMIT	LIM
LINEAR	LIN
LINEAR FEET	LIN FT
LONGITUDE	LONG
MANHOLE	MH
MARKER	MRK
MAXIMUM	MAX
MEAN HIGH WATER	MHW
MEAN LOW WATER	MLW
MEASUREMENT	MEAS
MEDIAN	MED
METER	M
MERIDIAN	MER
MILE POST	MP
MILES	MI
MILES PER HOUR	MPH
MILLIMETER	MM
MINIMUM	MIN
MONUMENT	MON
MULTIPLE	MULT
NORMAL	NORM
NORMAL CROWN	NC
NORMAL CROWN SLOPE	NCS
NORTH	N
NORTH BOUND ROADWAY	NBR
NORTHING-EASTING	NE
NOT IN CONTRACT	NIC
NOT TO SCALE	NTS
NUMBER	NO
OBSERVATION	OBS
ON CENTER	OC
ORIGINAL	ORIG
OVERHEAD	OHD
OVERHAUL	OH
OUT TO OUT	OO
PAINT	PNT
PAVED	PVD
PAVED SHOULDER	PVD SH
PAVEMENT	PVMT
PIPE END TREATMENT	PET
PIPE ENTERING CULVERT	PEC
PLATE GIRDER	PL GDR
POINT OF BEGINNING	POB
POINT OF COMPOUND CURVE	PCC
POINT OF CURVATURE	PC
POINT OF REVERSE CURVATURE	PRC
POINT OF ENDING	POE
POINT OF INTERSECTION	PI
POINT OF TANGENCY	PT
POINT ON CURVE	POC
POUND	LB
PRESENT	PRES
PROFILE GRADE	PG
PROJECT	PROJ
PROJECT CONTROL	PJC
PROPERTY LINE	ℙ
PROPOSED	PROP
QUADRUPLE	QUAD
QUADRUPLE BARREL CULVERT	CQ
QUANTITY	QUANT
RADIUS	R
RAILROAD	RR
RANGE	RGE
RECORD	REC
REDUCTION	RED
REFERENCE	REF
REFERENCE POINT	RP
REFERENCE POINT FOR POINT ON TANGENT	RPPOT
REINFORCED	REINF
REINFORCED CONCRETE	RC
REINFORCED CONCRETE DECK GIRDER	RCDG
REINFORCED CONCRETE PIPE	RCP
REINFORCING STEEL	REINF STL
RELOCATE	RELC
REMOVE	REM
REQUIRED	REQD
RETAIN(ING)	RET
REVERSE CROWN	RC
REVISION	REV
RIGHT	RT
RIGHT AHEAD	RA
RIGHT BACK	RB
RIGHT OF WAY	ROW
RIGHT OF WAY MARKER	ROWM
RIVER	RIV
ROAD	RD
ROADWAY	RDWY
SECTION	SEC
SERVICE ROAD	SER RD
SHEET	SHT
SHEET PILING	SHT PILE
SHOULDER	SHLD
SIDE DRAIN	SD
SIDEWALK	SW
SIGHT DISTANCE	S DIST
SINGLE BARREL CULVERT	CS
SKEW	SK
SLOPE STAKE	SST
SOLID SODDING	SOL SOD
SOUTH	S
SOUTH BOUND ROADWAY	SBR
SPECIAL	SP
SPECIAL DITCH	SP-DT
SPECIAL DITCH LEFT	SDL
SPECIAL DITCH MEDIAN	SDM
SPECIAL DITCH RIGHT	SDR
SPECIAL DRAWING	SP-DWG
SPECIFICATIONS	SPEC
SPRING LINE	SL
SPIRAL TO CURVE	SC
SPIRAL POINT OF INTERSECTION	SPI
SPIRAL TO TANGENT	ST
SQUARE	SQ
SQUARE FEET	FT2 or SQ FT
SQUARE METERS	M2
SQUARE YARD	YD2 or SQ YD
STAKE	STK
STANDARD	STD
STANDARD DRAWING	STD-DWG
STANDARD STRENGTH	STD STR
STATION	STA
STATION & ELEVATION	S/E
STATION & OFFSET	SO
STOPPING SIGHT DISTANCE	SSD
STREET	ST
STRUCTURE	STR
SUB-GRADE	SG
SUPERELEVATION	SE,se or e
SURVEY	SRV
SYMMETRICAL	SYM
TANGENT	TAN
TANGENT LENGTH (CURVE DATA)	T
TANGENT TO SPIRAL	TS
TEMPORARY	TEMP
TEMPORARY BENCH MARK	TBM
THROAT	TH
TOWNSHIP	TSHP
TRIPLE	TR
TRIPLE BARREL CULVERT	CT
TURN OUT	TO
TURNING POINT	TP
TYPE	TY
UNIT	U
UNKNOWN	UNK
UNPAVED	UNPVD
VALLEY GUTTER	VG
VARIABLE	VAR
VERTICAL	VERT
VERTICAL CURVE	VC
VERTICAL POINT OF CURVATURE	PVC
VERTICAL POINT OF INTERSECTION	PVI
VERTICAL POINT OF TANGENCY	PVT
VITRIFIED	VIT
VOLUME	VOL
WEST	W
WEST BOUND ROADWAY	WBR
WING WALL	WW
WITNESS CORNER	WC
WOOD	WD
WORKING POINT	WP
WOVEN WIRE	W/W
YARD	YD

STRUCTURES

NUMBER OF STORIES	1, 2, 3, 4
FRAME	FR
BUILDING	BLDG
BLOCK	BLK
BRICK	BR
STUCCO	STU
METAL	MET
RESIDENCE	RES
BUSINESS	BUS
WAREHOUSE	WHSE
CHICKEN HOUSE	CH HSE
CHURCH	CH
SCHOOL	SCH
DOUBLE WIDE MOBILE HOME	DW MH
MOBILE HOME	MH

UTILITIES

ANCHOR WIRE	AW
BURIED ELECTRIC	BE
BURIED FIBER OPTIC	BFO
BURIED TELEPHONE CABLE	BTC
BURIED CABLE TELEVISION	BTV
CAST IRON	CI
CIRCUIT	CKT
DUCTILE IRON	DUC IRON
EASEMENT	ESMT
FIBER OPTIC	FO
FIRE HYDRANT	FH
FORCED MAIN (SANITARY SEWER)	FM
GAS MAIN	GM
GAS METER	GMET
GAS VALVE	GV
GUY WIRE	GUY
HIGH PRESSURE	HP
KILOVOLT AMPS	KVA
MANHOLE	MH
MERCURY VAPOR LIGHT	MVL
OVERHEAD FIBER OPTIC	OFO
OVERHEAD TELEPHONE CABLE	OTC
OVERHEAD ELECTRIC CABLE	OE
OVERHEAD CABLE TELEVISION	OTV
PAIR	PR
PEDESTAL	PED
POLY-VINYL CHLORIDE PIPE	PVC
POWER POLE	PP
SANITARY SEWER	SS
SERVICE	SERV
STEEL	STL
STORM DRAIN	STM
STORM SEWER	STMS
SWITCH	SW
TELEPHONE	TEL
TELEPHONE MANHOLE	TMH
TRANSFORMER	TRAN
TRANSMISSION LINE	TR LN
TRIAXIAL CABLE (SERVICE)	TRIX
VITRIFIED CLAY PIPE	VCP
WATER MAIN	WM
WATER METER	WMET
WATER VALVE	WV

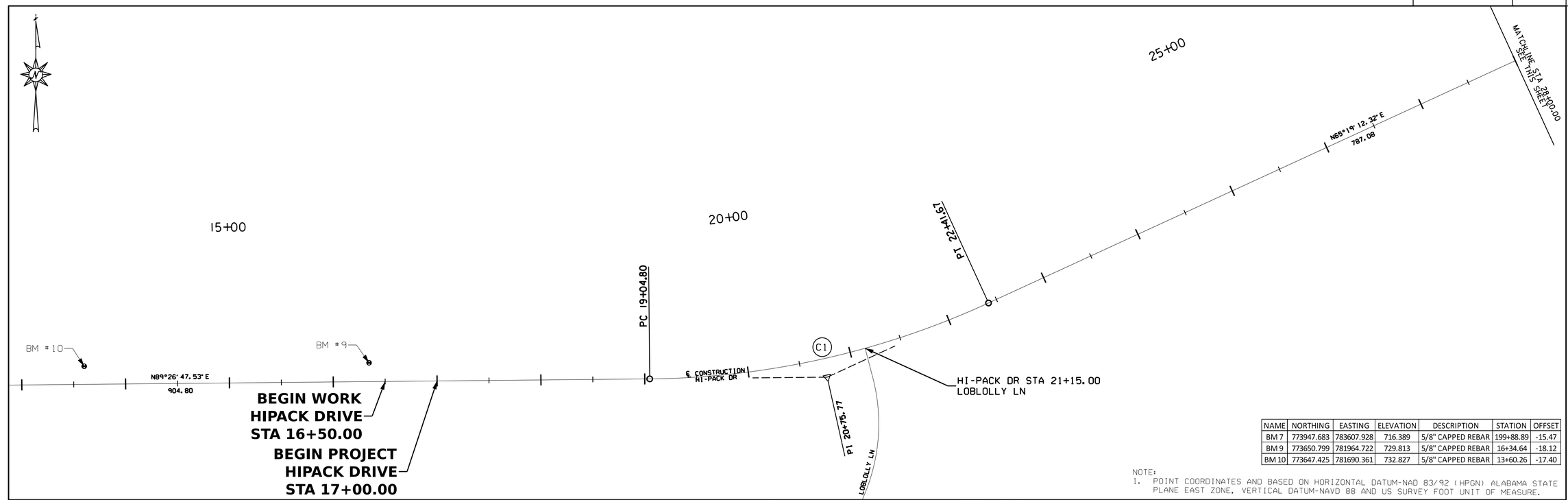
PROPERTY

DEED BOOK	DB
REAL PROPERTY BOOK	RP
PLAT BOOK	PB
MAP BOOK	MB
PAGE	PG
OFFICIAL RECORD	OR
CAPPED (TYPICAL PLASTIC SURVEYORS CAP)	CAP
ALUMINUM CAP	ALUM CAP
BRASS CAP	BR CAP
IRON PIPE	IP
CRIMPED	CR
REINFORCING STEEL	REBAR
CONCRETE MONUMENT	CM
DAMAGED	DAM
CHISELED X	CH X
HUB AND TACK	H&T
NAIL AND BOTTLE TOP	N&BT
PARKER-KALON (MASONARY NAILS)	PK NAIL
FENCE POST	F-POST
RAILROAD IRON	RR IRON
COTTON SPINDLE	COT SP
ANGLE IRON	ANGLE IRON
DECORATIVE	DECO
ELECTRIC	ELEC

	PLAN SUBMITTAL: FINAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE: PLANS LEGEND SHEET ABBREVIATIONS	ROUTE: HI-PACK DRIVE

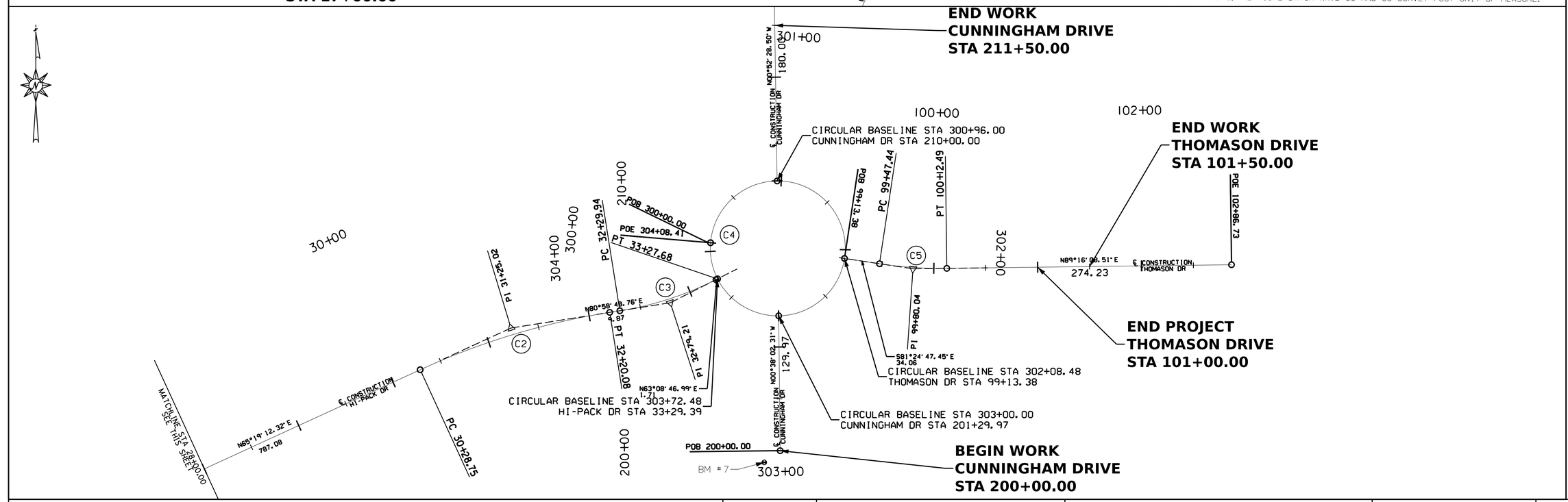
GEOMETRIC LAYOUT

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	1E



NAME	NORTHING	EASTING	ELEVATION	DESCRIPTION	STATION	OFFSET
BM 7	773947.683	783607.928	716.389	5/8" CAPPED REBAR	199+88.89	-15.47
BM 9	773650.799	781964.722	729.813	5/8" CAPPED REBAR	16+34.64	-18.12
BM 10	773647.425	781690.361	732.827	5/8" CAPPED REBAR	13+60.26	-17.40

NOTE:
1. POINT COORDINATES AND BASED ON HORIZONTAL DATUM-NAD 83/92 (HPGN) ALABAMA STATE PLANE EAST ZONE, VERTICAL DATUM-NAVD 88 AND US SURVEY FOOT UNIT OF MEASURE.



PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 50 0 50 SCALE (FEET)	SHEET TITLE	ROUTE
FINAL			GEOMETRIC LAYOUT	HI-PACK DRIVE

GEOMETRIC LAYOUT

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	1F

HI-PACK DRIVE		STATION	NORTHING	EASTING
Element: Linear				
POB(	POB)	10+00.00	773626.55	781330.28
PC(	PC)	19+04.80	773635.29	782235.04
Tangential Direction:		N89°26'47.53"E		
Tangential Length:		904.80		
Element: Circular				
PC(	PC)	19+04.80	773635.29	782235.04
(C1) PI(	PI)	20+75.77	773636.94	782406.00
CC(	CC)		774435.25	782227.31
PT(	PT)	22+41.67	773708.33	782561.35
Radius:		800.00		
Delta:		24°07'35.21" Left		
Degree of Curvature(Arc):		07°09'43.10"		
Length:		336.87		
Tangent:		170.97		
Chord:		334.39		
Middle Ordinate:		17.67		
External:		18.06		
Tangent Direction:		N89°26'47.53"E		
Radial Direction:		S00°33'12.47"E		
Chord Direction:		N77°22'59.92"E		
Radial Direction:		S24°40'47.68"E		
Tangent Direction:		N65°19'12.32"E		
Element: Linear				
PT(	PT)	22+41.67	773708.33	782561.35
PC(	PC)	30+28.75	774036.97	783276.54
Tangential Direction:		N65°19'12.32"E		
Tangential Length:		787.08		
Element: Circular				
PC(	PC)	30+28.75	774036.97	783276.54
(C2) PI(	PI)	31+25.02	774077.17	783364.01
CC(	CC)		773400.92	783568.82
PT(	PT)	32+20.08	774092.26	783459.08
Radius:		700.00		
Delta:		15°39'36.44" Right		
Degree of Curvature(Arc):		08°11'06.40"		
Length:		191.32		
Tangent:		96.26		
Chord:		190.73		
Middle Ordinate:		6.53		
External:		6.59		
Tangent Direction:		N65°19'12.32"E		
Radial Direction:		S24°40'47.68"E		
Chord Direction:		N73°09'00.54"E		
Radial Direction:		S09°01'11.24"E		
Tangent Direction:		N80°58'48.76"E		
Element: Linear				
PT(	PT)	32+20.08	774092.26	783459.08
PC(	PC)	32+29.94	774093.81	783468.82
Tangential Direction:		N80°58'48.76"E		
Tangential Length:		9.87		
Element: Circular				
PC(	PC)	32+29.94	774093.81	783468.82
(C3) PI(	PI)	32+79.21	774101.53	783517.48
CC(	CC)		774403.92	783419.60
PT(	PT)	33+27.68	774123.78	783561.43
Radius:		314.00		
Delta:		17°50'01.77" Left		
Degree of Curvature(Arc):		18°14'49.43"		
Length:		97.74		
Tangent:		49.27		
Chord:		97.34		
Middle Ordinate:		3.79		
External:		3.84		
Tangent Direction:		N80°58'48.76"E		
Radial Direction:		S09°01'11.24"E		
Chord Direction:		N72°03'47.88"E		
Radial Direction:		S26°51'13.01"E		
Tangent Direction:		N63°08'46.99"E		
Element: Linear				
PT(	PT)	33+27.68	774123.78	783561.43
POE(	POE)	33+29.39	774124.56	783562.96
Tangential Direction:		N63°08'46.99"E		
Tangential Length:		1.71		

CUNNINGHAM DR (SOUTH APPROACH)		STATION	NORTHING	EASTING
Element: Linear				
POB(	POB)	200+00.00	773958.96	783623.27
POE(	GeomBL27)	201+29.97	774088.93	783621.83
Tangential Direction:		N00°38'02.31"W		
Tangential Length:		129.97		

CUNNINGHAM DR (NORTH APPROACH)		STATION	NORTHING	EASTING
Element: Linear				
POB(	POB)	210+00.00	774218.92	783620.32
POE(	POE)	211+80.00	774398.90	783617.57
Tangential Direction:		N00°52'28.50"W		
Tangential Length:		180.00		

CIRCULAR BASELINE		STATION	NORTHING	EASTING
Element: Circular				
PC(	GeomBL)	300+00.00	774159.38	783556.18
(C4) CC(	CC)		774153.92	783620.95
PT(	GeomBL)	304+08.41	774159.38	783556.18
Radius:		65.00		
Delta:		359°59'59.96" Right		
Degree of Curvature(Arc):		88°08'50.47"		
Length:		408.41		
Tangent:		0.00		
Chord:		0.00		
Middle Ordinate:		0.00		
External:		0.00		
Tangent Direction:		N04°49'03.82"E		
Radial Direction:		S85°10'56.18"E		
Chord Direction:		S04°49'03.68"W		
Radial Direction:		S85°10'56.22"E		
Tangent Direction:		N04°49'03.78"E		

THOMASON DRIVE		STATION	NORTHING	EASTING
Element: Linear				
POB(	POB)	99+13.38	774144.22	783685.23
PC(	PC)	99+47.44	774139.13	783718.91
Tangential Direction:		S81°24'47.45"E		
Tangential Length:		34.06		
Element: Circular				
PC(	PC)	99+47.44	774139.13	783718.91
(C5) PI(	PI)	99+80.04	774134.26	783751.14
CC(	CC)		774534.65	783778.63
PT(	PT)	100+12.49	774134.68	783783.73
Radius:		400.00		
Delta:		09°19'04.04" Left		
Degree of Curvature(Arc):		14°19'26.20"		
Length:		65.05		
Tangent:		32.60		
Chord:		64.98		
Middle Ordinate:		1.32		
External:		1.33		
Tangent Direction:		S81°24'47.45"E		
Radial Direction:		S08°35'12.55"W		
Chord Direction:		S86°04'19.47"E		
Radial Direction:		S00°43'51.49"E		
Tangent Direction:		N89°16'08.51"E		
Element: Linear				
PT(	PT)	100+12.49	774134.68	783783.73
POE(	POE)	102+86.73	774138.18	784057.94
Tangential Direction:		N89°16'08.51"E		
Tangential Length:		274.23		

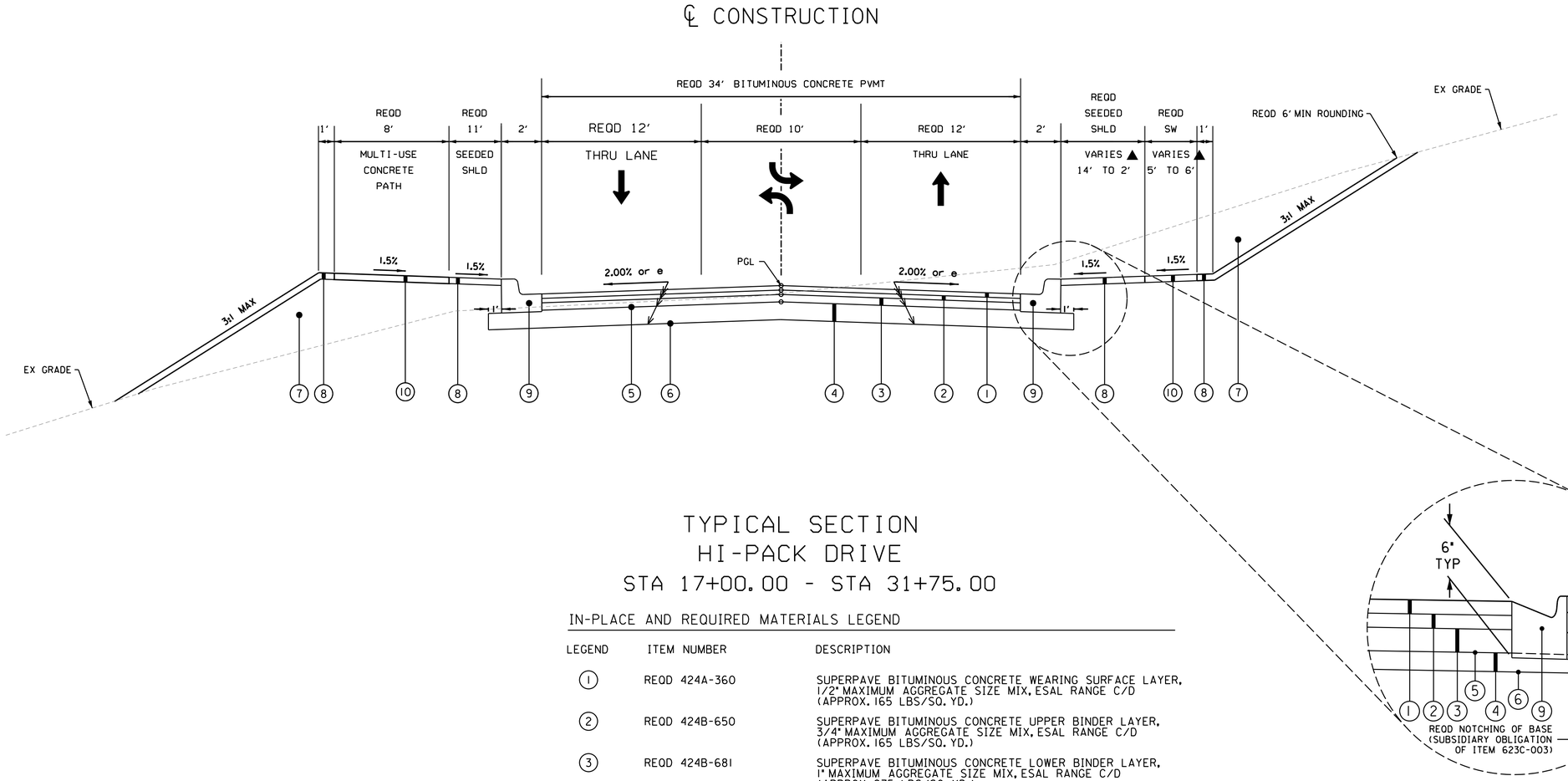
PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			GEOMETRIC LAYOUT	HI-PACK DRIVE

TYPICAL SECTION

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	2

▲ SEE CROSS SECTIONS & PLAN SHEET FOR WIDTHS

PROJECT NOTES
200
201
202
203
204
205
206



TYPICAL SECTION
HI-PACK DRIVE
STA 17+00.00 - STA 31+75.00

IN-PLACE AND REQUIRED MATERIALS LEGEND

LEGEND	ITEM NUMBER	DESCRIPTION
(1)	REQD 424A-360	SUPERPAVE BITUMINOUS CONCRETE WEARING SURFACE LAYER, 1/2" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
(2)	REQD 424B-650	SUPERPAVE BITUMINOUS CONCRETE UPPER BINDER LAYER, 3/4" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
(3)	REQD 424B-681	SUPERPAVE BITUMINOUS CONCRETE LOWER BINDER LAYER, 1" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 275 LBS/SQ. YD.)
(4)	REQD 301A-012	CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED, 6" COMPACTED THICKNESS (VARIES APPROX. 30' - 40' WIDE)
(5)	REQD 401A-000	BITUMINOUS TREATMENT A (VARIES APPROX. 24' - 34' WIDE)
(6)	REQD 230A-000	ROADBED PROCESSING (VARIES APPROX. 30' - 40' WIDE)
(7)	REQD 210A-000 AND/OR REQD 210D-001	UNCLASSIFIED EXCAVATION AND/OR BORROW EXCAVATION (LOOSE TRUCKBED MEASUREMENT)(A4 OR BETTER)
(8)	REQD 650A-000	TOPSOIL (APPROX. THICKNESS 4")
(9)	REQD 623C-003	COMBINATION CURB AND GUTTER, TYPE C (MODIFIED)
(10)	REQD 618A-000	CONCRETE SIDEWALK, 4" THICK

SKETCH NO. 1
REQD NOTCHING OF BASE
FOR C&G PLACEMENT

	PLAN SUBMITTAL		NOT TO SCALE	SHEET TITLE	ROUTE
	FINAL	THREE NOTCH GROUP		TYPICAL SECTION	HI-PACK DRIVE

TYPICAL SECTION

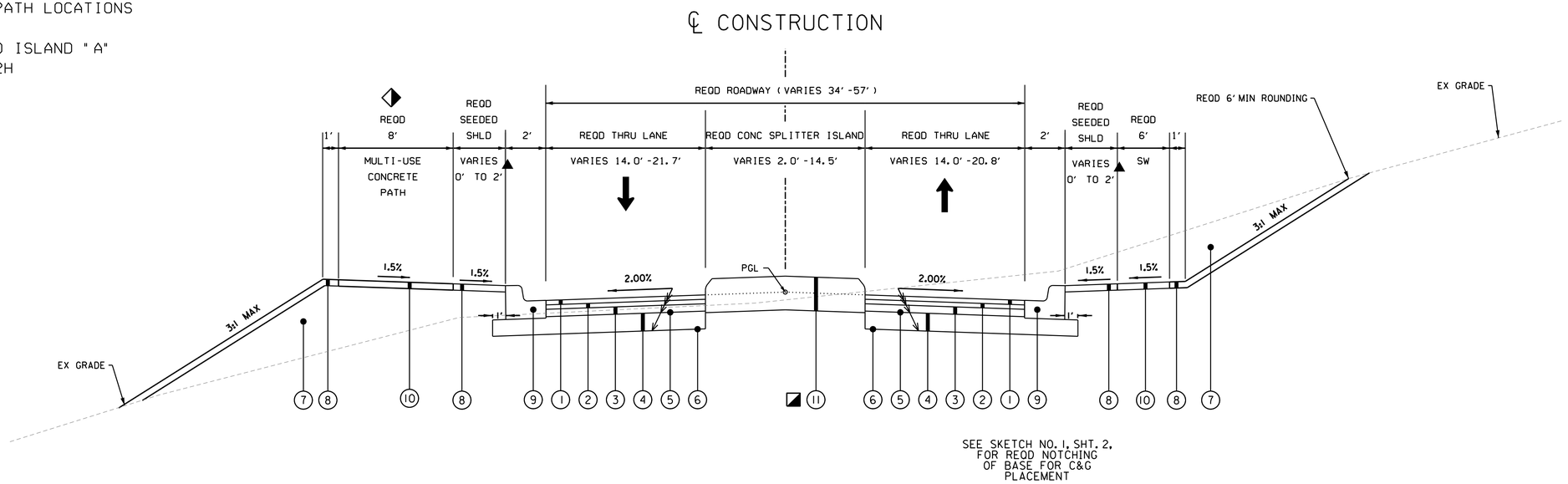
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	2A

▲ SEE CROSS SECTIONS & PLAN SHEET FOR WIDTHS

◆ SEE PLAN SHEETS AND CROSS SECTIONS FOR EXACT MULTI-USE PATH LOCATIONS

◪ SLOPE PAVED ISLAND "A" SEE SHEET 2H

PROJECT NOTES
200
201
202
203
204
205
206



SEE SKETCH NO. 1, SHT. 2, FOR REOD NOTCHING OF BASE FOR C&G PLACEMENT

TYPICAL SECTION
HI-PACK DRIVE
STA 31+75.00 - STA 33+29.39

IN-PLACE AND REQUIRED MATERIALS LEGEND

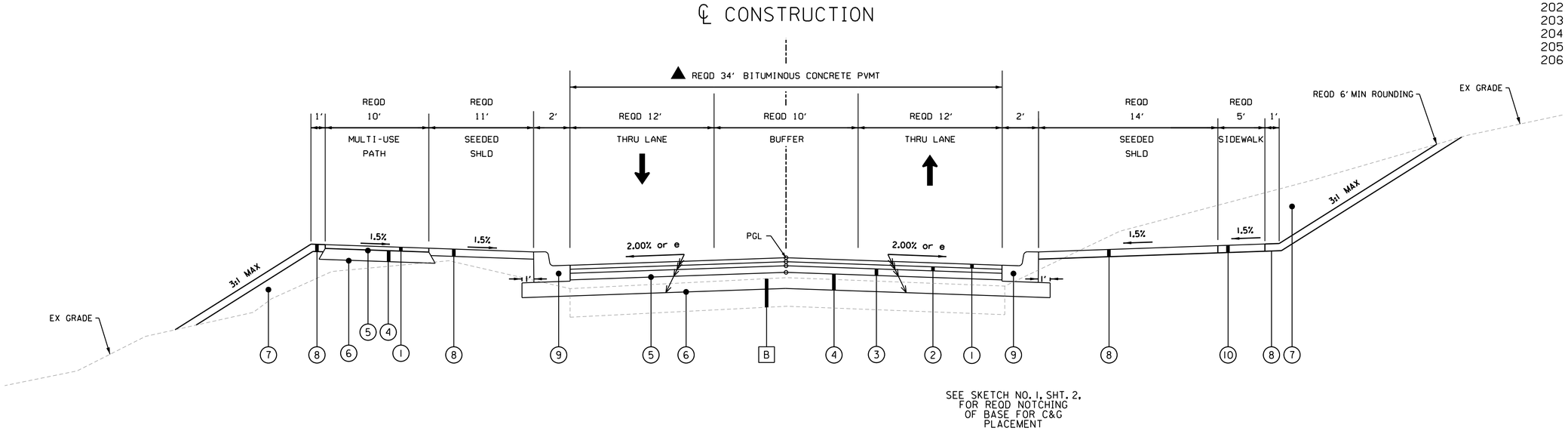
LEGEND	ITEM NUMBER	DESCRIPTION
1	REOD 424A-360	SUPERPAVE BITUMINOUS CONCRETE WEARING SURFACE LAYER, 1/2" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
2	REOD 424B-650	SUPERPAVE BITUMINOUS CONCRETE UPPER BINDER LAYER, 3/4" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
3	REOD 424B-681	SUPERPAVE BITUMINOUS CONCRETE LOWER BINDER LAYER, 1" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 275 LBS/SQ. YD.)
4	REOD 301A-025	CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED, 6" COMPACTED THICKNESS (VARIES APPROX. 40' WIDE)
5	REOD 401A-000	BITUMINOUS TREATMENT A (VARIES APPROX. 34' WIDE)
6	REOD 230A-000	ROADBED PROCESSING (VARIES APPROX. 40' WIDE)
7	REOD 210A-000 AND/OR REOD 210D-001	UNCLASSIFIED EXCAVATION AND/OR BORROW EXCAVATION (LOOSE TRUCKBED MEASUREMENT)(A4 OR BETTER)
8	REOD 650A-000	TOPSOIL (APPROX. THICKNESS 4")
9	REOD 623C-003	COMBINATION CURB AND GUTTER, TYPE C (MODIFIED)
10	REOD 618A-000	CONCRETE SIDEWALK, 4" THICK
11	REOD 614A-000	SLOPE PAVING (6" THICK)

PLAN SUBMITTAL		NOT TO SCALE	SHEET TITLE	ROUTE
FINAL	THREE NOTCH GROUP		TYPICAL SECTION	HI-PACK DRIVE

TYPICAL SECTION

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	2B

PROJECT NOTES
200
201
202
203
204
205
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SEE SKETCH NO. 1, SHT. 2, FOR REQD NOTCHING OF BASE FOR C&G PLACEMENT

TYPICAL SECTION
THOMASON DRIVE
STA 100+65.00 - STA 101+00.00

IN-PLACE AND REQUIRED MATERIALS LEGEND

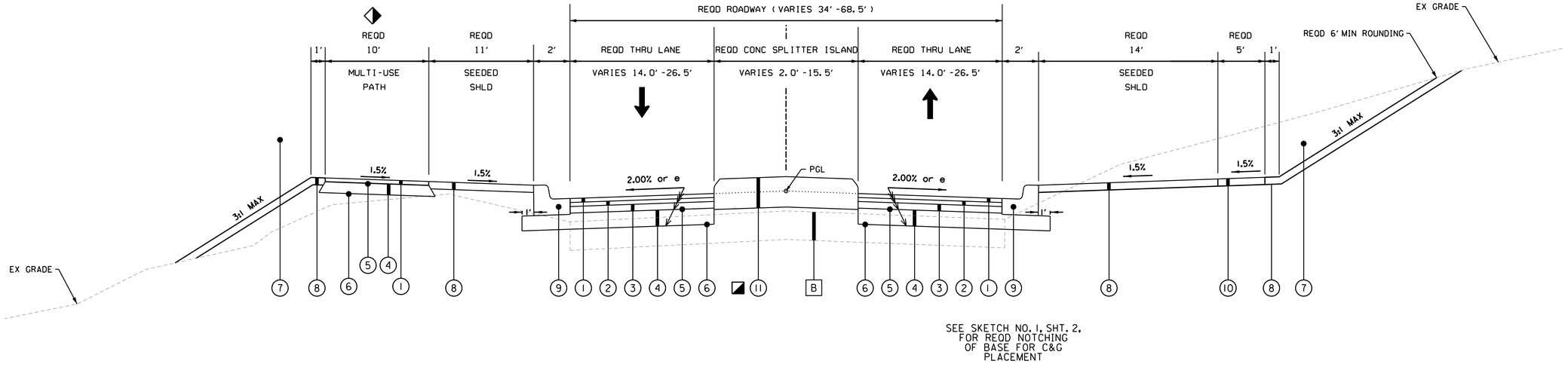
LEGEND	ITEM NUMBER	DESCRIPTION
B		EX BITUMINOUS PAVEMENT (REMOVE)
1	REQD 424A-360	SUPERPAVE BITUMINOUS CONCRETE WEARING SURFACE LAYER, 1/2" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
2	REQD 424B-650	SUPERPAVE BITUMINOUS CONCRETE UPPER BINDER LAYER, 3/4" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
3	REQD 424B-681	SUPERPAVE BITUMINOUS CONCRETE LOWER BINDER LAYER, 1" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 275 LBS/SQ. YD.)
4	REQD 301A-025	CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED, 6" COMPACTED THICKNESS (40' WIDE)
5	REQD 401A-000	BITUMINOUS TREATMENT A (34' WIDE)
6	REQD 230A-000	ROADBED PROCESSING (40' WIDE)
7	REQD 210A-000 AND/OR REQD 210D-001	UNCLASSIFIED EXCAVATION AND/OR BORROW EXCAVATION (LOOSE TRUCKBED MEASUREMENT)(A4 OR BETTER)
8	REQD 650A-000	TOPSOIL (APPROX. THICKNESS 4")
9	REQD 623C-003	COMBINATION CURB AND GUTTER, TYPE C (MODIFIED)
10	REQD 618A-000	CONCRETE SIDEWALK, 4" THICK

PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			TYPICAL SECTION	THOMASON DRIVE

TYPICAL SECTION

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	2C

PROJECT NOTES
200
201
202
203
204
205
206



SEE SKETCH NO. 1, SHT. 2, FOR REOD NOTCHING OF BASE FOR C&G PLACEMENT

◆ SEE PLAN SHEETS AND CROSS SECTIONS FOR EXACT MULTI-USE PATH LOCATIONS

◪ SLOPE PAVED ISLAND "E" SEE SHEET 2H

TYPICAL SECTION
THOMASON DRIVE
STA 99+13.38 - STA 100+65.00

IN-PLACE AND REQUIRED MATERIALS LEGEND

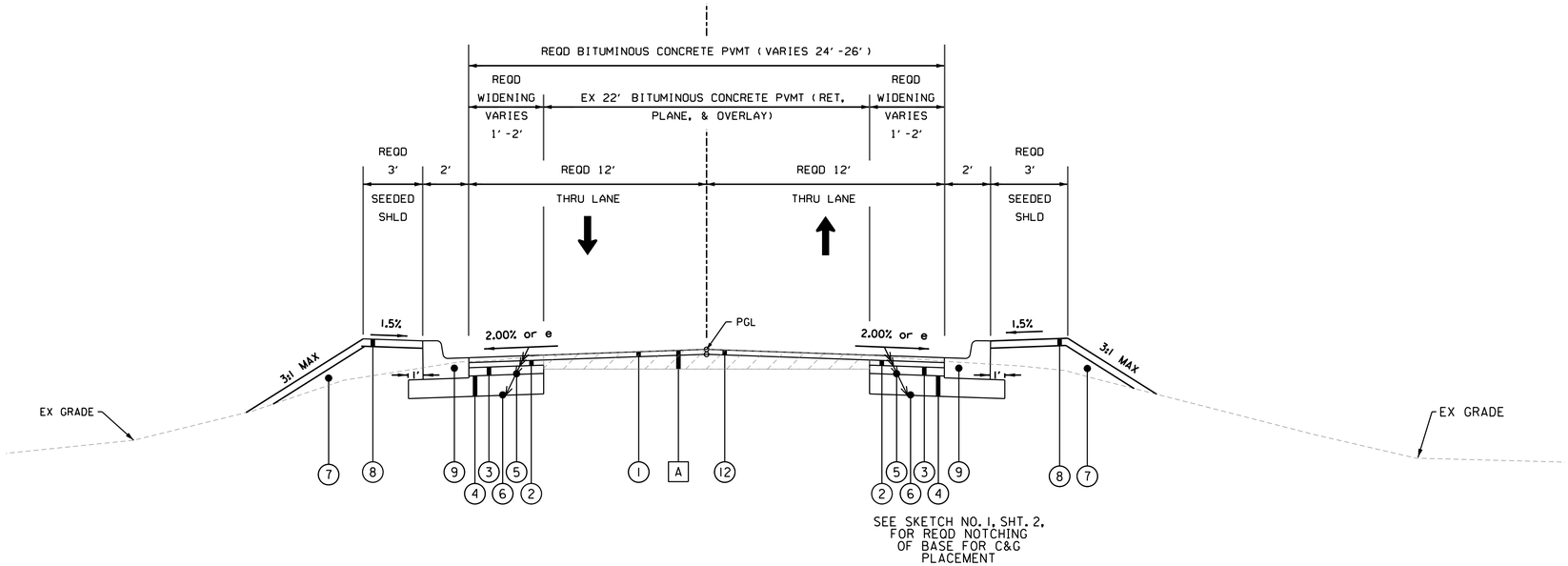
LEGEND	ITEM NUMBER	DESCRIPTION
B		EX BITUMINOUS PAVEMENT (REMOVE)
1	REOD 424A-360	SUPERPAVE BITUMINOUS CONCRETE WEARING SURFACE LAYER, 1/2" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
2	REOD 424B-650	SUPERPAVE BITUMINOUS CONCRETE UPPER BINDER LAYER, 3/4" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
3	REOD 424B-681	SUPERPAVE BITUMINOUS CONCRETE LOWER BINDER LAYER, 1" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 275 LBS/SQ. YD.)
4	REOD 301A-025	CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED, 6" COMPACTED THICKNESS (VARIES APPROX. 10' - 40' WIDE)
5	REOD 401A-000	BITUMINOUS TREATMENT A (VARIES APPROX. 10' - 34' WIDE)
6	REOD 230A-000	ROADBED PROCESSING (VARIES APPROX. 10' - 40' WIDE)
7	REOD 210A-000 AND/OR REOD 210D-001	UNCLASSIFIED EXCAVATION AND/OR BORROW EXCAVATION (LOOSE TRUCKBED MEASUREMENT)(A4 OR BETTER)
8	REOD 650A-000	TOPSOIL (APPROX. THICKNESS 4")
9	REOD 623C-003	COMBINATION CURB AND GUTTER, TYPE C (MODIFIED)
10	REOD 618A-000	CONCRETE SIDEWALK, 4" THICK
11	REOD 614A-000	SLOPE PAVING (6" THICK)

PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			TYPICAL SECTION	THOMASON DRIVE

TYPICAL SECTION

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	2D

℄ CONSTRUCTION



PROJECT NOTES
200
201
202
203
204
205
206

TYPICAL SECTION
CUNNINGHAM DRIVE
STA 200+00.00 - STA 200+79.11
STA 210+51.00 - STA 211+50.00

IN-PLACE AND REQUIRED MATERIALS LEGEND

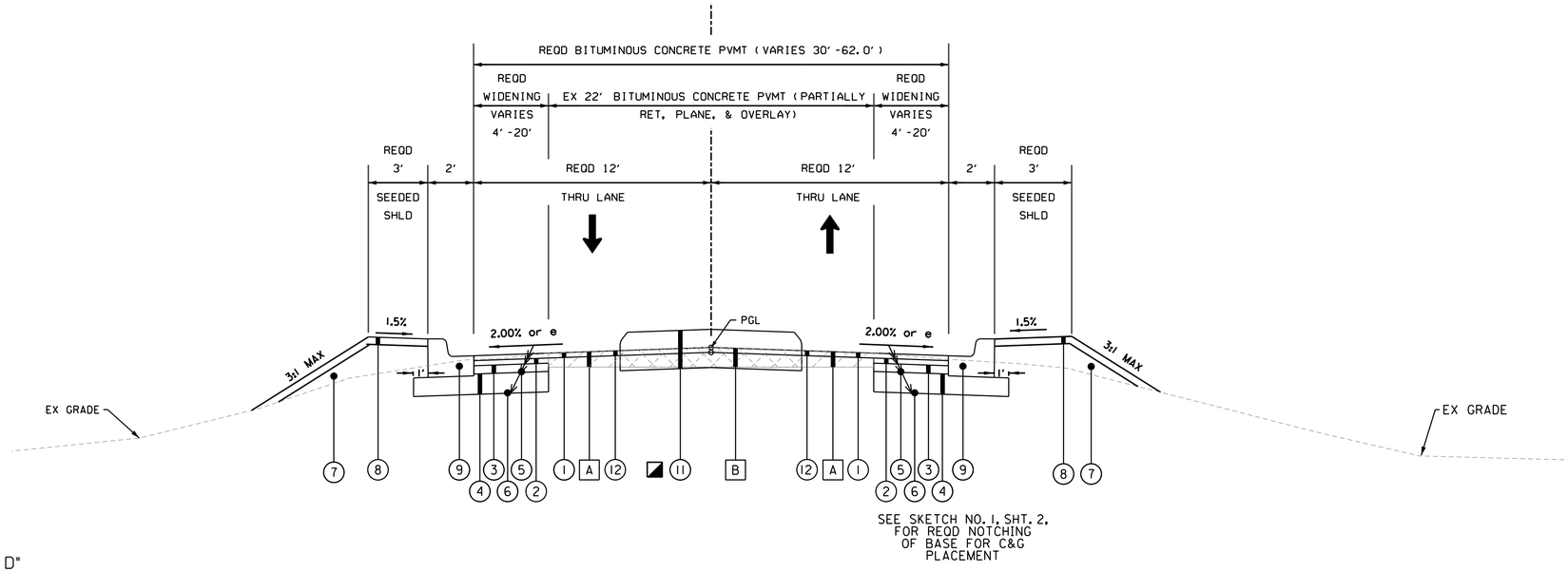
LEGEND	ITEM NUMBER	DESCRIPTION
A		EX BITUMINOUS PAVEMENT (RETAIN, PLANE, AND OVERLAY)(1.5" THICK)
1	REQD 424A-360	SUPERPAVE BITUMINOUS CONCRETE WEARING SURFACE LAYER, 1/2" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
2	REQD 424B-650	SUPERPAVE BITUMINOUS CONCRETE UPPER BINDER LAYER, 3/4" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
3	REQD 424B-681	SUPERPAVE BITUMINOUS CONCRETE LOWER BINDER LAYER, 1" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 275 LBS/SQ. YD.)
4	REQD 301A-025	CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED, 6" COMPACTED THICKNESS (VARIES APPROX. 10' - 40' WIDE)
5	REQD 401A-000	BITUMINOUS TREATMENT A (VARIES APPROX. 10' - 34' WIDE)
6	REQD 230A-000	ROADBED PROCESSING (VARIES APPROX. 10' - 40' WIDE)
7	REQD 210A-000 AND/OR REQD 210D-001	UNCLASSIFIED EXCAVATION AND/OR BORROW EXCAVATION (LOOSE TRUCKBED MEASUREMENT)(A4 OR BETTER)
8	REQD 650A-000	TOPSOIL (APPROX. THICKNESS 4")
9	REQD 623C-003	COMBINATION CURB AND GUTTER, TYPE C (MODIFIED)
10	REQD 618A-000	CONCRETE SIDEWALK, 4" THICK
12	REQD 618A-000	PLANING EXISTING PAVEMENT (APPROX. 1.10" THRU 2.0" THICK)(PLANE 1.5")

PLAN SUBMITTAL		NOT TO SCALE	SHEET TITLE	ROUTE
FINAL	THREE NOTCH GROUP		TYPICAL SECTION	CUNNINGHAM DRIVE

TYPICAL SECTION

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	2E

℄ CONSTRUCTION



SEE SKETCH NO. 1, SHT. 2, FOR REQD NOTCHING OF BASE FOR C&G PLACEMENT

◪ SLOPE PAVED ISLAND "C" & "D" SEE SHEET 2H

PROJECT NOTES
200
201
202
203
204
205
206

TYPICAL SECTION
CUNNINGHAM DRIVE
STA 200+79.11 - STA 201+29.97
STA 210+00.00 - STA 210+51.00

IN-PLACE AND REQUIRED MATERIALS LEGEND

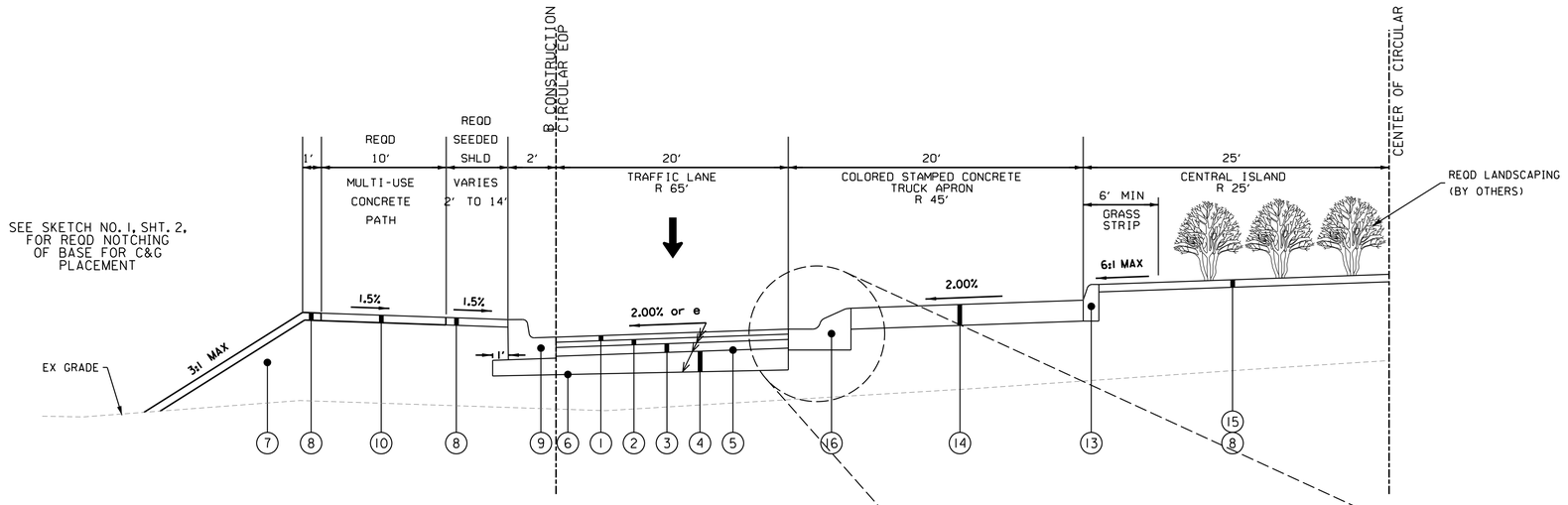
LEGEND	ITEM NUMBER	DESCRIPTION
[A]		EX BITUMINOUS PAVEMENT (RETAIN, PLANE, AND OVERLAY)(1.5" THICK)
[B]		EX BITUMINOUS PAVEMENT (REMOVE)
(1)	REQD 424A-360	SUPERPAVE BITUMINOUS CONCRETE WEARING SURFACE LAYER, 1/2" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
(2)	REQD 424B-650	SUPERPAVE BITUMINOUS CONCRETE UPPER BINDER LAYER, 3/4" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
(3)	REQD 424B-681	SUPERPAVE BITUMINOUS CONCRETE LOWER BINDER LAYER, 1" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 275 LBS/SQ. YD.)
(4)	REQD 301A-025	CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED, 6" COMPACTED THICKNESS (VARIES APPROX. 10' - 40' WIDE)
(5)	REQD 401A-000	BITUMINOUS TREATMENT A (VARIES APPROX. 10' - 34' WIDE)
(6)	REQD 230A-000	ROADBED PROCESSING (VARIES APPROX. 10' - 40' WIDE)
(7)	REQD 210A-000 AND/OR REQD 210D-001	UNCLASSIFIED EXCAVATION AND/OR BORROW EXCAVATION (LOOSE TRUCKBED MEASUREMENT)(A4 OR BETTER)
(8)	REQD 650A-000	TOPSOIL (APPROX. THICKNESS 4")
(9)	REQD 623C-003	COMBINATION CURB AND GUTTER, TYPE C (MODIFIED)
(10)	REQD 618A-000	CONCRETE SIDEWALK, 4" THICK
(11)	REQD 614A-000	SLOPE PAVING (6" THICK)

PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			TYPICAL SECTION	CUNNINGHAM DRIVE

TYPICAL SECTION

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	2F

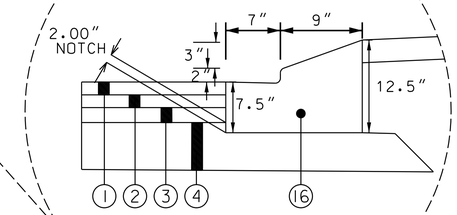
PROJECT NOTES
200
201
202
203
204
205
206



TYPICAL SECTION
ROUNDABOUT
STA 300+00.00 - STA 304+08.41

IN-PLACE AND REQUIRED MATERIALS LEGEND

LEGEND	ITEM NUMBER	DESCRIPTION
(1)	REQD 424A-360	SUPERPAVE BITUMINOUS CONCRETE WEARING SURFACE LAYER, 1/2" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
(2)	REQD 424B-650	SUPERPAVE BITUMINOUS CONCRETE UPPER BINDER LAYER, 3/4" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 165 LBS/SQ. YD.)
(3)	REQD 424B-681	SUPERPAVE BITUMINOUS CONCRETE LOWER BINDER LAYER, 1" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROX. 275 LBS/SQ. YD.)
(4)	REQD 301A-025	CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED, 6" COMPACTED THICKNESS (VARIES APPROX. 10' - 40' WIDE)
(5)	REQD 401A-000	BITUMINOUS TREATMENT A (VARIES APPROX. 10' - 34' WIDE)
(6)	REQD 230A-000	ROADBED PROCESSING (VARIES APPROX. 10' - 40' WIDE)
(7)	REQD 210A-000 AND/OR REQD 210D-001	UNCLASSIFIED EXCAVATION AND/OR BORROW EXCAVATION (LOOSE TRUCKBED MEASUREMENT)(A4 OR BETTER)
(8)	REQD 650A-000	TOPSOIL (APPROX. THICKNESS 4")
(9)	REQD 623C-003	COMBINATION CURB AND GUTTER, TYPE C (MODIFIED)
(10)	REQD 618A-000	CONCRETE SIDEWALK, 4" THICK
(13)	REQD 623B-002	CONCRETE CURB, TYPE A
(14)	REQD 450A-007	PLAIN CEMENT CONCRETE PAVEMENT, 12 INCHES THICK
(15)	REQD 654A-000	SOLID SODDING
(16)	REQD 623C-011	COMBINATION CURB AND GUTTER, TYPE M-10 (MACHINE LAID)



SKETCH NO. 2
CONCRETE CURB
TYPE M-10
NTS

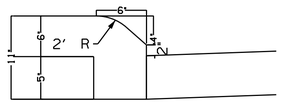
PLAN SUBMITTAL		NOT TO SCALE	SHEET TITLE	ROUTE
FINAL	THREE NOTCH GROUP		TYPICAL SECTION	ROUNDABOUT/ TURN LANE

SLOPE PAVED ISLAND DETAILS

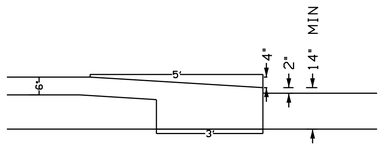
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	2H

TYPICAL SKETCH FOR MONOLITHIC CONCRETE SLOPE PAVED ISLANDS

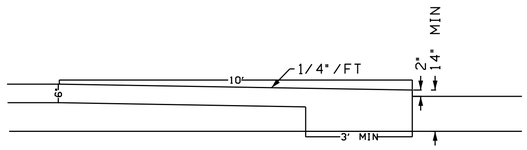
NOTES:
1. SEE THIS SHEET FOR LOCATIONS AND DIMENSIONS.
2. SEE STD DWG 623-N SPEC FOR SLOPE PAVED ISLANDS INFORMATION AND DIMENSIONS.



TYPICAL FACE DETAIL
SLOPE PAVED ISLAND



NOSE SECTION A-A



NOSE SECTION B-B

POINT	ALIGNMENT	STATION	OFFSET	SIDE
A1	Cunningham Drive	210+01.60	3.12	LT
A2	Cunningham Drive	210+02.77	4.23	LT
A3	Cunningham Drive	210+38.77	1.00	LT
A4	Cunningham Drive	210+50.00	1.00	LT
A5	Cunningham Drive	210+50.00	1.00	RT
A6	Cunningham Drive	210+38.90	1.00	RT
A7	Cunningham Drive	210+05.80	3.76	RT
A8	Cunningham Drive	210+02.34	1.29	RT

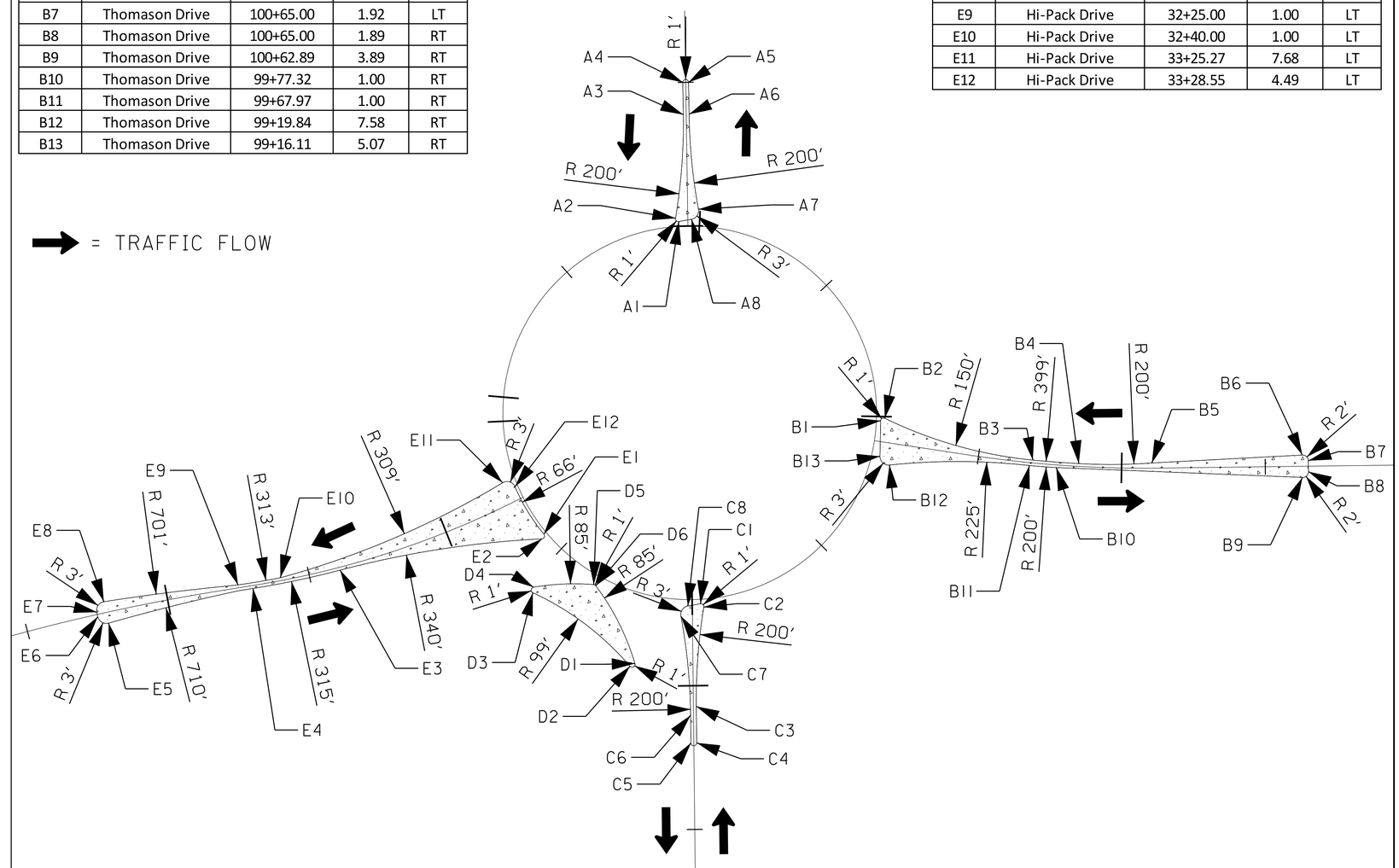
POINT	ALIGNMENT	STATION	OFFSET	SIDE
B1	Thomason Drive	99+14.50	7.20	LT
B2	Thomason Drive	99+15.79	8.28	LT
B3	Thomason Drive	99+68.96	1.00	LT
B4	Thomason Drive	99+85.05	1.00	LT
B5	Thomason Drive	100+10.54	1.81	LT
B6	Thomason Drive	100+62.92	6.92	LT
B7	Thomason Drive	100+65.00	1.92	LT
B8	Thomason Drive	100+65.00	1.89	RT
B9	Thomason Drive	100+62.89	3.89	RT
B10	Thomason Drive	99+77.32	1.00	RT
B11	Thomason Drive	99+67.97	1.00	RT
B12	Thomason Drive	99+19.84	7.58	RT
B13	Thomason Drive	99+16.11	5.07	RT

POINT	ALIGNMENT	STATION	OFFSET	SIDE
C1	Cunningham Drive	201+28.52	2.85	RT
C2	Cunningham Drive	201+27.36	4.00	RT
C3	Cunningham Drive	200+92.81	1.00	RT
C4	Cunningham Drive	200+80.11	1.00	RT
C5	Cunningham Drive	200+80.11	1.00	LT
C6	Cunningham Drive	200+89.75	1.00	LT
C7	Cunningham Drive	201+24.29	4.00	LT
C8	Cunningham Drive	201+27.76	1.56	LT

POINT	ALIGNMENT	STATION	OFFSET	SIDE
D1	Circular Baseline	303+14.83	24.31	LT
D2	Circular Baseline	303+15.89	25.60	LT
D3	Circular Baseline	303+47.48	18.05	LT
D4	Circular Baseline	303+48.32	16.46	LT
D5	Circular Baseline	303+33.95	3.47	LT
D6	Circular Baseline	303+33.17	3.47	LT

POINT	ALIGNMENT	STATION	OFFSET	SIDE
E1	Hi-Pack Drive	33+30.06	14.74	RT
E2	Hi-Pack Drive	33+28.68	15.87	RT
E3	Hi-Pack Drive	32+60.84	1.00	RT
E4	Hi-Pack Drive	32+29.94	1.00	RT
E5	Hi-Pack Drive	31+78.18	3.81	RT
E6	Hi-Pack Drive	31+75.00	0.82	RT
E7	Hi-Pack Drive	31+75.00	0.82	LT
E8	Hi-Pack Drive	31+78.18	3.81	LT
E9	Hi-Pack Drive	32+25.00	1.00	LT
E10	Hi-Pack Drive	32+40.00	1.00	LT
E11	Hi-Pack Drive	33+25.27	7.68	LT
E12	Hi-Pack Drive	33+28.55	4.49	LT

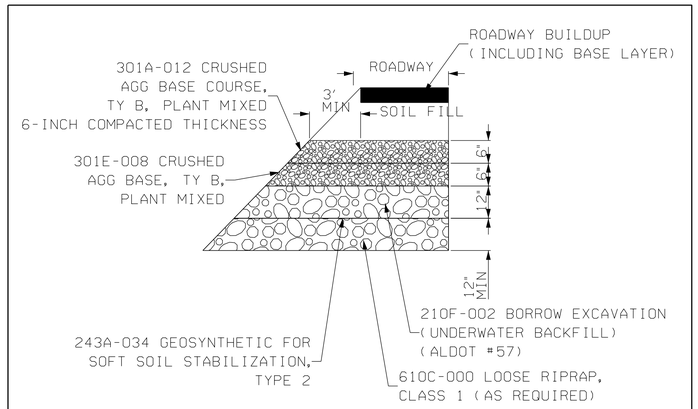
= TRAFFIC FLOW



PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			SLOPE PAVED ISLAND DETAILS	HI-PACK DRIVE

SPECIAL PROJECT DETAILS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	2-I



DETAIL I
OVER-EXCAVATION & STABILIZATION
NTS

	PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
	FINAL			SPECIAL PROJECT DETAILS	HI-PACK DRIVE

PROJECT NOTES

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	2J

NUMBER	PROJECT NOTE
200	THE L.A. ABRASION VALUE IS NOT AVAILABLE FOR THIS PROJECT.
201	FOLLOWING EXCAVATION AND PRIOR TO FILL PLACEMENT, THE EXPOSED SOILS SHALL BE PROOFROLLED IN THE PRESENCE OF THE ENGINEER. PROOFROLLING SHALL BE PERFORMED WITH A FULLY-LOADED, TRI-AXLE DUMP TRUCK OR OTHER PNEUMATIC-TIRED EQUIPMENT CAPABLE OF APPLYING A HIGH PRESSURE. COSTS ASSOCIATED WITH PROOFROLLING SHALL BE A SUBSIDIARY OF UNCLASSIFIED EXCAVATION, PAY ITEM 210A-000. AREAS DEEMED UNSTABLE BY THE ENGINEER SHALL BE STABILIZED AS SHOWN IN DETAIL 1, SHEET 2I.
202	PLAN AND PROFILE SHEETS, AS WELL AS PAVING, SIGNING, AND STRIPING LAYOUT SHEETS, MUST BE USED IN CONJUNCTION WITH TYPICAL SECTIONS AND CROSS SECTIONS TO OBTAIN PROPER WIDTHS.
203	EXISTING PAVED AND UNPAVED INTERSECTIONS, SIDEROADS, TURNOUTS, AND DRIVEWAYS SHALL HAVE THE SAME BUILDUP AS THE MAIN ROADWAY TO THE BACK OF THE RADII.
204	NOTCHING OF THE CRUSHED AGGREGATE BASE LAYER TO ACCOMMODATE FOR CURB AND GUTTER IS A SUBSIDIARY OBLIGATION OF ITEM 623C.
205	AT LOCATIONS WHERE REMOVAL IS ADJACENT TO EXISTING PAVEMENT OR CONCRETE, THE REMOVAL SHALL BE ACCOMPLISHED ALONG NEAT, FULL DEPTH SAW CUT LINES. THE COST OF THIS WORK SHALL BE SUBSIDIARY OF 210A-000, UNCLASSIFIED EXCAVATION.
206	THE EXACT LOCATION OF THE REQUIRED SIDEWALK WILL BE VERIFIED IN THE FIELD BY THE ENGINEER OR REPRESENTATIVE OF THE ENGINEER.
300	ALL REFERENCES TO "ALDOT" SHOWN ON THE REQUIRED RIGHT-OF-WAY MARKERS AS DETAILED ON DRAWING M-602 SHALL BE CHANGED TO "CITY OF OPELIKA". COST OF THIS WORK SHALL BE A SUBSIDIARY OBLIGATION OF ITEM 602A.
301	THE CONTRACTOR SHALL TRANSITION ALL REQUIRED CURB, CURB AND GUTTER, AND GUTTERS TO MATCH EXISTING CURBS, CURB AND GUTTERS, AND GUTTERS. THE TRANSITION SHALL OCCUR WITHIN THE LAST 10 FEET OF THE REQUIRED ITEM OR AS DIRECTED BY THE ENGINEER. THE COST OF THIS TRANSITION SHALL BE A SUBSIDIARY OBLIGATION OF THE ITEM BEING PLACED.
302	THE GEOSYNTHETIC REINFORCEMENT USED FOR SUBGRADE STABILIZATION SHALL CONSIST OF A BI-AXIAL OR TRI-AXIAL GEOGRID.
303	ITEMS TO BE REMOVED THAT ARE NOT PROVIDED FOR BY PAY ITEMS OR SPECIFICALLY MENTIONED BY NOTE TO BE INCLUDED IN OTHER ITEMS OF WORK SHALL BE REMOVED IN ACCORDANCE WITH REQUIREMENTS FOR EXTRA WORK IN ARTICLE 104.03 OF THE STANDARD SPECIFICATIONS.
304	ON-SITE SOILS USED AS FILL WITHIN 24 INCHES OF FINAL SUBGRADE ELEVATION, AND ALL BORROW SOILS SHALL CONSIST OF MATERIALS CLASSIFIED AS AASHTO GROUP A-4 OR BETTER. ON-SITE SOILS NOT CONFORMING TO A-4 OR BETTER MAY BE REUSED AS FILL BELOW 24 INCHES OF FINAL SUBGRADE ELEVATION.
400	OMITTED
401	ANY PROPERTY MARKERS DISTURBED IN THE COURSE OF CONSTRUCTION SHALL BE RE-ESTABLISHED BY AN ALABAMA LICENSED PROFESSIONAL LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
402	ALL DRIVEWAYS SHALL BE CONSIDERED "URBAN COMMERCIAL" AND RADII DIMENSIONS SHALL BE AS SHOWN ON ALDOT STANDARD DRAWING TO-107, UNLESS OTHERWISE NOTED AND SHOWN ON THE PAVING LAYOUT SHEET(S).
800	IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY OWNERS AND DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES ON THIS PROJECT WHETHER SHOWN ON THE PLANS OR NOT. THE LOCATION OF ANY REQUIRED GUARDRAIL, SIGNS, FOOTINGS OF ANY NATURE AND/OR ELECTRICAL/COMMUNICATIONS CONDUITS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO PREVENT ANY CONFLICTS WITH THESE UTILITIES. UTILITY LINE LOCATE REQUESTS WILL BE LIMITED TO INCREMENTS NOT TO EXCEED 2000 LINEAR FEET PER WORKING DAY OPERATIONS. MULTIPLE LOCATE REQUESTS WILL BE REQUIRED FOR PROJECTS GREATER THAN 2000 LINEAR FEET IN LENGTH.
900	CITY OF OPELIKA WILL BE THE NPDES PERMITTEE FOR THIS PROJECT. A NOTICE OF INTENT FOR NPDES PERMIT COVERAGE HAS BEEN FILED WITH ADEM. A COPY OF THE CONSTRUCTION BEST MANAGEMENT PRACTICES PLAN (CBMPP) IS AVAILABLE THROUGH THE CITY ENGINEER PRIOR TO BIDDING.
901	OMITTED
902	SHOULD ARTIFACTS OR ARCHAEOLOGICAL FEATURES BE ENCOUNTER DURING PROJECT ACTIVITIES, WORK SHALL CEASE AND THE ALABAMA HISTORICAL COMMISSION SHALL BE CONSULTED IMMEDIATELY.
903 - 905	OMITTED
906	THERE SHALL BE NO FUEL TANKS STORED ON THE RIGHT-OF-WAY. IN ADDITION, NO FUEL TRUCKS OR VEHICLES TRANSPORTING CHEMICALS, FERTILIZER, ETC., SHALL BE LEFT UNATTENDED ON THE RIGHT-OF-WAY.
907	EROSION AND SEDIMENT CONTROL ITEMS AS SHOWN IN THE PLANS ARE THE MINIMUM NECESSARY. CONTRACTOR SHALL SUPPLEMENT EROSION AND SEDIMENT CONTROL ITEMS AS NEEDED TO PREVENT UNFORESEEN EROSION AND SEDIMENTATION AS DICTATED BY SITE-SPECIFIC CONDITIONS AT THE TIME OF CONSTRUCTION.

GENERAL TRAFFIC CONTROL PLAN NOTES

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	2K

700 THE TRAFFIC CONTROL PLAN IS DEVELOPED IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES PART 6, 2009 EDITION. THE TRAFFIC CONTROL DEVICES INDICATED REPRESENT CONDITIONS KNOWN DURING PLAN DEVELOPMENT. IN THE EVENT ACTUAL PHYSICAL CONDITIONS WARRANT ADDITIONAL TRAFFIC CONTROL DEVICES, THEY SHALL BE INSTALLED IN CONFORMANCE WITH THE M.U.T.C.D. PART 6 AS DIRECTED BY THE ENGINEER. COST SHALL BE PAID FOR UNDER THE APPROPRIATE PAY ITEM.

701 ALL BLACK ON ORANGE CONSTRUCTION SIGNS SHALL BE FABRICATED USING TYPE XI FLUORESCENT ORANGE REFLECTIVE SHEETING MATERIAL FOR THE SIGN BACKGROUND.

702 DURING NON-WORKING HOURS NO EQUIPMENT OR MATERIAL SHALL BE PARKED OR STORED CLOSER THAN 30 FEET TO THE EDGE OF ANY ROADWAY CARRYING TRAFFIC. WHEN THIS IS NOT PRACTICAL, IT SHALL BE PLACED IN AN AREA APPROVED BY THE ENGINEER AND DELINEATED BY REFLECTORIZED DRUMS. THIS INCLUDES STORAGE OF TRAFFIC CONTROL DEVICES SUCH AS TRAILER MOUNTED OR OTHER TEMPORARY SIGNS, BARRICADES, DRUMS, ETC., WHICH ARE NOT IN USE DURING NON-WORKING HOURS. TO BE FURNISHED BY THE CONTRACTOR WITHOUT COST TO THE ALDOT. (SEE SKETCH ON SHEET 51)

703 WHERE THE LOCATION OF A REQUIRED SIGN FALLS IN A DRIVEWAY, SIDEWALK, BRIDGE, ETC. OR WHERE THE VISIBILITY OF A SIGN IS LIMITED TO THE TRAVELING PUBLIC, THE LOCATION SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER.

704 THE CONTRACTOR IS TO REMOVE, RELOCATE OR COVER DURING CONSTRUCTION AND THEN RESET OR UNCOVER UPON COMPLETION OF A PARTICULAR SECTION ANY CONFLICTING IN-PLACE ROADWAY SIGNS AND DELINEATORS, AS DIRECTED BY THE ENGINEER. SIGNS REQUIRING REMOVAL SHALL BE STOCKPILED AS DIRECTED BY THE ENGINEER AND SHALL BECOME PROPERTY OF THE ALDOT. COST SHALL BE A SUBSIDIARY OBLIGATION OF ITEM 740B.

705 DURING ALL PHASES OF WORK, NON-APPLICABLE PAVEMENT STRIPING OR MARKINGS SHALL BE REMOVED AND APPROPRIATE PAVEMENT STRIPING OR MARKINGS SHALL BE PLACED AS EXPEDITIOUSLY AS PRACTICAL, BUT IN ALL CASES, SHALL BE IN PLACE BY NIGHTFALL ON ANY ROADWAY CARRYING TRAFFIC, EXCEPT ON SHORT TERM OPERATIONS WHERE IT IS DETERMINED BY THE ENGINEER, THAT SUCH REMOVAL AND REPLACEMENT IS MORE HAZARDOUS THAN LEAVING EXISTING MARKINGS IN PLACE. COST OF ANY REMOVAL SHALL BE PAID FOR UNDER ITEM 701D OR AS A SUBSIDIARY OBLIGATION OF ITEM 701C.

706 OMITTED

707 THE CONTRACTOR SHALL PLACE ALL ADVANCE WARNING SIGNS BEFORE PROCEEDING WITH HIS WORK. SIGNS SHALL BE PLACED IN ORDER, IN THE DIRECTION OF TRAFFIC AND REMOVED IN REVERSE ORDER.

708 ALL VEHICLES, EQUIPMENT, PERSONNEL (EXCEPT FLAGGERS), AND THEIR ACTIVITIES, ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE PAVEMENT UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.

709 THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE ACCESS TO BUSINESSES AND RESIDENCES DURING ALL PHASES OF CONSTRUCTION.

710 CONSTRUCTION SIGNS MOUNTED ON TEMPORARY SUPPORTS SHALL BE MOUNTED AT A MINIMUM HEIGHT OF 5 FEET.

711 FLAGGERS SHALL BE PROPERLY ATTIRED, EQUIPPED WITH STAFF MOUNTED STOP/SLOW PADDLES IN SIGHT OF EACH OTHER, OR HAVE DIRECT COMMUNICATION AT ALL TIMES. FLAGGER STATION LOCATION MAY BE VARIED FROM THOSE SHOWN BASED ON ROADWAY ALIGNMENT AND CONDITIONS AT THE TIME OF THE LANE CLOSURE.

712 FLAGGERS ARE TO BE USED WHEN DIRECTED BY THE ENGINEER. SIGNS SHALL BE PLACED AT THE APPROPRIATE TIME, AND SHALL BE COVERED OR REMOVED WHEN FLAGGERS ARE NOT ON DUTY AND DURING NON-WORKING HOURS.

713 FOR MOVING OPERATIONS, THE TRAFFIC CONES MAY BE DELETED IF THE FLAGGERS ARE IN SIGHT OF EACH OTHER, OR IF A PILOT CAR IS USED ON A TWO LANE ROADWAY.

714 OMITTED

715 ALL CONTRACTOR'S EMPLOYEES' PERSONAL VEHICLES, AND CONTRACTOR'S EQUIPMENT NOT IN OPERATION, SHALL BE PARKED A MINIMUM OF THIRTY (30) FEET FROM THE TRAVELED WAY DURING WORKING HOURS, AS NOT TO CREATE A HAZARD.

716 THE TRAFFIC CONTROL PLAN IS NOT ALL INCLUSIVE. THE TCP PROVIDES SEVERAL DETAILED DRAWINGS INDICATING THE TRAFFIC CONTROL NECESSARY FOR THE DIFFERENT CONSTRUCTION ACTIVITIES ANTICIPATED FOR THIS PROJECT. THE CONTRACTOR SHALL SELECT THE DETAILED DRAWING THAT BEST FITS THE ACTIVITY TO BE PERFORMED.

717 OMITTED

718 REQUIRED TEMPORARY ROUTE MARKER ASSEMBLIES THAT ARE TO BE LOCATED IN THE VICINITY OF EXISTING ROUTE MARKERS SHOULD BE PLACED ALONG SIDE OF THOSE ALREADY IN PLACE. SOME EXISTING ROUTE MARKERS MAY HAVE TO BE COVERED OR REMOVED, AS DIRECTED BY THE ENGINEER. COST SHALL BE A SUBSIDIARY OBLIGATION OF ITEM 740B.

719 RA-1 (REBUILD ALABAMA) SIGNS SHALL BE REQUIRED FOR EVERY PROJECT. RA-1 SIGNS SHALL BE PLACED AT THE BEGINNING OF THE WORK LIMITS OF THE SUBJECT PROJECT ROUTE. RA-1 SIGNS SHALL BE POSTED ON THE RIGHT-HAND SIDE OF THE ROADWAY ON THEIR OWN SUPPORT SYSTEM. THE RA-1 SIGNS SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.

720 ALL TRAFFIC CONTROL DEVICES THAT ARE NOT APPLICABLE AT ANY SPECIFIC TIME SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

721 OMITTED

722 OMITTED

723 THE CONTRACTOR SHALL MAKE PROVISIONS FOR THE SAFETY OF PEDESTRIAN TRAFFIC CROSSING THE WORK ZONES DURING CONSTRUCTION.

724 OMITTED

725 ALL SIGNS SHALL BE POST-MOUNTED IF THE WORK PERIOD EXCEEDS FOUR DAYS, EXCEPT FOR THOSE SIGNS WHICH ARE MOUNTED ON BARRICADES. FOR REPEATED DAY OPERATIONS, SIGNS MAY BE MOUNTED ON TEMPORARY SUPPORTS AND REMOVED AT THE COMPLETION OF THE DAY'S OPERATION.

726 W8 SIGNS INTENDED TO WARN MOTORISTS OF SURFACE CONDITIONS EXTENDING FOR GREATER THAN 1 MILE SHALL BE PLACED PRIOR TO THE BEGINNING OF SURFACE CONDITION AND AT ONE MILE INCREMENTS THEREAFTER, WITH THE EXCEPTION SPECIFIED IN NOTE 727.

727 DURING THE WIDENING OR RESURFACING OF ANY ROADWAY CARRYING TRAFFIC, THE CONTRACTOR SHALL ADVISE THE MOTORISTS OF ANY EDGE OF PAVEMENT DROP-OFFS 3 INCHES OR GREATER BY PLACING SHOULDER DROP-OFF SIGNS EVERY 1/2 MILE BEGINNING PRIOR TO THE WIDENING OR RESURFACING. REQUIRED SHOULDER WORK TO ELIMINATE THE DROP-OFFS SHALL BE PURSUED IN AN EXPEDITIOUS MANNER FOLLOWING THE WIDENING AND/OR RESURFACING.

728 A DIFFERENCE IN ELEVATION OF APPROXIMATELY 2 INCHES OR LESS AT THE CENTERLINE MAY BE ALLOWED DURING NON-WORKING HOURS WITHOUT ADDITIONAL TRAFFIC CONTROL. SPECIAL CONDITIONS MAY EXIST WHERE PROTECTION SHOULD BE PROVIDED WHERE THE DIFFERENCE IS 2 INCHES OR LESS.

729 SIGNS ON TEMPORARY SUPPORTS ARE TO BE REMOVED OR COVERED WHEN NO WORK IS BEING PERFORMED OR AT THE COMPLETION OF THE DAY'S OPERATION.

730 OMITTED

731 OMITTED

732 CHANNELIZING DRUMS SHOULD BE PLACED ON 10 FOOT INTERVALS IN RADII.

733 CHANNELIZING DRUMS PLACED TO PROTECT COMPLETED WORK NOT OPEN TO TRAFFIC, SHOULD BE SPACED AT 50 FOOT INTERVALS.

734 CHANNELIZING DRUMS PLACED IN THE EXCAVATED AREA AHEAD OF PAVING OPERATIONS, SHOULD BE SPACED AT 50 FOOT INTERVALS.

735 CHANNELIZING DRUMS PLACED ON PAVEMENT DURING WORKING HOURS SHALL BE SHIFTED TO THE EDGE OF SHOULDER DURING NON-WORKING HOURS AND DURING PEAK PERIODS.

736 CHANNELIZING DRUMS SHOULD BE PLACED ON 25 FOOT INTERVALS THROUGHOUT ALL TAPERS.

737 CHANNELIZING DEVICES SHALL EXTEND TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.

738 OMITTED

739 OMITTED

740 OMITTED

741 FOR DIVIDED ROADWAYS, THE REQUIRED ADVANCE WARNING SIGNS SHALL BE POSTED ON BOTH THE RIGHT AND LEFT SIDE OF THE ROADWAY.

742 THE CONTRACTOR SHALL CLOSE THE LANE ADJACENT TO THE WORK AREA ANYTIME WORK OUTSIDE THE EXISTING TRAVEL LANES ENCROACHES WITHIN 2 FEET OF THE EXISTING EDGE OF PAVEMENT.

743 OMITTED

744 THE TRANSITION TAPER LENGTH (L) IS SHOWN IN TABLE 6C-4, AND THE BUFFER LENGTH IS SHOWN IN TABLE 6C-2 OF THE MUTCD, PART 6, 2009 EDITION.

745 OMITTED

746 UNEVEN LANES SIGNS SHALL BE COVERED OR REMOVED WHEN NO UNEVEN PAVEMENT CONDITIONS EXIST.

747 MOVING OPERATIONS SHALL BE CONFINED TO ONE LANE IN THE DIRECTION OF TRAFFIC.

748 R16-3 (WHEN WORKERS ARE PRESENT SPEEDING FINES DOUBLED) AND R16-3a (END DOUBLED FINES) SIGNS SHALL BE REQUIRED FOR EVERY PROJECT ON STATE ROUTES AND INTERSTATE HIGHWAYS. THESE SIGNS SHALL BE POSTED AT THE BEGINNING AND END OF THE PROJECT WITH AN R2-1 (REGULATORY SPEED SIGN) ALWAYS FOLLOWING THE R16-3 SIGN. ADDITIONAL R16-3 AND R2-1 SIGNS SHALL BE POSTED AT MAXIMUM INTERVALS OF THREE MILES THROUGHOUT THE PROJECT LIMITS.

749 WHEN A CONSTRUCTION WORK ZONE SPEED LIMIT REDUCTION IS NOT REQUIRED AT THE END OF THE WORK DAY, THE CONTRACTOR SHALL COVER OR REMOVE THE REDUCED R2-1 (REGULATORY SPEED SIGNS) AND THE W3-5b (REDUCED SPEED AHEAD) SIGNS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

750 DURING REPLACEMENT OF GUARDRAIL AND/OR GUARDRAIL END ANCHORS, A REFLECTORIZED DRUM SHALL BE PLACED BEFORE THE END OF ANY EXPOSED GUARDRAIL AT NIGHT WHERE THE GUARDRAIL END CANNOT BE REPLACED IN ONE DAY'S TIME.

751 CONSTRUCTION SIGNS MOUNTED ON A SINGLE OR DUAL SQUARE TUBULAR OR U-CHANNEL POST SHALL BE INSTALLED AS SHOWN ON SPECIAL DRAWING NOS. IHS-710-21 AND IHS-710-23.

752 THE CONTRACTOR AND THE ENGINEER SHALL DISCUSS AND PLAN FOR THE HANDLING OF TRAFFIC FOR ALL HOLIDAYS BEFORE ANY WORK BEGINS. UNLESS OTHERWISE PRE-APPROVED BY THE REGION ENGINEER, THE FOLLOWING SHALL HOLD:

THE CONTRACTOR SHALL NOT HAVE A LANE CLOSURE DURING THE FOLLOWING PERIODS UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR ALDOT:

FOR CHRISTMAS AND NEW YEARS DAY:
FROM 11:59 PM DECEMBER 23 THROUGH 6:00 AM JANUARY 2.

FOR NATIONAL MEMORIAL DAY AND LABOR DAY:
FROM 12:00 NOON THE FRIDAY BEFORE THE HOLIDAY THROUGH 11:59 PM THE DAY OF THE HOLIDAY.

FOR INDEPENDENCE DAY (THE 4TH OF JULY)
FROM 12:00 NOON THE DAY BEFORE THE HOLIDAY THROUGH 11:59 PM THE DAY OF THE HOLIDAY.

FOR THANKSGIVING DAY:
FROM 12:00 NOON THE WEDNESDAY BEFORE THANKSGIVING DAY THROUGH 11:59 PM THE SUNDAY FOLLOWING THANKSGIVING DAY.

ANY OTHER STATE HOLIDAYS WILL BE HANDLED AS APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND LOCAL GOVERNMENT ON TRAFFIC AND/OR WORK RESTRICTIONS FOR LOCAL HOLIDAYS OR EVENTS NOT LISTED ON ALDOT'S LIST OF OFFICIAL STATE HOLIDAYS.

753 FOR THE DURATION OF THE PROJECT, CONTRACTOR SHALL MONITOR THE WEATHER CONDITION ALONG THE COAST OF ALABAMA AND/OR FLORIDA IN CASE OF HURRICANE EVACUATION NEEDS. THERE SHALL NOT BE A LANE CLOSURE IF IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES THE CONDITIONS WARRANT POSSIBLE EVACUATION, EMERGENCY PROCEDURES SHALL BE COORDINATED WITH THE ENGINEER.

	PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
	FINAL			GENERAL TRAFFIC CONTROL PLAN NOTES	HI-PACK DRIVE

SUMMARY OF QUANTITIES

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	3

ITEM NO	DESCRIPTION	UNIT	QUANTITY
201A002	CLEARING AND GRUBBING (MAXIMUM ALLOWABLE BID $5,000 PER ACRE)(APPROXIMATELY 2 ACRES)	LUMP SUM	1
206D000	REMOVING PIPE	LIN FT	300
206D011	REMOVING FENCE	LINFT	311
206E000	REMOVING HEADWALLS	EACH	5
206E002	REMOVING JUNCTION BOXES	EACH	1
209A000	MAILBOX RESET, SINGLE	EACH	1
210A000	UNCLASSIFIED EXCAVATION	CUYD	12609
201C000	MUCK EXCAVATION	CUYD	5628
210D011	BORROW EXCAVATION (A4 OR BETTER)	CUYD	8071
210F002	BORROW EXCAVATION (UNDERWATER BACKFILL) (ALDOT #57)	TON	2439
214A000	STRUCTURE EXCAVATION	CUYD	1570
214B001	FOUNDATION BACKFILL, COMMERCIAL	CUYD	994
243A034	GEOSYNTHETIC REINFORCEMENT FOR SOFT SOIL STABILIZATION, TYPE 2	SQYD	5628
301A012	CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED, 6" COMPACTED THICKNESS	SQYD	15335
301E008	CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED	TON	1267
401A000	BITUMINOUS TREATMENT A	SQYD	9707
424A360	SUPERPAVE BITUMINOUS CONCRETE WEARING SURFACE LAYER, 1/2" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D	TON	684
424B650	SUPERPAVE BITUMINOUS CONCRETE UPPER BINDER LAYER, 3/4" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D	TON	684
424B681	SUPERPAVE BITUMINOUS CONCRETE LOWER BINDER LAYER, 1" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D	TON	1141
530A001	18" ROADWAY PIPE (CLASS 3 R.C.)	LIN FT	201
530A004	36" ROADWAY PIPE (CLASS 3 R.C.)	LINFT	29
530A007	54" ROADWAY PIPE (CLASS 3 R.C.)	LINFT	99
533A098	18" STORM SEWER PIPE (CLASS 3 R.C.)	LINFT	434
533A101	36" STORM SEWER PIPE (CLASS 3 R.C.)	LINFT	90
533A102	42" STORM SEWER PIPE (CLASS 3 R.C.)	LINFT	607
533A104	54" STORM SEWER PIPE (CLASS 3 R.C.)	LINFT	50
600A000	MOBILIZATION	LUMPSUM	1
602A000	RIGHT OF WAY MARKERS	EACH	23
602D000	CONCRETE VALVE MARKER	EACH	10
610C000	LOOSE RIPRAP, CLASS 1	TON	3565
610C001	LOOSE RIPRAP, CLASS 2	TON	52
610D003	FILTER BLANKET, GEOTEXTILE	SQYD	725
614A000	SLOPE PAVING	CUYD	68
618A000	CONCRETE SIDEWALK, 4" THICK	SQYD	2717
618B003	CONCRETE DRIVEWAY, 6" THICK (INCLUDES WIRE MESH)	SQYD	27
618C001	DETECTABLE WARNING SURFACE	SOFT	88
618D000	CURB RAMP	SQYD	38
619A005	36" ROADWAY PIPE END TREATMENT, CLASS 1	EACH	2
619A008	54" ROADWAY PIPE END TREATMENT, CLASS 1	EACH	2
620A000	MINOR STRUCTURE CONCRETE	CUYD	1
621A011	JUNCTION BOXES, TYPE 1 OR 1P	EACH	3
621B011	JUNCTION BOX UNITS, TYPE 1 OR 1P	EACH	3
621C015	INLETS, TYPE S1 OR S3 (1 WING)	EACH	11
621C017	INLETS, TYPE S1 OR S3 (2 WING)	EACH	4
621C062	INLETS, TYPE S3 (2 WING) (PARTIAL)	EACH	1
621D015	INLET UNITS, TYPE S1 OR S3	EACH	5
623A001	CONCRETE GUTTER (VALLEY)	LINFT	44

PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			SUMMARY OF QUANTITIES	HI-PACK DRIVE

SUMMARY OF QUANTITIES

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	3A

623C003	COMBINATION CURB & GUTTER, TYPE C (MODIFIED)	LIN FT	4245
641A514	1 INCH COPPER WATER SERVICE LINE LAID	LIN FT	198
641A518	2 INCH COPPER WATER SERVICE LINE LAID	LIN FT	128
641A612	6 INCH DUCTILE IRON WATER MAIN LAID	LIN FT	183
641A614	8 INCH DUCTILE IRON WATER MAIN LAID	LIN FT	1792
641A616	10 INCH DUCTILE IRON WATER MAIN LAID	LIN FT	664
641D500	FIRE HYDRANT	EACH	3
64M510	2 INCH GATE VALVE WITH BOX	EACH	2
64M516	6 INCH GATE VALVE WITH BOX	EACH	6
64M518	8 INCH GATE VALVE WITH BOX	EACH	14
64M520	10 INCH GATE VALVE WITH BOX	EACH	4
641N520	8 INCH X 6 INCH ANCHOR TEE	EACH	5
641N530	10 INCH X 6 INCH ANCHOR TEE	EACH	1
641N620	8 INCH X 8 INCH DUCTILE IRON ANCHOR TEE	EACH	3
641N730	10 INCH X 10 INCH DUCTILE IRON ANCHOR TEE	EACH	1
6410534	10 INCH X 8 INCH TAPPING VALVE AND SLEEVE	EACH	1
641P520	1 INCH SERVICE TAP	EACH	4
645A510	8 INCH DUCTILE IRON SANITARY SEWER GRAVITY PIPE LAID	LIN FT	250
645E522	4 INCH P.V.C. STACKS AND LATERALS	LIN FT	150
645G510	4 INCH SANITARY SEWER LATERAL CLEANOUT	EACH	1
645H510	48 INCH MANHOLE	EACH	1
645I500	48 INCH MANHOLE UNIT	EACH	2
649A535	12 INCH STEEL ENCASEMENT PIPE, TYPE 1 INSTALLATION	LIN FT	94
649A545	16 INCH STEEL ENCASEMENT PIPE, TYPE 1 INSTALLATION	LIN FT	78
649A555	20 INCH STEEL ENCASEMENT PIPE, TYPE 1 INSTALLATION	LIN FT	42
650B000	TOPSOIL FROM STOCKPILES	CU YD	1750
652A100	SEEDING	ACRE	2
656A010	MULCHING	ACRE	2
659C002	EROSION CONTROL PRODUCT, TYPE S2	SQYD	10142
665A000	TEMPORARY SEEDING	ACRE	6
665B001	TEMPORARY MULCHING	TON	18
665G000	SAND BAGS	EACH	50
665J002	SILT FENCE	LIN FT	4230
665N000	TEMPORARY COARSE AGGREGATE,ALDOT NUMBER 1	TON	300
6650001	SILT FENCE REMOVAL	LIN FT	4230
665P005	INLET PROTECTION, STAGE 3 OR 4	EACH	18
680A001	GEOMETRIC CONTROLS	LUMP SUM	1
701A227	SOLID WHITE, CLASS 2, TYPE A TRAFFIC STRIPE (5" WIDE)	MILE	2
701A230	SOLID YELLOW, CLASS 2, TYPE A TRAFFIC STRIPE (5" WIDE)	MILE	1
701A244	BROKEN YELLOW, CLASS 2, TYPE A TRAFFIC STRIPE (5" WIDE)	MILE	1
701B207	DOTTED, CLASS 2, TYPE A TRAFFIC STRIPE (5" WIDE)	LIN FT	82
701C002	BROKEN TEMPORARY TRAFFIC STRIPE (PAINT)	MILE	1
701C003	SOLID TEMPORARY TRAFFIC STRIPE (PAINT)	MILE	2
703A002	TRAFFIC CONTROL MARKINGS, CLASS 2, TYPE A	SQ FT	1647
703D001	TEMPORARY TRAFFIC CONTROL MARKINGS	SQ FT	1647
705A032	PAVEMENT MARKERS, CLASS A-H, TYPE 1-B	EACH	66
705A037	PAVEMENT MARKERS, CLASS A-H, TYPE 2-D	EACH	42
705A038	PAVEMENT MARKERS, CLASS A-H, TYPE 2-E	EACH	33
710A153	CLASS 9, ALUMINUM FLAT SIGN PANELS (TYPE XI BACKGROUND)	SQ FT	24
710A154	CLASS 9, ALUMINUM FLAT SIGN PANELS (TYPE XI BACKGROUND, FLUORESCENT)	SQ FT	44
710A171	CLASS 4, ALUMINUM FLAT SIGN PANELS (TYPE IV BACKGROUND)	SQ FT	582
710B021	ROADWAY SIGN POST (#3 U CHANNEL, GALVANIZED STEEL OR 2 ", 14 GA SQUARE TUBULAR STEEL)	LIN FT	467
740B000	CONSTRUCTION SIGNS	SQ FT	697
740D000	CHANNELIZING DRUMS	EACH	100
740E000	CONES (36 INCHES HIGH)	EACH	50
740F002	BARRICADES, TYPE III	EACH	14
740I002	WARNING LIGHTS, TYPE B	EACH	7
742A001	PORTABLE CHANGEABLE MESSAGE SIGN, TYPE 2	EACH	2

PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			SUMMARY OF QUANTITIES	HI-PACK DRIVE

SUMMARY OF QUANTITIES - BOX SHEETS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	3B

REQUIRED REMOVING PIPE				
LOCATION	STATION	SIDE	SIZE/TYPE	206D-000 REMOVING PIPE LIN FT
HI-PACK DR	21+15.23	LT	42" CPP	28
	21+22.25	LT	42" CPP	181
CUNNINGHAM DR	210+00.00	RT	24" RCP	66
	210+80.00	RT	24" RCP	25
TOTAL				**300**

REQUIRED REMOVING INLETS & HEADWALLS				
LOCATION	STATION	SIDE	206E-000 REMOVING HEADWALLS EACH	206E-002 REMOVING JUNCTION BOXES EACH
HI-PACK DR	21+22.25	LT		1
	22+98.40	RT	1	
CUNNINGHAM DR	201+17.65	RT	1	
	210+02.55	RT	1	
	210+73.00	RT	1	
	210+96.00	RT	1	
TOTAL			**5**	**1**

REQUIRED MAILBOX RESET				
LOCATION	STATION	OFFSET (FT)	SIDE	209A-000 MAILBOX RESET, SINGLE EACH
CIRCULAR BASELINE	303+18.33	15.4	RT	1
TOTAL				**1**

REQUIRED REMOVING FENCE				
LOCATION	STATION FROM	STATION TO	SIDE	206D-011 REMOVING FENCE LIN FT
CUNNINGHAM DR	200+18.00	201+11.63	LT	147
	201+29.97	210+41.05	LT	164
TOTAL				**311**

REQUIRED RIGHT OF WAY MARKERS					
ROADWAY	STATION	OFFSET (±)	SIDE	602A-000 RIGHT OF WAY MARKERS EA	SPEC OR STD DWG
HIPACK DR	17+00.00	31	RT	1	M-602
	17+00.00	50	RT	1	
	17+07.52	50	LT	1	
	19+04.80	50	RT	1	
	19+04.80	50	LT	1	
	21+09.65	50	RT	1	
	22+41.67	50	LT	1	
	23+75.05	89	RT	1	
	23+97.01	40	RT	1	
	24+52.51	25	RT	1	
	30+28.75	25	RT	1	
	30+28.75	50	LT	1	
	31+03.55	50	LT	1	
	31+50.00	25	RT	1	
	31+71.53	30	LT	1	
	32+20.08	30	LT	1	
	32+29.94	30	LT	1	
	32+50.00	30	RT	1	
	33+00.00	60	RT	1	
CUNNINGHAM DR	200+75.00	31	RT	1	
	200+98.48	32	LT	1	
	210+50.00	32	LT	1	
THOMASON DR	99+50.00	56	RT	1	
TOTAL				**23**	

REQUIRED SLOPE PAVING						
LOCATION	STATION FROM	STATION TO	SIDE	614A-000 SLOPE PAVING CU YD	SPEC OR STD DWG	NOTES
HI-PACK DR	31+75.00	33+29.39	RT/LT	27	623-N SPEC, SHEET 2H	ISLAND "E"
CIRCULAR BASELINE	303+14.74	303+48.50	LT	9		ISLAND "D"
CUNNINGHAM DR	200+79.11	201+28.53	RT/LT	6		ISLAND "C"
THOMASON DR	99+14.50	100+65.00	RT/LT	20		ISLAND "B"
CUNNINGHAM DR	210+01.59	210+51.00	RT/LT	6		ISLAND "A"
TOTAL				**68**		

REQUIRED RIPRAP						
LOCATION	SIDE	STATION TO STATION		LOOSE RIPRAP, CLASS 2 TON 610C-001	FILTER BLANKET, GEOTEXTILE SQ YD 610D-003	NOTES
HI-PACK DR	RT	23+51.43	23+66.60	11	12	SEE SHEET 3E BOX SHEETS FOR ADDITIONAL 667 SQ YD OF ITEM 610D-003
	LT	24+64.91	24+76.22	7	8	
	LT	29+41.08	29+52.37	7	8	
	RT	29+96.00	30+04.00	7	8	
CUNNINGHAM DR	LT	210+46.00	210+54.00	13	14	
	RT	211+50.00	211+58.00	7	8	
TOTAL				**52**	**58**	

REQUIRED CONCRETE DRIVEWAY, CONCRETE SIDEWALK, DETECTABLE WARNING SURFACE AND CURB RAMP								
LOCATION	STATION FROM	STATION TO	SIDE	618A-000 CONCRETE SIDEWALK, 4" THICK SQ YD	618B-003 CONCRETE DRIVEWAY, 6" THICK (INCLUDES WIRE MESH) SQ YD	618C-001 DETECTABLE WARNING SURFACE SQ FT	618D-000 CURB RAMP SQ YD	SPEC OR STD DWG
HI-PACK DR	17+00.00	33+29.39	LT	1410	27	8	4	SW-618
	17+00.00	20+93.81	RT	221		8	4	
	21+32.08	33+18.11	RT	699		16	8	
CIRCULAR BASELINE	300+00.00	300+83.88	LT	94		16	5	
	301+07.65	301+94.12	LT	136		24	11	
	302+21.36	302+85.45	LT	55		16	6	
THOMASON DR	99+48.10	100+12.50	RT/LT	102				
TOTAL				**2717**	**27**	**88**	**38**	

PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			SUMMARY OF QUANTITIES - BOX SHEETS	HI-PACK DRIVE

SUMMARY OF QUANTITIES - BOX SHEETS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	3C

REQUIRED ROADWAY SIGNS

ENTRY NO.	SHEET NO.	LOCATION				NUMBER OF POSTS	STANDARD SIGNS (FLAT PLANEL)												CLASS 9, ALUMINUM FLAT SIGN PANELS (TYPE XI BACKGROUND) (SQ FT)	CLASS 9, ALUMINUM FLAT SIGN PANELS (TYPE XI BACKGROUND, FLUORESCENT) (SQ FT)	CLASS 4, ALUMINUM FLAT SIGN PANELS (TYPE IV BACKGROUND) (SQ FT)	ROADWAY SIGN POST (#3 U CHANNEL, GALVANIZED STEEL OR 2", 14 GA SQUARE TUBULAR STEEL) (LIN FT)	REMARKS	SPEC OR STD DWG
		ROADWAY	STATION	OFFSET	SIDE		R1-1 (STD)	R1-2 (STD)	R2-1(STD)	R3-7L (STD)	R4-7(STD)	R6-4a(STD)	W3-1 (STD)	W1-7 (STD)	W2-6 (STD)	W11-2 (STD)	W16-7p (STD)	D1-5a (SPEC)	710A-153	710A-154	710A-171	710B-021		
1	9	HI-PACK	21+40.20	50.00	RT	1	1												7.46			13		SHS-0, SHS-1, SHS-2, SHS-12, SHS-13, SHS-20, SHS-21, SHS-22, IHS-710-12, IHS-710-21, IHS-710-23, SL-710
2	9		30+00.00	32.50	RT	1			1												5	13	25 MPH	
3	9		31+00.00	30.00	RT	1									1						9	13		
4	9		31+50.00	37.00	LT	1			1												5	13	35 MPH	
5	9		31+80.00	0.00	-	1					1										5	13		
6	9		32+00.00	36.00	RT	2												1			116	30	114"X146"	
7	9		33+00.00	58.00	RT	1										1				9		13		
																	1			2				
8	9		33+13.66	82.75	RT	1		1											3.9			13		
9	9	CUNNINGHAM DR	198+00.00	24.00	RT	1			1												5	13	25 MPH	
10	9		199+00.00	25.13	RT	1									1						9	13		
11	9		200+10.00	25.00	LT	1			1												5	13	35 MPH	
12	9		200+50.00	25.00	RT	2												1			116	30	114"X146"	
13	9		200+80.25	0.00	-	1					1										5	13		
14	9		200+95.00	28.00	RT	1										1				9		13		
																	1			2				
15	9		201+14.15	33.80	RT	1		1											3.9			13		
16	9		210+23.00	48.00	LT	1		1											3.9			13		
17	9		210+43.30	30.00	LT	1										1				9		13		
																	1			2		13		
18	9		210+49.68	0.00	-	1					1										5	13		
19	9		211+00.00	25.00	LT	2												1			116	30	114"X146"	
20	9		212+50.00	21.25	LT	1									1						9	13		
21	9		213+50.00	24.75	LT	1			1												5	13		
22	9	THOMASON DR	99+22.50	37.00	LT	1		1											3.9			13		
23	9		99+56.25	28.00	LT	1										1				9		13		
																	1			2				
24	9		100+50.00	25.00	LT	1												1			116	13	114"X146"	
25	9		100+58.34	0.00	-	1					1										5	13		
26	9		101+00.00	26.00	LT	1									1						9	13		
27	9		102+00.00	25.00	LT	1			1												5	13	25 MPH	
28	9	CIRCULAR BASELINE	300+64.35	41.25	RT	1						1									8	13		
29	9		301+72.50	41.25	RT	1						1									8	13		
30	9		302+70.60	41.25	RT	1						1									8	13		
31	9		303+41.63	41.25	RT	1						1									8	13		
TOTAL																			**24**	**44**	**582**	**467**		

PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			SUMMARY OF QUANTITIES BOX SHEETS	HI-PACK DRIVE

SUMMARY OF QUANTITIES - BOX SHEETS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	3D

REQUIRED DRAINAGE SUMMARY

LOCATION			INDEX NO.		DRAINAGE SHT NO.		REQUIRED STORM SEWER PIPE				REQUIRED ROADWAY PIPE			REQUIRED PIPE END TREATMENT		JUNCTION BOXES	JUNCTION BOX UNITS	INLETS			INLET UNITS	STRUCTURE EXCAVATION	FOUNDATION BACKFILL (COMMERCIAL)	MINOR STRUCTURE CONCRETE	NOTES	SPEC OR STD DWG
ROAD	STATION TO STATION	SIDE	FROM	TO	PLAN	SECTION	CLASS 3 RCP	CLASS 3 RCP	CLASS 3 RCP	CLASS 3 RCAP	CLASS 3 RCP	CLASS 3 RCAP	CLASS 3 RCAP	CLASS 1	CLASS 1	TYPE 1 OR 1P	TYPE 1 OR 1P	TYPE S1 OR S3 (1 WING)	TYPE S1 OR S3 (2 WING)	TYPE S3 (2 WING) (PARTIAL)	TYPE S1 OR S3					
	FROM	TO					18"	36"	42"	54"	18"	36"	54"	36"	54"	EA	EA	EA	EA	EA	EA	CU YD	CU YD	CU YD		
							533A-098	533A-101	533A-102	533A-104	530A-001	530A-004	530A-007	619A-005	619A-008	621A-011	621B-011	621C-015	621C-017	621C-062	621D-015	214A-000	214B-001	620A-000		
HI-PACK DR	18+00	18+00	RT/LT	1	2	4	60					39							1				32	22			
	18+00	20+00	LT	2	4	4	60			194									1				149	99			
	20+00	20+00	RT/LT	3	4	4	60					39							1				36	24			
	20+00	21+15	LT	4	6	4	60			109									1				85	63			
	21+15	22+00	LT	6	8	4	60			79						1	1						90	60			
	22+00	22+00	RT/LT	7	8	4	60					39							1				76	33			
	22+00	23+90	LT	8	10	4	60			185									1				220	129			
	23+90	24+18	LT	10	18	4	61			40									1				46	30			
	23+65	24+34	RT/LT	11	18	4	61						99		1								138	81			
	24+34	24+66	LT	18	20	4	61				50				1	1	2						56	37			
	24+34	25+21	LT	16	18	4	61	84											1				71	42			
	25+21	25+21	RT/LT	15	16	4	61					29							1				24	16			
	25+21	26+50	LT	14	16	4	62	126											1				94	61			
	26+50	26+50	RT/LT	13	14	4	62					29							1				24	16			
	30+00	30+00	RT	19	23	5	62		25						1								28	18			
	30+00	30+00	RT/LT	23	26	5	62						29						1			2	32	21			
	29+51	30+00	LT	26	28	5	62		65						1				1			3	66	43			
	30+00	31+35	RT	21	23	5	62	128												1			95	62			
THOMASON DR	99+17	99+17	RT	29	29	5	63														1						
	99+17	99+17	LT	30	32	5	63					26				1							22	14			
	99+17	210+50	LT	32	33	5	63	96											1				75	50			
TOTALS								434	**90**	607	**50**	**201**	**29**	**99**	**2**	**2**	3	**3**	11	**4**	**1**	**5**	**1570**	**994**	**1**		

REQUIRED STRIPING, MARKINGS, AND RAISED PAVEMENT MARKERS

LOCATION	701A-227	701A-230	701A-244	701B-207	701C-002	701C-003	703A-002	703D-001	705A-032	705A-037	705A-038	SPEC OR STD DWG
	SOLID WHITE, CLASS 2, TYPE A TRAFFIC STRIPE (5" WIDE)	SOLID YELLOW, CLASS 2, TYPE A TRAFFIC STRIPE (5" WIDE)	BROKEN YELLOW, CLASS 2, TYPE A TRAFFIC STRIPE (5" WIDE)	DOTTED, CLASS 2, TYPE A TRAFFIC STRIPE (5" WIDE)	BROKEN TEMPORARY TRAFFIC STRIPE (PAINT)	SOLID TEMPORARY TRAFFIC STRIPE (PAINT)	TRAFFIC CONTROL MARKINGS, CLASS 2, TYPE A	TEMPORARY TRAFFIC CONTROL MARKINGS	PAVEMENT MARKERS, CLASS A-H, TYPE 1-B	PAVEMENT MARKERS, CLASS A-H, TYPE 2-D	PAVEMENT MARKERS, CLASS A-H, TYPE 2-E	
	MILE	MILE	MILE	LIN FT	MILE	MILE	SQ FT	SQ FT	EA	EA	EA	
HI-PACK DR	0.7	0.7	0.2	-	0.2	1.3	663	663	66	42	33	TCM-703, PM-705-1, PM-705-2, PM-705-6, PS-701-4
CUNNINGHAM DR	0.2	0.1	-	-	-	0.3	613	613	-	-	-	
THOMASON DR	0.1	0.1	-	-	-	0.2	371	371	-	-	-	
CICRULAR BASELINE	0.1	-	-	82	-	0.1	-	-	-	-	-	
TOTAL	**2**	**1**	**1**	**82**	**1**	**2**	**1647**	**1647**	**66**	**42**	**33**	

PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			SUMMARY OF QUANTITIES BOX SHEETS	HI-PACK DRIVE

SUMMARY OF QUANTITIES - BOX SHEETS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	3E

REQUIRED TEMPORARY EROSION AND SEDIMENT CONTROL SUMMARY													
LOCATION	610D-003	652A-100	656A-010	659C-002	665A-000	665B-001	665G-000	665J-002	665N-000	665O-001	665P-005	NOTES	STD OR SPECIAL DWG
	FILTER BLANKET, GEOTEXTILE	SEEDING	MULCHING	EROSION CONTROL PRODUCT, TYPE S2	TEMPORARY SEEDING	TEMPORARY MULCHING	SAND BAGS	SILT FENCE	TEMPORARY COARSE AGGREGATE, ALDOT NUMBER 1	SILT FENCE REMOVAL	INLET PROTECTION, STAGE 3 OR 4		
	SQ YD	ACRE	ACRE	SQ YD	ACRE	TON	EACH	LIN FT	TON	LIN FT	EA	SEE SHEET 3B BOX SHEETS	ESC-100, ESC-200, ESC-300,
PROJECT LIMITS	667	2	2	10142	6	18	50	4230	300	4230	18	FOR ADDITIONAL 58 SQ YD	ESC-400, ESC-501-509
TOTAL	**667**	**2**	**2**	**10142**	**6**	**18**	**50**	**4230**	**300**	**4230**	**18**	OF ITEM 610D-003	-

REQUIRED CURB AND GUTTER						
LOCATION	STATION		SIDE	623C-003	623A-001	SPEC OR STD DWG
	FROM	TO		COMBINATION CURB & GUTTER, TYPE C (MODIFIED)	CONCRETE GUTTER (VALLEY)	
				LIN FT	LIN FT	
HI-PACK DR	17+00.00	33+04.25	LT	1553	44	623-XY
	17+00.00	20+89.98	RT	399		
	20+94.65	21+00.00	RT	24		
	21+21.74	21+32.08	RT	30		
	21+37.95	33+16.02	RT	1198		
CIRCULAR BASELINE	303+94.44	300+80.69	LT	120		
	301+10.86	301+92.55	LT	111		
	302+22.97	302+83.32	LT	84		
CUNNINGHAM DR	200+00.00	201+10.47	LT	120		
	200+31.70	201+05.49	RT	74		
	210+33.78	211+50.00	LT	117		
	210+33.61	210+76.80	RT	44		
	210+92.21	211+50.00	RT	60		
THOMASON DR	99+44.57	101+00.00	LT	153		
	99+44.93	101+00.00	RT	158		
TOTAL				**4245**	**44**	

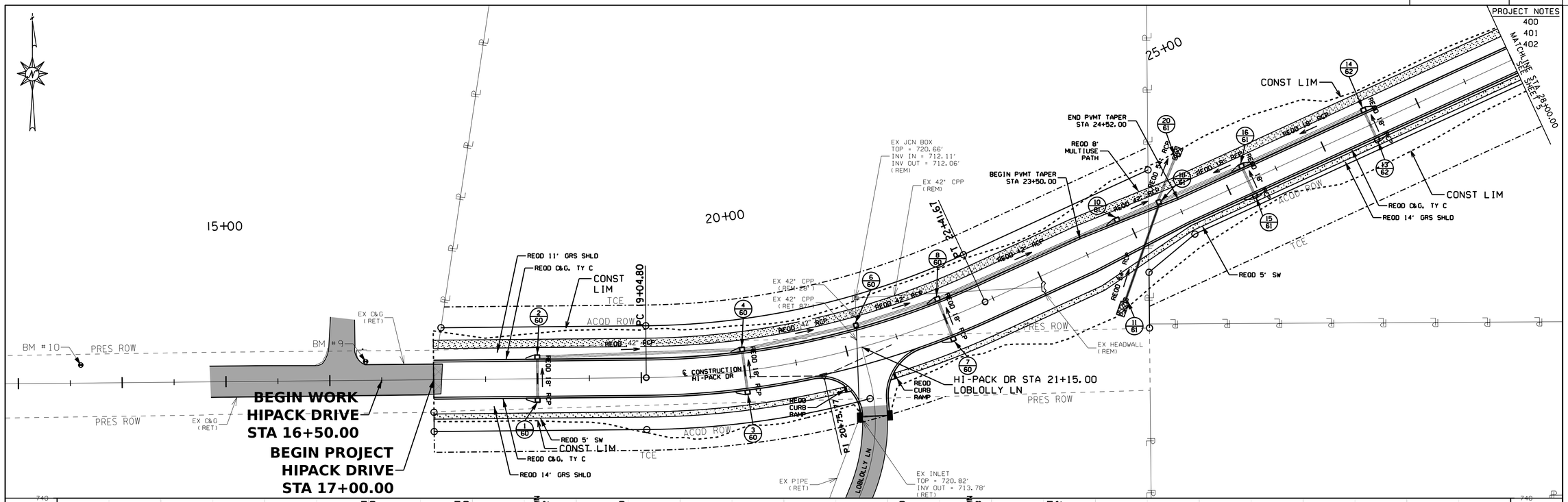
REQUIRED UTILITY ITEMS																				
	602D-000	641A-514	641A-518	641A-612	641A-614	641A-616	641D-500	641J-510	641J-516	641J-518	641J-520	641N-520	641N-530	641N-620	641N-730	641O-534	641P-520	649A-535	649A-545	649A-555
	CONCRETE VALVE MARKER	1 INCH COPPER WATER SERVICE LINE LAID	2 INCH COPPER WATER SERVICE LINE LAID	6 INCH DUCTILE IRON WATER MAIN LAID	8 INCH DUCTILE IRON WATER MAIN LAID	10 INCH DUCTILE IRON WATER MAIN LAID	FIRE HYDRANT	2 INCH GATE VALVE WITH BOX	6 INCH GATE VALVE WITH BOX	8 INCH GATE VALVE WITH BOX	10 INCH GATE VALVE WITH BOX	8 INCH X 6 INCH ANCHOR TEE	10 INCH X 6 INCH ANCHOR TEE	8 INCH X 8 INCH DUCTILE IRON ANCHOR TEE	10 INCH X 10 INCH DUCTILE IRON ANCHOR TEE	10 INCH X 8 INCH TAPPING VALVE AND SLEEVE	1 INCH SERVICE TAP	12 INCH STEEL ENCASEMENT PIPE, TYPE 1 INSTALLATION	16 INCH STEEL ENCASEMENT PIPE, TYPE 1 INSTALLATION	20 INCH STEEL ENCASEMENT PIPE, TYPE 1 INSTALLATION
LOCATION	EACH	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	LIN FT	LIN FT	LIN FT
HI-PACK DR	10	198	128	183	1792	664	3	2	6	14	4	5	1	3	1	1	4	94	78	42
TOTAL	**10**	**198**	**128**	**183**	**1792**	**664**	**3**	**2**	**6**	**14**	**4**	**5**	**1**	**3**	**1**	**1**	**4**	**94**	**78**	**42**

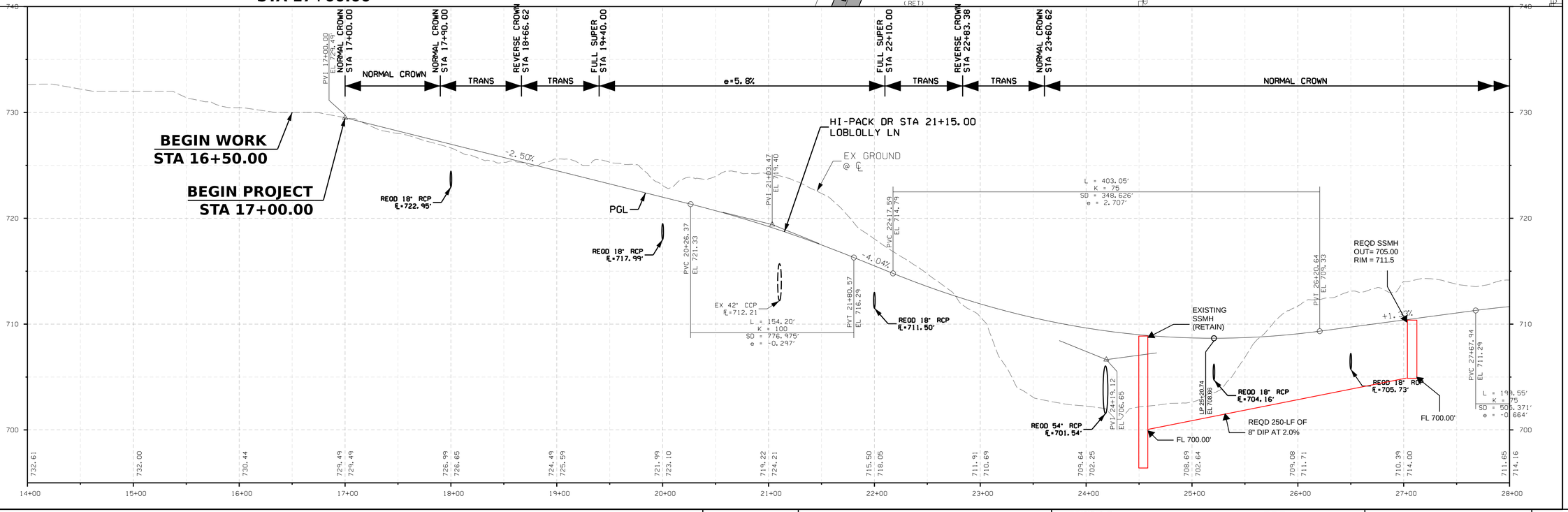
PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			SUMMARY OF QUANTITIES BOX SHEETS	HI-PACK DRIVE

PLAN & PROFILE - HI-PACK DRIVE

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	4

PROJECT NOTES
400
401
402

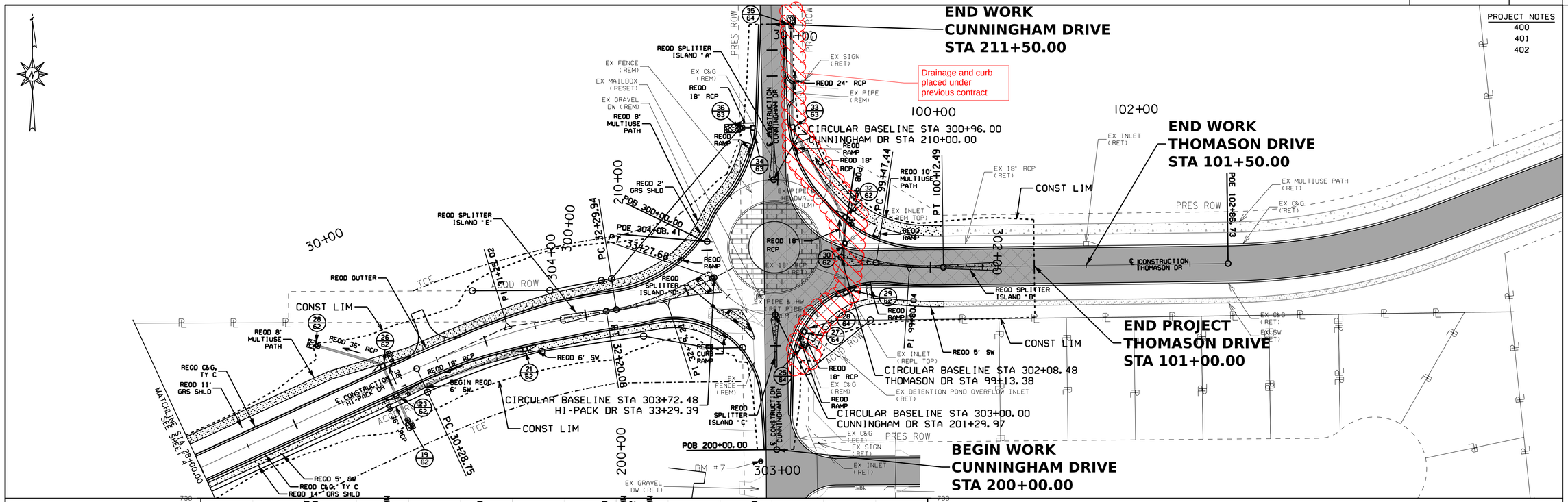




PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 50 0 50 (FEET) VERT 5 0 5	SHEET TITLE	ROUTE
FINAL			PLAN & PROFILE - HI-PACK DRIVE	HI-PACK DRIVE

PLAN & PROFILE - HI-PACK DRIVE, CUNNINGHAM DRIVE & THOMASON DRIVE

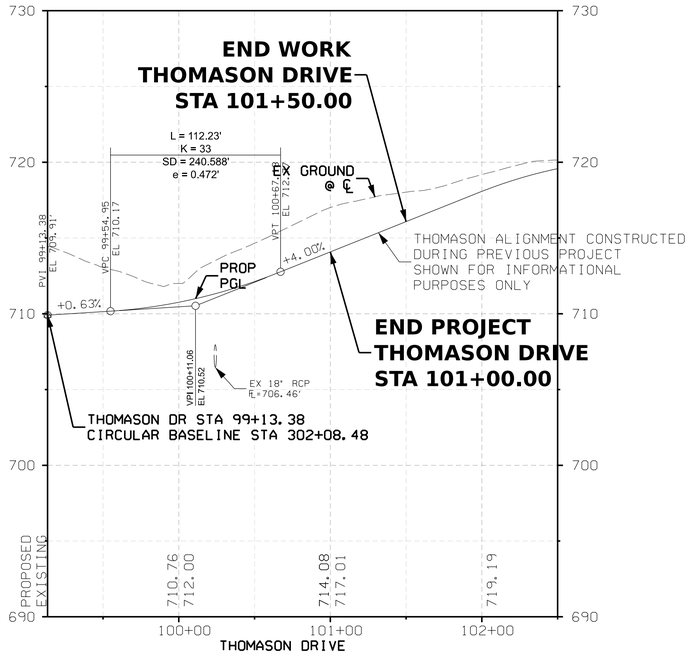
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	5

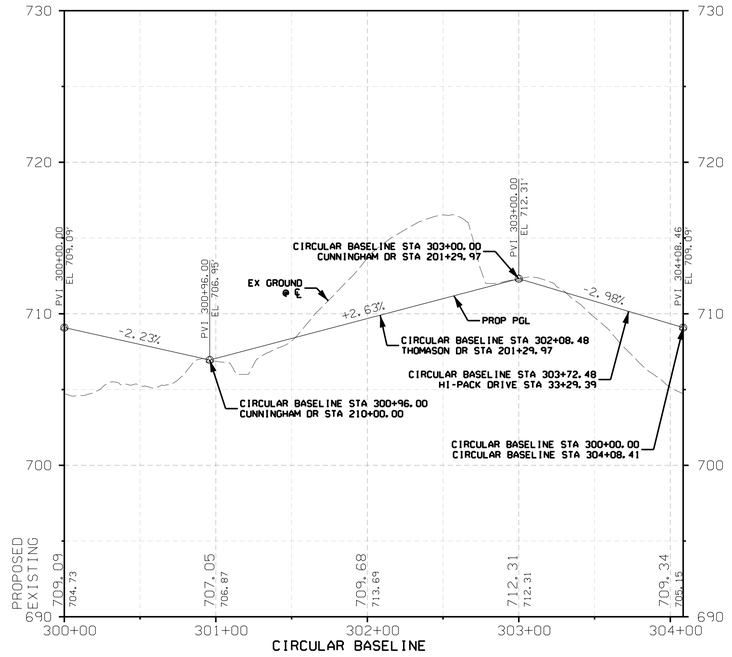


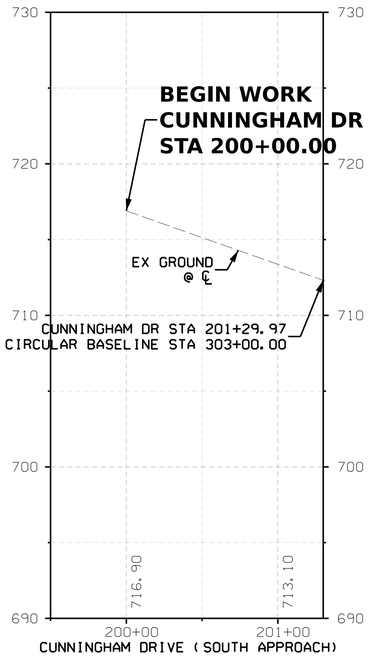
PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 50 0 50 (FEET) VERT 5 0 5	SHEET TITLE	ROUTE
FINAL			PLAN & PROFILE - HI-PACK DRIVE, CUNNINGHAM DRIVE & THOMASON DRIVE	HI-PACK DRIVE

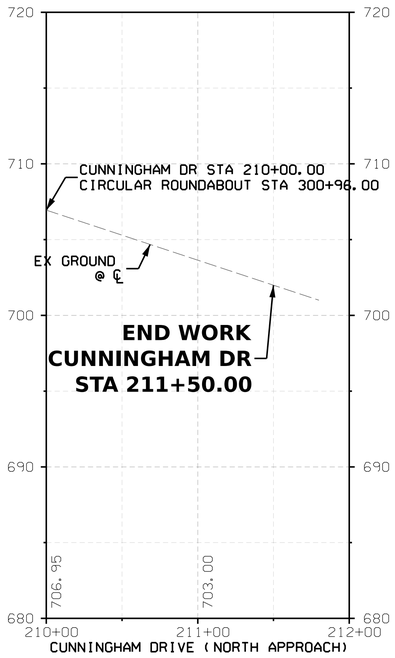
PROFILE SHEET

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	6





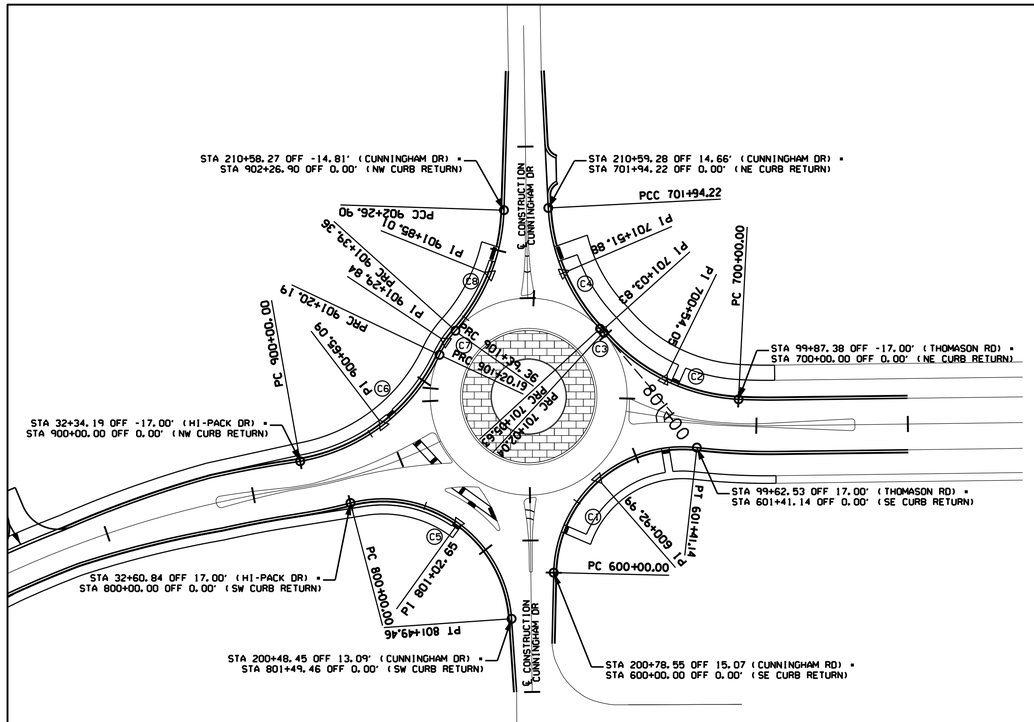


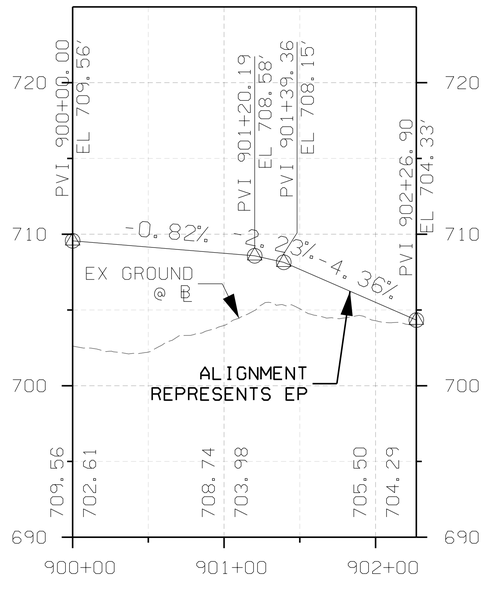


PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 50 0 50 VERT 50 0 50 (FEET)	SHEET TITLE	ROUTE
FINAL			PROFILE SHEET	HI-PACK DRIVE

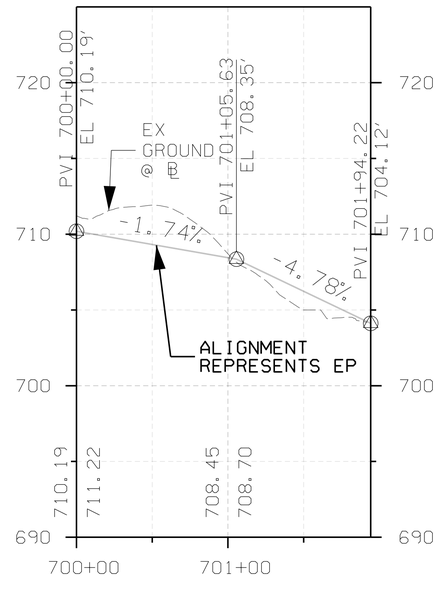
CURB RETURN PLAN & PROFILE

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	7





NW CURB PROFILE



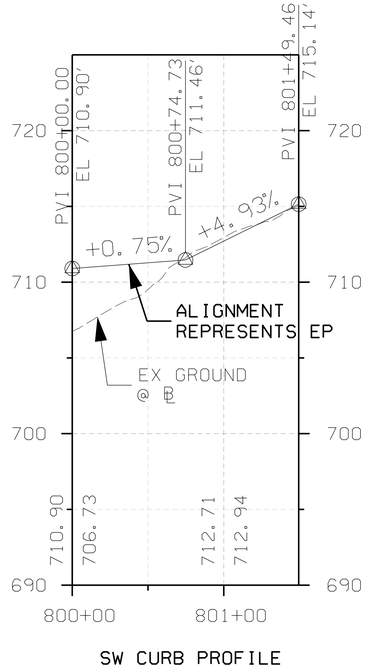
NE CURB PROFILE

NW CURB RETURN		STATION	NORTHING	EASTING
Element: Circular				
(C6) PC(	RdEoP6)	900+00.00	774111.25	783470.12
PI(	PI)	900+65.09	774122.65	783534.20
CC(	CC)		774235.53	783448.01
PRC(	RdEoP6)	901+20.19	774181.46	783562.08
Radius:		126.23		
Delta:		54°33'07.17" Left		
Degree of Curvature/Arc):		45°23'22.08"		
Length:		120.19		
Tangent:		65.09		
Chord:		115.70		
Middle Ordinate:		14.04		
External:		15.75		
Tangent Direction:		N79°54'51.96"E		
Radial Direction:		S10°05'08.04"E		
Chord Direction:		N52°38'18.37"E		
Radial Direction:		S64°38'15.21"E		
Tangent Direction:		N25°21'44.79"E		
Element: Circular				
(C7) PRC(	RdEoP6)	901+20.19	774181.46	783562.08
PI(	PI)	901+29.84	774190.21	783566.17
CC(	CC)		774153.92	783620.95
PRC(	RdEoP6)	901+39.36	774197.39	783572.62
Radius:		65.00		
Delta:		16°53'49.28" Right		
Degree of Curvature/Arc):		88°08'50.47"		
Length:		19.17		
Tangent:		9.65		
Chord:		19.10		
Middle Ordinate:		0.71		
External:		0.71		
Tangent Direction:		N25°04'15.68"E		
Radial Direction:		S64°55'44.32"E		
Chord Direction:		N33°31'10.31"E		
Radial Direction:		S48°01'55.05"E		
Tangent Direction:		N41°58'04.95"E		
Element: Circular				
(C8) PRC(	RdEoP6)	901+39.36	774197.39	783572.62
PI(	PI)	901+85.01	774231.33	783603.15
CC(	CC)		774280.98	783474.69
PT(	RdEoP6)	902+26.90	774276.96	783604.62
Radius:		125.00		
Delta:		40°07'30.63" Left		
Degree of Curvature/Arc):		45°50'11.84"		
Length:		87.54		
Tangent:		45.65		
Chord:		85.76		
Middle Ordinate:		7.59		
External:		8.08		
Tangent Direction:		N41°58'04.95"E		
Radial Direction:		S48°01'55.05"E		
Chord Direction:		N21°54'19.64"E		
Radial Direction:		S88°09'25.67"E		
Tangent Direction:		N01°50'34.33"E		

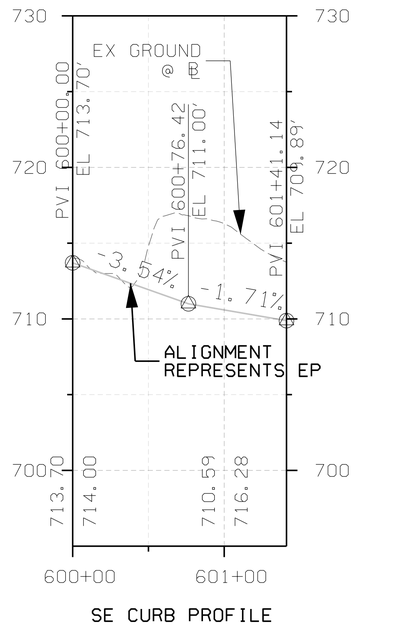
SW CURB RETURN		STATION	NORTHING	EASTING
Element: Circular				
(C9) PC(	RdEoP7)	800+00.00	774083.70	783503.35
PI(	PI)	801+02.85	774109.67	783602.66
CC(	CC)		774001.46	783524.86
PT(	RdEoP7)	801+49.46	774007.26	783609.66
Radius:		85.00		
Delta:		100°44'39.84" Right		
Degree of Curvature/Arc):		67°24'24.48"		
Length:		149.46		
Tangent:		102.65		
Chord:		130.93		
Middle Ordinate:		30.79		
External:		48.27		
Tangent Direction:		N75°20'32.33"E		
Radial Direction:		S14°39'27.67"E		
Chord Direction:		S54°17'07.75"E		
Radial Direction:		S86°05'12.17"W		
Tangent Direction:		S03°54'47.83"E		

NE CURB RETURN		STATION	NORTHING	EASTING
Element: Circular				
(C2) PC(	RdEoP)	700+00.00	774152.12	783759.47
PI(	PI)	700+54.05	774154.83	783705.49
CC(	CC)		774276.97	783765.73
PRC(	RdEoP)	701+02.04	774196.02	783670.48
Radius:		125.00		
Delta:		46°46'14.09" Right		
Degree of Curvature/Arc):		45°50'11.84"		
Length:		102.04		
Tangent:		54.05		
Chord:		99.23		
Middle Ordinate:		10.27		
External:		11.19		
Tangent Direction:		N87°07'59.68"W		
Radial Direction:		N02°52'00.32"E		
Chord Direction:		N63°44'52.64"W		
Radial Direction:		N49°38'14.41"E		
Tangent Direction:		N40°21'45.59"W		
Element: Circular				
(C3) PC(	RdEoP)	701+02.04	774196.02	783670.48
PI(	PI)	701+03.83	774197.38	783669.32
CC(	CC)		774153.92	783620.95
PRC(	RdEoP)	701+05.63	774198.68	783668.08
Radius:		65.00		
Delta:		03°09'45.94" Left		
Degree of Curvature/Arc):		88°08'50.47"		
Length:		3.59		
Tangent:		1.79		
Chord:		3.59		
Middle Ordinate:		0.02		
External:		0.02		
Tangent Direction:		N40°21'45.59"W		
Radial Direction:		N49°38'14.41"E		
Chord Direction:		N41°56'36.56"W		
Radial Direction:		N46°28'28.47"E		
Tangent Direction:		N43°31'31.53"W		
Element: Circular				
(C4) PRC(	RdEoP)	701+05.63	774198.68	783668.08
PI(	PI)	701+51.88	774232.22	783636.23
CC(	CC)		774284.77	783758.72
PT(	RdEoP)	701+94.22	774278.41	783633.88
Radius:		125.00		
Delta:		40°36'30.51" Right		
Degree of Curvature/Arc):		45°50'11.84"		
Length:		88.59		
Tangent:		46.25		
Chord:		86.75		
Middle Ordinate:		7.77		
External:		8.28		
Tangent Direction:		N43°31'31.53"W		
Radial Direction:		N46°28'28.47"E		
Chord Direction:		N23°13'16.28"W		
Radial Direction:		N87°04'58.97"E		
Tangent Direction:		N02°55'01.03"W		

SE CURB RETURN		STATION	NORTHING	EASTING
Element: Circular				
(C1) PC(	RdEoP1)	600+00.00	774037.71	783637.46
PI(	PI)	600+92.99	774130.67	783634.55
CC(	CC)		774035.80	783722.44
PT(	RdEoP1)	601+41.14	774120.27	783731.96
Radius:		85.00		
Delta:		95°08'24.16" Right		
Degree of Curvature/Arc):		67°24'24.48"		
Length:		141.14		
Tangent:		92.99		
Chord:		125.48		
Middle Ordinate:		27.65		
External:		40.98		
Tangent Direction:		N01°17'10.76"E		
Radial Direction:		S88°42'49.24"E		
Chord Direction:		N48°51'22.84"E		
Radial Direction:		S06°29'34.92"W		
Tangent Direction:		S83°34'25.08"E		



SW CURB PROFILE

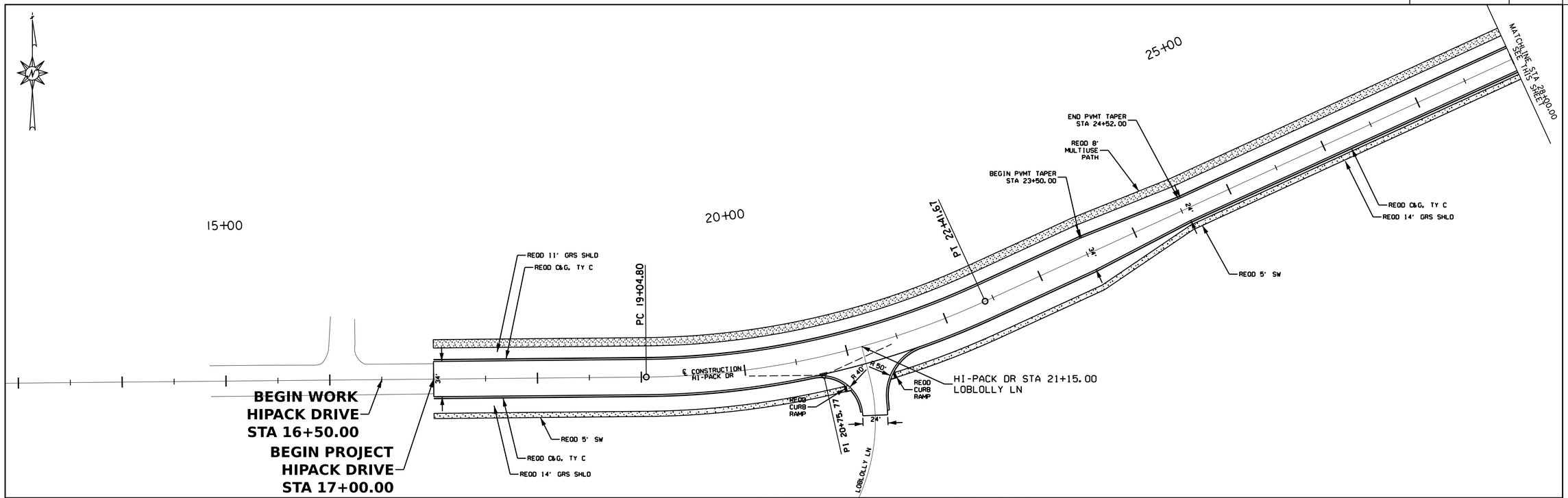


SE CURB PROFILE

PLAN SUBMITTAL	THREE NOTCH GROUP	50 HORIZ 0 50 (FEET) 5 VERT 0 5	SHEET TITLE	ROUTE
FINAL			CURB RETURN PLAN & PROFILE	HI-PACK DRIVE

PAVING LAYOUT

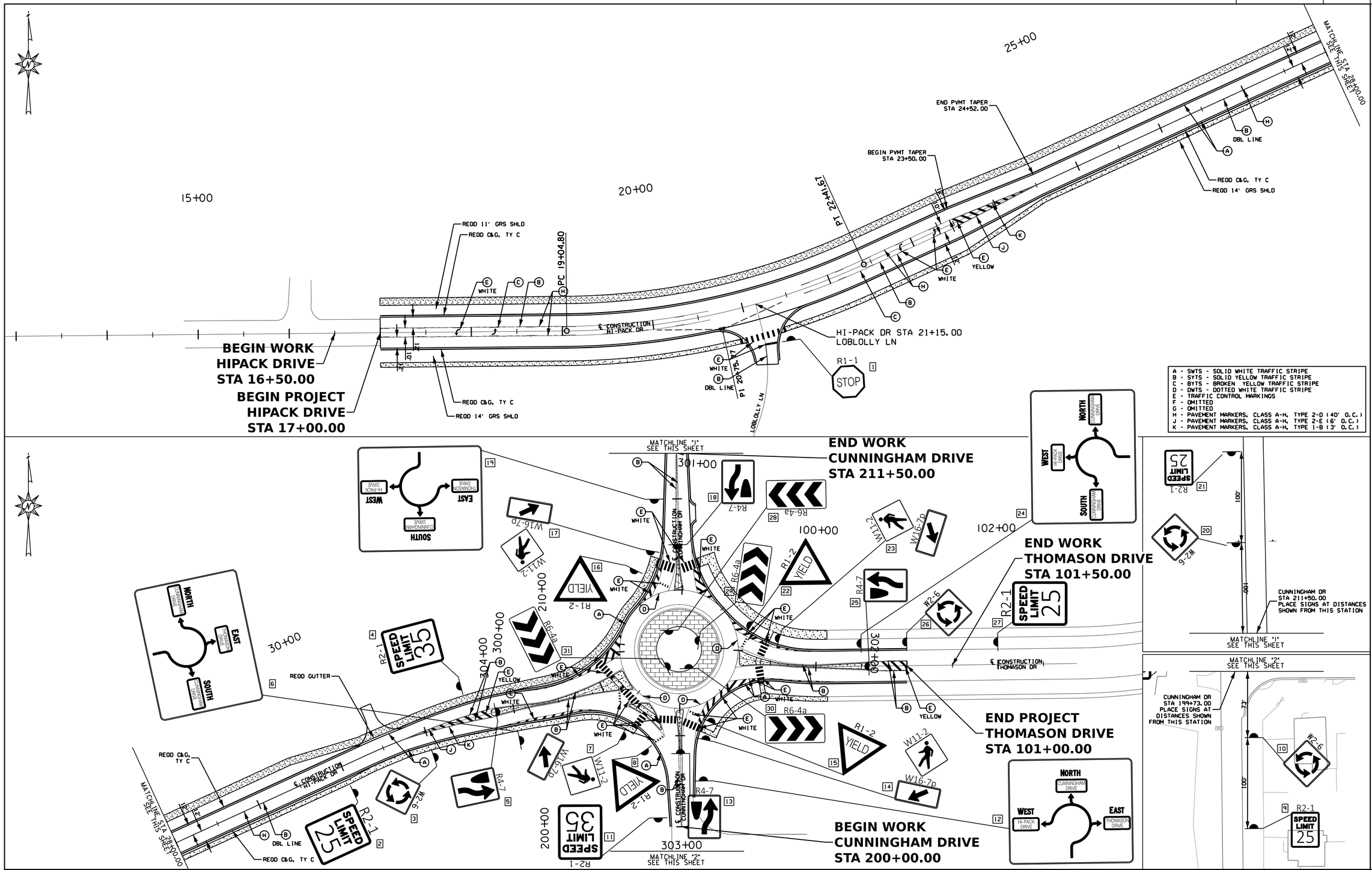
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	8



PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 50 0 50 SCALE (FEET)	SHEET TITLE	ROUTE
FINAL			PAVING LAYOUT	HI-PACK DRIVE

SIGNING & STRIPING LAYOUT

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	9



PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 50 0 50 SCALE (FEET)	SHEET TITLE	ROUTE
FINAL			SIGNING & STRIPING LAYOUT	HI-PACK DRIVE

UTILITY LAYOUT

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	12

NOTES:

1. ALL DUCTILE IRON WATER MAIN TO BE RESTRAINED VIA RESTRAINING GASKETS.
2. ALL MECHANICAL JOINT FITTINGS TO BE INSTALLED WITH FIELD LOK OR ROMAC GRIP ASSEMBLIES OR APPROVED EQUAL. MEGALUGS NOT ACCEPTABLE.
3. ALL DUCTILE IRON FITTINGS INCLUDING, BUT NOT LIMITED TO, BENDS, TEES, THREADED CONNECTIONS, AND CAPS, SHALL BE A SUBSIDIARY OBLIGATION OF THE ASSOCIATED DUCTILE IRON WATER MAIN LAID. PAY ITEMS 641A-612, 641A-614, OR 641A-616.
4. WATER MAIN SHALL BE LOCATED APPROXIMATELY EQUIDISTANT BETWEEN SIDEWALK AND ROW BOUNDARY. ANY DEVIATIONS FROM THIS LOCATION SHALL BE REVIEWED AND APPROVED BY OPELIKA WATER BEFORE INSTALLATION.
5. DEFLECTIONS OF PIPE GREATER THAN THE SPECIFICATION GIVEN BY THE MANUFACTURER WILL NOT BE ACCEPTED. INSTALL BENDS WHERE NEEDED.
6. INSTALLED WATER MAIN TO BE TESTED TO 150 PSI FOR A MINIMUM OF 4 HOURS WITH NO LOSS IN PRESSURE.
7. CONNECTION TO EXISTING 8-INCH AND 10-INCH MAINS MUST BE SCHEDULED A MINIMUM OF 72 HOURS IN ADVANCE WITH OPELIKA WATER.
8. ALL WORK ON WATER INFRASTRUCTURE MUST BE PERFORMED TO OPELIKA WATER'S STANDARDS AND SPECIFICATIONS.
9. EXISTING OPELIKA WATER SYSTEM VALVES SHALL BE OPERATED BY OPELIKA WATER EMPLOYEES ONLY.
10. ALL MATERIALS FOR WATER LINE CONSTRUCTION SHALL BE SUBMITTED TO AND APPROVED BY OPELIKA WATER PRIOR TO CONSTRUCTION.
11. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE MANNER ONLY. THE CONTRACTOR SHALL FIELD DETERMINE THE EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
12. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR FROM THEIR FAILURE TO EXACTLY LOCATE AND PROTECT ANY AND ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
13. ALABAMA STATE LAW REQUIRES THIS WORK TO BE INSTALLED BY AN ALABAMA LICENSED UTILITY CONTRACTOR.

PROJECT NOTES

UTILITY OWNERS

OPELIKA POWER SERVICES (334)705-5593 CONTACT: MR. BRENT POTEET	SPIRE ENERGY (334)391-3804 CONTACT: MR. JASON GIPSON
OPELIKA PUBLIC WORKS/ SEWER DEPARTMENT (334)705-5413 CONTACT: MR. MIKE HILYER	SOUTHEAST AL GAS (334)428-2862 CONTACT: ROBERT FORBES
OPELIKA WATER (334)705-5500 CONTACT: MATT MCDOUGALD	CHARTER COMMUNICATIONS (334)718-4857 CONTACT: MR. DAVID WHITE
AT&T (334)741-7876 CONTACT: MR. JAKE KILGORE	ALABAMA POWER (334)832-2345 CONTACT: MR. TROY CHILES

BEGIN WORK HIPACK DRIVE STA 16+50.00

BEGIN PROJECT HIPACK DRIVE STA 17+00.00

END WORK CUNNINGHAM DRIVE STA 211+50.00

END WORK THOMASON DRIVE STA 101+50.00

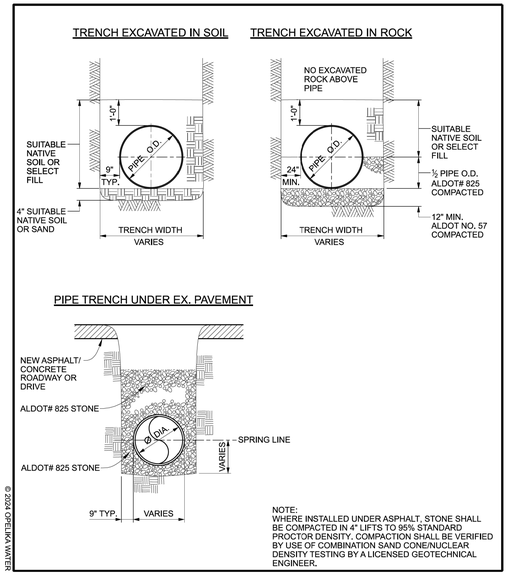
END PROJECT THOMASON DRIVE STA 101+00.00

BEGIN WORK CUNNINGHAM DRIVE STA 200+00.00

PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 50 0 50 SCALE (FEET)	SHEET TITLE	ROUTE
FINAL			UTILITY LAYOUT	HI-PACK DRIVE

UTILITY DETAILS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	13

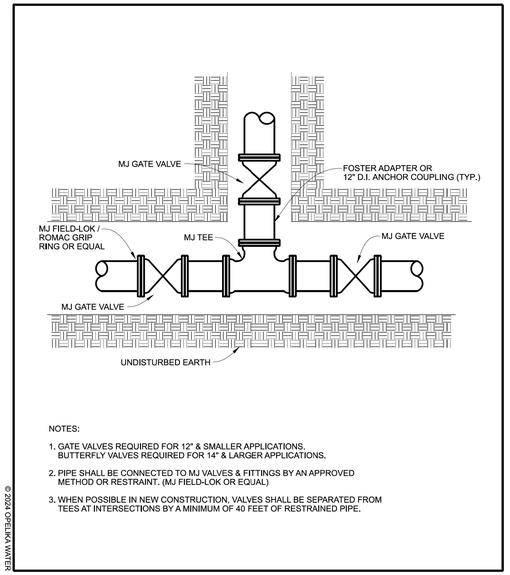


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SHEET TITLE	PROJECT NO.
PIPE BEDDING & BACKFILL	2024-SD
SHEET NO. DT-01	SCALE NO SCALE
	DATE JANUARY 2024

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER



NOTES:

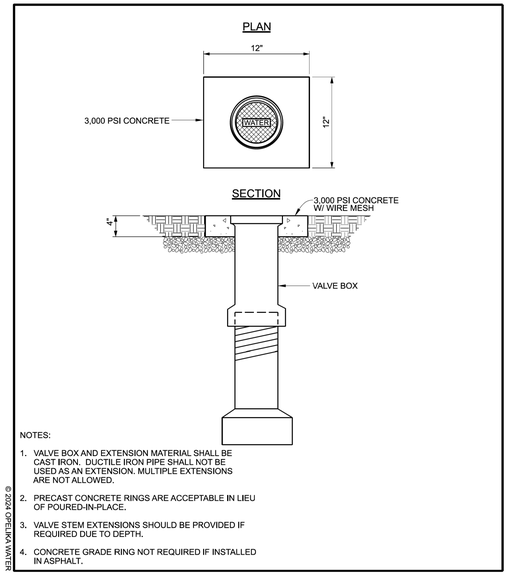
1. GATE VALVES REQUIRED FOR 12" & SMALLER APPLICATIONS. BUTTERFLY VALVES REQUIRED FOR 14" & LARGER APPLICATIONS.
2. PIPE SHALL BE CONNECTED TO MJ VALVES & FITTINGS BY AN APPROVED METHOD OR RESTRAINT. (MJ FIELD-LOK OR EQUAL)
3. WHEN POSSIBLE IN NEW CONSTRUCTION, VALVES SHALL BE SEPARATED FROM TEES AT INTERSECTIONS BY A MINIMUM OF 40 FEET OF RESTRAINED PIPE.

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SHEET TITLE	PROJECT NO.
TYPICAL VALVE ARRANGEMENT	2024-SD
SHEET NO. DT-02	SCALE NO SCALE
	DATE JANUARY 2024

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER



NOTES:

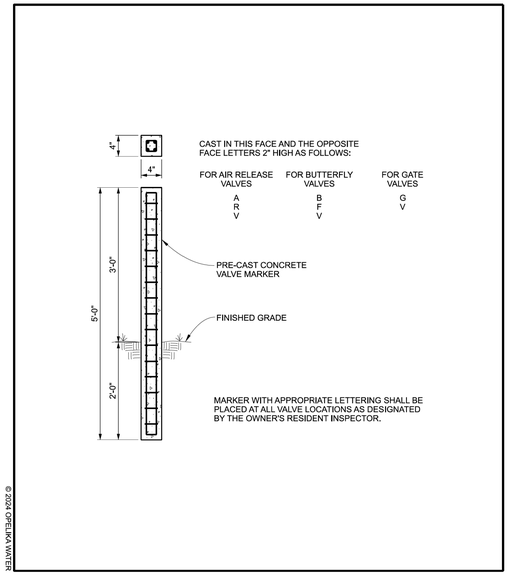
1. VALVE BOX AND EXTENSION MATERIAL SHALL BE CAST IRON. DUCTILE IRON PIPE SHALL NOT BE USED AS AN EXTENSION. MULTIPLE EXTENSIONS ARE NOT ALLOWED.
2. PRECAST CONCRETE RINGS ARE ACCEPTABLE IN LIEU OF POURED-IN-PLACE.
3. VALVE STEM EXTENSIONS SHOULD BE PROVIDED IF REQUIRED DUE TO DEPTH.
4. CONCRETE GRADE RING NOT REQUIRED IF INSTALLED IN ASPHALT.

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SHEET TITLE	PROJECT NO.
VALVE BOX	2024-SD
SHEET NO. DT-03	SCALE NO SCALE
	DATE JANUARY 2024

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER

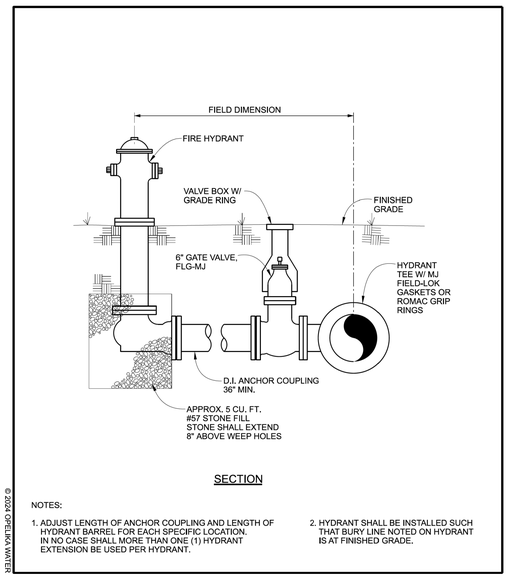


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SHEET TITLE	PROJECT NO.
CONCRETE VALVE MARKER	2024-SD
SHEET NO. DT-04	SCALE NO SCALE
	DATE JANUARY 2024

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER



NOTES:

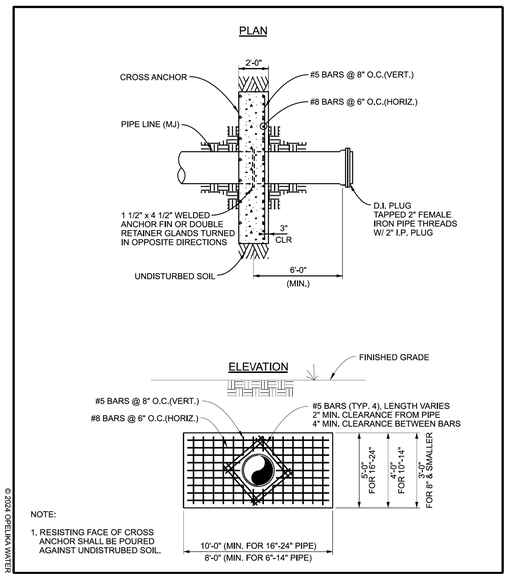
1. ADJUST LENGTH OF ANCHOR COUPLING AND LENGTH OF HYDRANT BARREL FOR EACH SPECIFIC LOCATION. IN NO CASE SHALL MORE THAN ONE (1) HYDRANT EXTENSION BE USED PER HYDRANT.
2. HYDRANT SHALL BE INSTALLED SUCH THAT BURY LINE NOTED ON HYDRANT IS AT FINISHED GRADE.

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SHEET TITLE	PROJECT NO.
FIRE HYDRANT	2024-SD
SHEET NO. DT-05	SCALE NO SCALE
	DATE JANUARY 2024

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER



NOTE:

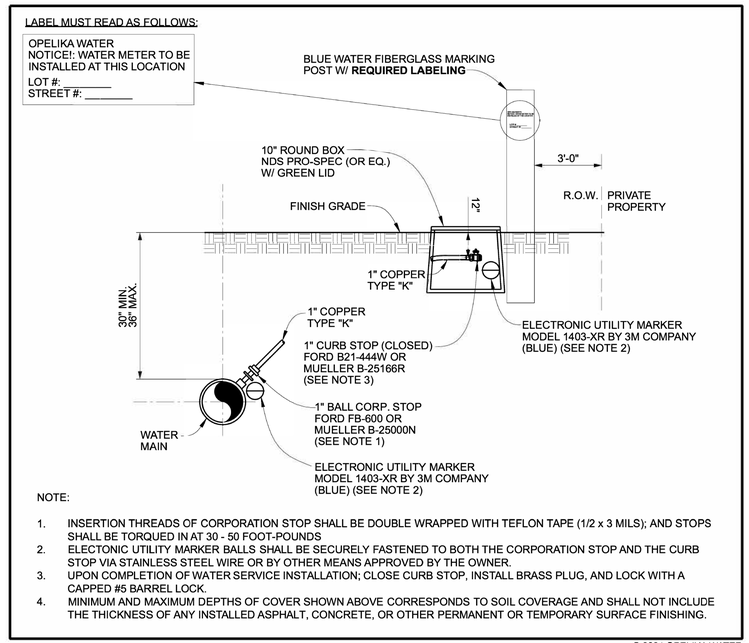
1. RESISTING FACE OF CROSS ANCHOR SHALL BE POURED AGAINST UNDISTRUBED SOIL.

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SHEET TITLE	PROJECT NO.
CONCRETE CROSS ANCHOR	2024-SD
SHEET NO. DT-06	SCALE NO SCALE
	DATE JANUARY 2024

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER



NOTE:

1. INSERTION THREADS OF CORPORATION STOP SHALL BE DOUBLE WRAPPED WITH TEFLON TAPE (1/2 x 3 MILS); AND STOPS SHALL BE TORQUED IN AT 30 - 50 FOOT-POUNDS
2. ELECTONIC UTILITY MARKER BALLS SHALL BE SECURELY FASTENED TO BOTH THE CORPORATION STOP AND THE CURB STOP VIA STAINLESS STEEL WIRE OR BY OTHER MEANS APPROVED BY THE OWNER.
3. UPON COMPLETION OF WATER SERVICE INSTALLATION; CLOSE CURB STOP, INSTALL BRASS PLUG, AND LOCK WITH A CAPPED #5 BARREL LOCK.
4. MINIMUM AND MAXIMUM DEPTHS OF COVER SHOWN ABOVE CORRESPONDS TO SOIL COVERAGE AND SHALL NOT INCLUDE THE THICKNESS OF ANY INSTALLED ASPHALT, CONCRETE, OR OTHER PERMANENT OR TEMPORARY SURFACE FINISHING.

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OPELIKA WATER

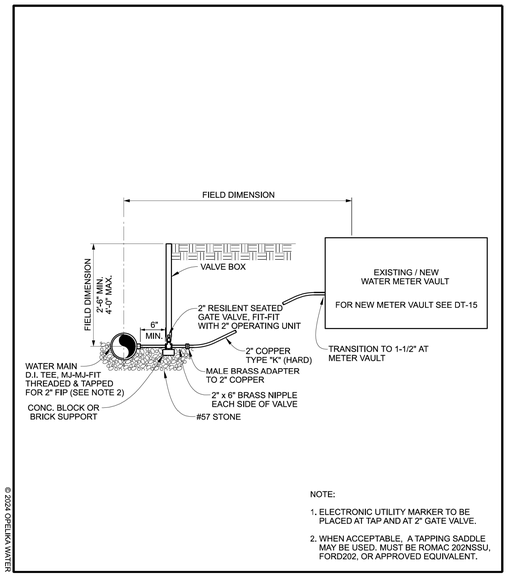
THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

SHEET TITLE	PROJECT NO.
3/4" OR 1" SERVICE INSTALLATION	2024-SD
SHEET NO. DT-07	SCALE NO SCALE
	DATE AUG 2024

PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			UTILITY DETAILS	HI-PACK DRIVE

UTILITY DETAILS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	13A



NOTE:

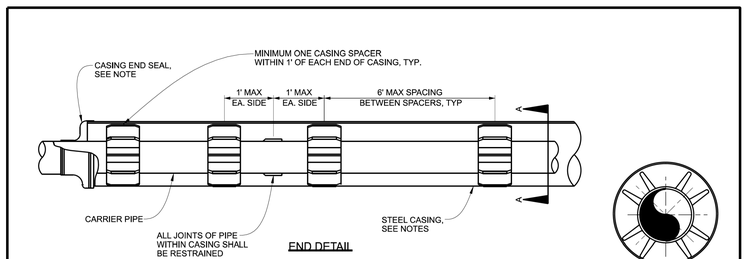
1. ELECTRONIC UTILITY MARKER TO BE PLACED AT TAP AND AT 2" GATE VALVE.
2. WHEN ACCEPTABLE, A TAPPING SADDLE MAY BE USED. MUST BE ROMAC 202NSSU, FORD202, OR APPROVED EQUIVALENT.

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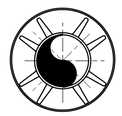
SHEET TITLE: 1 1/2" TO 2" SERVICE CONNECTION
SHEET NO.: DT-09
PROJECT NO.: 2024-SD
SCALE: NO SCALE
DATE: OCT 2024

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

OPELIKA WATER



END DETAIL



SECTION A-A

NOTES:

1. BORING SHALL BE AT 90 DEGREES TO ALL CROSSINGS UNLESS OTHERWISE APPROVED. THE BORING OF THE HOLE AND INSTALLATION OF THE CASING PIPE SHALL BE SIMULTANEOUS. BORE HOLE DIAMETER SHALL ESSENTIALLY BE THE SAME AS THE OUTSIDE DIAMETER OF THE CASING PIPE TO BE INSTALLED.
2. AERIAL CROSSINGS SHALL BE AS INDICATED.
3. JOINTS SHALL CONFORM TO THE REQUIREMENTS OF AWWA C206. JOINTS BETWEEN SECTIONS SHALL BE COMPLETELY WELDED TO THE PRECEDING SECTIONS. PRIOR TO WELDING JOINTS, THE CONTRACTOR SHALL ENSURE THAT BOTH ENDS OF THE CASING SECTIONS BEING WELDED ARE SQUARE.
4. STEEL PIPE CASING WALL THICKNESS SHALL BE AS INDICATED. VERIFY CASING SIZES PRIOR TO ORDERING AND SIZING CASING INSULATORS.
5. CASING SPACERS SHALL BE RESTRAINED-TYPE BOLTED SPACERS AND SHALL HAVE A MAXIMUM SPACING AS SHOWN, OR AS RECOMMENDED BY MANUFACTURER, WHICHEVER IS CLOSER. PIPE CASING SPACERS SHALL BE AS MANUFACTURED BY PIPELINE SEAL AND INSULATOR, INC., ADVANCE PRODUCTS AND SYSTEMS, INC., OR APPROVED EQUAL.
6. CASING END SEALS FOR AERIAL OR EXPOSED ENDS SHALL BE SYNTHETIC NEOPRENE RUBBER PULL-ON TYPE END SEALS WITH STAINLESS STEEL BANDS AS MANUFACTURED BY THE ABOVE MANUFACTURERS, OR APPROVED EQUAL. CASING END SEALS FOR BURIED APPLICATIONS SHALL BE MASONRY BULKHEADS FOR CASINGS LARGER THAN 16" IN DIAMETER. CASINGS 16" DIAMETER AND SMALLER MAY USE SYNTHETIC NEOPRENE RUBBER SEALS OR MASONRY BULKHEADS.

MINIMUM STEEL CASING SIZES

CARRIER PIPE		CASING SPACER		STEEL CASING		
NOMINAL PIPE DIAMETER	PIPE O.D.	O.D. OVER SPACER RUNNERS	BAND WIDTH	MINIMUM CASING THICKNESS	CASING I.D.	MINIMUM CASING O.D.
4	4.8	9.2	4	0.25	11.5	12
6	6.9	11.3	6	0.25	13.5	14
8	9.05	13.45	8	0.25	15.5	16
10	11.1	15.5	10	0.25	17.5	18
12	13.2	18.6	12	0.25	23.5	24
14	15.3	20.7	14	0.25	23.5	24
16	17.4	22.8	16	0.3125	29.375	30
18	19.5	24.9	18	0.3125	29.375	30
20	21.6	27	20	0.3125	29.375	30
24	25.8	31.2	24	0.3125	35.375	36
30	32	37.4	30	0.5	41	42
36	38.3	43.7	36	0.5	47	48
42	44.5	49.9	42	0.5	53	54

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OPELIKA WATER

THE WATER WORKS BOARD OF THE CITY OF OPELIKA
STANDARD CONSTRUCTION DETAILS
OPELIKA, ALABAMA

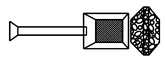
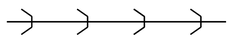
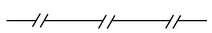
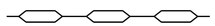
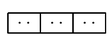
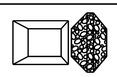
SHEET TITLE: PIPE CASING INSTALLATION
SHEET NO.: DT-11
PROJECT NO.: 2024-SD
SCALE: NO SCALE
DATE: JANUARY 2024

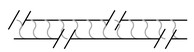
	PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
	FINAL			UTILITY DETAILS	HI-PACK DRIVE

EROSION AND SEDIMENT CONTROL PLAN LEGEND

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	30

BEST MANAGEMENT PRACTICES (BMP's)

TEMPORARY SLOPE DRAIN PIPE WITH ROCK DITCH CHECK AND SUMP EXCAVATION	
TEMPORARY EARTH BERM	
BRUSH BARRIER	
SILT FENCE SEDIMENT BARRIER	
FLOATING BASIN BOOM	
HAY BALE DITCH CHECK	
SAND BAG DITCH CHECK	
WATTLE DITCH CHECK	
ROCK DITCH CHECK	
ROCK DITCH CHECK WITH SUMP EXCAVATION	
SILT FENCE DITCH CHECK	

INLET PROTECTION	
STABILIZED CONSTRUCTION ENTRANCE	
EROSION CONTROL PRODUCTS	
SLOPE DRAIN	
TEMPORARY EARTH BERM WITH POLYETHYLENE	
DREDGE, FILL	
PRIMARY STORMWATER DISCHARGE POINT	
SECONDARY STORMWATER DISCHARGE POINT	
BACKGROUND POINT	
SEDIMENT RETENTION BARRIER	
SOLID SODDING	
TEMPORARY RIPRAP BERM	
TEMPORARY SEDIMENTATION BASIN	
PERMANENT DETENTION BASIN	

EROSION AND SEDIMENT CONTROL PHASES

INITIAL PHASE - AS CLEARING BEGINS AND PRIOR TO ANY GRUBBING OR GRADING WORK.

INTERMEDIATE PHASE - AS NEEDED. AS WORK IS ONGOING AND ADVANCING TOWARD COMPLETION.

FINAL CONSTRUCTION - AS WORK IS COMPLETED AND PERMANENT VEGETATION IS ESTABLISHED.

--SPECIFICATIONS--
CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

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REVISIONS

ALABAMA DEPARTMENT OF TRANSPORTATION
1409 COLISEUM BOULEVARD
MONTGOMERY, AL 36130-3050

DESIGN BUREAU SPECIAL DRAWING

EROSION & SEDIMENT CONTROL LEGEND

Bureau Std Engr: J.T.
DRAWN BY: N.D.F. DATE DRAWN: 07-28-23

SPECIAL DRAWING NO: SPECIAL PROJECT DETAIL

INDEX NO

PLAN SUBMITTAL: FINAL

THREE NOTCH GROUP

NOT TO SCALE

SHEET TITLE: EROSION AND SEDIMENT CONTROL PLAN LEGEND

ROUTE: HI-PACK DRIVE

EROSION & SEDIMENT CONTROL PLAN - INITIAL PHASE

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	31

PROJECT NOTES

15+00
20+00
25+00
CONST LIM
TCE
ACOD ROW
PRES ROW
EX C&G (RET)
EX 42" CPP (REM)
EX 42" CPP (RET)
EX JCN BOX TOP = 720.66' INV IN = 712.11' INV OUT = 712.06' (REM)
EX HEADWALL (REM)
SCE
PC 19+04.80
PT 22+41.67
PI 20+73.24
1.0
1.1
BEGIN WORK HIPACK DRIVE STA 16+50.00
BEGIN PROJECT HIPACK DRIVE STA 17+00.00
HI-PACK DR STA 21+15.00 LOBLOLLY LN
CONSTRUCTION HI-PACK DR
EX PIPE (RET)
EX INLET TOP = 720.82' INV OUT = 713.78' (RET)
LOBLOLLY LN
MATCHLINE STA 28+00.00 SEE THIS SHEET

301+00
END WORK CUNNINGHAM DRIVE STA 211+50.00
4.0
EX FENCE (REM)
EX MAILBOX (RESET)
EX GRAVEL DW (REM)
EX SIGN (RET)
EX PIPE (REM)
3.0
100+00
102+00
CIRCULAR BASELINE STA 300+96.00 CUNNINGHAM DR STA 210+00.00
CONSTRUCTION CUNNINGHAM DR
EX INLET (RET)
END WORK THOMASON DRIVE STA 101+50.00
POB 99+13.38
PC 99+47.44
PT 100+12.49
EX 18" RCP (RET)
EX PIPE & HEADWALL (REM)
EX MULTIUSE PATH (RET)
EX C&G (RET)
POE 102+96.73
CONSTRUCTION THOMASON DR
210+00
POB 300+00.00
POE 304+08.41
PC 32+29.94
PT 33+27.68
PI 31+78.02
304+00
302+00
EX 18" RCP (RET)
EX PIPE & HW (RET PIPE REM HW)
PI 99+80.04
EX INLET (REPL TOP)
EX DETENTION POND OVERFLOW INLET (RET)
CIRCULAR BASELINE STA 302+08.48 THOMASON DR STA 99+13.38
END PROJECT THOMASON DRIVE STA 101+00.00
CIRCULAR BASELINE STA 303+00.00 CUNNINGHAM DR STA 201+29.97
30+00
CONST LIM
2.0
CONSTRUCTION HI-PACK DR
PC 30+28.75
PT 32+20.08
PI 32+74.14
CIRCULAR BASELINE STA 303+72.48 HI-PACK DR STA 33+29.39
EX FENCE (REM)
MATCHLINE STA 28+00.00 SEE THIS SHEET
2.1
200+00
POB 200+00.00
303+00
BM # 7
EX GRAVEL DW (RET)
EX SIGN (RET)
EX INLET (RET)
BEGIN WORK CUNNINGHAM DRIVE STA 200+00.00

PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 50 0 50 SCALE (FEET)	SHEET TITLE	ROUTE
FINAL			EROSION & SEDIMENT CONTROL PLAN - INTIIAL PHASE	HI-PACK DRIVE

EROSION & SEDIMENT CONTROL PLAN - INTERMEDIATE PHASE

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	33

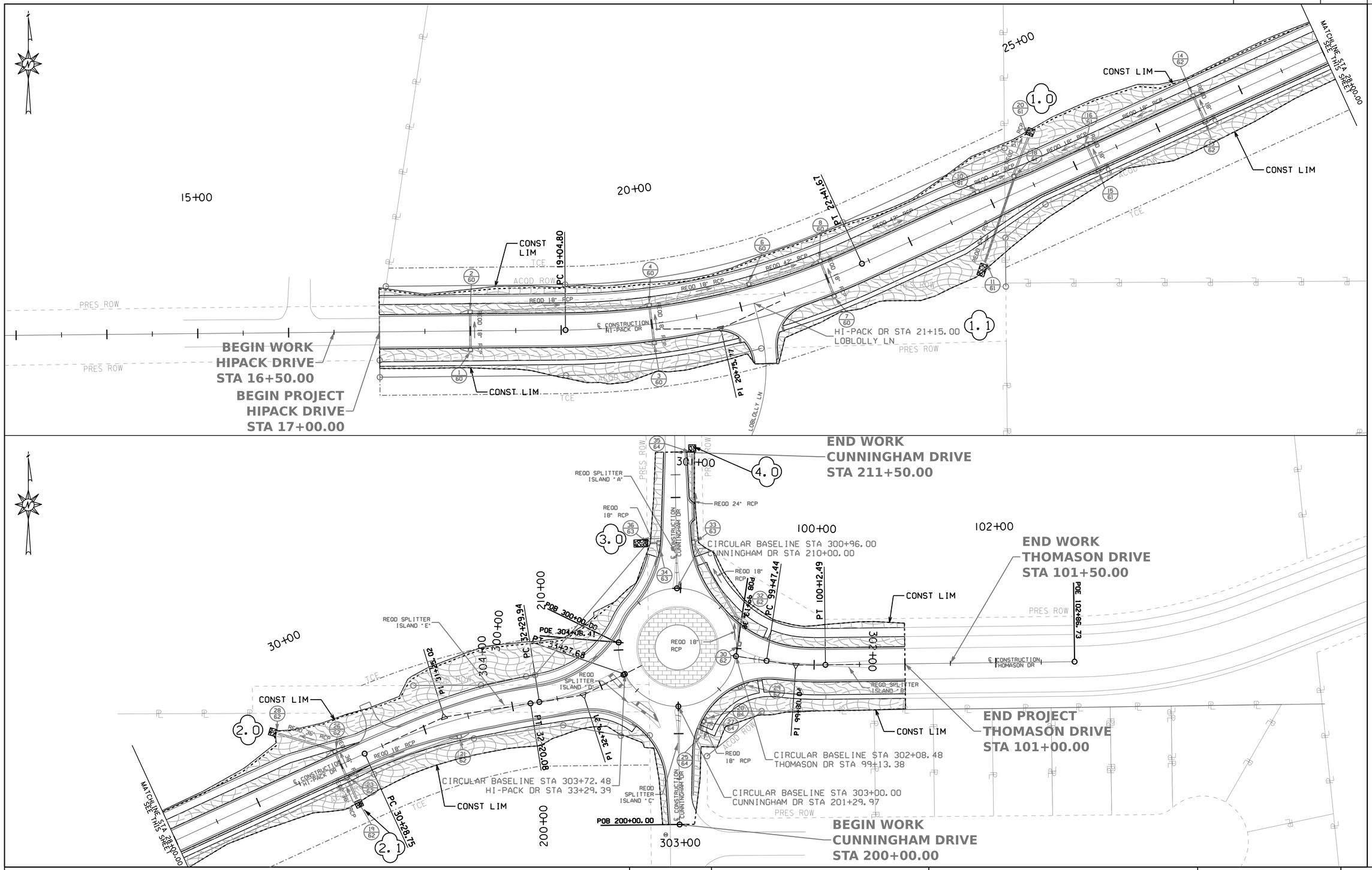
15+00
20+00
25+00
BEGIN WORK
HIPACK DRIVE
STA 16+50.00
BEGIN PROJECT
HIPACK DRIVE
STA 17+00.00
REOD 11' GRS SHLD
REOD C&G, TY C
CONST LIM
TCE
ACOD ROW
PRES ROW
POC 19+04.80
REOD 18" RCP
REOD 42" RCP
REOD 24" RCP
REOD 15" RCP
REOD 14' GRS SHLD
SCE
℄ CONSTRUCTION HI-PACK DR
PI 22+41.67
PI 20+73.17
HI-PACK DR STA 21+15.00
LOBLOLLY LN
1.0
1.1
END PVMT TAPER
STA 24+52.00
BEGIN PVMT TAPER
STA 23+50.00
MATCHLINE STA 28+00.00
SEE THIS SHEET

END WORK
CUNNINGHAM DRIVE
STA 211+50.00
4.0
REOD SPLITTER ISLAND "A"
REOD 24" RCP
3.0
100+00
102+00
CIRCULAR BASELINE STA 300+96.00
CUNNINGHAM DR STA 210+00.00
REOD 18" RCP
REOD 2' GRS SHLD
POB 300+00.00
POE 304+08.41
PC 302+29.94
PI 303+27.68
PI 304+31.02
210+00
300+00
304+00
30+00
REOD SPLITTER ISLAND "E"
REOD SPLITTER ISLAND "D"
REOD CUTTER
2.0
2.1
REOD 36" RCP
REOD C&G, TY C
REOD 11' GRS SHLD
REOD 14' GRS SHLD
℄ CONSTRUCTION HI-PACK DR
CIRCULAR BASELINE STA 303+72.48
HI-PACK DR STA 33+29.39
PC 302+28.75
CONST LIM
POB 200+00.00
200+00
303+00
REOD SPLITTER ISLAND "C"
CIRCULAR BASELINE STA 303+00.00
CUNNINGHAM DR STA 201+29.97
BEGIN WORK
CUNNINGHAM DRIVE
STA 200+00.00
PC 99+47.44
PI 100+12.49
PT 100+12.49
POB 99+47.44
CONST LIM
END WORK
THOMASON DRIVE
STA 101+50.00
POE 102+96.73
℄ CONSTRUCTION THOMASON DR
REOD SPLITTER ISLAND "B"
PI 99+80.04
CIRCULAR BASELINE STA 302+08.48
THOMASON DR STA 99+13.38
END PROJECT
THOMASON DRIVE
STA 101+00.00

PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 50 0 50 SCALE (FEET)	SHEET TITLE	ROUTE
FINAL			EROSION & SEDIMENT CONTROL PLAN - INTERMEDIATE PHASE	HI-PACK DRIVE

EROSION & SEDIMENT CONTROL PLAN - FINAL PHASE

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	35



PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 50 0 50 SCALE (FEET)	SHEET TITLE	ROUTE
FINAL			EROSION & SEDIMENT CONTROL PLAN - FINAL PHASE	HI-PACK DRIVE

TRAFFIC CONTROL PLAN SUMMARY

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	50

TRAFFIC CONTROL NOTES

SEE SHEET 2K

DRAWINGS

A - IHS-710-12
B - IHS-710-21
C - IHS-710-23
D - TCD-100
E - B-107-2
F - PCMS-710

SEQUENCE OF CONSTRUCTION

CONSTRUCTION	TRAFFIC
PHASE I	**PHASE I**
INSTALL ALL APPLICABLE ADVANCE WARNING TRAFFIC CONTROL DEVICES.	TRAFFIC NOT AFFECTED
INSTALL ALL APPLICABLE EROSION CONTROL ITEMS ACCORDING TO THE BMP PLAN PRIOR TO EACH PHASE.	TRAFFIC NOT AFFECTED
PHASE II (HI-PACK DRIVE - STA 17+00 TO 33+29)	**PHASE II**
COMPLETE GRADE, DRAIN, BASE, PAVE OF HI-PACK DRIVE THRU UPPER BINDER LAYER.	TRAFFIC NOT AFFECTED
COMPLETE SIDEWALK AND MULTI-USE PATH CONSTRUCTION.	TRAFFIC NOT AFFECTED
PHASE III (ROUNDABOUT)	**PHASE III**
INSTALL PHASE III (THOMASON DRIVE) DETOUR.	TRAFFIC DETOURED
PERFORM MILLING OF CUNNINGHAM DRIVE THROUGHOUT PROJECT LIMITS.	TRAFFIC DETOURED
COMPLETE REQUIRED REMOVAL OF EXISTING THOMASON DRIVE.	TRAFFIC DETOURED
COMPLETE GRADE, DRAIN, BASE, PAVE OF ROUNDABOUT AND THOMASON DRIVE THRU UPPER BINDER LAYER.	TRAFFIC DETOURED
PHASE IV	**PHASE IV**
INSTALL PHASE IV (CUNNINGHAM DRIVE & THOMASON DRIVE) DETOUR.	TRAFFIC DETOURED
INSTALL WEARING SURFACE LAYER THROUGHOUT PROJECT LIMITS.	TRAFFIC DETOURED
INSTALL REQUIRED PERMANENT STRIPING, TRAFFIC CONTROL MARKINGS AND LEGENDS THROUGHOUT PROJECT LIMITS.	TRAFFIC DETOURED
PHASE V	**PHASE V**
REMOVE DETOUR.	CONSTRUCT UNDER TRAFFIC
UTILIZING SINGLE LANES CLOSURES, INSTALL WEARING SURFACE LAYER THROUGHOUT PROJECT LIMITS.	CONSTRUCT UNDER TRAFFIC
INSTALL REQUIRED PERMANENT STRIPING, TRAFFIC CONTROL MARKINGS AND LEGENDS THROUGHOUT PROJECT LIMITS.	CONSTRUCT UNDER TRAFFIC
PHASE VI	**PHASE VI**
COMPLETE ANY REMAINING ITEMS OF WORK.	CONSTRUCT UNDER TRAFFIC
REMOVE TRAFFIC CONTROL DEVICES.	TRAFFIC NOT AFFECTED

NOTE:
ANY ITEM OF WORK CAN BE PERFORMED CONCURRENTLY WITH THE APPROVAL OF THE ENGINEER AS LONG AS IT DOES NOT CONFLICT WITH ANOTHER SEQUENCE ITEM.

REQUIRED CONSTRUCTION SIGNS (740B-000)

DESCRIPTION	CONSTRUCTION SIGNS			SIZE (INCH)	MOUNT	M.U.T.C.D NUMBER	SHS OR SPECIAL PROJECT DETAIL DRAWING NUMBER	STANDARD OR SPECIAL DRAWING
	NUMBER	S.F. EACH	TOTAL S.F.					
END ROAD WORK	4	8	32	48"X24"	POST	G20-2	SHS-30	A,B,C
ROAD CLOSED	4	10	40	48"X30"	TYPE III	R11-2	SHS-8	A,B,C
ROAD CLOSED X.X MILES AHEAD	3	12.5	37.5	60"X30"	TYPE III	R11-3a	SHS-8	A,B,C
HORIZONTAL ALIGNMENT	4	16	64	48"X48"	POST	W1-4	SHS-26	A,B,C
ROAD WORK AHEAD	3	9	27	36"X36"	POST	W20-1	SHS-29	A,B,C
ROAD WORK 1500'	3	9	27	36"X36"	POST	W20-1	SHS-29	A,B,C
ROAD WORK 1000'	3	9	27	36"X36"	POST	W20-1	SHS-29	A,B,C
ROAD WORK 500'	3	9	27	36"X36"	POST	W20-1	SHS-29	A,B,C
DETOUR 1000'	1	9	9	36"X36"	POST	W20-1	SHS-29	A,B,C
DETOUR 500'	1	9	9	36"X36"	POST	W20-1	SHS-29	A,B,C
ROAD CLOSED 1500'	3	9	27	36"X36"	POST	W20-3	SHS-29	A,B,C
ROAD CLOSED 1000'	3	9	27	36"X36"	POST	W20-3	SHS-29	A,B,C
ROAD CLOSED 500'	3	9	27	36"X36"	POST	W20-3	SHS-29	A,B,C
ONE LANE ROAD AHEAD	2	16	32	48"X48"	TEMP	W20-4	SHS-29	A,B,C
CENTER LANE CLOSED 1500'	2	16	32	48"X48"	TEMP	W20-5	SHS-29	A,B,C
CENTER LANE CLOSED 1000'	2	16	32	48"X48"	TEMP	W20-5	SHS-29	A,B,C
FLAGGER AHEAD	3	16	48	48"X48"	TEMP	W20-7	SHS-29	A,B,C
SHOULDER DROPOFF	2	9	18	36"X36"	POST	W8-17	SHS-28	A,B,C
GROOVED PAVEMENT	2	9	18	36"X36"	POST	W8-15	SHS-28	A,B,C
MOTORCYCLE PLAQUE	2	3	6	24"X18"	POST	W8-15P	SHS-28	A,B,C
STREET NAME (THOMASON DR)	4	3.8	15.2	46"X12"	POST	D1-3	SHS-22	A,B,C
STREET NAME (CUNNINGHAM DR)	12	4.3	51.6	52"X12"	POST	D1-3	SHS-22	A,B,C
DETOUR	2	2	4	24"X12"	POST	M4-8	SHS-31	A,B,C
END DETOUR	3	3	9	24"X18"	POST	M4-8a	SHS-31	A,B,C
DETOUR WITH ARROW (RIGHT)	2	5	10	30"X24"	POST	M4-9R	SHS-31	A,B,C
DETOUR WITH ARROW (LEFT)	2	5	10	30"X24"	POST	M4-9L	SHS-31	A,B,C
DETOUR ARROW WITH LEGEND (RIGHT)	2	6	12	48"X18"	POST	M4-10R	SHS-31	A,B,C
DETOUR ARROW WITH LEGEND (LEFT)	3	6	18	48"X18"	POST	M4-10L	SHS-31	A,B,C
PROJECT TOTAL			697					

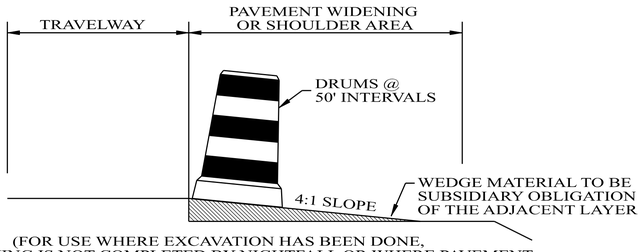
REQUIRED TRAFFIC CONTROL DEVICES

PAY ITEM	DESCRIPTION	EACH	SHS OR SPECIAL PROJECT DETAIL DRAWING NUMBER
740D-000	CHANNELIZING DRUMS	100	D
740E-000	CONES (36 INCHES HIGH)	50	D
740F-002	TYPE III BARRICADE	14	E
740I-002	WARNING LIGHTS, TYPE B	7	E
742A-001	PORTABLE CHANGEABLE MESSAGE SIGN, TYPE 2	2	F

PLAN SUBMITTAL		NOT TO SCALE	SHEET TITLE	ROUTE
FINAL	THREE NOTCH GROUP		TRAFFIC CONTROL PLAN SUMMARY	HI-PACK DRIVE

TEMPORARY TRAFFIC CONTROL PLAN SHEET

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	51

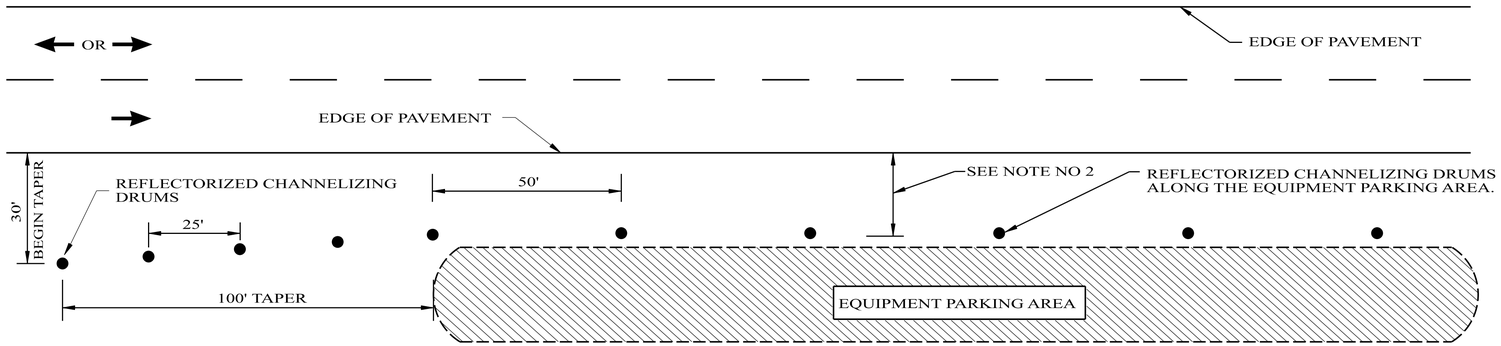


(FOR USE WHERE EXCAVATION HAS BEEN DONE, BUT WIDENING IS NOT COMPLETED BY NIGHTFALL OR WHERE PAVEMENT DROP OFF OF RESURFACING PROJECTS IS 3" OR MORE AT NIGHTFALL)

TYPICAL FOR DROP-OFF AT EDGE OF PAVEMENT

NOTE:
THE CONTRACTOR IS TO CONSTRUCT A WEDGE OF UNCLASSIFIED EXCAVATION OR CRUSHED AGGREGATE BASE . THE COST OF PLACING AND REMOVAL SHALL BE A SUBSIDIARY OBLIGATION OF THE ADJACENT LAYER.

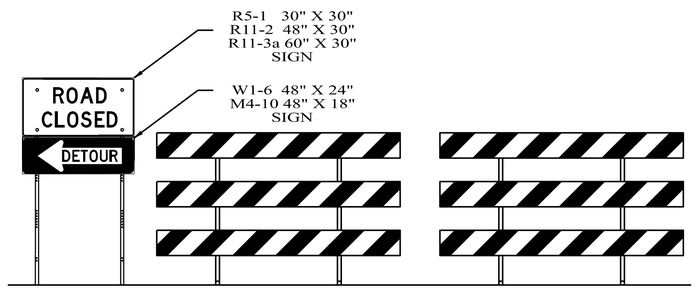
CHANNELIZING DRUMS SHALL BE PLACED AT 50 FT INTERVALS.



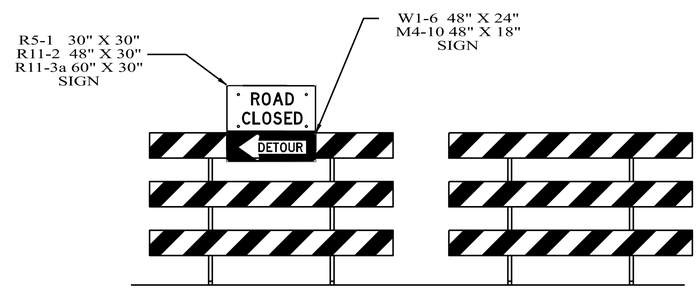
NOTES:

1. SEE ALDOT'S GENERAL TRAFFIC CONTROL PLAN NOTE NO. 702.
2. DRUMS TO BE AS FAR AS PRACTICAL FROM EDGE OF PAVEMENT, MINIMUM DESIRABLE DISTANCE IS 15 FEET FOR FREEWAY TYPE FACILITIES AND 10 FEET FOR OTHER FACILITIES. FOR UNUSUAL CONDITIONS, SUCH AS SPECIAL EQUIPMENT OR LIMITED AVAILABLE SPACE, DIMENSIONS LESS THAN DESIRABLE SHALL BE AS DIRECTED BY THE ENGINEER.
3. ALL DEVICES TO BE FURNISHED BY THE CONTRACTOR WITHOUT COST TO THE ALDOT.

DELINEATING DETAIL FOR EQUIPMENT PARKING OR STORING AREA



DETAILS FOR TYPICAL PLACEMENT OF TYPE III BARRICADES INSIDE OF CLEAR ZONE



DETAILS FOR TYPICAL PLACEMENT OF TYPE III BARRICADES OUTSIDE OF CLEAR ZONE

NOTES

1. SLOPE OF STRIPES ON BARRICADES SHALL BE IN ACCORDANCE WITH SECTION 6F.68 OF THE MUTCD AND DRAWING B-107-2.
2. IF SIGNS ARE REQUIRED TO BE USED IN CONJUNCTION WITH TYPE III BARRICADES TO BE PLACED INSIDE THE CLEAR ZONE, THEY SHALL BE POST MOUNTED TO THE SIDE OF THE BARRICADES AS SHOWN.
3. IF ROAD CLOSED OR DETOUR SIGNS ARE REQUIRED TO BE USED WITH TYPE III BARRICADES TO BE PLACED OUTSIDE THE CLEAR ZONE, THEY SHALL BE PLACED ON THE TOP OF THE BARRICADES NEAREST THE DETOUR.

NOT TO SCALE

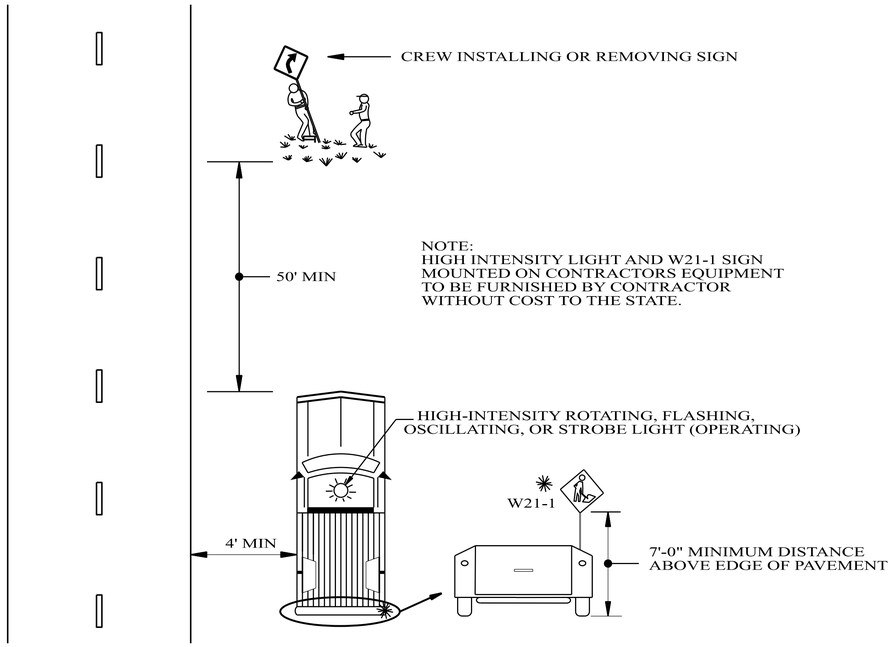
--SPECIFICATIONS--
CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

Bureau Std Engr: D.J.W. / DRAWN BY: / DATE DRAWN: / REVISED DATE: 12-8-2021	DESIGN BUREAU SPECIAL DRAWING	SPECIAL DRAWING NO	INDEX NO
	STANDARD DETAILS FOR TRAFFIC CONTROL PLANS	SPECIAL PROJECT DETAIL	2001

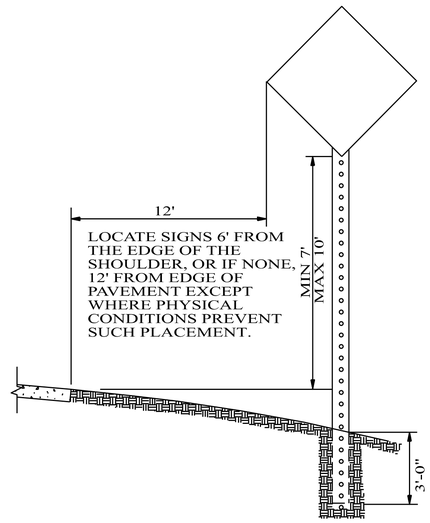
	PLAN SUBMITTAL		NOT TO SCALE	SHEET TITLE	ROUTE
	FINAL	THREE NOTCH GROUP		TEMPORARY TRAFFIC CONTROL PLAN SHEET	HI-PACK DRIVE

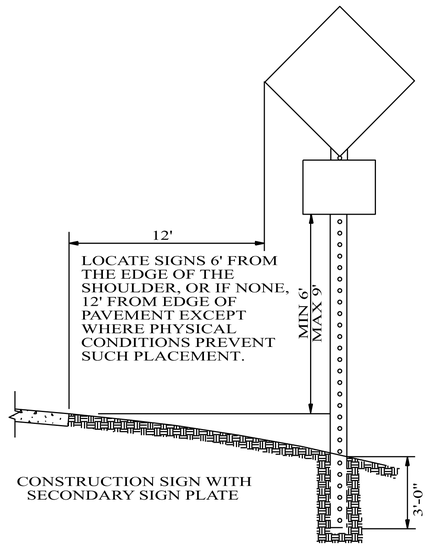
TEMPORARY TRAFFIC CONTROL PLAN SHEET

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	52



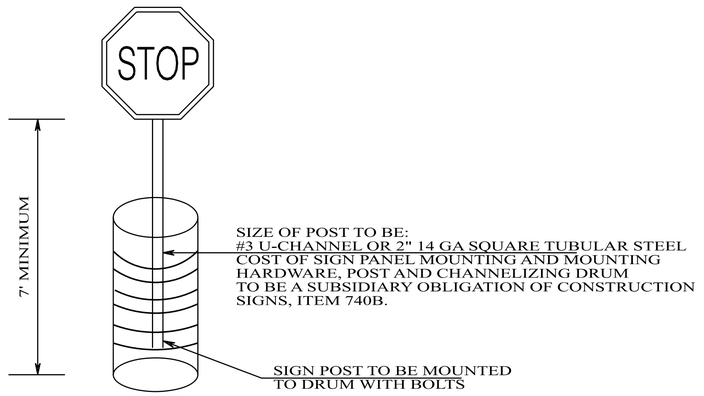
TYPICAL METHOD FOR INSTALLING OR REMOVING CONSTRUCTION SIGNS





NOTE:
IF THE CONTRACTOR CHOOSES TO SPLICE THE POSTS FOR THE REQUIRED POST MOUNTED CONSTRUCTION SIGNS, THEY SHALL BE SPLICED AS SHOWN ON DRAWING IHS-710-23.

HEIGHT AND LATERAL LOCATION OF POST MOUNTED CONSTRUCTION SIGNS



DETAIL FOR DRUM MOUNTED CONSTRUCTION SIGNS

NOT TO SCALE

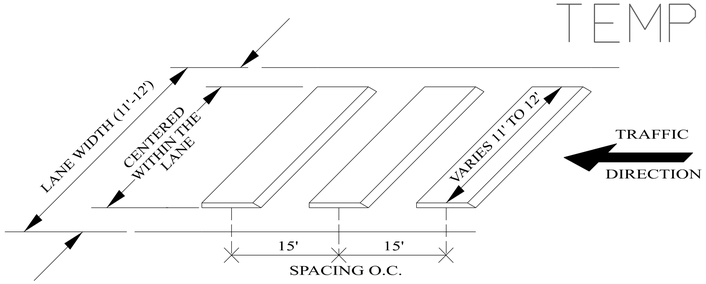
--SPECIFICATIONS--
CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

Bureau Std Engr: D.J.W.	DESIGN BUREAU SPECIAL DRAWING	SPECIAL DRAWING NO	INDEX NO
DRAWN BY:	STANDARD DETAILS FOR TRAFFIC CONTROL PLANS	SPECIAL PROJECT DETAIL	2001A
DATE DRAWN:			
REVISED DATE: 6-12-2019			

	PLAN SUBMITTAL			SHEET TITLE	ROUTE
	FINAL	THREE NOTCH GROUP	NOT TO SCALE	TEMPORARY TRAFFIC CONTROL PLAN SHEET	HI-PACK DRIVE

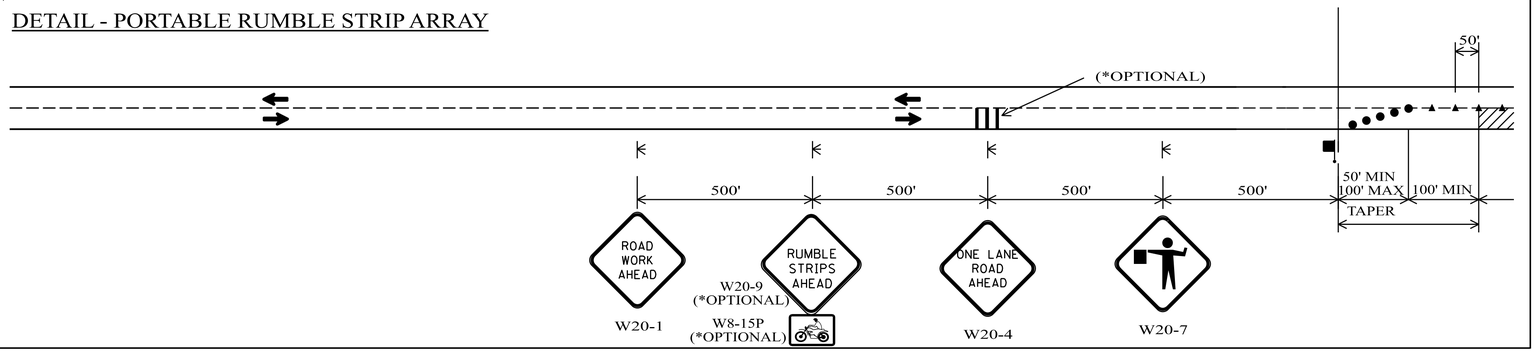
TEMPORARY TRAFFIC CONTROL PLAN SHEET

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	53



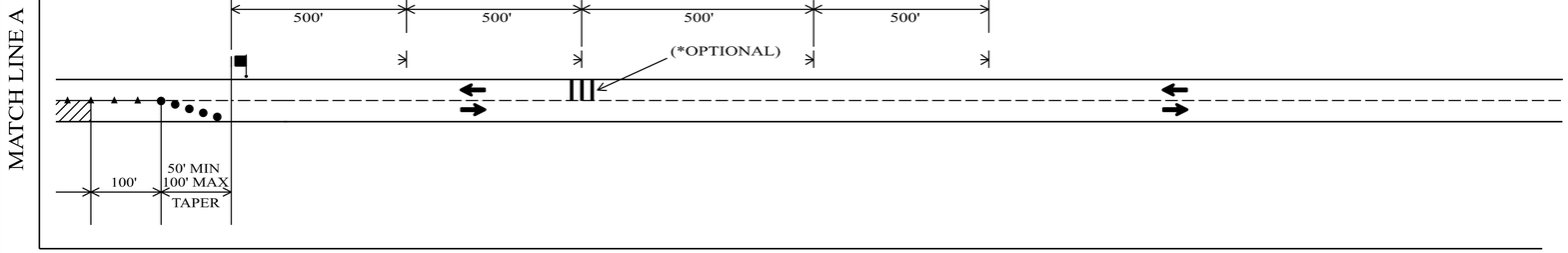
DETAIL - PORTABLE RUMBLE STRIP ARRAY

TWO LANE HIGHWAY, ONE LANE CLOSURE



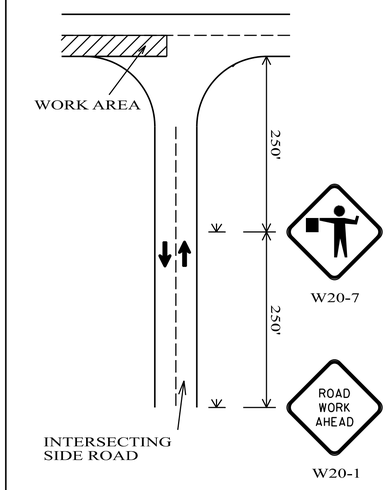
REQUIRED SIGN SIZES	
W20-1	48" X 48"
W20-9	48" X 48"
W8-15p	24" X 18"
W20-4	48" X 48"
W20-7	48" X 48"

THE SIGN SIZES SHOWN ON THIS SHEET SHALL SUPERCEDE THOSE SHOWN ON THE STANDARD HIGHWAY SIGNS DRAWINGS UNLESS OTHERWISE APPROVED BY THE ENGINEER.



TYPICAL PLACEMENT OF ADVANCE WARNING SIGNS/RUMBLE STRIPS/FLAGGER FOR MAINTENANCE OPERATION AT THE WORK AREA

TRAFFIC CONTROL FOR INTERSECTING SIDE ROADS WITHIN WORK AREA



NOTE: THE W20-1 SIGN TO BE USED ON INTERSECTING ROADS SHALL BE 36"X36" IN SIZE. THE TEMPORARY MOUNTED W20-1 SIGN SHOWN ON THE SIDE ROAD, WILL NOT BE REQUIRED IF ONE IS ALREADY POST MOUNTED ON THE SIDE STREET.

LEGEND

- TEMPORARY MOUNTED SIGN
- POST MOUNTED SIGN
- CONES
- CHANNELIZING DRUM
- FLAGGER
- WORK AREA
- RUMBLE STRIPS

GENERAL NOTES

1. ALL SIGNS REQUIRED FOR THE LANE CLOSURE SHALL BE TEMPORARY MOUNTED.
2. THE COLOR OF THE PORTABLE RUMBLE STRIPS SHALL BE BLACK OR ORANGE. USE 1 ARRAY PER APPROACH, EACH ARRAY SHALL CONSIST OF 3 RUMBLE STRIPS.
3. PORTABLE RUMBLE STRIPS SHALL NOT BE PLACED IN SHARP HORIZONTAL OR VERTICAL CURVES NOR SHALL THEY BE PLACED THROUGH THE PEDESTRIAN CROSSINGS OR ON BRIDGE DECKS.
4. IF THE PORTABLE RUMBLE STRIPS BECOME OUT OF ALIGNMENT (SKEWED) BY MORE THAN 1 (ONE) FOOT, MEASURE FROM ONE END TO THE OTHER, THEY SHALL BE READJUSTED TO BRING THE PLACEMENT BACK TO THE ORIGINAL LOCATION.
5. THE LANE CLOSURE SHALL NOT EXTEND ANY FURTHER THAN APPROXIMATELY 1 MILE IN LENGTH. AS OPERATONS PROGRESS, THE ENGINEER IN CHARGE SHALL MOVE THE FLAGGER'S LOCTION TO MEET THIS 1 MILE REQUIREMENT.
6. THE PORTABLE RUMBLE STRIPS AND SIGNS SHALL BE REMOVED AFTER THE COMPLETION OF THAT DAY'S OPERATION.
7. PORTABLE RUMBLE STRIPS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

NOT TO SCALE

--SPECIFICATIONS--
CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

Bureau Std Engr: D.J.W.
DRAWN BY:
DATE DRAWN:
REVISED DATE: 11-26-2019

DESIGN BUREAU SPECIAL DRAWING: DETAILS FOR TRAFFIC CONTROL FOR TWO LANE HIGHWAYS

SPECIAL DRAWING NO: SPECIAL PROJECT DETAIL

INDEX NO: 2002A

PLAN SUBMITTAL: FINAL

THREE NOTCH GROUP

NOT TO SCALE

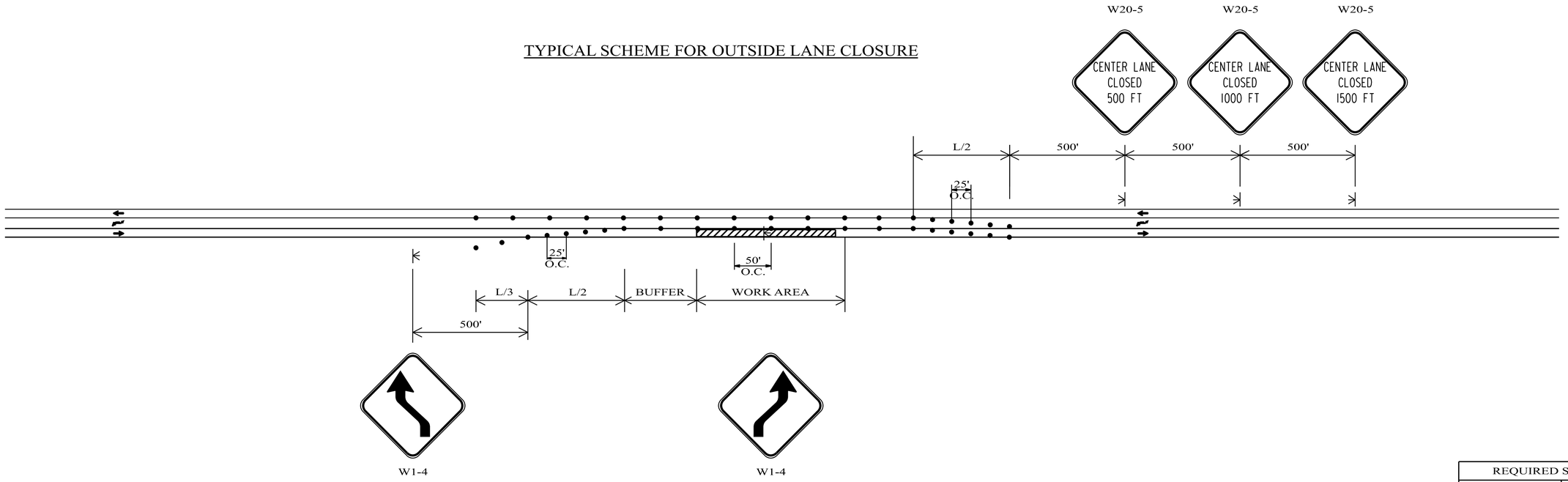
SHEET TITLE: TEMPORARY TRAFFIC CONTROL PLAN SHEET

ROUTE: HI-PACK DRIVE

TEMPORARY TRAFFIC CONTROL PLAN SHEET

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	54

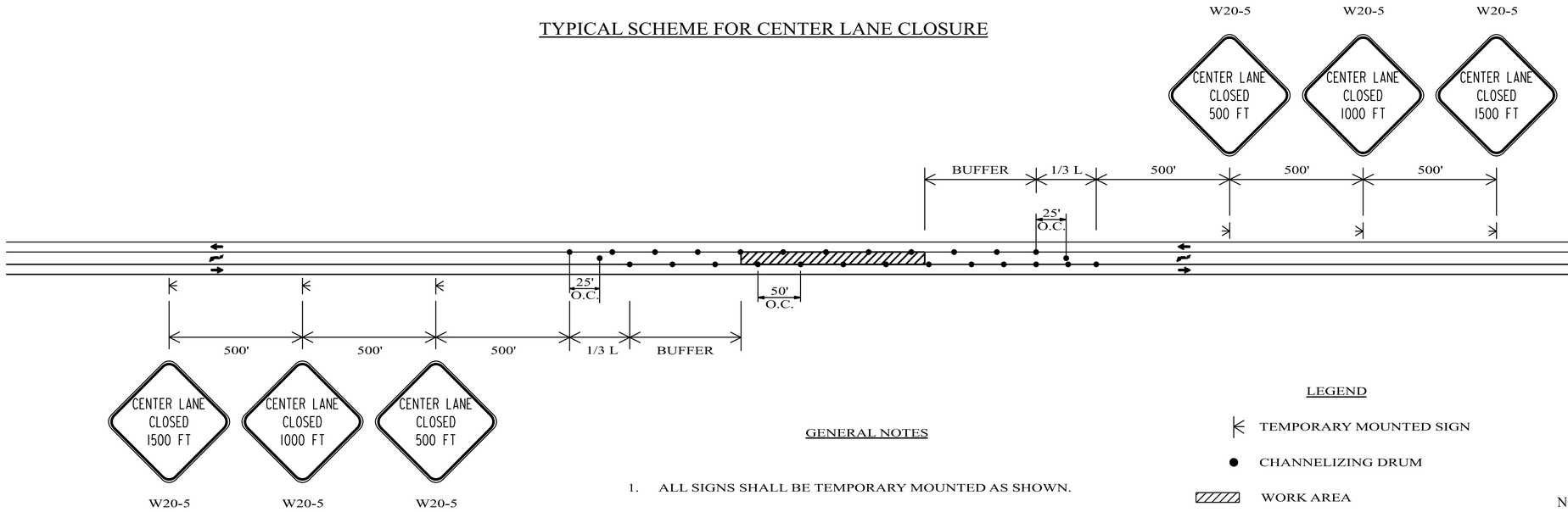
TYPICAL SCHEME FOR OUTSIDE LANE CLOSURE



REQUIRED SIGN SIZES	
W1-4	48" X 48"
W20-5	48" X 48"

THE SIGN SIZES SHOWN ON THIS SHEET SHALL SUPERCEDE THOSE SHOWN ON THE STANDARD HIGHWAY SIGNS DRAWINGS UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TYPICAL SCHEME FOR CENTER LANE CLOSURE



GENERAL NOTES

1. ALL SIGNS SHALL BE TEMPORARY MOUNTED AS SHOWN.

LEGEND

- TEMPORARY MOUNTED SIGN
- CHANNELIZING DRUM
- WORK AREA

NOT TO SCALE

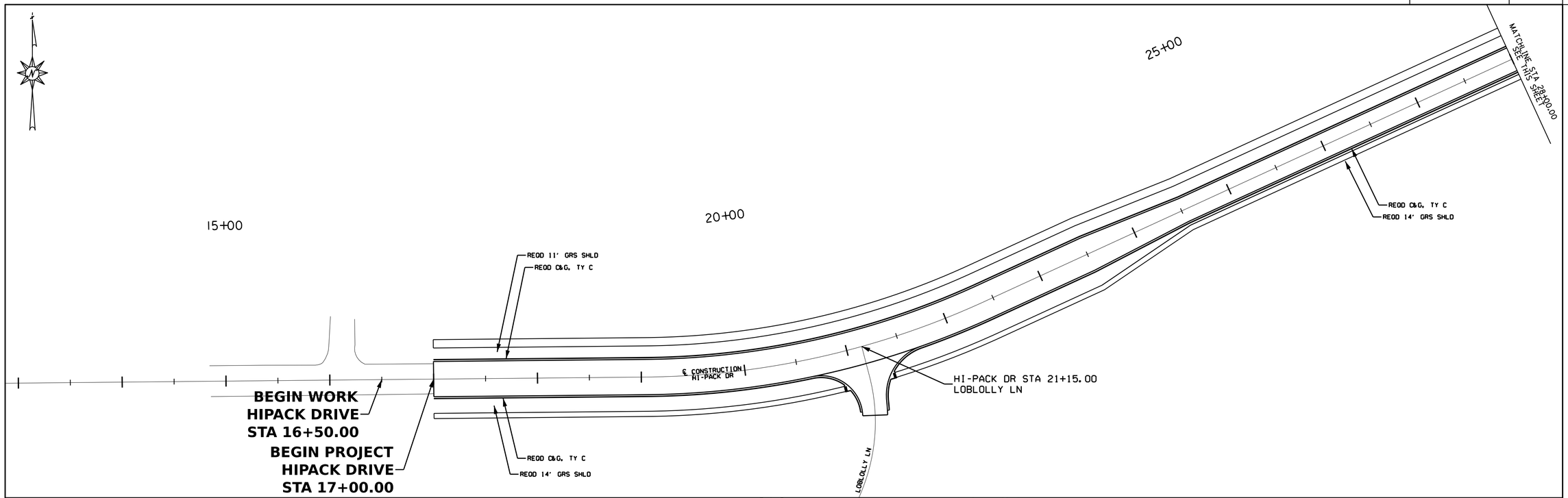
Bureau Std Engr: D.J.W. DRAWN BY: DATE DRAWN: REVISED DATE: 6-12-2019	DESIGN BUREAU SPECIAL DRAWING DETAILS FOR TRAFFIC CONTROL FOR 3-LANE HIGHWAY LANE CLOSURES	SPECIAL DRAWING NO SPECIAL PROJECT DETAIL	INDEX NO 2021

--SPECIFICATIONS--
CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

	PLAN SUBMITTAL FINAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE TEMPORARY TRAFFIC CONTROL PLAN SHEET ROUTE HI-PACK DRIVE

TRAFFIC CONTROL PLAN SHEET - PHASE III

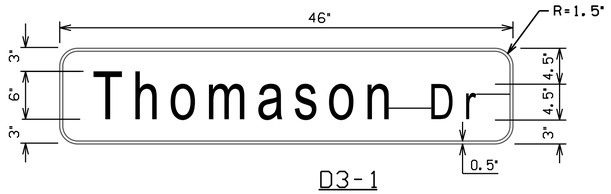
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	55



PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 50 0 50 SCALE (FEET)	SHEET TITLE	ROUTE
FINAL			TRAFFIC CONTROL PLAN SHEET - PHASE III	HI-PACK DRIVE

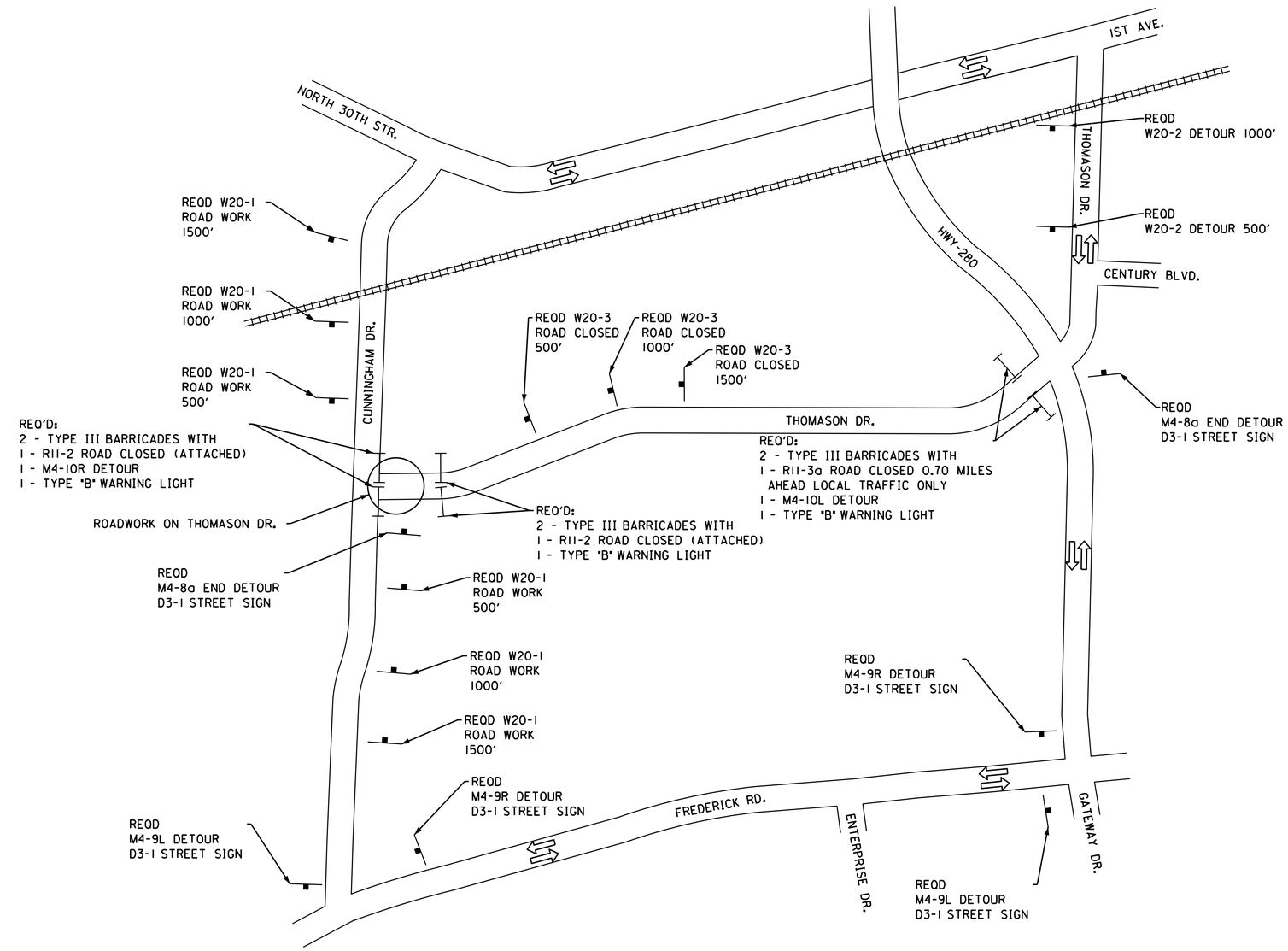
TRAFFIC CONTROL PLAN: PHASE III DETOUR

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	56



D3-1

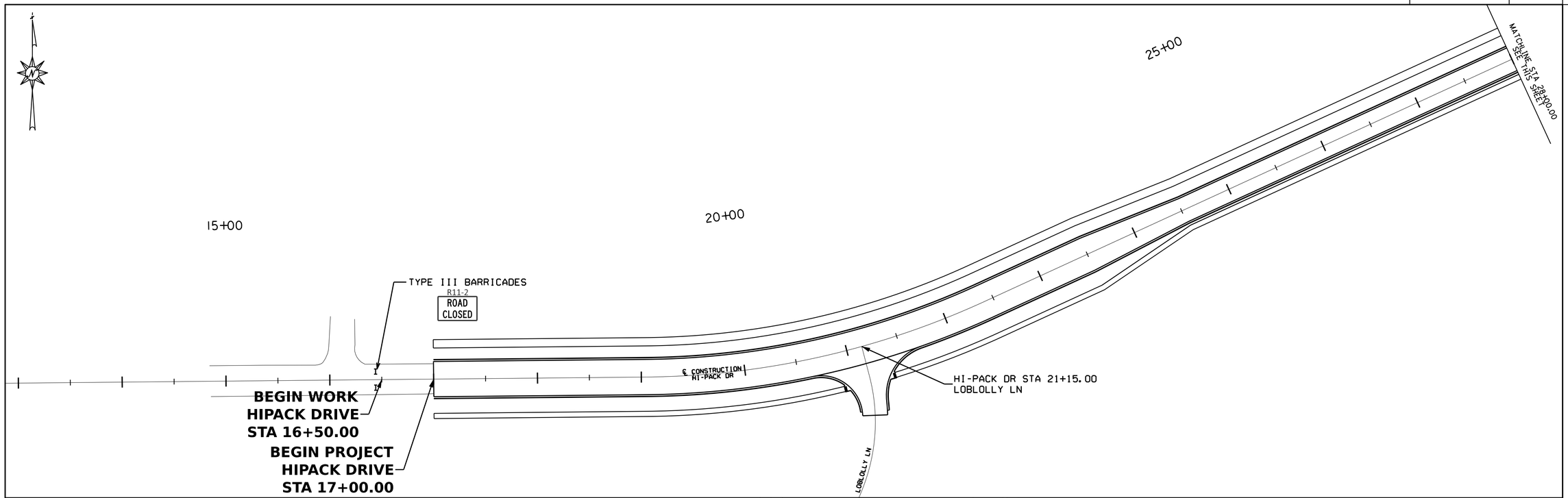
LEGEND/BORDER: BLACK
BACKGROUND: ORANGE



PLAN SUBMITTAL		NOT TO SCALE	SHEET TITLE	ROUTE
FINAL	THREE NOTCH GROUP		TRAFFIC CONTROL PLAN: PHASE III DETOUR	HI-PACK DRIVE

TRAFFIC CONTROL PLAN SHEET - PHASE IV

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	57



PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 50 0 50 SCALE (FEET)	SHEET TITLE	ROUTE
FINAL			TRAFFIC CONTROL PLAN SHEET - PHASE IV	HI-PACK DRIVE

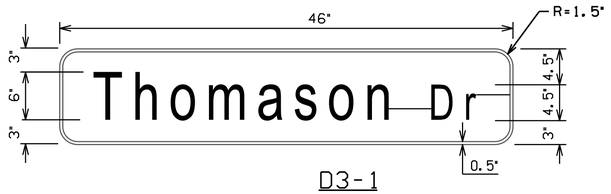
TRAFFIC CONTROL PLAN: PHASE IV DETOUR

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	58



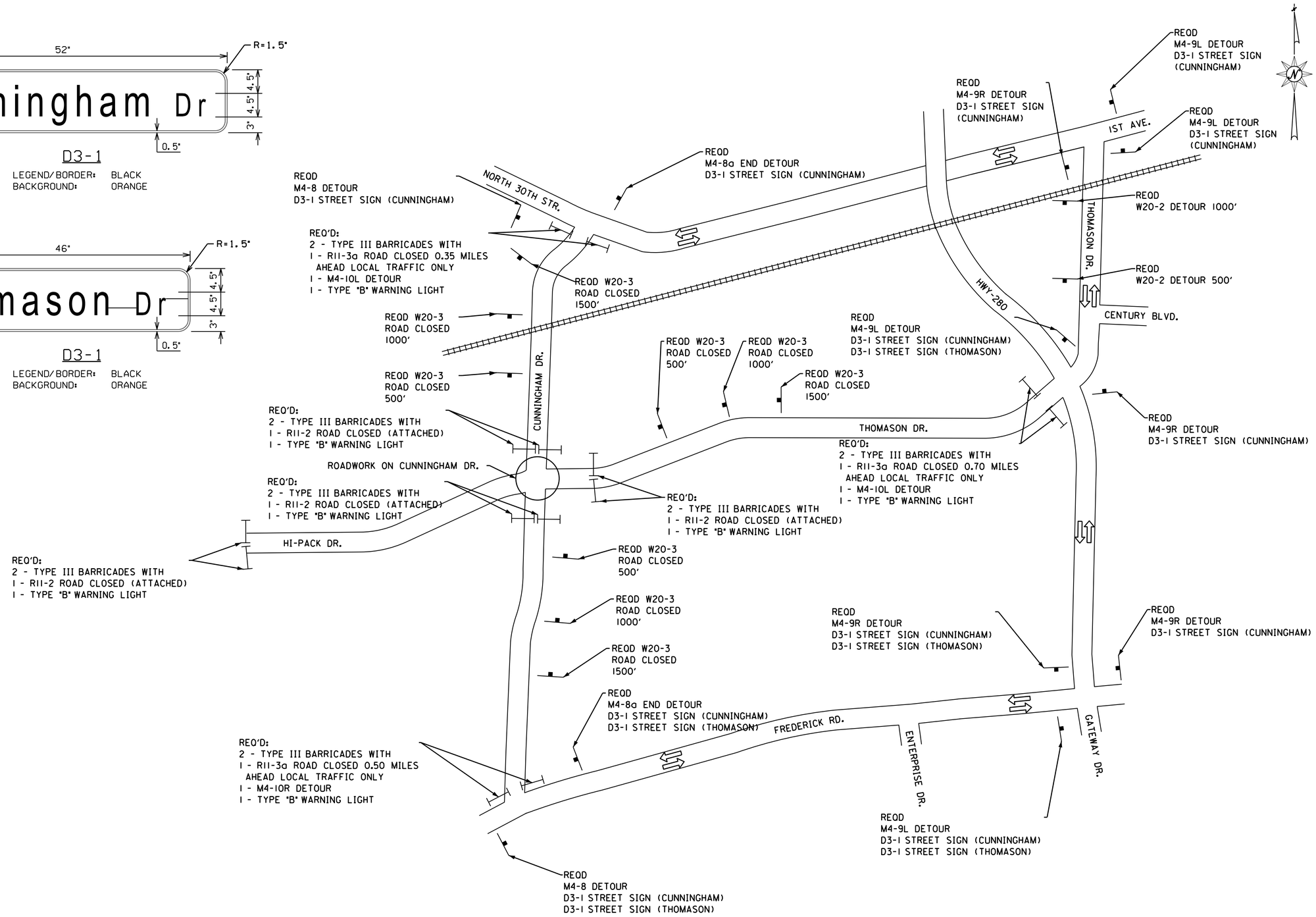
D3-1

LEGEND/BORDER: BLACK
BACKGROUND: ORANGE



D3-1

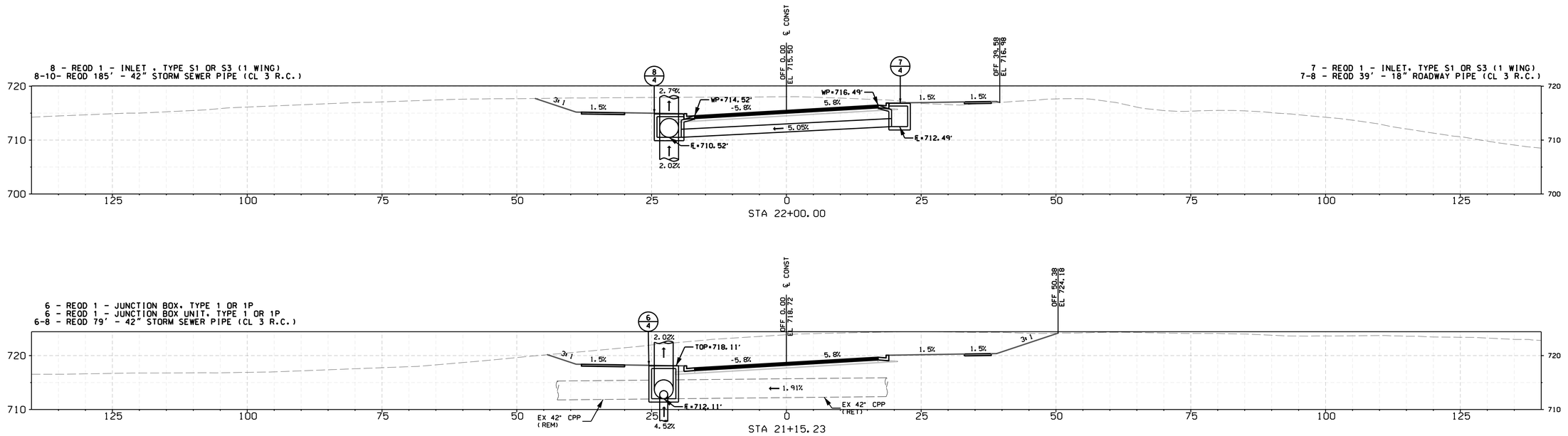
LEGEND/BORDER: BLACK
BACKGROUND: ORANGE



PLAN SUBMITTAL			SHEET TITLE	ROUTE
FINAL	THREE NOTCH GROUP	NOT TO SCALE	TRAFFIC CONTROL PLAN: PHASE IV DETOUR	HI-PACK DRIVE

DRAINAGE CROSS SECTIONS

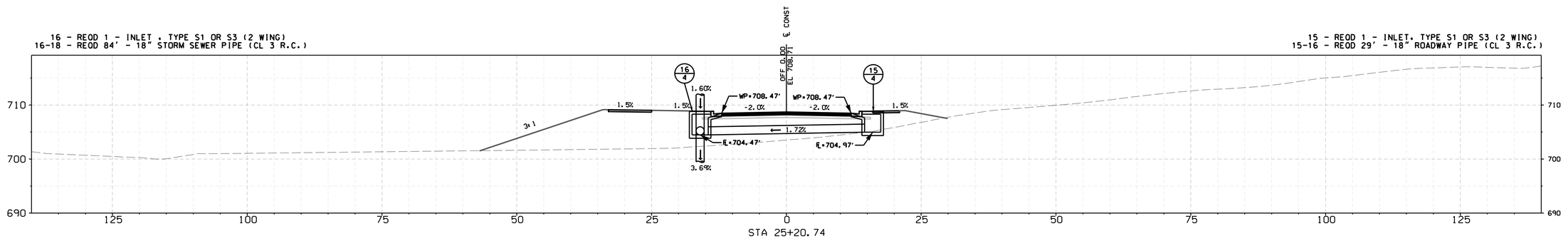
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	60

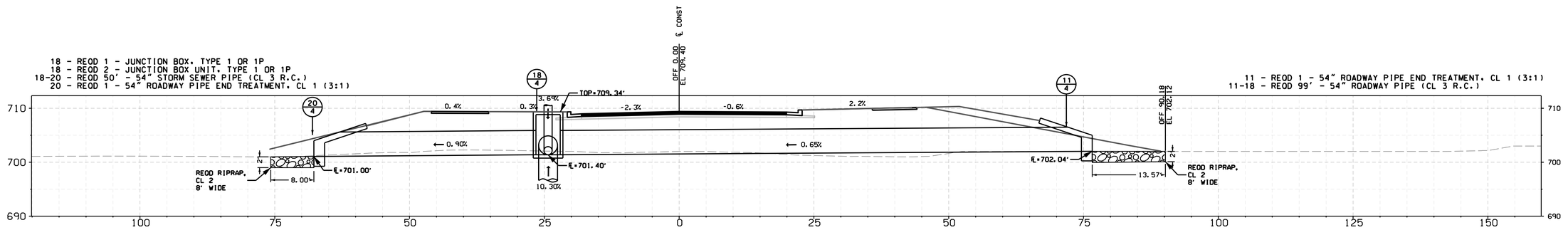


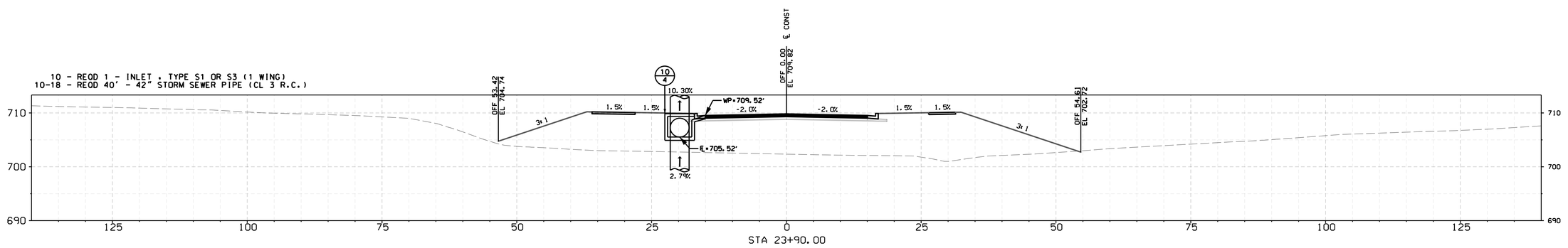
	PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
	FINAL			DRAINAGE CROSS SECTIONS	HI-PACK DRIVE

DRAINAGE CROSS SECTIONS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	61



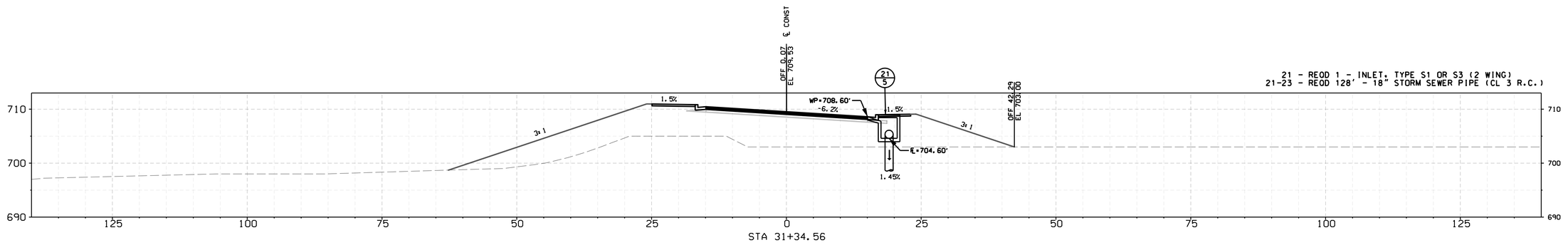


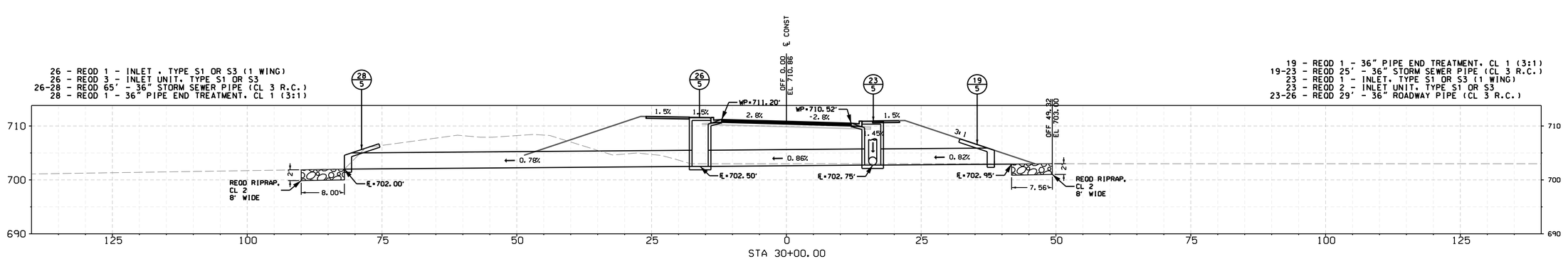


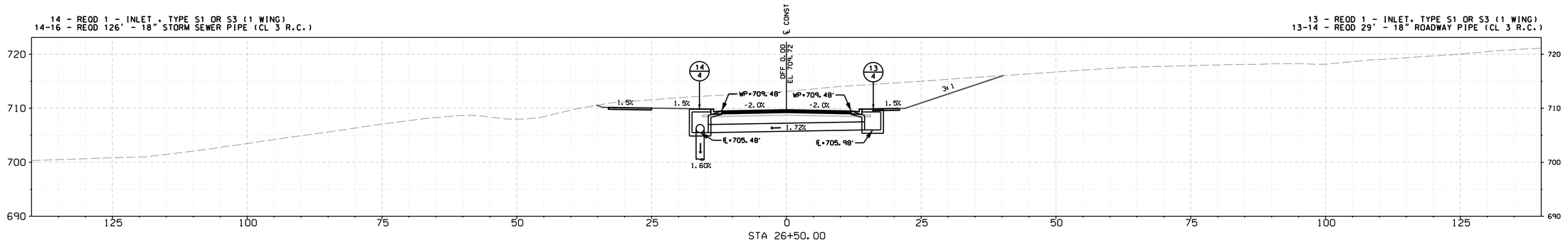
	PLAN SUBMITTAL			SHEET TITLE	ROUTE
	FINAL	THREE NOTCH GROUP	NOT TO SCALE	DRAINAGE CROSS SECTIONS	HI-PACK DRIVE

DRAINAGE CROSS SECTIONS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	62







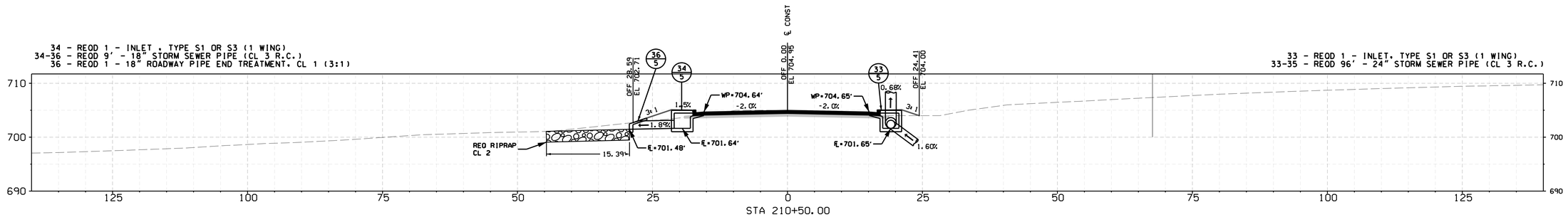
	PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
	FINAL			DRAINAGE CROSS SECTIONS	HI-PACK DRIVE

DRAINAGE CROSS SECTIONS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	63

34 - REQD 1 - INLET , TYPE S1 OR S3 (1 WING)
34-36 - REQD 9' - 18" STORM SEWER PIPE (CL 3 R.C.)
36 - REQD 1 - 18" ROADWAY PIPE END TREATMENT, CL 1 (3:1)

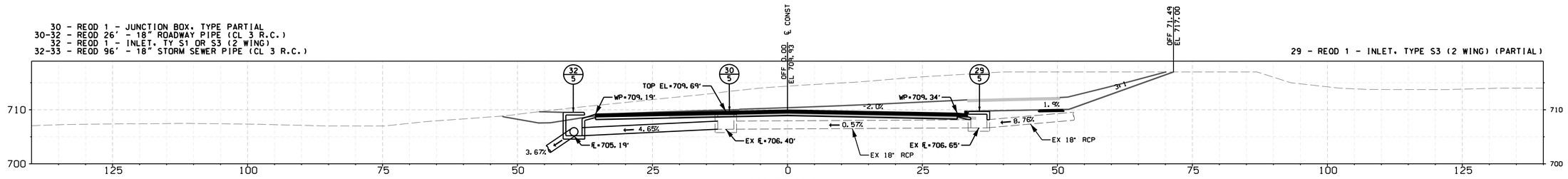
33 - REQD 1 - INLET, TYPE S1 OR S3 (1 WING)
33-35 - REQD 96' - 24" STORM SEWER PIPE (CL 3 R.C.)



STA 210+50.00

30 - REQD 1 - JUNCTION BOX, TYPE PARTIAL
30-32 - REQD 26' - 18" ROADWAY PIPE (CL 3 R.C.)
32 - REQD 1 - INLET, TY S1 OR S3 (2 WING)
32-33 - REQD 96' - 18" STORM SEWER PIPE (CL 3 R.C.)

29 - REQD 1 - INLET, TYPE S3 (2 WING) (PARTIAL)



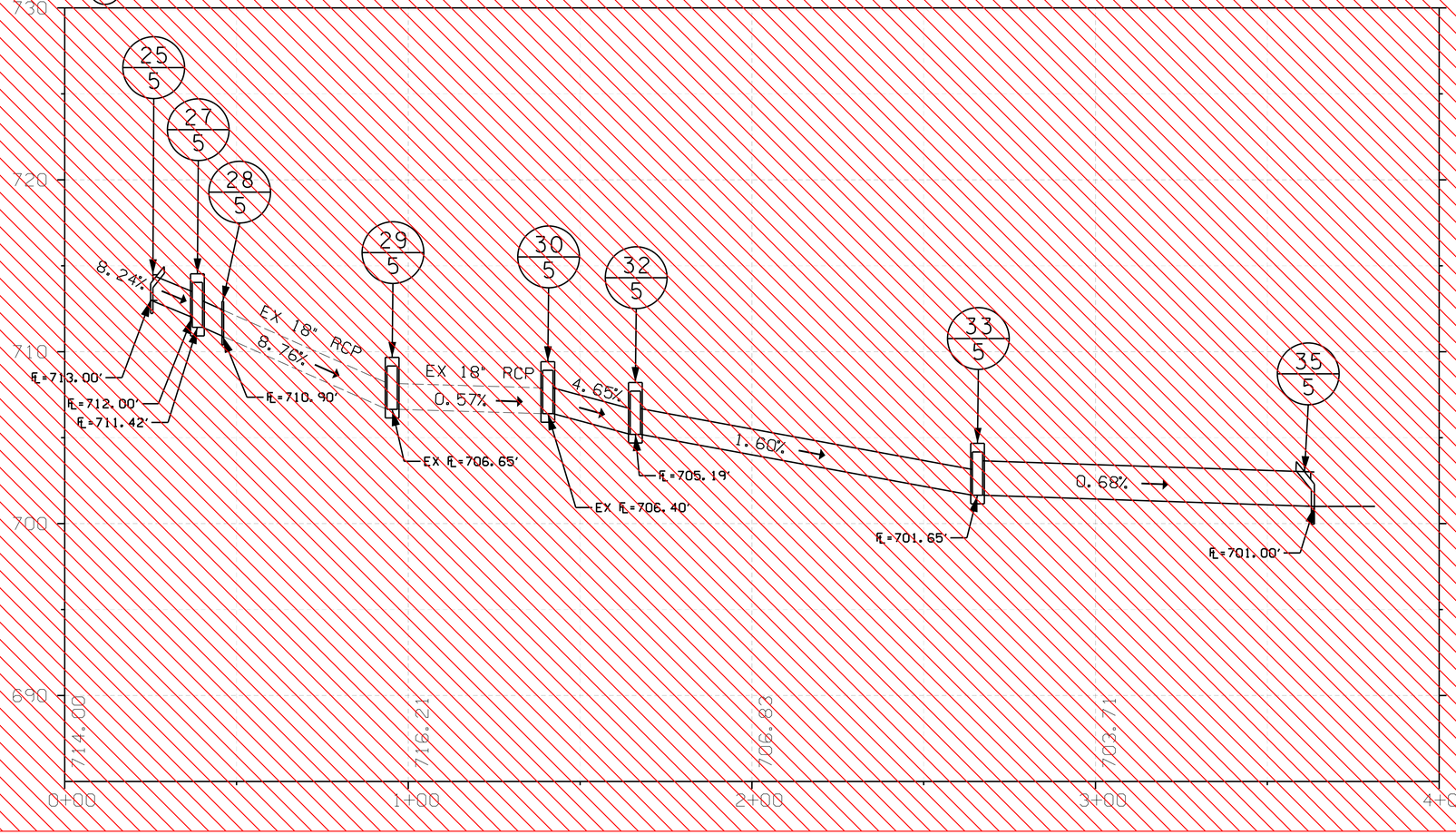
STA 99+16.90

	PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
	FINAL			DRAINAGE CROSS SECTIONS	HI-PACK DRIVE

DRAINAGE PROFILE

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2026	64

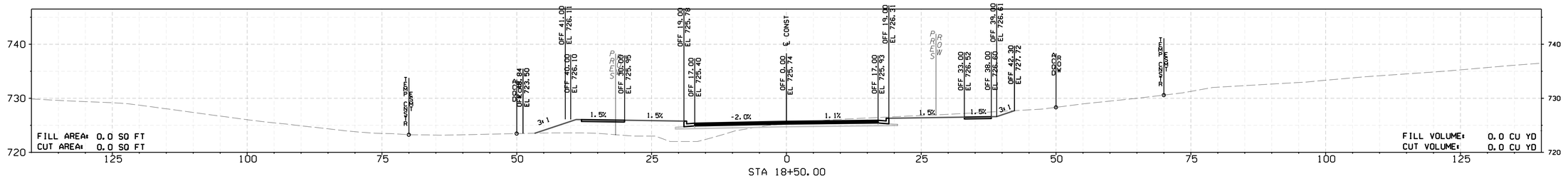
(25) - REQD 1 - 18" PIPE END TREATMENT, CL 1 (3:1)
(25)-(27) - REQD 13' - 18" STORM SEWER PIPE (CL 3 R.C.)
(27) - REQD 1 - JUNCTION BOX, TYPE 1 OR 1P
(27)-(28) - REQD 4' - 18" STORM SEWER PIPE (CL 3 R.C.)
(28) - REQD 1 - CONCRETE COLLAR
(29) - REQD 1 - INLET, TYPE S1 OR S3 (2 WING) (PARTIAL)
(30) - REQD 1 - JUNCTION BOX, TYPE PARTIAL
(30)-(32) - REQD 26' - 18" ROADWAY PIPE (CL 3 R.C.)
(32) - REQD 1 - INLET, TYPE S1 OR S3 (2 WING)
(32)-(33) - REQD 96' - 18" STORM SEWER PIPE (CL 3 R.C.)
(33) - REQD 1 - INLET, TYPE S1 OR S3 (1 WING)
(33)-(35) - REQD 96' - 24" STORM SEWER PIPE (CL 3 R.C.)
(35) - REQD 1 - 24" PIPE END TREATMENT, CL 1 (3:1)

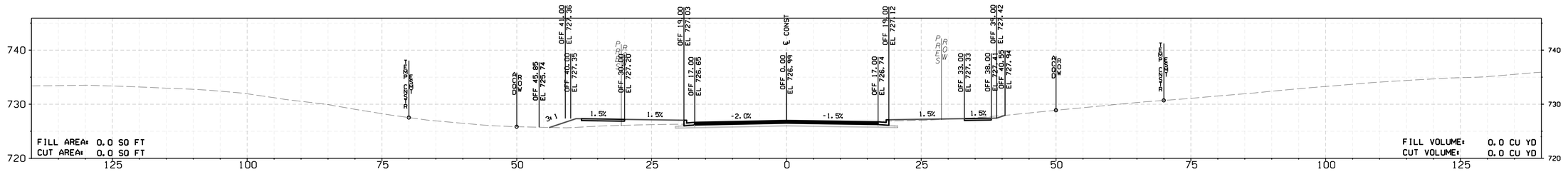


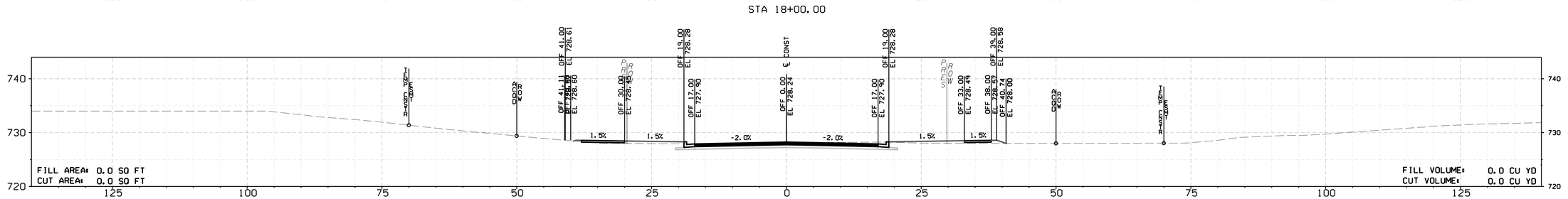
PLAN SUBMITTAL	THREE NOTCH GROUP	NOT TO SCALE	SHEET TITLE	ROUTE
FINAL			DRAINAGE PROFILE	HI-PACK DRIVE

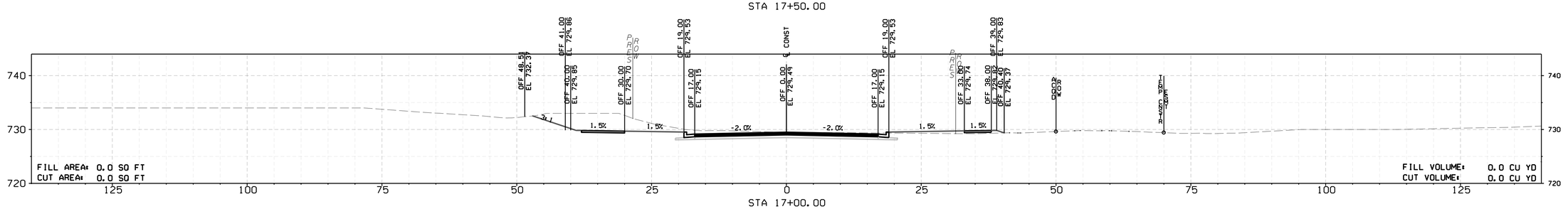
CROSS SECTIONS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	80





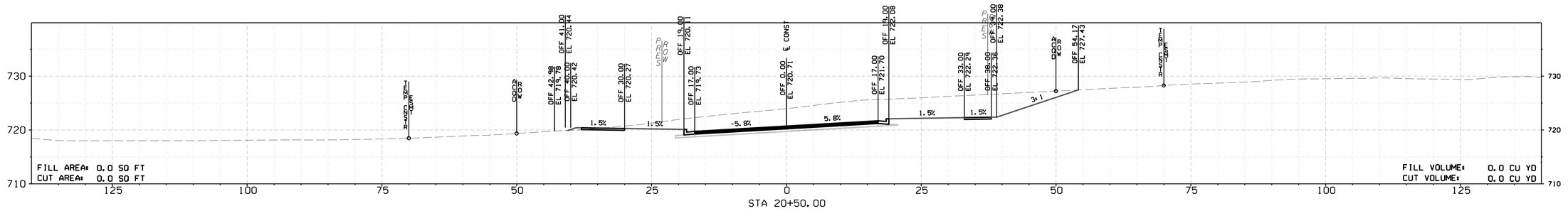


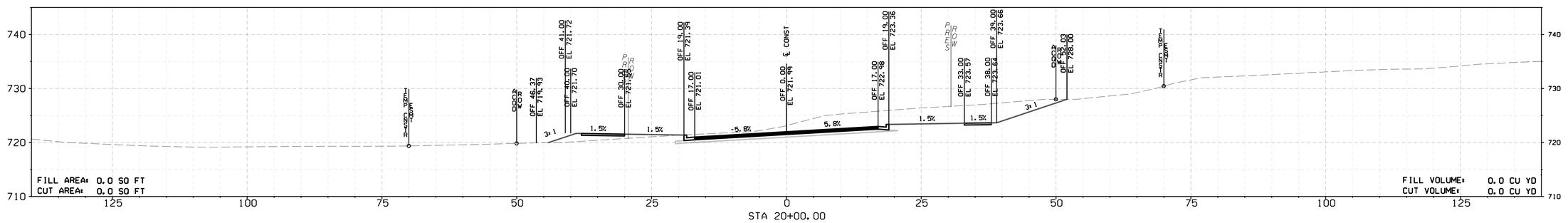


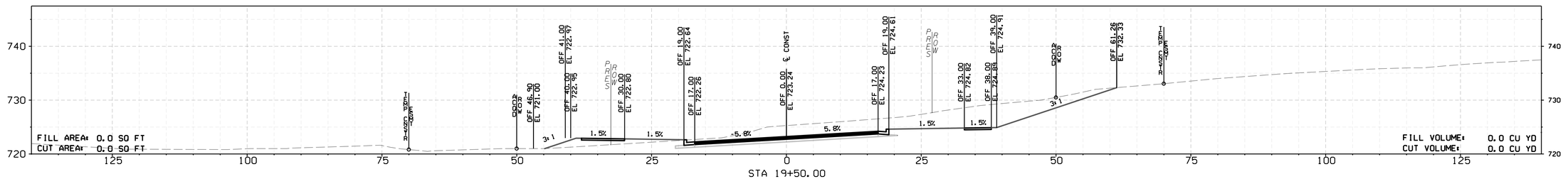
	PLAN SUBMITTAL	CDG	10 HORIZ 0 10 SCALE (FEET) 10 VERT 0 10	SHEET TITLE	ROUTE
	FINAL			CROSS SECTIONS	HI-PACK DRIVE

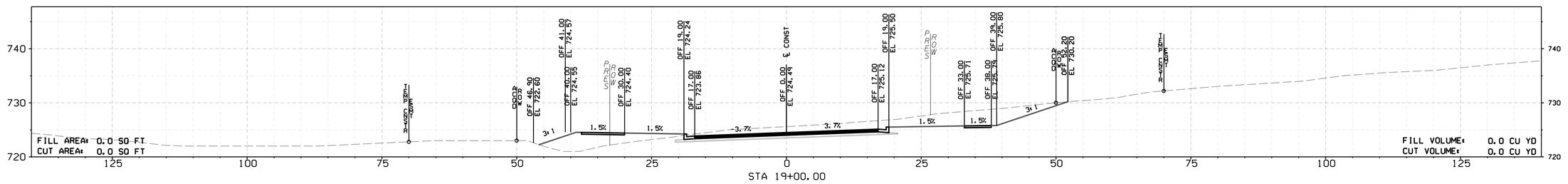
CROSS SECTIONS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	81







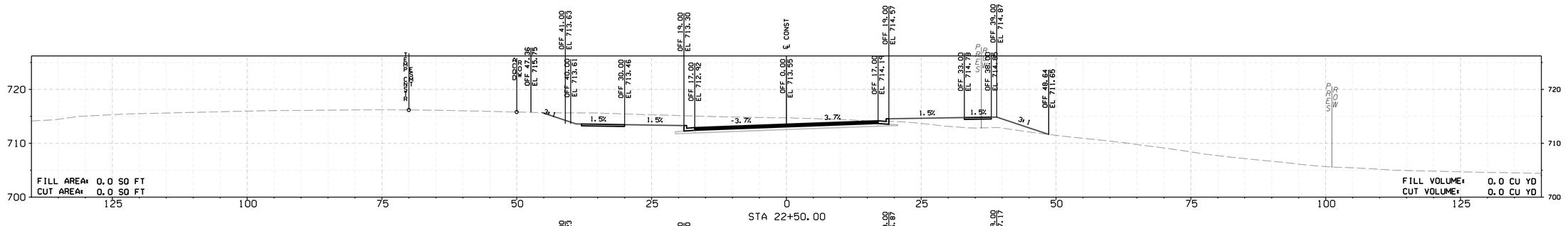


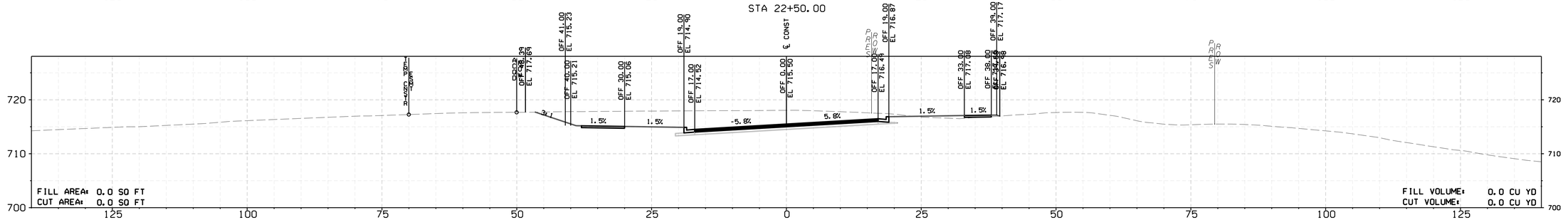
PLAN SUBMITTAL		SHEET TITLE	ROUTE
FINAL	CDG	CROSS SECTIONS	HI-PACK DRIVE

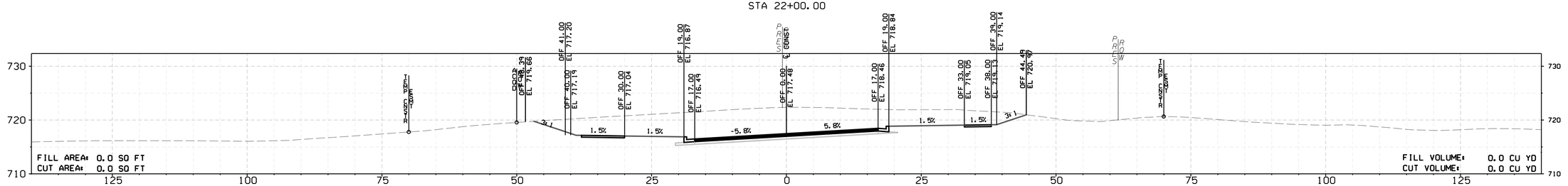
HORIZ 10 0 10 SCALE (FEET) VERT 10 0 10

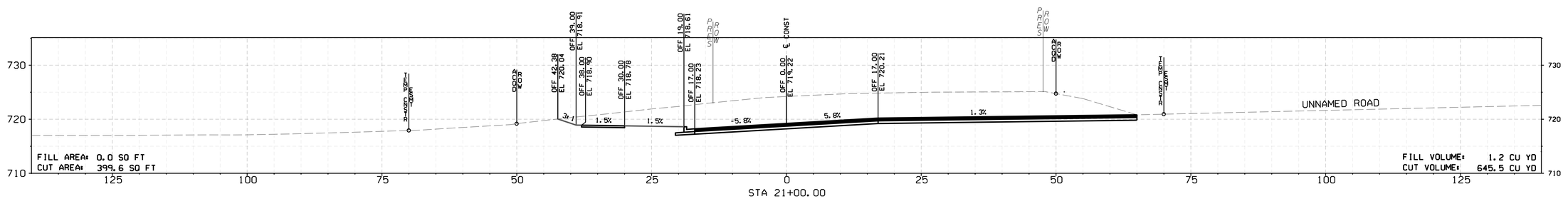
CROSS SECTIONS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	82









	PLAN SUBMITTAL FINAL	CDG	HORIZ 10 0 10 SCALE (FEET) VERT 10 0 10	SHEET TITLE CROSS SECTIONS	ROUTE HI-PACK DRIVE

CROSS SECTIONS

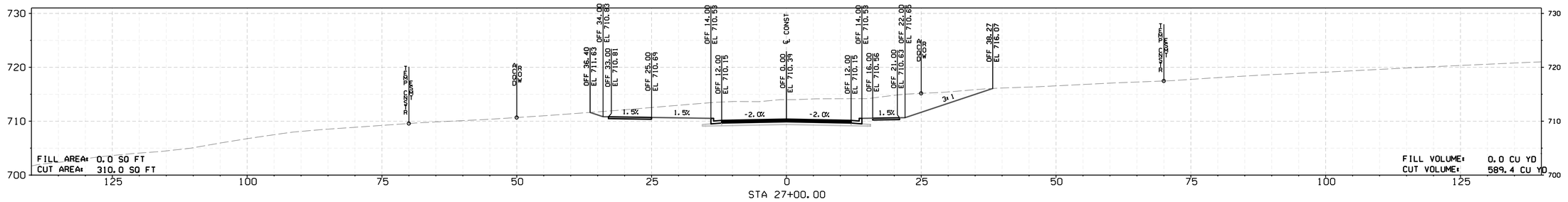
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	83

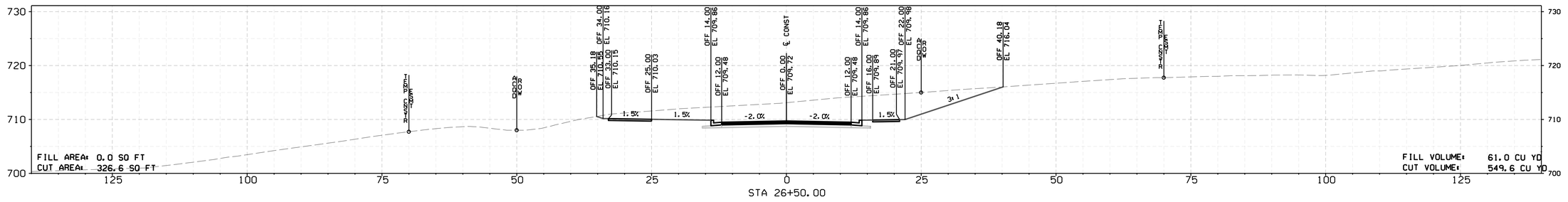


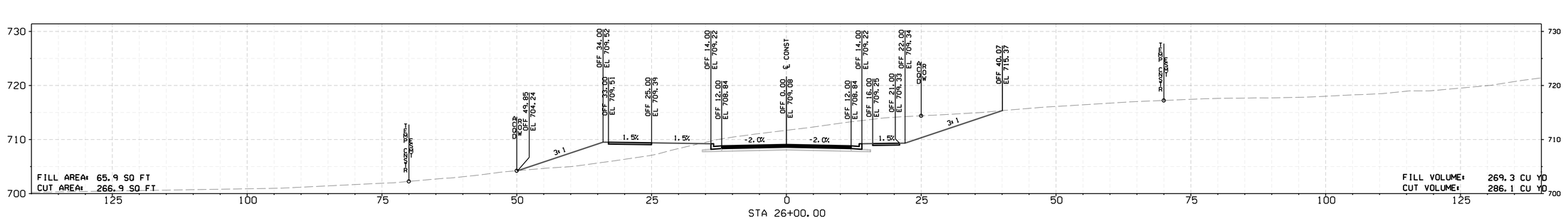
PLAN SUBMITTAL	CDG	HORIZ 10 0 10 SCALE (FEET) VERT 10 0 10	SHEET TITLE	ROUTE
FINAL			CROSS SECTIONS	HI-PACK DRIVE

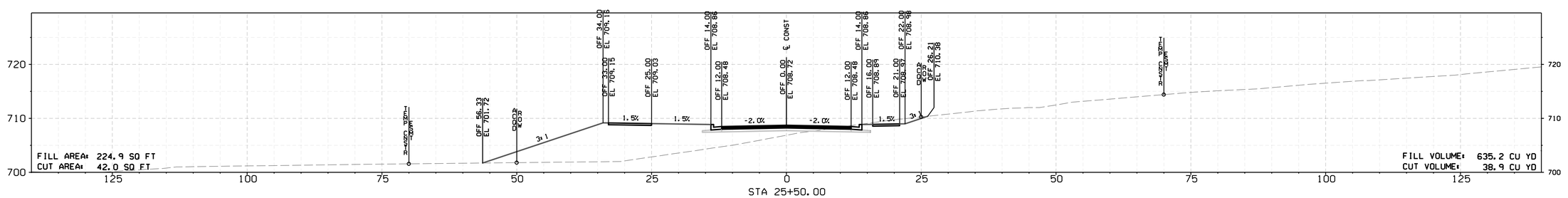
CROSS SECTIONS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	84





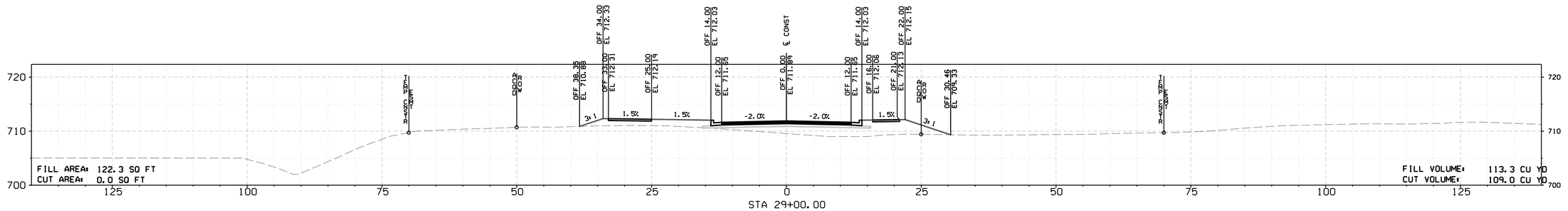


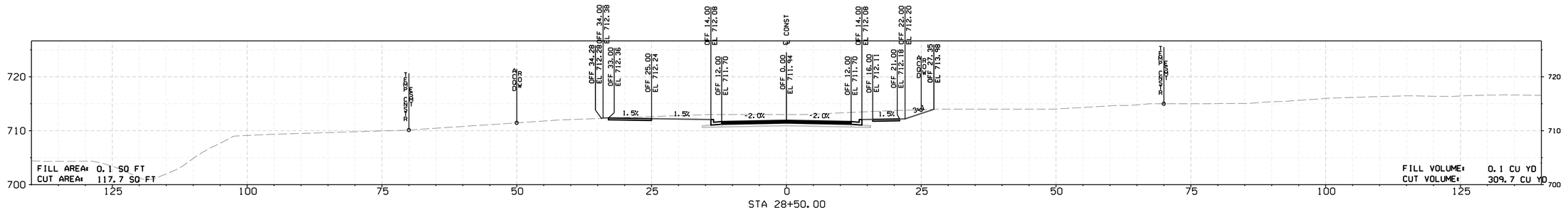


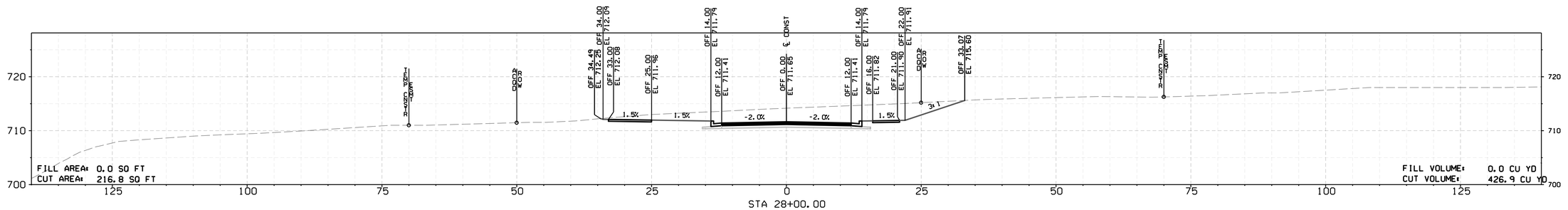
	PLAN SUBMITTAL	CDG	HORIZ 10 0 10 SCALE (FEET) VERT 10 0 10	SHEET TITLE	ROUTE
	FINAL			CROSS SECTIONS	HI-PACK DRIVE

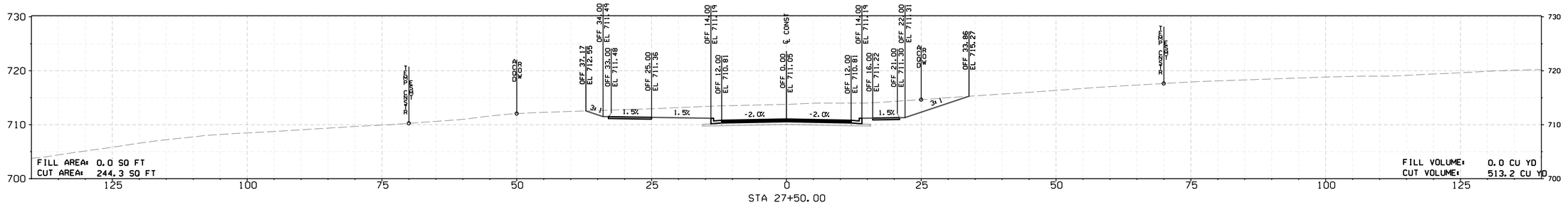
CROSS SECTIONS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	85







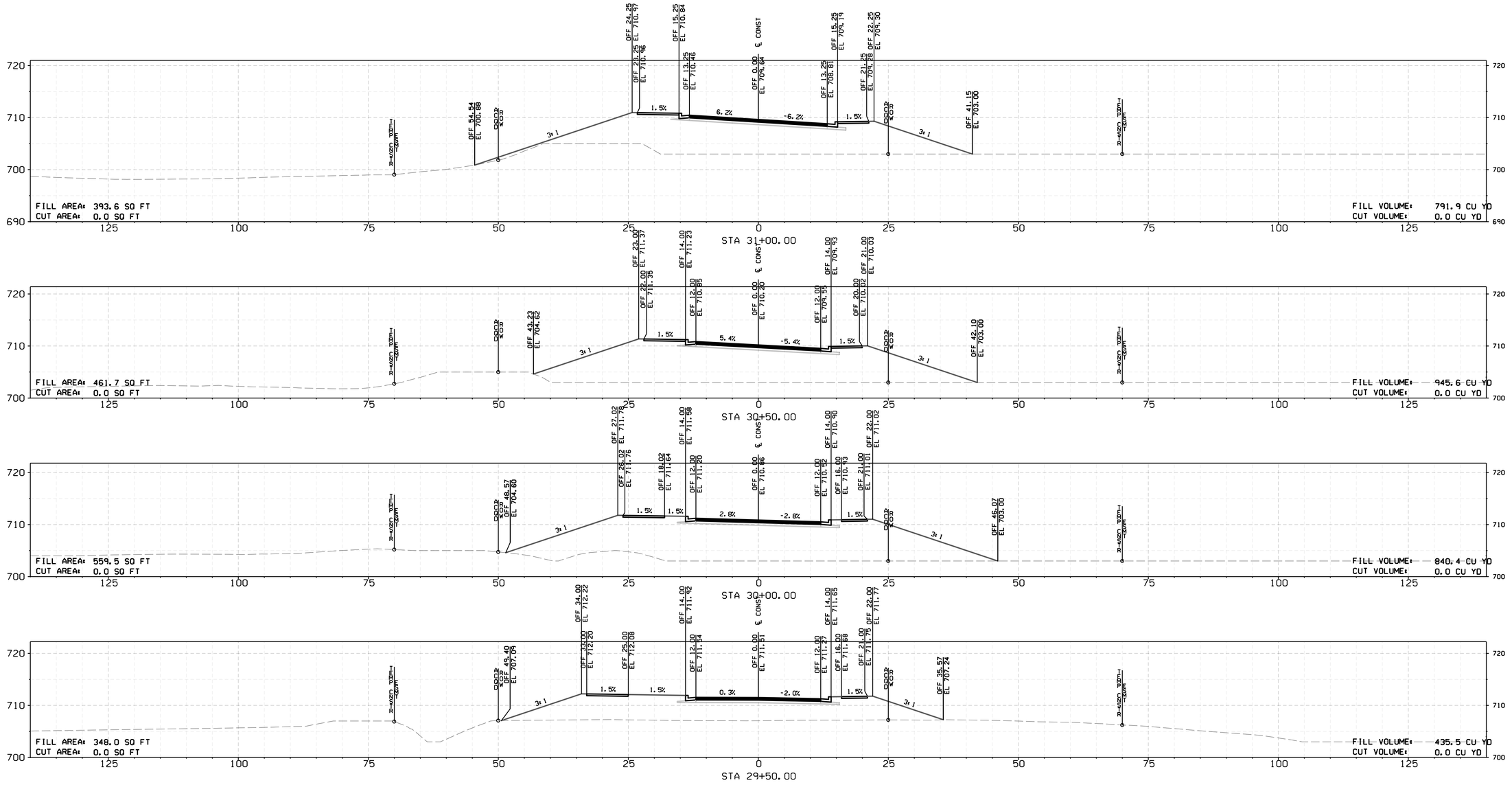


PLAN SUBMITTAL		SHEET TITLE	ROUTE
FINAL	CDG	CROSS SECTIONS	HI-PACK DRIVE

HORIZ 10 0 10 SCALE (FEET) VERT 10 0 10

CROSS SECTIONS

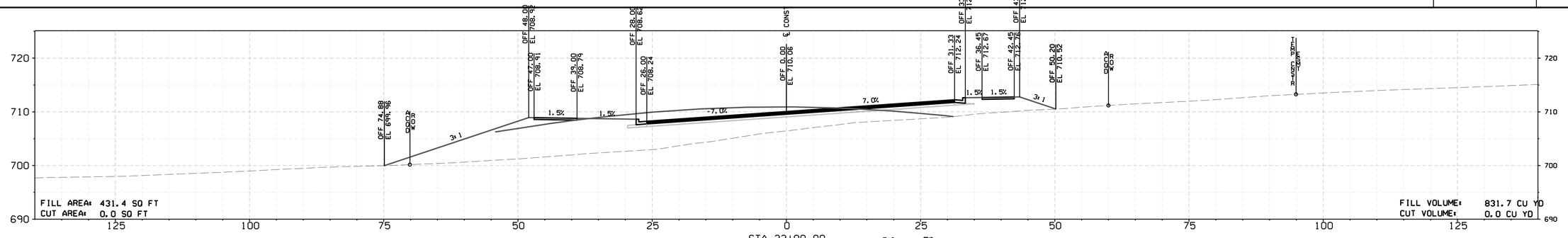
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	86

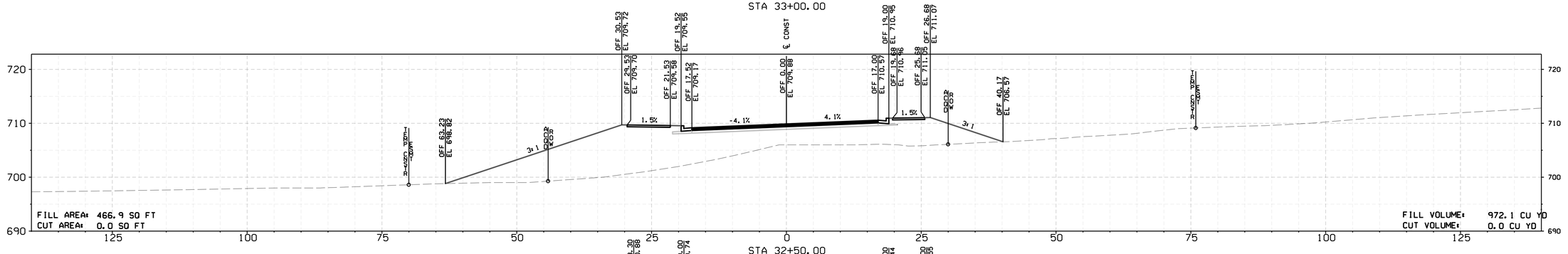


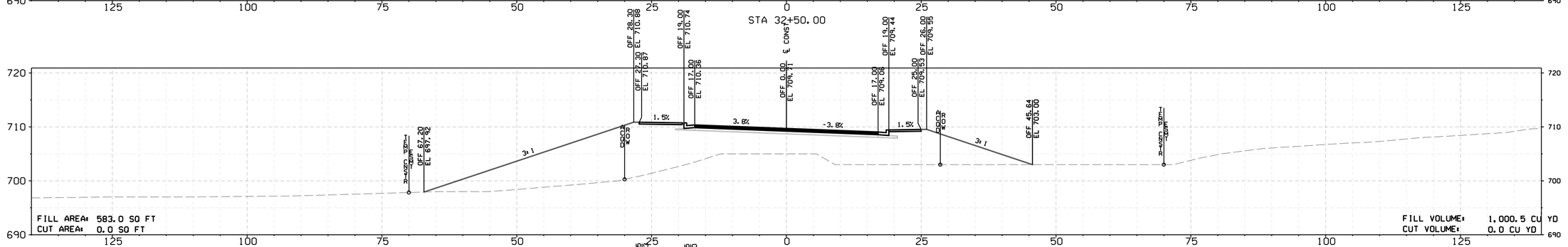
	PLAN SUBMITTAL	CDG	HORIZ 10 0 10 SCALE (FEET) VERT 10 0 10	SHEET TITLE	ROUTE
	FINAL			CROSS SECTIONS	HI-PACK DRIVE

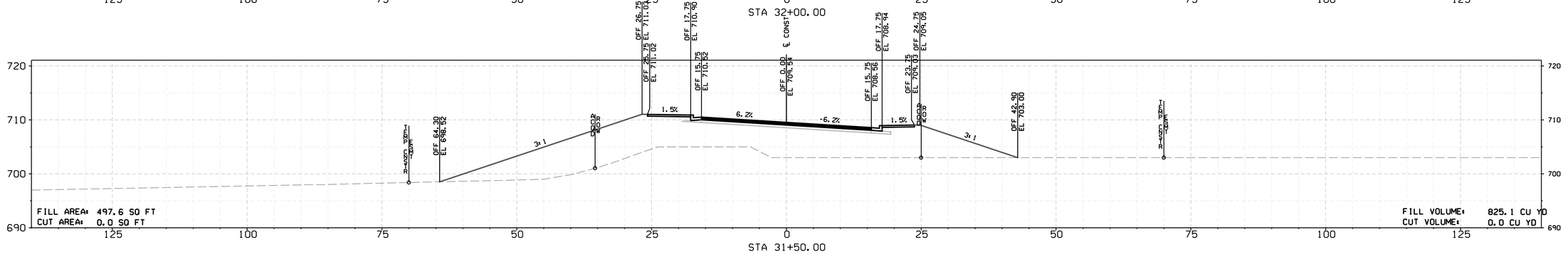
CROSS SECTIONS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	87





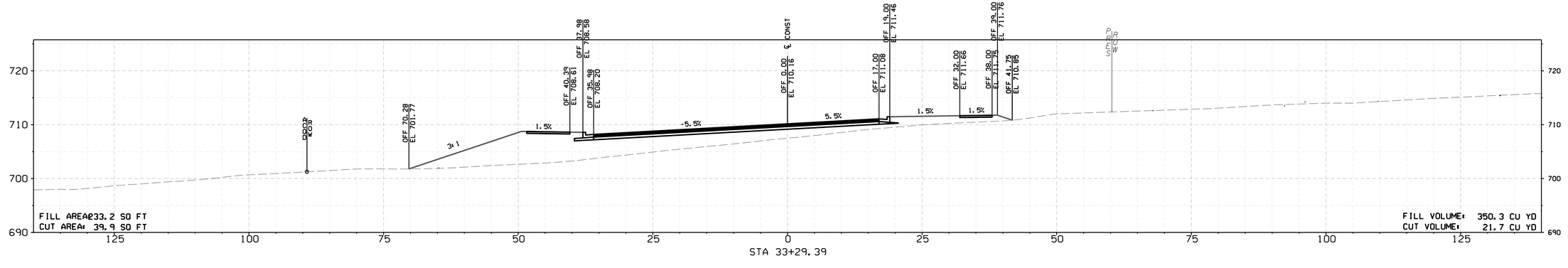




	PLAN SUBMITTAL	CDG	HORIZ 10 0 10 SCALE (FEET) VERT 10 0 10	SHEET TITLE	ROUTE
	FINAL			CROSS SECTIONS	HI-PACK DRIVE

CROSS SECTIONS

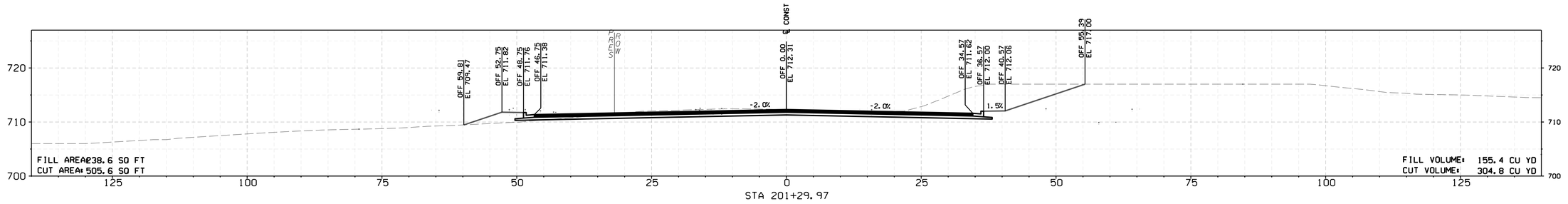
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	88

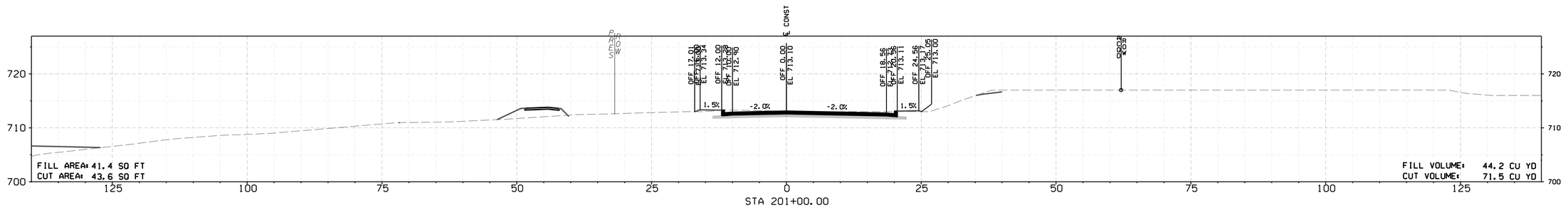


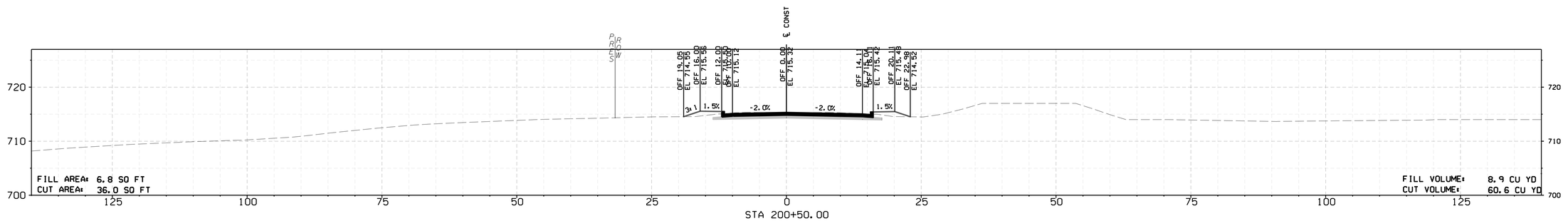
PLAN SUBMITTAL	CDG	SCALE (FEET) HORIZ 10 0 10 VERT 10 0 10	SHEET TITLE	ROUTE
FINAL			CROSS SECTIONS	HI-PACK DRIVE

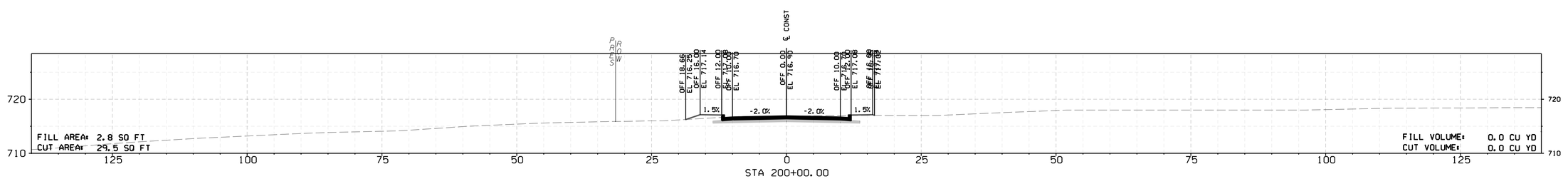
CROSS SECTIONS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	100





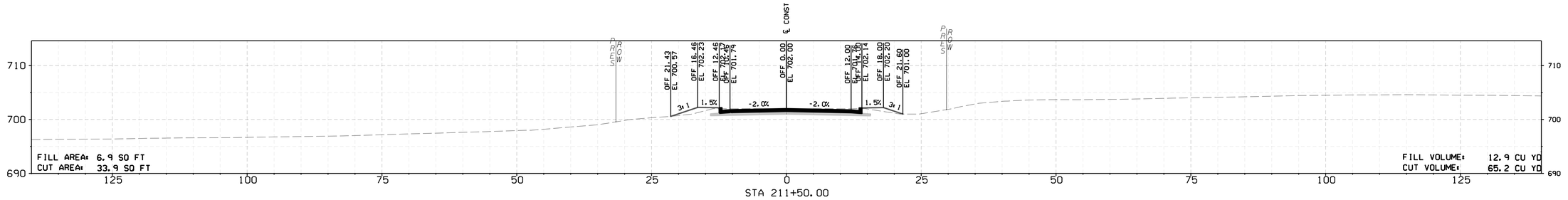




PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 10 0 10 SCALE (FEET) VERT 10 0 10	SHEET TITLE	ROUTE
FINAL			CROSS SECTIONS	CUNNINGHAM DRIVE

CROSS SECTIONS

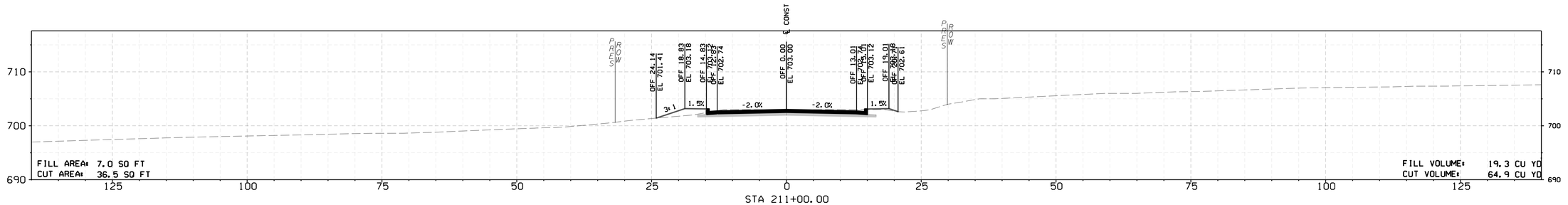
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	101



FILL AREA: 6.9 SQ FT
CUT AREA: 33.9 SQ FT

FILL VOLUME: 12.9 CU YD
CUT VOLUME: 65.2 CU YD

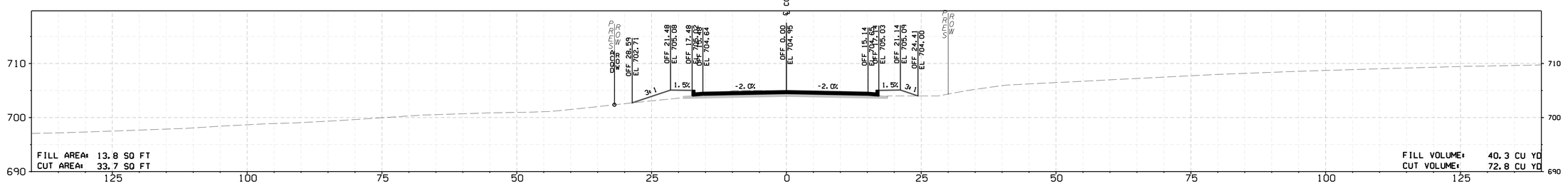
STA 211+50.00



FILL AREA: 7.0 SQ FT
CUT AREA: 36.5 SQ FT

FILL VOLUME: 19.3 CU YD
CUT VOLUME: 64.9 CU YD

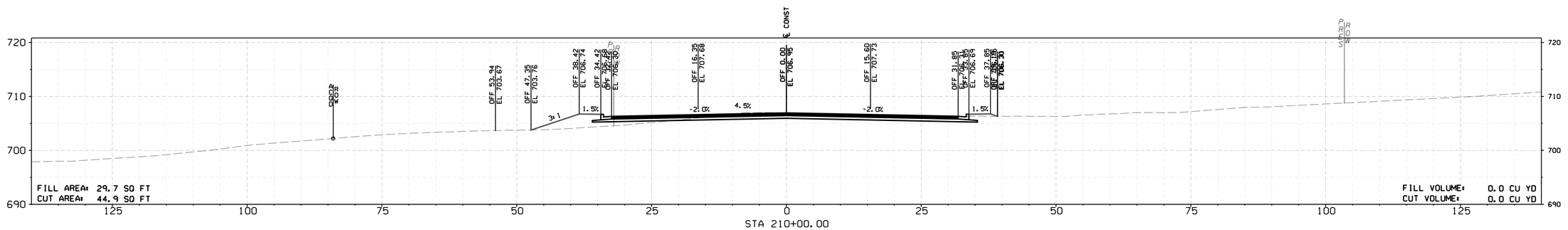
STA 211+00.00



FILL AREA: 13.8 SQ FT
CUT AREA: 33.7 SQ FT

FILL VOLUME: 40.3 CU YD
CUT VOLUME: 72.8 CU YD

STA 210+50.00



FILL AREA: 29.7 SQ FT
CUT AREA: 44.9 SQ FT

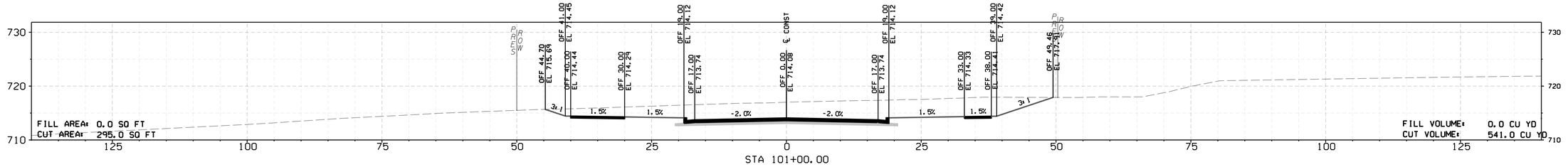
FILL VOLUME: 0.0 CU YD
CUT VOLUME: 0.0 CU YD

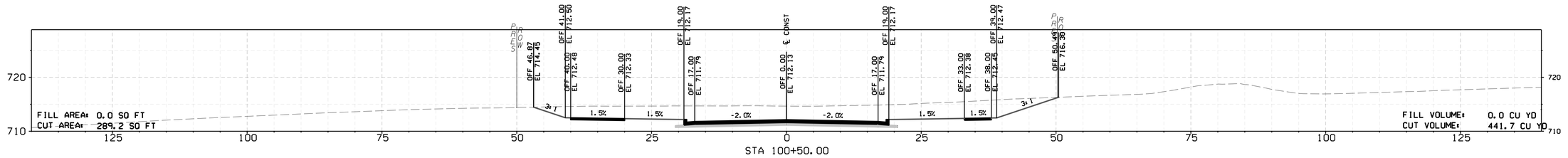
STA 210+00.00

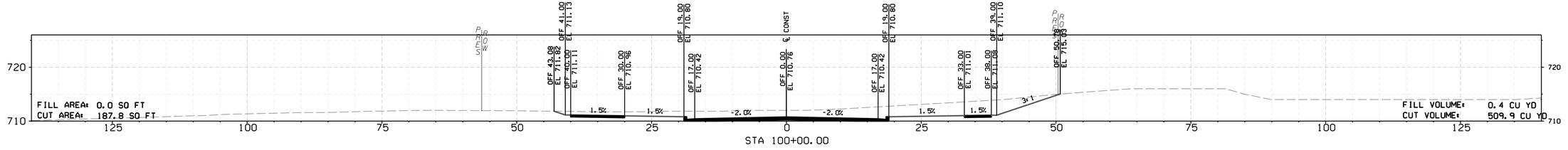
PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 10 0 10 SCALE (FEET) VERT 10 0 10	SHEET TITLE	ROUTE
FINAL			CROSS SECTIONS	CUNNINGHAM DRIVE

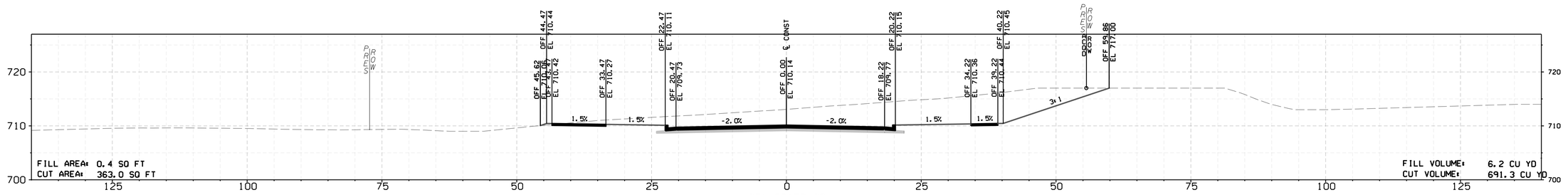
CROSS SECTIONS

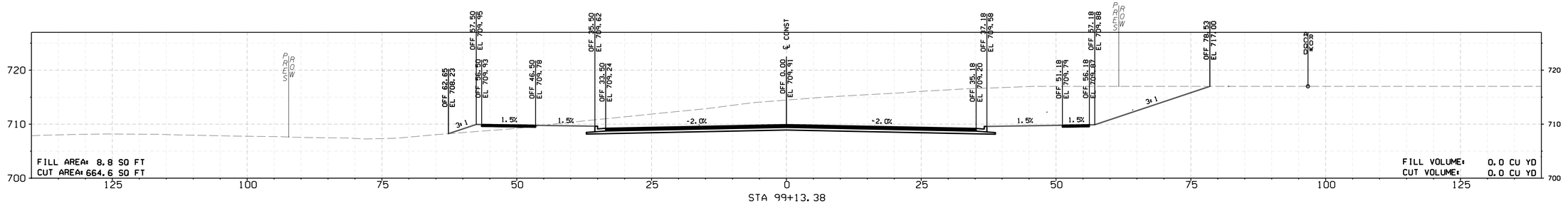
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	105







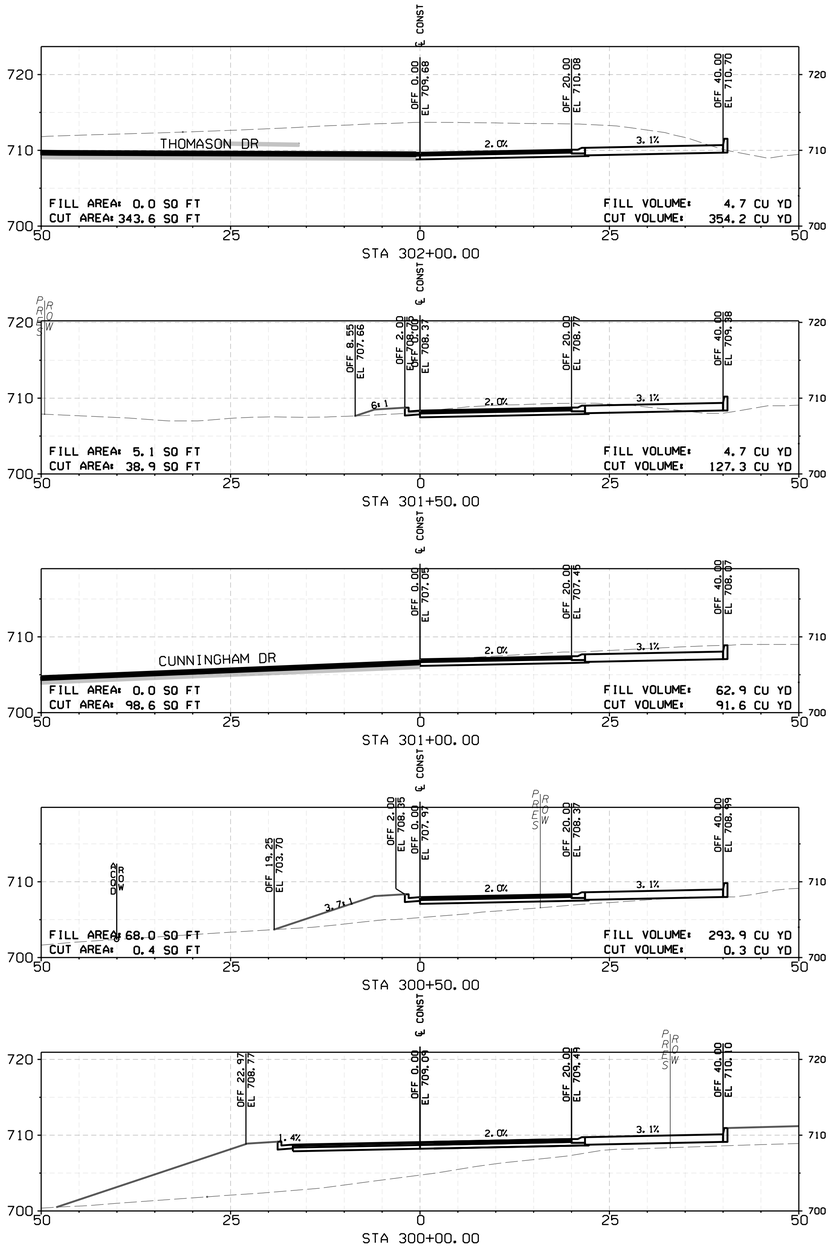




PLAN SUBMITTAL	THREE NOTCH GROUP	SCALE (FEET) HORIZ 10 0 10 VERT 10 0 10	SHEET TITLE	ROUTE
FINAL			CROSS SECTIONS	THOMASON DRIVE

CROSS SECTIONS

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	106



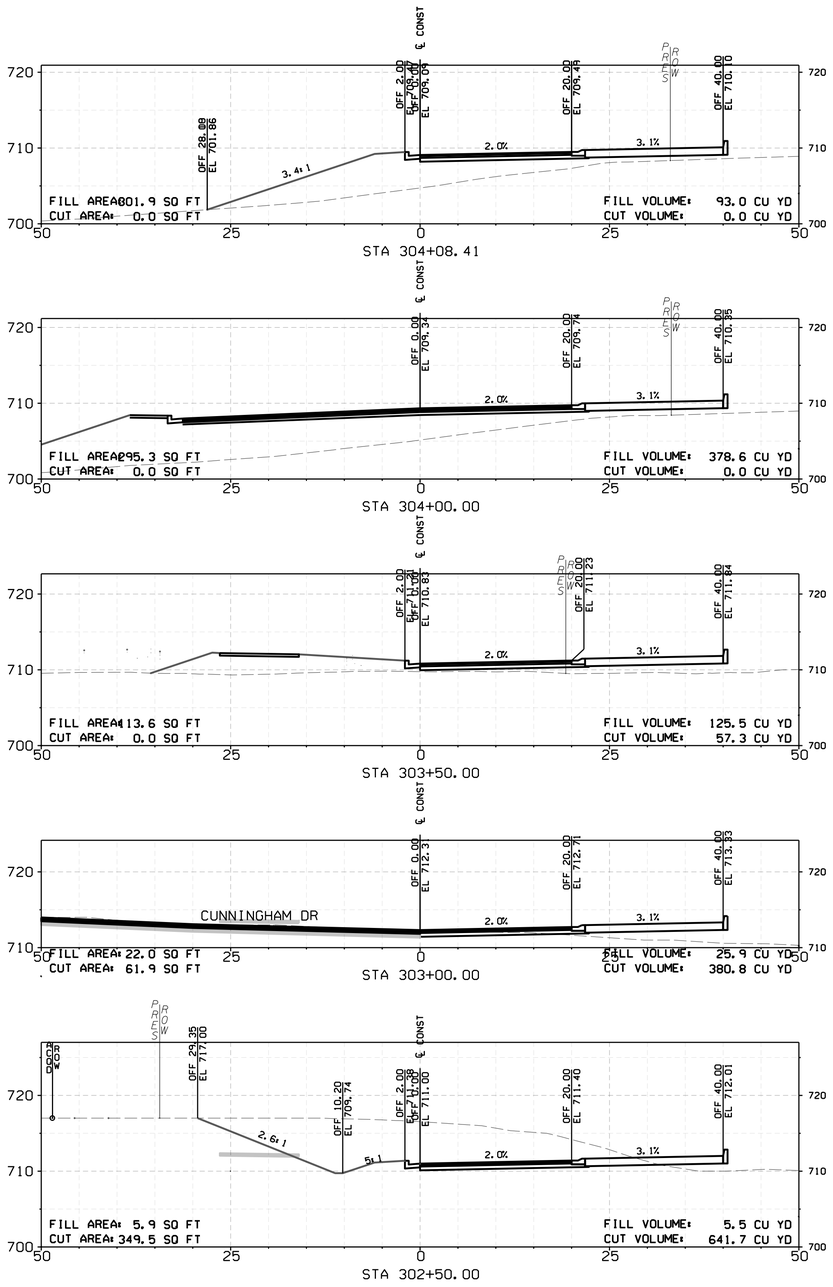
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STA 301+50.00

STA 301+00.00

STA 300+50.00

STA 300+00.00



STA 304+08.41

STA 304+00.00

STA 303+50.00

STA 303+00.00

STA 302+50.00

PLAN SUBMITTAL	THREE NOTCH GROUP	HORIZ 10 0 10 SCALE (FEET) VERT 10 0 10	SHEET TITLE	ROUTE
FINAL			CROSS SECTIONS	CIRCULAR BASELINE

EARTHWORK SUMMARY

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
R071321196	2025	110

GN-2 NOTES
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SUMMARY TOTALS FROM CROSS SECTIONS	CUT	=	10644 CU YD
	FILL	=	13628 CU YD
UNCLASSIFIED EXCAVATION:	NORMAL CUT	=	10644 CU YD
	REMOVAL OF EX ASPHALT	=	0 CU YD
	TOPSOIL BENEATH FILL	=	1965 CU YD
	LOW CONSISTENCY MATERIALS	=	0 CU YD
TOTAL UNCLASSIFIED EXCAVATION (ITEM 210A-000)		=	12609 CU YD
BORROW EXCAVATION (A4 OR BETTER)(ITEM 210D-011)		=	8071 CU YD
TOPSOIL FROM STOCKPILES (ITEM 650B-000)		=	1750 CU YD
MUCK EXCAVATION (ITEM 210C-000)		=	5628 CU YD
BORROW EXCAVATION (UNDERWATER BACKFILL) (ALDOT #57) (ITEM 210F-002)		=	2439 TON
CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED (ITEM 301E-008)		=	1267 TON
LOOSE RIPRAP, CLASS 1 (ITEM 610C-000)		=	3565 TON

PLAN SUBMITTAL		NOT TO SCALE	SHEET TITLE	ROUTE
FINAL	THREE NOTCH GROUP		EARTHWORK SUMMARY	THOMASON DRIVE