City of Bryant
210 SW 3rd Street
Bryant, AR 72022
501-943-0999
www.cityofbryant.com

REQUEST FOR PROPOSALS (RFP) FOR ALCOA PARK – MILLS PARK TRAIL AND MILLS PARK TRAIL RESURFACING

FULL BID INFORMATION AND REQUIREMENTS LOCATED AT WWW.CITYOFBRYANT.COM/PAGES/BIDS

All bids must be emailed, mailed, or hand-delivered to the City of Bryant's Boswell Municipal Complex located at **210 SW 3rd Street, Bryant, AR 72022, Attn: Nichole Manley, no later than Friday, August 22, 2025 at 12:00 P.M.**

BID OPENING DATE: Monday, August 25, 2025 @ 2 PM
Location: Boswell Municipal Complex Conference Room, 210 SW 3rd Street, Bryant, AR 72022

The City reserves the right to reject any or all bids, waive irregularities or informalities of any bid, and make an award in a manner consistent with the law, or deemed in the City's best interest.

Evaluation of the bid will be based on the following criteria:

- Qualifications, Experience, and Competence
- Cost
- Estimated completion time

Bid Envelopes must be sealed and marked with the following:

ALCOA PARK – MILLS PARK TRAIL (BRYANT) (S), F.A.P. TAPU-9061(12),
ARDOT JOB NO. 061807
MCE JOB NO. 22-5738
Bryant, Arkansas
&
Mills Park Trail Resurfacing

PROJECT MANUAL

ALCOA PARK – MILLS PARK TRAIL (BRYANT) (S), F.A.P. TAPU-9061(12), ARDOT JOB NO. 061807

BRYANT, ARKANSAS

FOR REVIEW ONLY



APRIL, 2025



MCE PROJECT NO. 22-5738

McCLELLAND CONSULTING ENGINEERS, INC.
DESIGNED TO SERVE

PROJECT MANUAL

ALCOA PARK – MILLS PARK TRAIL (BRYANT) (S), F.A.P. TAPU-9061(12), ARDOT JOB NO. 061807

BRYANT, ARKANSAS

APRIL, 2025

MCE PROJECT NO. 22-5738

Prepared By:
McClelland Consulting Engineers, Inc.
7302 Kanis Road
Little Rock, Arkansas 72204
Phone 501/371-0272
Fax 501/371-9932

ALCOA PARK – MILLS PARK TRAIL (BRYANT) (S), F.A.P. TAPU-9061(12),
ARDOT JOB NO. 061807
22-5738

TABLE OF CONTENTS

SECTION NO.	SECTION TITLE	NUMBER OF PAGES
PART I	**BIDDING REQUIREMENTS**	
00030	Advertisement for Bids	2
00100	Instructions to Bidders	6
00300	Bid Form	7
	Contractor's Check List	1
	Supplement to Proposal	
	Anti-Collusion and Debarment Certification	2
	Certification	2
	Restriction of Boycott of Israel Certification	1
00350	Bid Bond	2
	Notice of Award	1
	EJCDC C-610 Performance Bond	4
	EJCDC C-615 Payment Bond	4
PART II	**CONTRACT FORMS**	
00500	Contract	3
	Notice to Proceed	1
PART III	**CONDITIONS OF CONTRACT**	
00700	General Conditions	26
00800	Supplemental Conditions	2
	Title VI Contract Provisions – Appendix A	1
	Title VI Contract Provisions – Appendix E	1
	Required Contract Provisions	
	Federal Aid Construction Contracts	14
	FHWA-1273 Supplemental Specifications	
	Equal Employment Opportunity Notice to Contractors	1
	Specific Equal Employment Opportunity Responsibilities	5
	Equal Employment Opportunity Goals and Timetables	2
	Equal Employment Opportunity Federal Standards	4
	Posters and Notices Required for Federal-Aid Projects	3
	Supplemental Specification	
	Wage Rates Determination	6
	Special Provisions	
	Differing Site Conditions and Temporary Suspensions of Work	1
	Documentation of Payments Made to Disadvantaged Business Enterprises	5
	Cargo Preference Act Requirements	1
	Rectangular Rapid Flashing Beacon	5
DIVISION 1	**GENERAL REQUIREMENTS**	
01001	Basic Requirements	10
	EJCDC C-620 Application for Payment	4
	EJCDC 1910-8-B Change Order	1
	Contractor's Lien Release	1

EJCDC C-625 Certificate of Substantial Completion 1
Excavation Reporting Form 1
Overhead High Voltage Reporting Form 1
01025 Measurement and Payment 7

DIVISION 2 SITEWORK
02015 Maintenance of Traffic 2
02200 Site Preparation 3
02231 Clearing and Grubbing 4
02300 Earthwork 8
02315 Trench Excavation, Backfill, and Compacting 8
02631 Reinforced Concrete Pipe and Fittings 2
02722 Aggregate Base Course 5
02748 Portland Cement Concrete Paving 5
02767 Thermoplastic Pavement Marking 4
02770 Concrete Curbs and Sidewalks 5
02924 Sodding 3

DIVISION 3 - 16 NOT USED

APPENDIX 1

DOCUMENT 00030
ADVERTISEMENT FOR BIDS

Bids:

PROJECT: ALCOA PARK – MILLS PARK TRAIL (BRYANT) (S), F.A.P. TAPU-9061(12), ARDOT JOB NO. 061807

MCE Project No.: 22-5738

McClelland Consulting Engineers, Inc.
7302 Kanis Road
Little Rock, Arkansas 72204
Phone: (501) 371-0272

The City of Bryant, Arkansas will receive bids on a General Contract to provide a direct pedestrian connection from Mills Park to Alcoa Park. Construction will include an asphalt overlay of existing sidewalk, new asphalt trail, new drainage structures, and a crosswalk upgrade.

"Build America, Buy America" Requirements, as specified in Title 23 of the United States code Section 313 and Title 23 of the code of Federal Regulations Section 635.410, apply to this project. This requirement applies to all iron and steel products used on the project.

Bids shall be on a unit price basis.

The City of Bryant, Arkansas will receive Bids until 12:00 P.M. August 22, 2025 at City Hall, 210 SW 3rd Street, Bryant, Arkansas 72022. Bids received after this time will not be accepted. All bids received in accordance with the terms of the advertisement shall be publicly opened and at a minimum, the total amount bid must be read aloud (the sponsor may choose to read the bids item by item). If any bid received is not read aloud, the name of the bidder and the reason for not reading the bid aloud shall be publicly announced at the letting. All interested parties are invited to attend.

Pursuant to Ark. Code Ann. § 22-9-203, the Owner encourages all small, minority, and women business enterprises to submit bids for capital improvements. Encouragement is also made to all general contractors that in the event they subcontract portions of their work, consideration is given to the identified groups.

Digital copies of the bid documents are available at http://www.mce.us.com for a fee of $22. These documents may be downloaded by selecting this project from the "Current Bids" link, and by entering Quest Project Number on the "Browse Projects" page. For assistance and free membership registration, contact QuestCDN at (952) 233-1632 or info@questcdn.com. Addendums to the bid package will be issued through the online MCE Plan Holders List; therefore, all prime bidders shall be responsible for downloading the bid documents from the MCE online plan room in order to be included in the Plan Holders List and submit a bid. Bidders must enter the addenda numbers in the Proposal to verify receipt.

Each Bid must be submitted on the prescribed form and accompanied by a certified check or bid bond executed on the prescribed form, payable to City of Bryant in an amount not less than 5 percent of the amount bid. The bid proposal and work of the proposed contract shall be in accordance with all applicable federal, state, county, and local laws, ordinances and regulations.

For information concerning the proposed Work, contact Justin Woodall at the Engineer's office.

The City of Bryant hereby notifies all bidders that this contract is subject to applicable labor laws, non-discrimination provisions, wage rate laws and other federal laws including the Fair Labor Standards Act of 1938. The Work Hours Act of 1962 and Title VI of the Civil Rights Act of 1964 also apply.

Registration and good standing in the System for Award Management (SAM) will be required prior to contract execution.

Any Bid may be rejected which contains material omissions, or irregularities, or in which any of the unit prices are obviously unbalanced in the opinion of the Owner. Also, a bid may be rejected if it, in any manner, shall fail to conform to the conditions of the Bidding Requirements and Contract Documents.

The Owner reserves the right to waive irregularities, reject bids, choose the most qualified bidder for the Project, and to postpone award of the Contract for a period of time which shall not exceed beyond 90 days from the bid opening date.

CITY OF BRYANT, ARKANSAS

DOCUMENT 00100

INSTRUCTIONS TO BIDDERS

PARAGRAPH NO./TITLE

1. FORMAT
2. SPECIFICATION LANGUAGE
3. GENERAL DESCRIPTION OF THE PROJECT
4. QUALIFICATION OF CONTRACTORS
5. MINORITY PARTICIPATION
6. DOCUMENT INTERPRETATION
7. BIDDER'S UNDERSTANDING
8. PROJECT MANUAL AND DRAWINGS
9. TYPE OF BID
10. TRENCH AND EXCAVATION SAFETY SYSTEM
11. PREPARATION OF BIDS
12. STATE AND LOCAL SALES AND USE TAXES
13. SUBMISSION OF BIDS
14. TIE BIDS
15. TELEGRAPHIC OR WRITTEN MODIFICATION OF BID
16. WITHDRAWAL OF BID
17. BID SECURITY
18. RETURN OF BID SECURITY
19. AWARD OF CONTRACT
20. BASIS OF AWARD
21. EXECUTION OF CONTRACT
22. PERFORMANCE AND PAYMENT BONDS
23. FAILURE TO EXECUTE CONTRACT AND FURNISH BOND
24. PERFORMANCE OF WORK BY CONTRACTOR
25. TIME OF COMPLETION
26. PROVISION OF REQUIRED INSURANCE

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DOCUMENT 00100

INSTRUCTIONS TO BIDDERS

1. FORMAT

The Contract Documents are divided into Parts, Divisions, and Sections in keeping with accepted industry practice in order to separate categories of subject matter for convenient reference thereto. Generally, there has been no attempt to divide the Specification Sections into work performed by the various building trades, work by separate subcontractors, or work required for separate facilities in the Project.

2. SPECIFICATION LANGUAGE

"Command" type sentences are used in Contract Documents. These refer to and are directed to the Contractor.

3. GENERAL DESCRIPTION OF THE PROJECT

A general description of the Work to be done is contained in the ADVERTISEMENT FOR BIDS. The scope is indicated on the accompanying Drawings and specified in applicable parts of these Contract Documents.

4. QUALIFICATION OF CONTRACTORS

The prospective bidders must meet the statutorily prescribed requirements before Award of Contract by the Owner.

Owner and Engineer shall review each Bidder's qualifications before a Contract will be awarded for the work contemplated herein. The Owner will conduct investigations, as necessary, to determine the performance record and ability of the apparent low Bidder to perform the size and type of work specified under this Contract. Upon request, the Bidder shall submit information as deemed necessary by the Owner to evaluate the Bidder's qualifications.

The Bidder must have an application on file with the State of Arkansas Contractor's Licensing Board and be in the process of obtaining a Contractor's License in the State of Arkansas. Before the Owner and Contractor enter into a Contract Agreement, the Contractor must have their License in hand. For any questions concerning Contractor's Licensing Requirements contact the State Licensing Board at (501) 372-4661.

5. MINORITY PARTICIPATION

Pursuant to Ark. Code Ann. § 22-9-203, the Owner encourages all small, minority, and women business enterprises to submit bids for capital improvements. Encouragement is also made to all general contractors that in the event they subcontract portions of their work, consideration is given to the identified groups.

6. DOCUMENT INTERPRETATION

The Contract Documents governing the Work proposed herein consist of the Drawings and all material bound herewith. These Contract Documents are intended to be mutually cooperative and to provide all details reasonably required for the execution of the proposed Work. Any person contemplating the submission of a Bid shall have thoroughly examined all of the various parts of these Documents and, should there be any doubt as to the meaning or intent of said Contract Documents, the Bidder should request of the Engineer, in writing (received by the Engineer at least 5 working days prior to bid opening), an interpretation thereof.

Any interpretation or change in said Contract Documents will be made only in writing, in the form of Addenda to the Documents, which will be furnished to all Bidders receiving a set of the Documents. Bidders shall submit with their Bids, or indicate receipt, of all Addenda. The Owner or Engineer will not be responsible for any other explanation or interpretations of said Documents not issued in writing by Addendum.

7. BIDDER'S UNDERSTANDING

Each Bidder must inform himself of the conditions relating to the execution of the Work, and it is assumed that he will inspect the site and make himself thoroughly familiar with all the Contract Documents. Failure to do so will not relieve the successful Bidder of his obligation to enter into a Contract and complete the contemplated Work in strict accordance with the Contract Documents. It shall be the Bidder's obligation to verify for himself and to his complete satisfaction all information concerning site and subsurface conditions.

Information derived from topographic maps, or from Drawings showing location of utilities and structures will not in any way relieve the Contractor from any risk, or from proper examination of the site and additional investigations as he may elect, or from proper fulfillment of all the terms of the Contract Documents.

Each Bidder shall inform himself of, and the Bidder awarded a Contract shall comply with, federal, state, and local laws, statutes, and ordinances relative to the execution of the Work. This requirement includes, but is not limited to, applicable regulations concerning minimum wage rates; nondiscrimination in the employment of labor; protection of public and employee safety and of health environment protection, the protection of natural resources, fire protection, burning and nonburning requirements, permits, fees, contractor's license, nonresident contractors' notice and bond requirements, and similar subjects.

8. PROJECT MANUAL AND DRAWINGS

No return of Drawings is required and no refund will be made.

9. TYPE OF BID

Unit prices shall be submitted in the appropriate places on the Bid form. The total amount to be paid to the Contractor shall be the total amount of the unit price items as adjusted based on quantities installed and/or any adjustment for additions or deletions resulting from change orders during construction.

10. TRENCH AND EXCAVATION SAFETY SYSTEM

IN ACCORDANCE WITH **ARK. CODE ANN.§ 22-9-212**, BIDDERS MUST PROVIDE A SEPARATE PRICE FOR TRENCH AND EXCAVATION SAFETY PROGRAMS IN THE SPACE PROVIDED ON THE BID FORM. FAILURE TO DO SO WILL SUBJECT THE BIDDER TO DISQUALIFICATION.

11. PREPARATION OF BIDS

All blank spaces on the Bid Form must be filled in, preferably in BLACK ink. No changes shall be made in the phraseology of the forms. In case of discrepancy between unit prices and totals, unit prices will prevail.

Any Bid which contains material omissions, or irregularities, or in which any of the prices are obviously unbalanced in the opinion of the Owner may be rejected. Also, a bid may be rejected if, in any manner, it shall fail to conform to the conditions of the published ADVERTISEMENT FOR BIDS, Bidding Requirements, and Contract Documents.

Only one bid from any individual, firm, partnership, or corporation, under the same or different names, will be considered. Should it appear to the Owner that any Bidder is interested in more than one bid for Work contemplated, all bids in which such Bidder is interested will be rejected.

The Bidder shall sign his Bid Form on the blank space provided therefor. If Bidder is a corporation, the legal name of the corporation shall be set forth above, together with the signature of the officer or officers authorized to sign Contracts on behalf of the corporation. If Bidder is a partnership or sole proprietorship, the true name of the firm shall be set forth above, together with the signature of the sole proprietor, partner, or partners authorized to sign Contracts in behalf of the firm. If signature is by an agent, other than an officer of a corporation or a member of a partnership or sole proprietor, a notarized power-of-attorney must be on file with the Owner prior to opening of bids or submitted with the Bid.

12. STATE AND LOCAL SALES AND USE TAXES

Unless the Supplementary Conditions contains a statement that the Owner is exempt from state sales tax on materials incorporated into the Work, due to the qualification of the Work under this Contract, all state and local sales and use taxes, as required by the laws and statutes of the state and its political subdivisions, shall be paid by the Contractor. Prices quoted in the Bid shall include all nonexempt sales and use taxes, unless provision is made in the Bid Form to separately itemize the tax.

13. SUBMISSION OF BIDS

All Bids must be submitted not later than the time prescribed, at the place, and in the manner set forth in the ADVERTISEMENT FOR BIDS. Bids must be made on the Bid Form provided herein. Each Bid must be submitted in a sealed envelope, so marked as to indicate its contents without being opened, and addressed in conformance with the instructions in the ADVERTISEMENT FOR BIDS.

14. TIE BIDS

If two or more sealed bids are equal in amount, meet specifications, and are the lowest received at the bid opening, then the apparent low bidder will be determined by lot (placing the name of the tie bidders into a container and drawing one name). The drawing will be done by Owner personnel, or another person designated by the Owner in the presence of a witness and tie bidders. The witness shall be an employee of the Owner or Engineer. Documentation of the drawing must be included on the bid tabulation and be signed by those present. Nothing in the above and foregoing will diminish the Owner’s reserved right to reject any and all bids and/or to waive formalities.

15. TELEGRAPHIC OR WRITTEN MODIFICATION OF BID

Any Bidder may modify his bid by telegraphic or written communication at any time prior to the scheduled closing time for receipt of bids, provided such communication is received by the Owner prior to the closing time. The telegraphic or written communication should not reveal the bid price; it shall, however, state the addition or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened.

16. WITHDRAWAL OF BID

Any Bid may be withdrawn prior to the scheduled time for the opening of bids either by telegraphic or written request, or in person. No Bid may be withdrawn after the time scheduled for opening of Bids, unless the time specified in Item, AWARD OF CONTRACT, of these INSTRUCTIONS TO BIDDERS shall have elapsed.

17. BID SECURITY

Each bid shall include a bid security in the amount of five percent of the total bid offered. The bidder shall be required to submit a bidder's deposit, which includes enclosing a cashier's check payable to the order of the OWNER drawn upon a bank or trust company doing business in Arkansas or by a corporate bid bond in an amount equal to five (5) percent of the bid.

The Attorney-in-Fact who executes this bond in behalf of the Surety must attach a notarized copy of his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bond.

If the Bidder elects to furnish a Bid Bond, he shall use the Bid Bond form bound herewith or one conforming substantially thereto in form and content.

The bid bond shall indemnify the Owner against failure of the Contractor to execute and deliver the contract and necessary Performance and Payment Bonds for faithful performance of the contract. The bid bond shall provide that the Contractor or surety must pay the damage, loss, cost, and expense subject to the amount of the bid security directly arising out the Contractor's default in failing to execute and deliver the contract and bonds.

Owner will have the right to retain the bid security of bidders to whom an award is being considered until the Contract has been executed and bonds have been furnished, or until specified time has elapsed so that bids may be withdrawn, or until all bids have been rejected.

18. RETURN OF BID SECURITY

Within fifteen (15) days after the award of the Contract, the Owner will return the bid securities to all Bidders whose Bids are not to be further considered in awarding the Contract. Retained bid securities will be held until the Contract has been finally executed, after which all bid securities, other than Bidders' bonds and any guarantees which have been forfeited, will be returned to the respective Bidders whose Bids they accompanied.

19. AWARD OF CONTRACT

Within ninety (90) calendar days after the opening of Bids, unless otherwise stated in the ADVERTISEMENT FOR BIDS or SUPPLEMENTARY CONDITIONS of these Documents, the Owner will accept one of the Bids or will act in accordance with BASIS OF AWARD, below. The acceptance of the Bid will be by written notice of award, mailed or delivered to the office designated on the Bid Form. In the event of failure of the lowest responsible and responsive qualified Bidder to sign and return the Contract with acceptable Performance and Payment Bonds, as prescribed herein, the Owner may award the Contract to the next lowest responsible and responsive qualified Bidder. Such award, if made, will be made within ninety (90) days after the opening of Bids.

20. BASIS OF AWARD

If, at the time this Contract is to be awarded, the Total Base Bid of the lowest acceptable Bid exceeds the funds then estimated by the Owner as available, the Owner may reject all bids or take other action as best serves the Owner's interests. The basis of the award will be as stated in the bid.

21. EXECUTION OF CONTRACT

The successful Bidder shall, within fifteen (15) consecutive days after receiving notice of award, sign and deliver to the Owner the Contract hereto attached, together with the acceptable bonds as required in these Documents. Within fifteen (15) consecutive days after receiving the signed Contract with acceptable bonds from the successful Bidder, the Owner's authorized agent will sign the Contract. Signature by both parties constitutes execution of the Contract.

The successful bidder shall conform to the Rules and Regulations of Arkansas Department of Finance and Administration concerning nonresident contractor's notice and bond requirements.

22. PERFORMANCE AND PAYMENT BONDS

The successful Bidder shall furnish a Performance and Payment Bond in the amount equal to one hundred percent (100%) of the contract price on the forms provided in the Contract Documents as security for faithful performance of the Contract and payment of all obligations arising thereunder within ten days after receipt of the Notice of Award. The bond shall be written by a surety company qualified and authorized to do business in the State of Arkansas and shall be listed on the current U. S. Department of Treasury, Circular Number 570, or amendments thereto, in the Federal Register of acceptable Sureties for Federal projects. The bond shall be executed by an agent licensed by the State Insurance Commissioner to represent the surety company in Arkansas. The bond shall be written in favor of the Owner. Bond company rating by “AM Best Rating Company” to be “A-“ or above and have a Positive or Stable Rating Outlooks.

The Attorney-in-Fact who executes this Performance Bond and Payment Bond in behalf of the Surety must attach a notarized copy of his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bond. All Contracts, Performance and Payment Bonds, and respective powers-of-attorney will have the same date.

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 location where any part of the project is located, or ceases to meet the requirements of the preceding paragraph, the Contractor shall within five days thereafter substitute another Bond and Surety, both of which must be acceptable to Owner.

Before execution of the Contract Documents, the Contractor shall submit the Bonds (in triplicate) to the Owner. The Bonds shall be submitted **WITHOUT DATES**, as they will be dated by the Owner at the same time as the Contracts are executed.

23. FAILURE TO EXECUTE CONTRACT AND FURNISH BOND

Failure to deliver bonds as specified above shall be considered as having abandoned the Contract, and the bid security will be retained by the Owner as liquidated damages.

24. PERFORMANCE OF WORK BY CONTRACTOR

The Contractor shall perform on the site, and with his own organization, work equivalent to at least forty percent of the total amount of the Work to be performed under this Contract. Contractors submitting bids where forty percent of Work is not with their own forces shall be deemed a “Brokerage Contractor” and the bid may be rejected by Owner. If determined during the “Award of Contract” phase that the Contractor is not going to be performing forty percent of Work as bid, the Contractor’s bid may be subject to rejection and forfeiture of Bid Bond.

If, during the progress of the Work hereunder, the Contractor requests a reduction of the percentage and the Engineer determines that it would be to the Owner's advantage, the percentage of the work required to be performed by the Contractor's own organization may be reduced, PROVIDED prior written approval of such reduction is obtained by the Contractor from the Engineer.

Each bidder must furnish with his bid a list of the items that he will perform with his own forces and the estimated total cost of these items.

25. TIME OF COMPLETION

The time of completion of the Work to be performed under this Contract is of the essence of the

Contract. Delays and extensions of time may be allowed in accordance with the provisions stated in Document 00700 - GENERAL CONDITIONS. The time allowed for the completion of the Work is stated in Document 00500 - Contract.

26. PROVISION OF REQUIRED INSURANCE

The Bidder's attention is directed to the insurance requirements set forth in the General Conditions (amended in the Supplementary Conditions, if appropriate). Submittal of a bid indicates full understanding and intent to comply with the insurance requirements which are a condition of the contract.

END OF SECTION

DOCUMENT 00300

BID FORM

NOTE TO BIDDER: Please use BLACK ink for completing this Bid form.

To. _____

Address: _____

_____

_____

Project Title: **ALCOA PARK – MILLS PARK TRAIL (BRYANT) (S), F.A.P. TAPU-9061(12), ARDOT JOB NO. 061807**

Engineer's Project No.: **22-5738**

Date: _____

Bidder: _____

Address: _____

Bidder's person to contact for additional information on this Bid:

Name: _____

Telephone: _____

ADDENDA

The Bidder hereby acknowledges that he/she has received Addenda Numbers:

_____ to these Specifications.
(Bidder insert number of each addendum received.)

INSURANCE AND BONDING REQUIREMENTS

The Bidder hereby acknowledges that he/she has read and understands the performance bond, payment bond, and insurance requirements for this project as specified in the General Conditions. If awarded a construction contract, the Bidder agrees to furnish the required bonds and insurance certificates within fifteen (15) days of the date the award is made.

Signature _____ Title _____

MEASUREMENT AND PAYMENT

The Bidder hereby acknowledges that he/she has read and understands Section 01025 - Measurement and Payment completely prior to completing this Bid Form.

Signature _____ Title _____

BIDDER'S DECLARATION AND UNDERSTANDING

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Bid are those named herein, that this Bid is, in all respects, fair and without fraud, that it is made without collusion with any official of the Owner, and that the Bid is made without any connection or collusion with any person submitting another Bid on this Contract.

The Bidder further declares that he has carefully examined the Contract Documents for the construction of the project, that he has personally inspected the site, that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the Contract Documents, and that this Bid is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Bid.

The Bidder further agrees that he has exercised his own judgment and has utilized all data which he believes pertinent from the Engineer, Owner, and other sources in arriving at his own conclusions.

The Bidder states that he has experience in and is qualified to perform the work herein specified and, if he does not have craftsmen experienced and qualified in any phase of the work for which this Bid is offered, that he will subcontract the work under said phase to a contractor who does have the necessary experience and qualifications.

CONTRACT EXECUTION AND BONDS

The Bidder agrees that if this Bid is accepted, he will, within 15 days after notice of award, sign the Contract in the form annexed hereto, and will at that time, deliver to the Owner the Performance Bond and Payment Bond required herein, and will, to the extent of his Bid, furnish all machinery, tools, apparatus, and other means of construction and do the work and furnish all the materials necessary to complete all work as specified or indicated in the Contract Documents.

CERTIFICATES OF INSURANCE, PAYMENT BOND, AND PERFORMANCE BOND

The Bidder further agrees to furnish the Owner, before executing the Contract, the certificates of insurance, Payment Bond, and Performance Bond as specified in these Documents.

START OF CONSTRUCTION, CONTRACT COMPLETION TIME, AND LIQUIDATED DAMAGES

Start of Construction, Contract Completion Time, and Liquidated Damages are stated in Document 00500 - Contract.

SALES AND USE TAXES

The Bidder agrees that all federal, state, and local sales and use taxes are included in the stated bid prices for the work.

UNIT PRICE BASE BID

Any Bid may be rejected which contains material omissions, or irregularities, or in which any of the unit prices are obviously unbalanced in the opinion of the Owner. Also, a bid may be rejected if, in any manner it shall fail to conform to the conditions of the published Bidding Requirements and Contract Documents.

The bidder agrees to accept as full payment for the work proposed herein the amount computed under the provisions of the Contract Documents and based on the following unit price amounts, it being expressly understood that the unit prices are independent of the exact quantities involved. The bidder agrees that the unit prices represent a true measure of the labor and materials required to perform the work, including all allowances for overhead and profit for each type and unit of work called for in the Contract Documents.

Item No.	ARDOT Item No.	Item Description	Unit	Quantity	Unit Price	Total
1	201	Clearing and Grubbing	STA	3	$	$
2	202	Remove and Dispose of Asphalt Driveways	SY	46	$	$
3	202	Remove and Dispose of Concrete Walks	SY	74	$	$
4	202	Remove and Dispose of Pipe Culverts	EA	2	$	$
5	SS & 303	Aggregate Base Course (Class 7)	TON	1,070	$	$
6	SS & 401	Tack Coat	GAL.	30	$	$
7	SP, SS, & 405	Mineral Aggregate in ACHM Surface Course (1/2")	TON	236	$	$
8	SP, SS, & 407	Asphalt Binder (PG 64-22) In ACHM Surface Course (1/2")	TON	14	$	$
9	505	Portland Cement Concrete Driveway	SY	28	$	$
10	601	Mobilization	LS	1	$	$
11	603	Maintenance of Traffic	LS	1	$	$
12	604	Signs	SF	57	$	$
13	604	Traffic Drums	EA	33	$	$
14	604	Removal of Permanent Pavement Markings	LF	354	$	$
15	606	18" Reinforced Concrete Flared End Sections	EA	4	$	$
16	606	18" Reinforced Concrete Pipe Culvert (CL.3)	LF	56	$	$
17	606	24" Reinforced Concrete Flared End Sections	EA	3	$	$
18	606	24" Reinforced Concrete Pipe Culvert (CL.3)	LF	76	$	$
19	606	Selected Pipe Bedding	CY	20	$	$
20	620	Water	M. GAL.	15	$	$
21	621	Rock Ditch Checks	CY	21	$	$
22	621	Silt Fence	LF	2,625	$	$
23	621	Sediment Removal and Disposal	CY	104	$	$
24	624	Solid Sodding, Bermuda (Includes Topsoil)	SY	1,191	$	$

Item No.	ARDOT Item No.	Item Description	Unit	Quantity	Unit Price	Total
25	633	Concrete Walks	SY	46	$	$
26	633	Hand Railing	LF	53	$	$
27	703	Rectangular Rapid Flashing Beacon (RRFB)	EA	2	$	$
28	719	Thermoplastic Pavement Marking White (6")	LF	140	$	$
29	719	Thermoplastic Pavement Marking Yellow (6")	LF	551	$	$
30	719	Thermoplastic Pavement Marking White (12")	LF	60	$	$
31	SP	Pipe Bollards	EA	6	$	$

TOTAL AMOUNT BID $_____

_____

Words

BASIS OF AWARD

The Bidder understands that the Contract will be awarded to the most qualified bidder with the lowest Total Base Bid that the Owner may choose that makes the Project cost acceptable to the Owner. The Owner reserves the right to waive irregularities, reject bids, choose the most qualified bidder for the Project, and to postpone award of the Contract for a period of time which shall not exceed beyond 90 days from the bid opening date.

PAYMENT SCHEDULE

A detailed payment schedule for each structure or unit shall be submitted by the successful low Bidder. The successful low Bidder shall meet with the Engineer and Owner, to review the format and details of the payment schedule. This meeting shall be held within 5 days of notification that the Contractor is the low Bidder. The purpose of the meeting shall be to establish an acceptable format for the payment schedule. The construction detailed payment schedule shall be completed by the Contractor 14 days after the meeting and submitted to the Engineer and Owner for review and approval. Failure of the Contractor to submit the payment schedule as required may result in the Owner's rejection of the Bid or delay in processing the Contractor's request for a progress payment.

SUBCONTRACTORS

The Bidder further certifies that proposals from the following subcontractors were used in the preparation of this Bid; and if awarded a contract, Bidder agrees to not enter into Contracts with others for these divisions of the Work without written approval from the Owner and Engineer.

Subcontractor	**Subcontractor**
Arkansas Contractor License #	Arkansas Contractor License #
Street Address, City, State, Zip Code	Street Address, City, State, Zip Code
Subcontractor	**Subcontractor**
Arkansas Contractor License #	Arkansas Contractor License #
Street Address, City, State, Zip Code	Street Address, City, State, Zip Code

SUPPLIERS/VENDORS

The Bidder shall list the suppliers/vendors where material for this Project will be purchased from and successful Bidder shall updated suppliers/vendors during construction of the Project.

Supplier/Vendor Name	**Supplier/Vendor Name**
Street Address, City, State, Zip Code	Street Address, City, State, Zip Code
Phone Number	Phone Number
Supplier/Vendor Name	**Supplier/Vendor Name**
Street Address, City, State, Zip Code	Street Address, City, State, Zip Code
Phone Number	Phone Number

PERFORMANCE OF WORK BY CONTRACTOR

The Bidder shall perform at least 40 percent of the work with his own forces (70 percent for water and sewer line projects) (refer to Paragraph 24, INSTRUCTIONS TO BIDDERS. Bids from so called "Brokerage Contractors" will not be considered.) List below the items that the Bidder will perform with his own forces, if awarded this Contract, and fill in the blank showing the estimated total cost of these items.

Estimated total cost of the above items the Bidder states that will be performed with his own forces, if awarded Contract:

_____Dollars ($_____)
(Words)

EXPERIENCE OF BIDDER

The Bidder states that he is an experienced Contractor and has completed similar projects within the last 5 years. (List similar projects, with types, names of clients, construction costs, and references with telephone numbers. Use additional sheets if necessary.)

SURETY

If the Bidder is awarded a construction Contract on this Bid, the Surety who provides the Performance and Payment Bond will be:

_____ whose address is:

_____
Street, City, State Zip Code

BIDDER

The name of the Bidder submitting this Bid is:

_____ doing business at:

_____
Street, City, State, Zip Code

which is the address to which all communications concerned with this Bid and with the Contract shall be sent.

The names of the principal officers of the corporation submitting this Bid, or of the partnership, or of all persons interested in this Bid as principals are as follows:

_____

_____

_____

If Sole Proprietor or Partnership

IN WITNESS hereto the undersigned has set his (its) hand this _____ day of _____, 20___.

_____
Signature of Bidder

_____
Title

If Corporation

IN WITNESS WHEREOF the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers this ____day of _____, 20___.

_____
Name of Corporation

(SEAL)

By_____

Title_____

Attest_____
Secretary

CONTRACTOR'S CHECK LIST

All the below items must be signed and/or filled out for bid to be accepted.

Section 300 – Bid Form

Section 300 – Addenda (If applicable)

Sponsor Supplement – Anti-Collusion & Debarment Certification

Sponsor Supplement – Certification for Federal-Aid Contract

Supplement – Restriction of Boycott of Israel Certification

Restriction of Boycott of Israel Certification

Bid Bond (Cashier's check, certified check or bid bond in the amount of 5% of the base bid)

CITY OF BRYANT

SUPPLEMENT TO PROPOSAL

ANTI-COLLUSION AND DEBARMENT CERTIFICATION

FAILURE TO EXECUTE AND SUBMIT THIS CERTIFICATION SHALL RENDER THIS BID NONRESPONSIVE AND NOT ELIGIBLE FOR AWARD CONSIDERATION.

As a condition precedent to the acceptance of the bidding document for this project, the bidder shall file this Affidavit executed by, or on behalf of the person, firm, association, or corporation submitting the bid. The original of this Affidavit shall be filed with CITY OF BRYANT **at the time proposals are submitted**.

A F F I D A V I T

I hereby certify, under penalty of perjury under the laws of the United States and/or the State of Arkansas, that the bidder listed below has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the submitted bid for this project, is not presently barred from bidding in any other jurisdiction as a result of any collusion or any other action in restraint of free competition, and that the foregoing is true and correct.

Further, that except as noted below, the bidder, or any person associated therewith in the capacity of owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving the administration of Federal funds:

a. is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency;

b. has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;

c. does not have a proposed debarment pending; and

d. has not been indicted, convicted, or had an adverse civil judgment rendered by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

CITY OF BRYANT

SUPPLEMENT TO PROPOSAL

ANTI-COLLUSION AND DEBARMENT CERTIFICATION

FAILURE TO EXECUTE AND SUBMIT THIS CERTIFICATION SHALL RENDER THIS BID NONRESPONSIVE AND NOT ELIGIBLE FOR AWARD CONSIDERATION.

EXCEPTIONS:

APPLIED TO	INITIATING AGENCY	DATES OF ACTION

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

Job No. _____ _____
(Name of Bidder)

F.A.P. No. _____ _____
(Signature)

_____ _____
(Date Executed) (Title of Person Signing)

The following Notary Public certification is **OPTIONAL** and may or may not be completed at the contractor's discretion.

State of _____)
County of _____)ss.

_____, being duly sworn, deposes and says that he is

_____ of _____
(Title) (Name of Bidder)

and that the above statements are true and correct.

Subscribed and Sworn to before me this _____ day of _____, 20_____.
My commission expires:_____

_____
(Notary Public)

(NOTARY SEAL)

CITY OF BRYANT

SUPPLEMENT TO PROPOSAL

C E R T I F I C A T I O N

The prospective contractor certifies, by signing and submitting this proposal, to the best of his or her knowledge and belief, that:

1 No Federal appropriated funds have been paid or will be paid, by or on his or her behalf, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or any employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2 If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal-Aid contract, the prospective contractor shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities", in accordance with its instructions. (Available from Arkansas Department of Transportation, Program Management Division).

This Certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. This Certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U. S. Code.

During the period of performance of this contract, the contractor and all lower tier subcontractors must file a Form-LLL at the end of each calendar year quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any previously filed disclosure form. Any person who fails to file the required Certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each failure.

The prospective contractor also agrees by submitting his or her proposal that he or she shall require that the language of this Certification be included in all lower tier subcontracts which exceed $100,000 and that all such subcontractors shall certify and disclose accordingly.

CITY OF BRYANT

SUPPLEMENT TO PROPOSAL

C E R T I F I C A T I O N

THIS CERTIFICATION SHALL BE COMPLETED BY THE BIDDER AS PART OF THIS PROPOSAL

The bidder _____, proposed subcontractor _____, hereby certifies that he has _____, has not _____, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that he has _____, has not _____, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

(Currently, Standard Form 100 [EEO-1] is the only report required by the Executive Orders or their implementing regulations.)

JOB NO.	(Company)
F.A.P. NO.	By: (Signature)
(Date Executed)	(Title of Person Signing)

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7 (b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.)

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7 (b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

2/28/18

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO PROPOSAL

RESTRICTION OF BOYCOTT OF ISRAEL CERTIFICATION

Pursuant to Arkansas Code Annotated § 25-1-503, a public entity **shall not** enter into a contract valued at $1,000 or greater with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of Israel.

By signing below, the Contractor agrees and certifies that they do not boycott Israel and will not boycott Israel during the remaining aggregate term of the contract.

If a company does boycott Israel, see Arkansas Code Annotated § 25-1-503.

Bid Number/Contract Number	
Description of product or service	
Contractor name	

Contractor Signature: _____ Date: _____

DOCUMENT 00350

BID BOND

STATE OF ARKANSAS

KNOW ALL MEN BY THESE PRESENTS, that we:

_____

Principal and Contractor, and _____

_____

hereinafter called Surety, are held and firmly bound unto the **City of Bryant, Arkansas** and represented by its Mayor and City Council, hereinafter called Owner, in the sum of

_____DOLLARS ($_____)

lawful money of the United States of America, for the payment of which well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

WHEREAS, the Principal contemplates submitting or has submitted a bid to the Owner for the furnishing of all labor, materials (except those to be specifically furnished by the Owner), equipment, machinery, tools, apparatus, means of transportation for, and the performance of the work covered in the Bid and the detailed Drawings and Specifications, entitled:

ALCOA PARK – MILLS PARK TRAIL (BRYANT) (S), F.A.P. TAPU-9061(12),
ARDOT JOB NO. 061807
MCE JOB NO. 22-5738
Bryant, Arkansas

WHEREAS, it was a condition precedent to the submission of said bid that a cashier's check, certified check, or bid bond in the amount of 5 percent of the base bid be submitted with said bid as a guarantee that the Bidder would, if awarded the Contract, enter into a written Contract with the Owner for the performance of said Contract within 15 consecutive calendar days after written notice having been given of the award of the Contract.

NOW, THEREFORE, the conditions of this obligation are such that if the Principal within 15 consecutive calendar days after written notice of such acceptance enters into a written Contract with the Owner and furnishes a Contract Surety Bond in an amount equal to 100 percent of the base bid, satisfactory to the Owner, then this obligation shall be void; otherwise the sum herein stated shall be due and payable to the Owner and the Surety herein agrees to pay said sum immediately upon demand of the Owner in good and lawful money of the United States of America, as liquidated damages for failure thereof of said Principal.

IN WITNESS WHEREOF, the said_____, as Principal herein, has caused these presents to be signed in its name by its_____ and attested by its _____under its corporate seal, and the said _____ as Surety herein, has caused these presents to be signed in its name by its_____

_____ under its corporate seal, this _____ day of _____ A.D., 20__.

Signed, sealed and delivered
in the presence of:

_____
Principal-Contractor

_____

By_____

_____
As to Principal

_____
Title

_____

Surety

_____

_____
Attorney-in-Fact
(Power-of-Attorney to be Attached)

_____
As to Surety

By_____
Agent

NOTICE OF AWARD

TO:

PROJECT: ALCOA PARK – MILLS PARK TRAIL (BRYANT) (S), F.A.P. TAPU-9061(12), ARDOT JOB NO. 061807 – 22-5738

The OWNER has considered the BID submitted by you on _____ for the above described WORK in response to its Advertisement for Bids and Instructions to Bidders.

You are hereby notified that your BID has been accepted in the amount of:

_____ Dollars ($_____)

You are required by the Instructions to Bidders to execute the Contract and furnish the required CONTRACTOR'S Performance BOND, Payment BOND, and certificates of insurance within fifteen (15) calendar days from the date of this Notice to you.

If you fail to execute said Contract and to furnish said BONDS within fifteen (15) days from the date of this Notice, said OWNER will be entitled to consider your bid in default, to annul this Notice of Award and to declare your Bid Security forfeited. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this_____ day of _____, 20___.

BRYANT, ARKANSAS
Owner

By _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

by_____, this the_____ day of _____, 20___.

By _____

Title _____

PERFORMANCE BOND

Contractor	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Contract**
Name: **City of Bryant**	Description *(name and location)*:
Mailing address *(principal place of business)*:	**Alcoa Park – Mills Park Trail (Bryant) (S), F.A.P. TAPU-9061(12), ARDOT Job No. 061807 – 22-5738**
210 SW 3rd Street	
Bryant, Arkansas 72022	Contract Price:
	Effective Date of Contract:

Bond

Bond Amount:

Date of Bond:

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
(Full formal name of Contractor)	*(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

EJCDC® C-610, Performance Bond.
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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:

    3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;

    3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

    3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. 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:

    5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

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

    5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

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

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5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven 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 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

   7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

   7.2. 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 5; and

   7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

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

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

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of 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 periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

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statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

    14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for 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 Construction Contract.

    14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows:

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PAYMENT BOND

Contractor	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Contract**
Name: **City of Bryant** Mailing address *(principal place of business)*: **210 SW 3rd Street** **Bryant, Arkansas 72022**	Description *(name and location)*: **Alcoa Park – Mills Park Trail (Bryant) (S), F.A.P. TAPU-9061(12), ARDOT Job No. 061807 – 22-5738** Contract Price: Effective Date of Contract:

Bond

Bond Amount:

Date of Bond:

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____	_____
(Full formal name of Contractor)	*(Full formal name of Surety) (corporate seal)*
By: _____	By: _____
(Signature)	*(Signature)(Attach Power of Attorney)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____
Attest: _____	Attest: _____
(Signature)	*(Signature)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

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1. The Contractor and 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 Construction Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety's obligations to a Claimant under this Bond will arise after the following:

    5.1. Claimants who do not have a direct contract with the Contractor

        5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

        5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).

    5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

    7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

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

    7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

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8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction 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 Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

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

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, 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 will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

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

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

    16.1. *Claim*—A written statement by the Claimant including at a minimum:

        16.1.1. The name of the Claimant;

        16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

        16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

        16.1.4. A brief description of the labor, materials, or equipment furnished;

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16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2. *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 Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction 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.

16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows:

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DOCUMENT 00500

CONTRACT

PROJECT: ALCOA PARK – MILLS PARK TRAIL (BRYANT) (S), F.A.P. TAPU-9061(12), ARDOT JOB NO. 061807

PROJECT NUMBER: 23-5738

THIS AGREEMENT, made and entered into on the ___day of_____,20___, by and between _____, herein called the Contractor, and the **City of Bryant, Arkansas**, hereinafter called the Owner:

W I T N E S S E T H:

That the Contractor, for the consideration hereinafter fully set out, hereby agrees with the Owner as follows:

1. That the Contractor shall furnish all the materials, and perform all of the work in manner and form as provided by the following enumerated Drawings, Specifications, and Documents, which are attached hereto and made a part hereof, as if fully contained herein and are entitled **Alcoa Park – Mills Park Trail (Bryant) (S), F.A.P. TAPU-9061(12), ARDOT Job No. 061807 – 23-5738** dated March, 2025.

Advertisement for Bids	Payment Bond
Instructions to Bidders	General Conditions
Bid and Acceptance Thereof	Supplemental Conditions
Performance Bond	Specifications
	Drawings (See Sheet Index below)

SHEET INDEX

Sheet No.	Description
1	Cover Sheet
2	Project Overview
3 – 4	Topographic Survey
5	Typical Sections of Improvement
6 – 7	Erosion Control Details
8 – 9	Maintenance of Traffic Details
10 – 11	Permanent Pavement Marking Details
12 – 14	Quantities
15	Summary of Quantities
16 – 18	Survey Control Details
19 – 22	Plan & Profile Details
23 – 27	Cross Section Sheets
DR-2	ARDOT Standard Drawing
FES-1	ARDOT Standard Drawing
FES-2	ARDOT Standard Drawing
PCC-1	ARDOT Standard Drawing

SHEET INDEX

Sheet No.	Description
PM-1	ARDOT Standard Drawing
SES-1	ARDOT Standard Drawing
SI-1	ARDOT Standard Drawing
TC-1	ARDOT Standard Drawing
TC-2	ARDOT Standard Drawing
TC-3	ARDOT Standard Drawing
TEC-1	ARDOT Standard Drawing
TEC-3	ARDOT Standard Drawing

2. That the Owner hereby agrees to pay to the Contractor for the faithful performance of this Agreement in lawful money of the United States, the amount of:

_____ Dollars ($_____).

3. The Work will be completed and ready for final payment in accordance with the General Conditions within 75 days after the date when the Contract Time commences to run as provided in Notice to Proceed.

4. Liquidated Damages: Owner and Contractor recognize that time is of the essence of this Agreement and the Owner will suffer financial loss if the Work is not completed within the time specified in above, plus any extensions thereof allowed in accordance with the General Conditions. They also recognize the delays, expense, and difficulties involved in proving 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 Three Hundred and Fifty Dollars ($350.00) for each day that expires after the time specified in Paragraph 3 for completion and readiness for final payment.

5. That within 30 days of receipt of an approved payment request, the Owner shall make partial payments to the Contractor on the basis of a duly certified and approved estimate of work performed during the preceding calendar month by the Contractor, LESS the retainage provided in the General Conditions, which is to be withheld by the Owner until all work within a particular part has been performed strictly in accordance with this Agreement and until such work has been accepted by the Owner.

6. That upon submission by the Contractor of evidence satisfactory to the Owner that all payrolls, material bills, and other costs incurred by the Contractor in connection with the construction of the work have been paid in full, final payment on account of this Agreement shall be made within 60 days after the completion by the Contractor of all work covered by this Agreement and the acceptance of such work by the Owner.

7. It is further mutually agreed between the parties hereto that if, at any time after the execution of this Agreement and the Surety Bond hereto attached for its faithful performance and payment, the Owner shall deem the Surety or Sureties upon such bond to be unsatisfactory or if, for any reason such bond ceases to be adequate to cover the performance of the work, the Contractor shall, at his expense, within 5 days after the receipt of notice from the Owner, furnish an additional bond or bonds in such form and amount and with such Surety or Sureties as shall be satisfactory to the Owner. In such event, no further payment to the Contractor shall be deemed to be due under this

Agreement until such new or additional security for the faithful performance of the work shall be furnished in manner and form satisfactory to the Owner.

8. No additional work or extras shall be done unless the same shall be duly authorized by appropriate action by the Owner in writing.

9. Regardless of any other term identified in any other agreement between the parties, the Owner and Contractor expressly agree this Agreement shall be governed by, and construed in accordance with, the laws of the State of Arkansas, without regard to its conflict of law principles. Any dispute, claim, or controversy arising out of or relating to this Agreement, including any breach or alleged breach, shall be resolved exclusively in the Circuit Court of Saline County, Arkansas. The parties consent to the personal jurisdiction of that court and waive any objections to venue or claims of inconvenient forum. If any party fails to comply with this provision, it agrees to reimburse the other party for any legal fees, costs, or expenses incurred by the party in enforcing this provision.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and date first above written, in three (3) counterparts, each of which shall, without proof or accounting for the other counterpart be deemed an original Contract.

SEAL:

_____
CONTRACTOR

WITNESSES: By_____

_____ _____
Title

BRYANT, ARKANSAS
OWNER

ATTEST: By_____

_____ _____
Clerk Title

Approved as to form:

_____ Attorney for Owner

NOTICE TO PROCEED

TO:

PROJECT: ALCOA PARK – MILLS PARK TRAIL (BRYANT) (S), F.A.P. TAPU-9061(12), ARDOT JOB NO. 061807, MCE PROJECT NO. 22-5738

You are hereby notified to commence WORK in accordance with the Contract dated _____on or before _____ , and you are to complete the WORK within 75 consecutive calendar days thereafter. The date of completion of all WORK is therefore _____, 20__.

BRYANT, ARKANSAS
Owner

By _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by _____, this the ____day of _____, 20___.

By _____

Title _____

DOCUMENT 00700
GENERAL CONDITIONS
TABLE OF CONTENT

ARTICLE NUMBER AND TITLE		***PAGE NUMBER***
1.	AS APPROVED	1
2.	AS SHOWN, AND AS INDICATED	1
3.	BIDDER	1
4.	CONTRACT	1
5.	CONTRACT DOCUMENTS	1
6.	CONTRACTOR	1
7.	DAYS	1
8.	DRAWINGS	1
9.	ENGINEER	2
10.	NOTICE	2
11.	OR EQUAL	2
12.	OWNER	2
13.	PLANS (See Drawings).	2
14.	SPECIFICATIONS	2
15.	NOTICE TO PROCEED	2
16.	SUBSTANTIAL COMPLETION	2
17.	WORK	3
18.	INTENT OF CONTRACT DOCUMENTS	3
19.	DISCREPANCIES AND OMISSIONS	3
20.	ALTERATIONS - CHANGES IN WORK	3
21.	SUB-SURFACE CONDITIONS FOUND DIFFERENT	4
22.	VERIFICATION OF CONTRACT DOCUMENTS	4
23.	DOCUMENTS TO BE KEPT ON THE JOB SITE	4
24.	ADDITIONAL CONTRACT DOCUMENTS	4
25.	OWNERSHIP OF DRAWINGS	4
26.	AUTHORITY OF THE ENGINEER	5
27.	DUTIES AND RESPONSIBILITIES OF THE ENGINEER	5
28.	REJECTED MATERIAL	5
29.	UNNOTICED DEFECTS	5

30. RIGHT TO RETAIN IMPERFECT WORK 6
31. LINES AND GRADES 6
32. SHOP DRAWING SUBMITTAL PROCEDURE 7
33. ADDITIONAL DETAIL DRAWINGS AND INSTRUCTIONS 7
34. INDEPENDENT CONTRACTOR 8
35. SUBCONTRACTING 8
36. INSURANCE AND LIABILITY 8
37. PERFORMANCE AND PAYMENT BONDS 11
38. INDEMNITY 11
39. TAXES AND CHARGES 11
40. ORDINANCES, PERMITS, AND LICENSES 12
41. SUPERINTENDENCE 12
42. RECEPTION OF ENGINEER'S DIRECTIONS 12
43. SANITATION 12
44. EMPLOYEES 12
45. PROJECT MEETINGS 12
46. SAFETY 13
47. CONTRACTOR'S TOOLS AND EQUIPMENT 13
48. PROTECTION OF WORK AND PROPERTY 13
49. RESPONSIBILITY OF CONTRACTOR TO ACT IN EMERGENCY 14
50. MATERIALS AND APPLIANCES 14
51. BUY AMERICA 14
52. CONTRACTORS' AND MANUFACTURERS' COMPLIANCE WITH STATE SAFETY, OSHA, AND OTHER CODE REQUIREMENTS 14
53. SUBSTITUTION OF MATERIALS 14
54. TESTS, SAMPLES, AND INSPECTIONS 15
55. ROYALTIES AND PATENTS 15
56. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT 15
57. CORRECTION OF DEFECTIVE WORK 15
58. BEGINNING OF THE WORK 16
59. SCHEDULES AND PROGRESS REPORTS 16
60. PROSECUTION OF THE WORK 17
61. ASSIGNMENT 17
62. OWNER'S RIGHT TO DO WORK 17

63. OWNER'S RIGHT TO TRANSFER EMPLOYMENT 17
64. OWNER’S RIGHT TO SUSPEND OR TERMINATE WORK 18
65. DELAYS AND EXTENSION OF TIME 19
66. LIQUIDATED DAMAGES 20
67. OTHER CONTRACTS 20
68. USE OF PREMISES 20
69. SUBSTANTIAL COMPLETION DATE 20
70. PERFORMANCE TESTING 21
71. OWNER'S USE OF PORTIONS OF THE WORK 21
72. CUTTING AND PATCHING 21
73. CLEANING UP 21
74. PAYMENT FOR CHANGE ORDERS 21
75. PARTIAL PAYMENTS 23
76. CLAIMS 25
77. NOTICE OF CLAIM FOR DELAY 25
78. RELEASE OF LIENS OR CLAIMS 25
79. FINAL PAYMENT 26
80. NO WAIVER OF RIGHTS 26
81. ACCEPTANCE OF FINAL PAYMENT CONSTITUTES RELEASE 26

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DOCUMENT 00700

GENERAL CONDITIONS

These General Conditions contain contractual-legal Articles which establish the requirements and conditions governing responsibility, policy, and procedures that apply during the construction and warranty period. This part of the Contract Documents is preprinted. Any modifications to the following Articles that are special to the Project under consideration will be made in the Supplementary Conditions. Requirements and conditions which have special significance to the Contract for the contemplated Work on this Project are as set forth in the remaining Sections of these Contract Documents.

DEFINITIONS

Wherever in the Contract Documents the following terms are used, the intent and meaning shall be interpreted as follows:

1. AS APPROVED

The words "as approved", unless otherwise qualified, shall be understood to be followed by the words "by the Engineer".

2. AS SHOWN, AND AS INDICATED

The words "as shown" and "as indicated" shall be understood to be followed by the words "on the Drawings".

3. BIDDER

The person or persons, partnership, firm, or corporation submitting a Bid for the Work contemplated.

4. CONTRACT

The "Contract" is the written agreement covering the performance of the Work and the furnishing of labor, materials, incidental services, tools, and equipment in the construction of the Work. It includes supplemental agreements amending or extending the Work contemplated and which may be required to complete the Work in a substantial and acceptable manner. Supplemental agreements are written agreements covering alterations, amendments, or extensions to the Contract and include Contract Change Orders.

5. CONTRACT DOCUMENTS

The "Contract Documents" consist of the Bidding Requirements, Contract forms, Conditions of the Contract, the Specifications, and the Drawings, including all modifications thereof, incorporated into the Documents before their execution, and including all other requirements incorporated by specific reference thereto. These form the Contract.

6. CONTRACTOR

The person or persons, partnership, firm, or corporation who enters into the Contract awarded him by the Owner.

7. DAYS

Unless otherwise specifically stated, the term "days" will be understood to mean calendar days.

8. DRAWINGS

The term "Drawings" refers to the official Drawings, profiles, cross sections, elevations, details, and other working drawings and supplementary drawings, or reproductions thereof, sealed by the Engineer, which show the location, character, dimensions, and details of the Work to be

performed. Drawings may either be bound in the same book as the Project Manual or bound separately and are a part of the Contract Documents, regardless of the method of binding.

9. ENGINEER

The person or organization identified as such in the Contract. The term "Engineer" means the Engineer or his authorized representative.

10. NOTICE

The term "notice" or the requirement to notify, as used in the Contract Documents or applicable state or federal statutes, shall signify a written communication delivered in person or by certified or registered mail to the individual, or to a member of the firm, or to an officer of the corporation for whom it is intended. Certified or registered mail shall be addressed to the last business address known to him who gives the notice.

11. OR EQUAL

The term "or equal" shall be understood to indicate that the "equal" product is the same or better than the product named in function, performance, reliability, quality, and general configuration. Determination of equality in reference to the Project design requirements will be made by the Engineer. Such "equal" products shall not be purchased or installed by the Contractor without the Engineer's written approval.

12. OWNER

The person, organization, or public body identified as such in the Contract.

13. PLANS (See Drawings).

14. SPECIFICATIONS

Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto. Where standard specifications, such as those of ASTM, AASHTO, etc., have been referred to, the applicable portions of such standard specifications shall become a part of these Contract Documents.

Where portions of the Work traverse or cross federal, state, county, or local highways, roads, streets, or railroads, and the agency in control of such property has established standard specifications governing items of Work that differ from these Specifications, the most stringent requirements shall apply.
The Contractor shall comply with all regulations and requirements of the State Highway Department and the City and County Road Departments wherever the Work traverses or crosses state, city, or county roads.

15. NOTICE TO PROCEED

A written notice given by the Owner to the Contractor (with a copy to the Engineer) fixing the date on which the Contract time will commence to run and on which the Contractor shall start to perform his obligation under the Contract. The Notice to Proceed shall be given within 30 days following execution of the Contract by the Owner.

16. SUBSTANTIAL COMPLETION

"Substantial completion" shall be that degree of completion of the Project, or a defined portion of the Project, sufficient to provide the Owner, at his discretion, the full-time use of the Project or defined portion of the Project for the purposes for which it was intended.

Such substantial completion shall not relieve the Contractor from liquidated damages should the Owner have added costs after the completion date, i.e., if additional construction observation, interest paid, loss of revenue, or other expenses continue to be charged to the Owner.

17. WORK

The word "Work" within these Contract Documents shall include all material, labor, and tools; all appliances, machinery, transportation, and appurtenances necessary to perform and complete the Contract; and such additional items not specifically indicated or described which can be reasonably inferred as belonging to the item described or indicated and as required by good practice to provide a complete and satisfactory system or structure. As used herein, "provide" shall be understood to mean "provide complete in place", that is, "furnish and install".

CONTRACT DOCUMENTS

18. INTENT OF CONTRACT DOCUMENTS

The Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all. The intent of the Documents is to include all Work (except specific items to be furnished by the Owner) necessary for completion of the Contract. Materials or Work described in words which so applied have a well-known technical and trade meaning shall be held to refer to such recognized standards.

19. DISCREPANCIES AND OMISSIONS

Any discrepancies or omissions found in the Contract Documents shall be reported to the Engineer immediately. The Engineer will clarify discrepancies or omissions, in writing, within a reasonable time.

In resolving inconsistencies among two or more Sections of the Contract Documents, precedence shall be given in the following order:

1. CONTRACT
2. SUPPLEMENTARY CONDITIONS
3. SPECIFICATIONS
4. INSTRUCTIONS TO BIDDERS
5. GENERAL CONDITIONS
6. DRAWING(S)

Figure dimensions on Drawings shall take precedence over scale dimensions. Detailed Drawings shall take precedence over general Drawings. It is understood and agreed that the Work shall be performed and completed according to the true spirit, meaning, and intent of these Documents.

20. ALTERATIONS - CHANGES IN WORK

The Owner, with or without notice to the Sureties and without invalidating the Contract, may order changes in the Work within the general scope of the Contract by altering, adding to, or deducting from the Work, the Contract being adjusted accordingly. To effect a change in the work a letter must be written by the OWNER to the ENGINEER and ARDOT stating any changes the OWNER requires in the project plans or specifications. Changes may necessitate a **Change Order** for the project and will be prepared by the ENGINEER and submitted to the CONTRACTOR and the OWNER for approval *prior to* effecting the change on the project. All such Work shall be executed under the conditions of the original Contract, except as specifically adjusted at the time of ordering such change.

*****NOTE: The OWNER shall not direct the CONTRACTOR to change work. *****

In giving instructions, the Engineer may order minor changes in the Work not involving extra cost and not inconsistent with the purposes of the Project, but otherwise, except in an emergency endangering life or property, additions or deductions from the Work shall be performed only in pursuance of an approved Change Order from the Owner, signed or countersigned by the Engineer, or a Change Order from the Engineer stating that the Owner has authorized the deduction, addition, or change, and no claim for additional payment shall be valid unless so ordered.

If the Work is reduced by alterations, such action shall not constitute a claim for damages based on loss of anticipated profits.

21. SUB-SURFACE CONDITIONS FOUND DIFFERENT

Should the Contractor encounter sub-surface and/or latent conditions at the site materially differing from those shown on the Drawings or indicated in the Specifications, the Contractor shall immediately give notice to the Engineer of such conditions before they are disturbed. The Engineer will thereupon promptly investigate the conditions, and if the Engineer finds that they materially differ from those shown on the Drawings or indicated in the Specifications, the Engineer will at once make such changes in the Drawings and/or the Specifications as he may find necessary. Any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in the Paragraph titled “Changes in Work.”

22. VERIFICATION OF CONTRACT DOCUMENTS

The Contractor shall thoroughly examine and become familiar with all of the various parts of these Contract Documents and determine the nature and location of the Work, the general and local conditions and all other matters which can in any way affect the Work under this Contract. Failure to make an examination necessary for this determination shall not release the Contractor from the obligations of this Contract. The Contractor warrants that no verbal agreement or conversation with any officer, agent, or employee of the Owner or with the Engineer either before or after the execution of this Contract, has affected or modified any of the terms or obligations herein contained.

23. DOCUMENTS TO BE KEPT ON THE JOB SITE

The Contractor shall keep one copy of the Contract Documents on the job site, in good order, available to the Engineer and to his representatives.

The Contractor shall maintain on a daily basis at the job site, and make available to the Engineer on request, one current record set of the Drawings which have been accurately marked up to indicate all modifications in the completed Work that differ from the design information shown on the Drawings. Upon substantial completion of the Work, the Contractor shall give the Engineer one complete set of marked up record Drawings.

Failure of the Contractor to submit accurate Record Drawings to the Engineer will be adequate justification for postponement of the Final Inspection and Final Payment.

24. ADDITIONAL CONTRACT DOCUMENTS

The Engineer will furnish to the Contractor on request and free of charge, three copies of the Project Manual and three sets of full-size Drawings. Additional copies of the Project Manual and the Drawings may be obtained on request by paying the price as shown in the Invitation to Bid for the Contract Documents.

25. OWNERSHIP OF DRAWINGS

All Drawings, Plans, Specifications, and copies thereof furnished by the Engineer and the Owner are their property. They are not to be used on other work and, with the exception of the signed Contract set, are to be returned to them on request at the completion of the Work. Any reuse of these materials without specific written verification or adaptation by the Engineer and the Owner will be at the risk of the user and without liability or legal expense to the Engineer and the Owner.

Such user shall hold the Engineer and the Owner harmless from any and all damages, including reasonable attorneys' fees, from any and all claims arising from any such reuse. Any such verification and adaptation by the Engineer and the Owner will entitle the Engineer to further compensation at rates to be agreed upon by the user, the Engineer and the Owner. All models are the property of the Owner.

THE ENGINEER

26. AUTHORITY OF THE ENGINEER

The Engineer shall be the Owner's representative during the construction period. His authority and responsibility shall be limited to the provisions set forth in these Contract Documents. The Engineer shall have the authority to reject Work and material which does not conform to the Contract Documents. However, neither the Engineer's authority to act under this provision, nor any decision made by him in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Engineer to the Contractor, any Subcontractor, their respective Sureties, any of their agents or employees, or any other person performing any of the Work.

27. DUTIES AND RESPONSIBILITIES OF THE ENGINEER

The Engineer will make periodic visits to the site of the Project to observe the progress and quality of the Work and to determine, in general, if the Work is proceeding in accordance with the intent of the Contract Documents. He shall not be required to make comprehensive or continuous inspections to check quality or quantity of the Work, and he shall not be responsible for construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work.

Visits and observations made by the Engineer shall not relieve the Contractor of his obligation to conduct comprehensive inspections of the Work and to furnish materials and perform acceptable Work, and to provide adequate safety precautions, in conformance with the intent of the Contract.

The Engineer will make decisions, in writing, on all claims of the Owner or the Contractor arising from interpretation or execution of the Contract Documents. Such decision shall be necessary before the Contractor can receive additional money under the terms of the Contract. Changes in Work ordered by the Engineer will be made in compliance with the Article titled, ALTERATIONS - CHANGES IN WORK.

One or more construction observers may be assigned to observe the Work for compliance with the Contract Documents and to act in matters of construction under this Contract. It is understood that such construction observers shall have the power to issue instructions and make decisions within the limitations of the authority of the Engineer. The Contractor shall furnish all reasonable assistance required by the Engineer or construction observer for proper review of the Work. Construction observers shall not have the power or authority to delete, increase, modify or otherwise change the requirements of the Contract Documents.

The above-mentioned observation shall not relieve the Contractor of his obligations to conduct comprehensive inspections of the Work and to furnish materials and perform acceptable Work and to provide adequate safety precautions, in conformance with the intent of the Contract.

28. REJECTED MATERIAL

Any material condemned or rejected by the Engineer or his authorized construction observer because of nonconformity with the Contract Documents shall be removed at once from the vicinity of the Work by the Contractor at his own expense, and the same shall not be used on the Work.

29. UNNOTICED DEFECTS

Any defective Work or material that may be discovered by the Engineer during construction or before the final acceptance of Work, or before final payment has been made, or during the guarantee period, shall be removed and replaced by Work and materials which shall conform to the provisions of the Contract Documents. Failure on the part of the Engineer to condemn or reject bad or inferior Work or materials shall not be construed to imply acceptance of such Work or materials. The Owner shall reserve and retain all of its rights and remedies at law against the

Contractor and its surety for correction of any and all latent defects discovered after the guarantee period.

30. RIGHT TO RETAIN IMPERFECT WORK

If any part or portion of the Work done or material furnished under this Contract shall prove defective and not in accordance with the Drawings and Specifications, and if the imperfection in the same shall not be of sufficient magnitude or importance as to make the Work dangerous or unsuitable, or if the removal of such Work will create conditions which are dangerous or undesirable, the Owner shall have the right and authority to retain such Work but shall make such deductions in the final payment therefore as may be just and reasonable. The Owner shall also have the option to require, at no added cost to the Owner, extended warranties, maintenance bonds, or other remedies to provide for repair or reconstruction of imperfect Work.

31. LINES AND GRADES

The Contractor shall stake-out Work for this Contract and set the lines and grades necessary to complete the Work and shall keep the Engineer informed a reasonable time in advance of the times and places at which he wishes to do Work in order that the Engineer may review the lines and grades set by the Contractor and in order that the Engineer may make the necessary measurements for payment to the Contractor. All stakes, marks, and other information shall be carefully preserved by the Contractor, and in case of their careless or unnecessary destruction or removal by him or his employees, such stakes, marks, and other information will be replaced at the Contractor's expense.

Figured dimensions, when given in the Drawings, shall be accurately followed, even though they may differ from scaled measurements. No Work shown on the Drawings, the dimensions of which are not figured, shall be executed until instructions have been obtained from the Engineers as to the dimensions to be used. Large-scale and full-size drawings shall be followed in preference to small-scale drawings. The Engineer will provide the Contractor with bench marks to be used to establish grades and will also provide a baseline to be used to establish the proper lines. All Work done under this Contract shall be done to the lines and grades shown on the Drawings. The Contractor shall stake-out Work for this Contract and set the lines and grades necessary to complete the Work and shall keep the Engineer informed a reasonable time in advance of the times and places at which he wishes to do Work in order that the Engineer may review the lines and grades set by the Contractor and in order that the Engineer may make the necessary measurements for payment to the Contractor.

The Contractor shall furnish without charge competent persons from his force and such tools, stakes, surveying instruments, and other materials as the Engineer may require for reviewing the Contractor's stake-out of the Work and in making measurements for payment estimates or for surveys to establish temporary or permanent reference marks in connection with said Work.

Any Work done without lines, grades, and levels being reviewed by the Engineer, or other representative of the Engineer, may be ordered removed and replaced at the Contractor's cost and expense. The Contractor shall carefully preserve all monuments, bench marks, reference points, and stakes, and in case of willful or careless destruction of the same, he will be charged with the resulting expense of replacement and shall be responsible for any mistakes or loss of time that may be caused by their unnecessary loss or disturbance. In the event that the stakes and marks placed by the Engineer are destroyed through carelessness on the part of the Contractor, and that the destruction of these stakes and marks causes a delay in the Work, the Contractor shall have no claim for damages or extensions of time.

In the case of any permanent monuments or bench marks which must of necessity be removed or disturbed in the construction of the Work, the Contractor shall carefully protect and preserve the same until they can be properly referenced and relocated. The Contractor shall also furnish at his own expense such materials and assistance as are necessary for the proper replacement of monuments or bench marks that have been moved or destroyed.

32. SHOP DRAWING SUBMITTAL PROCEDURE

The Contractor shall submit a sufficient number of copies to allow the Engineer to retain four copies (2 for himself; 2 for the Owner) for review, such shop drawings, electrical diagrams, and catalog cuts for fabricated items and manufactured items (including mechanical and electrical equipment) required for construction, except as noted below.

Should the Contractor fail to submit acceptable shop drawings on the second submittal, one copy will be returned to him and the cost of the Engineer's time to review subsequent submittals on the unacceptable item will be deducted from the Contractor's monthly payment invoice. Shop drawings shall be submitted in sufficient time to allow the Engineer not less than 20 regular working days per submittal for examining the shop drawings.

These shop drawings shall be accurate, distinct, and complete and shall contain all required information, including satisfactory identification of items, units, and assemblies in relation to the Contract Drawings and Specifications.

Unless otherwise approved by the Engineer, shop drawings shall be submitted only by the Contractor, who shall indicate by a signed stamp on the shop drawings, or other approved means, that he (the Contractor) has checked the shop drawings, and that the Work shown is in accordance with Contract requirements and has been checked for dimensions and relationship with Work of all other trades involved.

The practice of submitting incomplete or unchecked shop drawings for the Engineer to correct or finish will not be acceptable, and shop drawings which, in the opinion of the Engineer, clearly indicate that they have not been checked by the Contractor will be considered as not complying with the intent of the Contract Documents and will be returned to the Contractor for resubmission in the proper form.

When the shop drawings have been reviewed by the Engineer, two (2) sets of submittals will be returned to the Contractor appropriately stamped. If major changes or corrections are necessary, the shop drawing may be rejected and one (1) set will be returned to the Contractor with such changes or corrections indicated, and the Contractor shall correct and resubmit the shop drawings in quadruplicate, unless otherwise directed by the Engineer. No changes shall be made by the Contractor to resubmitted shop drawings other than those changes indicated by the Engineer, unless such changes are clearly described in a letter accompanying the resubmitted shop drawings.

The review of such shop drawings and catalog cuts by the Engineer shall not relieve the Contractor from responsibility for correctness of dimensions, fabrication details, and space requirements or for deviations from the Contract Drawings or Specifications unless the Contractor has called attention to such deviations in writing by a letter accompanying the shop drawings and the Engineer approves the change or deviation in writing at the time of submission; nor shall review by the Engineer relieve the Contractor from the responsibility for errors in the shop drawings. When the Contractor does call such deviations to the attention of the Engineer, the Contractor shall state in his letter whether or not such deviations involve any deduction or extra cost adjustment.

33. ADDITIONAL DETAIL DRAWINGS AND INSTRUCTIONS

The Engineer will furnish, with reasonable promptness, additional instructions by means of drawings or otherwise, if, in the Engineer's opinion, such are required for the proper execution of the Work. All such drawings and instructions will be consistent with the Contract Documents, true developments thereof, and reasonably inferable therefrom.

THE CONTRACTOR AND HIS EMPLOYEES

34. INDEPENDENT CONTRACTOR

The Contractor shall perform all Work under this Contract as an Independent Contractor and shall not be considered as an agent of the Owner or of the Engineer, nor shall the Contractor's subcontractors or employees be subagents of the Owner or of the Engineer.

The Contractor shall employ only employees who are competent and skillful in their respective line of work, and local labor shall be given preference. Whenever the Engineer or the Owner notify the Contractor that any person on this work is, in their opinion, incompetent, disorderly, or refuses to carry out the provisions of this Contract, or uses threatening or abusive language to any person representing the Owner on the work or is otherwise unsatisfactory, such person shall be immediately discharged from the Project and shall not be re-employed thereon except with the consent of the Engineer by the Owner.

35. SUBCONTRACTING

Within 30 days after the execution of the Contract, the Contractor shall submit to the Engineer the names of all subcontractors proposed for the Work, including the names of any subcontractors that were submitted with the Bid. The Contractor shall not employ any subcontractors that the Engineer may object to as lacking capability to properly perform Work of the type and scope anticipated. No changes will be allowed from the approved subcontractor list without written approval of the Engineer.

The Contractor agrees that he is as fully responsible to the Owner for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by them as he is for the acts and omissions of persons directly employed by him.

Nothing contained in the Contract Documents shall create any contractual relation between any subcontractor and the Owner.

36. INSURANCE AND LIABILITY

A. GENERAL

The Contractor shall provide (from insurance companies acceptable to the Owner) the insurance coverage designated hereinafter and pay all costs.

Before execution of the Contract, Contractor shall furnish the Owner with complete copies of all certificates of insurance specified herein showing the type, amount, class of operations covered, effective dates, and date of expiration of policies. Each Certificate shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least thirty (30) days prior written notice has been give to the Owner.

In case of the breach of any provision of this Article, the Owner, at his option, may take out and maintain, at the expense of the Contractor, such insurance as the Owner may deem proper and may deduct the cost of such insurance from any monies which may be due or become due the Contractor under this Contract.

All insurance contracts and certificates shall be executed by a licensed resident agent of the insurance company, and in all ways comply with the insurance laws of the State of Arkansas. Further, the said insurance company shall be duly licensed and qualified to do business in the State of Arkansas, and have an A.M. Best rating of A- or better and have a Positive or Stable Rating Outlooks.

In the event any Work under this Contract is performed by a subcontractor, the Contractor shall be responsible for any liability directly or indirectly arising out of the Work performed

under this Contract by a subcontractor, which liability is not covered by the subcontractor's insurance.

The Contractor's and any subcontractor's general liability and automobile liability insurance policies shall include the Owner and Engineer, their officers, agents, subconsultants and employees as additional insureds for any claims arising out of Work performed under this Contract. Certificates of insurance shall explicitly name the Owner and Engineer as additional insureds. Inclusion of either party as "certificate holder" does not meet this requirement.

B. WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE

Worker's Compensation Insurance in statutory limits shall be secured and maintained as required by the laws of the State of Arkansas. In addition, Employer's Liability Insurance in an amount not less than $500,000 for each accident, $500,000 for each employee regarding disease, and $500,000 policy limit regarding disease shall cover all employees who have performed any of the obligations assumed by the Contractor under these Contract Documents. This insurance will protect the Contractor against any and all claims resulting from injuries, sickness, disease, or death to employees engaged in work under this Contract. The Contractor shall require the subcontractor similarly to provide Worker's Compensation and Employer's Liability Insurance for all the latter's employees to be engaged in such Work. Workers Compensation and Employers Liability must include a Waiver of Subrogation in favor of the Owner and the Engineer.

Where Work under this Contract includes any water or navigational exposure, coverage shall be included to cover the Federal Longshoremen's and Harborworker's Act and the Federal Jones Act when applicable.

C. COMMERCIAL GENERAL LIABILITY INSURANCE

The Contactor shall maintain during the life of this Contract such *independent contractor's* general liability, completed operations and products liability, and automobile liability insurance as will provide coverage for claims for damages for bodily injury, including accidental death, as well as for claims for property damage which may arise directly or indirectly from performance of the Work under this Contract. The general liability policy should also specifically ensure the contractual liability assumed by the Contractor under Article 38, Indemnity. The General Liability policy must provide coverage on an occurrence basis, not a claims-made basis. A Waiver of Subrogation is to be provided in favor of the Owner and the Engineer in regards to General Liability. A Designated Construction Project Aggregate (also known as Per Project Aggregate) liability limit is required also. The Contractor's General Liability policy is to be primary and non-contributory.

Required limits of General Liability Insurance
General Aggregate: Not less than $2,000,000
Completed Operations Aggregate: Not less than $2,000,000
Each Occurrence of Injury or Property Damage: Not less than $1,000,000 Combined Single Limit

D. COMMERCIAL AUTO LIABILITY INSURANCE

The Contractor shall maintain during the life of this Contract automobile liability insurance that will provide coverage for claims for damages for bodily injury, including accidental death, as well as for claims for property damage which may arise directly or indirectly from performance of the Work under this Contract.

Commercial Automobile Liability Insurance
Shall include Personal Injury and Property Damage coverage for "Any Auto", "Hired Autos", and "Non-Owned Auto" at a Combined Single Limit of not less than $1,000,000.

E. EXCESS UMBRELLA LIABILITY INSURANCE

$2,000,000 limit of liability policy shall be provided in additional limits to underlying Limits required for General Liability, Auto Liability, and Employers Liability.

F. OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY INSURANCE

The Contractor shall indemnify and save harmless the Owner and Engineer from and against all losses and all suits, claims, demands, judgments, actions, and payment of every description and nature brought or recovered against him by reason of any omission or act of the Contractor, his agents, or employees in the execution of the work or in the guarding of it. The Contractor shall secure and maintain protective liability insurance in the name of the Owner and the Contractor covering from contingent liability under this contract.

1) **General Aggregate:** Not less than $2,000,000

2) **Each Occurrence of Personal Injury or Property Damage:** Not less than $1,000,000 Combined Single Limit.

G. BUILDER'S RISK INSURANCE

The Contractor shall procure and maintain during the life of this contract Builder's Risk Insurance fire, lightening, extended coverage, vandalism, and property theft on the insurable portion of the Project on a 100 percent completed value basis against damage to the equipment, structures, or material. The Owner and the Contractor, as their interests may appear shall be names as the Insured.

H. INSTALLATION FLOATER INSURANCE POLICY

The Contractor shall procure and maintain during the life of this contract an Installation Floater for fire, lightening, extended coverage, vandalism, and property theft on the insurance portion of the Project. The Owner and the Contractor, as their interests may appear, shall be named as the Insured. Coverage shall be based on 100 percent of the total value of the competed Project. The Installation Floater Insurance Policy shall protect against damage to all equipment and materials.

Note: Builder's Risk Insurance must be procured and maintained during the life of the project if there is an actual structure being erected or which exists on the premises. If no structure exists, or is being erected an **Installation Floater Insurance Policy** must be procured and maintained during the life of the project.

Note: Builder's Risk Insurance and Installation Floaters do not provide coverage for Contractor's equipment if stolen or damaged at a job site. Contractors are responsible for insuring their own equipment.

I. INSURANCE COVERAGE FOR SPECIAL CONDITIONS

When the construction is to be accomplished within a public or private right-of-way requiring special insurance coverage, the Contractor shall conform to the particular requirements and provide the required insurance. The Contractor shall include in his liability policy all endorsements, or purchase additional liability insurance that the said authority may require for the protection of the authority, its officers, agents, and employees. Insurance coverage for special conditions, when required, shall be provided as set forth in the Supplementary Conditions.

J. NO PERSONAL LIABILITY OF PUBLIC OFFICIALS

In carrying out any of the provisions hereof in exercising any authority granted by the Contract, there will be no personal liability upon any public official.

37. PERFORMANCE AND PAYMENT BONDS

The successful Bidder shall furnish a Performance and Payment Bond in the amount equal to one hundred percent (100%) of the contract price on the forms provided in the Contract Documents as security for faithful performance of the Contract and payment of all obligations arising thereunder within ten days after receipt of the Notice of Award. The bond shall be written by a surety company qualified and authorized to do business in the State of Arkansas and shall be listed on the current U.S. Department of Treasury, Circular Number 570, or amendments thereto, in the Federal Register of acceptable Sureties for Federal projects. The bond shall be executed by a resident agent licensed by the State Insurance Commissioner to represent the surety company in Arkansas. The bond shall be written in favor of the Owner. Bond company rating by "AM Best Rating Company" to be "A-" or above and have a Positive or Stable Rating Outlooks.

The Attorney-in-Fact who executes this Performance Bond and Payment Bond in behalf of the Surety must attach a notarized copy of his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bond. All Contracts, Performance and Payment Bonds, and respective powers-of-attorney will have the same date.

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 location where any part of the project is located, or ceases to meet the requirements of the preceding paragraph, the Contractor shall within five days thereafter substitute another Bond and Surety, both of which must be acceptable to Owner.

Before execution of the Contract Documents, the Contractor shall submit the Bonds (in triplicate) to the Owner. The Bonds shall be submitted **WITHOUT DATES**, as they will be dated by the Owner at the same time as the Contracts are executed.

38. INDEMNITY

The Contractor shall indemnify and hold harmless the Owner, the Engineer, and their agents and employees from and against damages, losses, and expenses including attorney's fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease, or death, or to injury or to destruction of tangible property (other than the Work itself), including the loss of use resulting there from, and (2) is caused in whole or in part by any act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

In any and all claims against the Owner, the Engineer, or any of their agents or employees by any employee of the Contractor, any subcontractor, anyone directly indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Article shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under Worker's Compensation Acts, Disability Benefit Acts, or other Employee Benefit Acts.

39. TAXES AND CHARGES

The Contractor shall withhold and pay any and all sales and use taxes, including any and all charge of taxes thereof, and all withholding taxes, whether state or federal, and pay all Social Security charges and also all State Unemployment Compensation charges, and pay or cause to be withheld, as the case may be, any and all taxes, charges, or fees or sums whatsoever, which are now or may hereafter be required to be paid or withheld under any laws.

40. ORDINANCES, PERMITS, AND LICENSES

The Contractor shall keep himself fully informed of all local ordinances, as well as state and federal laws, which in any manner affect the Work herein specified. The Contractor shall at all times comply with said ordinances, laws, and regulations, and protect and indemnify the Owner, the Engineer and their respective employees, and its officers and agents against any claim or liability arising from or based on the violation of any such laws, ordinances, or regulations up to the amount of the Contract Price. All permits, licenses, and inspection fees necessary for prosecution and completion of the Work shall be secured and paid for by the Contractor, unless otherwise specified.

The Contractor shall observe and comply with all applicable local, state, and federal occupational safety and health regulations during the prosecution of Work under this Contract. In addition, full compliance by the Contractor with the U. S. Department of Labor's Occupational Safety and Health Standards, as established in Public Law 91-596, will be required under the terms of this Contract.

41. SUPERINTENDENCE

The Contractor shall keep on the Work, during its progress, competent supervisory personnel. The Contractor shall designate, in writing, before starting Work, one authorized representative who shall have complete authority to represent and to act for the Contractor. The Contractor shall give sufficient supervision to the Work, using his best skill and attention. The Contractor shall be solely responsible for all construction means, methods, techniques, and procedures, and for providing adequate safety precautions and coordinating all portions of the Work under the Contract. It is specifically understood and agreed that the Engineer, its employees and agents, shall not have control or charge of and shall not be responsible for the construction means, methods, techniques, procedures, or for providing adequate safety precautions in connection with the Work under the Contract.

42. RECEPTION OF ENGINEER'S DIRECTIONS

The superintendent, or other duly authorized representative of the Contractor, shall represent the Contractor in all directions given to him by the Engineer. Such directions of major importance will be confirmed in writing. Any direction will be so confirmed, in each case, on written request from the Contractor.

43. SANITATION

Sanitary conveniences conforming to state and local codes shall be erected and maintained by the Contractor at all times while workers are employed on the Work. The sanitary convenience facilities shall be as approved by the Engineer.

44. EMPLOYEES

The Contractor shall employ only men or women who are competent and skillful in their respective line of work. Whenever the Engineer or Owner shall notify the Contractor that any person on the Work is, in their opinion, incompetent, unfaithful, or disorderly or refuses to carry out the provisions of this Contract or uses threatening or abusive language to any person representing the Owner on the Work, or is otherwise unsatisfactory, such person shall be immediately discharged from the Project and shall not be re-employed thereon except with the consent of the Engineer by the Owner.

45. PROJECT MEETINGS

The Engineer may conduct Project meetings, as he deems necessary, for the purposes of discussing and resolving matters concerning the various elements of the Work. Time and place for these meetings and the names of persons required to be present shall be as directed by the

Engineer. Contractor shall comply with these attendance requirements and shall also require his subcontractors to comply.

46. SAFETY

The Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons (including employees) and property during performance of the Work. This requirement shall apply continuously and not be limited to normal working hours. Safety provisions shall conform to U. S. Department of Labor (OSHA); the State Labor Department Laws; all other applicable federal, state, county, and local laws, ordinances, and codes; the requirements set forth below; and any regulations that may be detailed in other parts of these Documents. Where any of these are in conflict, the more stringent requirement shall be followed. The Contractor's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth herein.

The Contractor shall develop and maintain for the duration of this Contract, a safety program that will effectively incorporate and implement all required safety provisions. The Contractor shall appoint an employee who is qualified and authorized to supervise and enforce compliance with the safety program.

The duty of the Engineer to conduct construction review of the Contractor's performance is not intended to include a review or approval of the adequacy of the Contractor's safety supervisor, the safety program, or any safety measures taken in, on, or near the construction site.

The Contractor, as a part of his safety program, shall maintain at his office or other well-known place at the job site, safety equipment applicable to the Work as prescribed by the aforementioned authorities, all articles necessary for giving first aid to the injured, and shall establish the procedure for the immediate removal to a hospital or a doctor's care of persons (including employees) who may be injured on the job site.

If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Engineer and the Owner. In addition, the Contractor must promptly report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance of the Work whether on, or adjacent to, the site, giving full details and statements of witnesses.

If a claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Engineer, giving full details of the claim.

47. CONTRACTOR'S TOOLS AND EQUIPMENT

The Contractor's tools and equipment used on the Work shall be furnished in sufficient quantity and of a capacity and type that will safely perform the Work specified, and shall be maintained and used in a manner that will not create a hazard to persons or property, or cause a delay in the progress of the Work.

48. PROTECTION OF WORK AND PROPERTY

The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this Contract. The Contractor shall at all times safely guard and protect from damage his own Work, and that of adjacent property (as provided by law and the Contract Documents). All passageways, guard fences, lights, and other facilities required for protection by federal, state, or municipal laws and regulations and local conditions, must be provided and maintained.

The Contractor shall protect his Work and materials from damage due to the nature of the Work, the elements, carelessness of other Contractors, or from any cause whatever until the completion and acceptance of the Work. All loss or damages arising out of the nature of the Work to be done

under these Contract Documents, or from any unforeseen obstruction or defects which may be encountered in the prosecution of the Work, or from the action of the elements, shall be sustained by the Contractor.

In addition, the Contractor shall take special precautions to prevent the "flotation" of all tanks and structures prior to their final acceptance and filling for beneficial use. The Contract price shall include all costs associated with such special precautions.

Also, the Contractor shall not load or permit any part of any structure to be loaded with a weight that will endanger its safety or its structural integrity.

49. RESPONSIBILITY OF CONTRACTOR TO ACT IN EMERGENCY

In case of an emergency which threatens loss or injury of property, and/or safety of life, the Contractor shall act, without previous instructions from the Owner or Engineer, as the situation may warrant. The Contractor shall notify the Engineer thereof immediately thereafter. Any claim for compensation by the Contractor, together with substantiating documents in regard to expense, shall be submitted to the Owner through the Engineer and the amount of compensation shall be determined by agreement.

50. MATERIALS AND APPLIANCES

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, and other facilities necessary for the execution and completion of the Work.

Unless otherwise specified, all materials shall be new, and both workmanship and materials shall be of good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

In selecting and/or approving equipment for installation in the Project, the Owner and Engineer assume no responsibility for injury or claims resulting from failure of the equipment to comply with applicable national, state, and local safety codes or requirements, or the safety requirements of a recognized agency, or failure due to faulty design concepts, or defective workmanship and materials.

51. BUY AMERICA

Unless otherwise stipulated, only steel and manufactured products produced in the United States will be used by the Contractor, subcontractors, materialmen, and suppliers in performance of the Work.

52. CONTRACTORS' AND MANUFACTURERS' COMPLIANCE WITH STATE SAFETY, OSHA, AND OTHER CODE REQUIREMENTS

The completed Work shall include all necessary permanent safety devices, such as machinery guards and similar ordinary safety items required by the state and federal (OSHA) industrial authorities and applicable local and national codes. Further, any features of the Work (including Owner-selected equipment) subject to such safety regulations shall be fabricated, furnished, and installed in compliance with these requirements. Contractors and manufacturers of equipment shall be held responsible for compliance with the requirements included herein. Contractors shall notify all equipment suppliers and subcontractors of the provisions of this Article.

53. SUBSTITUTION OF MATERIALS

Except for Owner-selected equipment items and items where no substitution is clearly specified, whenever any material, article, device, product, fixture, form, type of construction, or process is indicated or specified by patent or proprietary name, by name of manufacturer, or by catalog number, such specifications shall be deemed to be used for the purpose of establishing a standard

of quality and facilitating the description of the material or process desired. This procedure is not to be construed as eliminating from competition other products of equal or better quality by other manufacturers where fully suitable in design, and shall be deemed to be followed by the words "or equal". The Bidder may, in such cases, submit complete data to the Engineer 10 days prior to bid date for consideration of another material, type, or process which shall be substantially equal in every respect to that so indicated or specified. Substitute materials shall not be used unless approved in writing. The Owner or his authorized agent will be the sole judge of the substituted article or material.

54. TESTS, SAMPLES, AND INSPECTIONS

The Contractor shall furnish, without extra charge, the necessary test pieces and samples, including facilities and labor for obtaining the same, as requested by the Engineer. When required, the Contractor shall furnish certificates of tests of materials and equipment made at the point of manufacture by a recognized testing laboratory.

The Owner, Engineer, authorized government agents, and their representatives shall at all times be provided safe access to the Work wherever it is in preparation or progress, and the Contractor shall provide facilities for such access and for inspection, including maintenance of temporary and permanent access.

If the Specifications, the Engineer's instructions, laws, ordinances, or any public authority require any Work to be specially tested or approved, the Contractor shall give timely notice of its readiness for inspection. Inspections to be conducted by the Engineer will be promptly made, and where practicable, at the source of supply. If any Work should be covered up without approval or consent of the Engineer. it shall be uncovered for examination at the Contractor's expense.

55. ROYALTIES AND PATENTS

The Contractor shall pay all royalty and license fees, unless otherwise specified. The Contractor shall defend all suits or claims for infringement of any patent rights and shall save the Owner and the Engineer harmless from any and all loss, including reasonable attorneys' fees, on account thereof, up to the amount of the Contract Price.

56. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT

If the Work should be stopped under an order of any court or other public authority for a period of more than 3 months, through no act or fault of the Contractor, its Subcontractors, or respective employees or agents, then the Contractor may, upon 15 days' written notice to the Owner and the Engineer, if said default has not been cured, stop Work or terminate this Contract and recover from the Owner payment for the reasonable value of Work performed.

57. CORRECTION OF DEFECTIVE WORK

The Contractor hereby agrees to make, at his own expense, all repairs or replacements necessitated by defects in materials or workmanship supplied under terms of this Contract, and pay for any damage to other works resulting from such defects, which are found during construction or become evident within 1 year after the date of final acceptance of the Work or within 1 year after the date of substantial completion established by the Engineer for specified items of equipment, or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents. The Contractor further assumes responsibility for a similar guarantee for all Work and materials provided by subcontractors or manufacturers of packaged equipment components.

The effective date for the start of the guarantee or warranty period for equipment qualifying as substantially complete is defined in Article 16, SUBSTANTIAL COMPLETION, and Article 69, SUBSTANTIAL COMPLETION DATE, in these General Conditions. The Contractor also agrees to hold the Owner and the Engineer harmless from liability of any kind arising from damage due to

said defects. The Contractor shall make all repairs and replacements promptly upon receipt of written order for same from the Owner.

If the Contractor fails to make the repairs and replacements promptly, the Owner may do the Work, and the Contractor and his Surety shall be liable for the cost thereof. Any additional requirements for the Project relative to correction of defective Work after final acceptance are set forth in the Supplementary Conditions.

PROGRESS OF THE WORK

58. BEGINNING OF THE WORK

Before Work shall be started and materials ordered, the Contractor shall meet and consult with the Owner and/or Engineer relative to materials, equipment, and all arrangements for prosecuting the Work.

59. SCHEDULES AND PROGRESS REPORTS

The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, records, and other data as the Owner may request concerning Work performed or to be performed under this Contract.

Construction Schedule Requirements: The Contractor shall comply with the following requirements concerning construction scheduling and payments:

The Contractor shall submit a construction schedule of the bar graph type (or other approved type) prior to the preconstruction conference showing the following information as a minimum:

a. Date of Notice to Proceed with Contract Work.

b. Actual date construction is scheduled to start if different from the date of Notice to Proceed.

c. Contract completion date.

d. Beginning and completion dates for each phase of Work.

e. The dates at which special detail drawings are required.

f. Respective dates for submission of shop drawings and the beginning of manufacture, the testing of, and the installation of materials, supplies, and equipment.

g. All construction milestone dates.

h. A separate graph showing Work placement in dollars versus Contract time.

The schedule shall incorporate approved Contract changes. The schedule shall be maintained in an up-to-date condition monthly and shall be available for inspection at the construction site at all times.

The construction schedule shall be submitted in conjunction with and/or in addition to any other requirements concerning schedules within these Specifications.

The construction schedule shall be updated and submitted with each monthly request for payment. Should the Contractor fall behind said schedule, he shall present in writing to the owner a revised plan of action to complete the project on time. Methods may include, but are not limited to additional manpower, equipment, working overtime, etc. as may be required. Also, the construction schedule shall be revised accordingly. Failure to submit such revised construction schedule and written explanation shall be reason to withhold payment entirely or reduce payment substantially.

60. PROSECUTION OF THE WORK

It is expressly understood and agreed that the time of beginning, rate of progress, and time of completion of the Work are the essence of this Contract. The Work shall be prosecuted at such time, and in or on such part or parts of the Project as may be required, to complete the Project as contemplated in the Contract Documents and the approved construction schedule.

Regular Work hours shall be from 7:00 a.m. to 6:00 p.m. Monday through Friday. No Work requiring the presence of the Engineer's representative will be performed outside of regular Work hours. If, however, the Contractor works additional hours (other than specified herein), the Contractor shall pay the Owner for additional engineering services as outlined below.

The cost of additional engineering services shall be borne by the Contractor and will be based upon actual hours worked (labor cost x 3 x 1.5) plus out-of-pocket expenses such as lodging, mileage, materials, etc. Otherwise, the Contractor may perform clean-up work only outside of regular hours (including Saturdays and Sundays). No Work will be accomplished on holidays. McClelland Consulting Engineers, Inc. observes the following holidays during the year: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day and Friday following, Christmas Eve, and Christmas Day. When a holiday occurs on a Saturday, the Company will observe it on the Friday preceding, and when a holiday occurs on a Sunday, the Company will observe it on the following Monday.

61. ASSIGNMENT

Neither party to the Contract shall assign the Contract or sublet it as a whole, without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him hereunder without the prior written consent of the Owner.

62. OWNER'S RIGHT TO DO WORK

If the Contractor should, in the opinion of the Engineer, neglect to prosecute the Work properly or should neglect or refuse at his own cost to take up and replace Work as shall have been rejected by the Engineer, then the Owner shall notify the Surety of the condition, and after 10 days' written notice to the Contractor and the Surety, or without notice if an emergency or danger to the Work or public exists, and without prejudice to any other right which the Owner may have under the Contract, take over that portion of the work which has been improperly executed or uncompleted, and make good the deficiencies and deduct the cost thereof from the payments then or thereafter due the Contractor, and if such payments are not sufficient thereof, charge the cost to the Contractor and its surety.

63. OWNER'S RIGHT TO TRANSFER EMPLOYMENT

If the Contractor should abandon the Work or should be adjudged bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workers or proper materials, or if he should fail to make prompt payment to subcontractors for material or labor, or persistently disregard laws, ordinances, or the instructions of the Engineer, or otherwise be guilty of a substantial violation of any provision of the Contract or any laws or ordinance, the Owner may, without prejudice to any other right or remedy, and after giving the Contractor and Surety 7 days' written notice, transfer the employment for said Work from the Contractor to the Surety. Upon receipt of such notice, such Surety shall enter upon the premises and take possession of all materials, tools, and appliances thereon for the purpose of completing the Work included under this Contract and employ, by Contract or otherwise, any qualified person or persons to finish the Work and provide the materials therefore, in accordance with the Contract Documents, without termination of the continuing full force and effect of this Contract.

In case of such transfer of employment to such Surety, the Surety shall be paid in its own name on estimates according to the terms hereof without any right of the Contractor to make any claim for the same or any part thereof.

If after the furnishing of said written notice to the Surety, the Contractor and the Surety still fail to make reasonable progress on the performance of the Work, the Owner may terminate the employment of the Contractor and take possession of the premises and of all materials, tools, and appliances thereon and finish the Work by whatever method he may deem expedient and charge the cost thereof to the Contractor and Surety. In such case, the Contractor shall not be entitled to receive any further payment until the Work is finished. If the expense of completing the Contract, including compensation for additional managerial and administrative services, shall exceed such unpaid balance, the Contractor and the Surety shall pay the difference to the Owner.

64. OWNER'S RIGHT TO SUSPEND OR TERMINATE WORK

Owner may suspend work under the following conditions:

At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than ninety 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 Times, or both, directly attributable to any such suspension if Contract makes an approved claim therefor as provided in per the General Conditions.
Owner may terminate:

Upon the occurrence of any one or more of the following events:

1. If Contractor persistently fails 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 in the Contract Documents.
2. If Contractor disregards Laws or Regulations of any public body having jurisdiction.
3. If Contractor disregards the authority of the Engineers.
4. If Contractor otherwise violates in any substantial way any provisions of the Contract Documents.

Owner may, after giving Contractor (and the surety, if any) seven days' written notice and to the extent permitted by Laws and Regulations, 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 sustained by Owner arising out of or resulting from 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, provided that when exercising any rights or remedies under the paragraph Owner shall not be required to obtain the lowest price for the Work performed.

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.

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 incurred in settlement of terminated contracts with Subcontractors, Suppliers and others.

4. For reasonable expenses directly attributable to termination.

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.

65. DELAYS AND EXTENSION OF TIME

If the Contractor is delayed in the progress of the Work by any separate Contractor employed by the Owner, or by strikes, lockouts, fire, excessive adverse weather conditions not reasonably anticipated (on the basis of official weather records from the past ten years, minimum, from the locality involved), or acts of God, the Contractor shall, within 48 hours of the start of the occurrence, give written notice to the Owner of the cause of the potential delay and estimate the possible time extension involved, and within 7 days after the cause of delay has been remedied, the Contractor shall given written notice to the Owner of any actual time extension requested as a result of the aforementioned occurrence; then the Contract time may be extended by Change Order for such reasonable time as the Engineer determines.

It is agreed that no claim shall be made or allowed for any damages which may arise out of any delay caused by the above referenced acts or occurrences, other than claims for the appropriate extension of time.

No extension of time will be granted to the Contractor for delays occurring to parts of the Work that have no measurable impact on the completion of the total Work under this Contract; nor will extension of time be granted for delays to parts of Work that are not located on the critical path if the Critical Path Method (CPM) is used for scheduling the Work.

No extension of time will be considered for weather conditions normal to the area in which the Work is being performed. Unusual weather conditions, if determined by the Engineer to be of a severity that would stop all progress of the Work, may be considered as cause for an extension of Contract completion time. The Contractor shall provide official documentation of weather conditions experienced versus those anticipated as described above.

Delays in delivery of equipment or material purchased by the Contractor or his subcontractors (including Owner-selected equipment) shall not be considered as a just cause for delay. The Contractor shall be fully responsible for the timely ordering, scheduling, expediting, delivery, and installation of all equipment and materials.

Within a reasonable period after the Contractor submits to the Owner a written request for an extension of time, the Engineer will present his written opinion to the Owner as to whether an extension of time is justified, and, if so, his recommendation as to the number of days for time extension. The Owner will make the final decision on all requests for extension of time. In no event shall the Contractor be entitled under this Contract to collect or recover any damages, loss, or expense incurred by any delay other than as caused by the Owner, as stipulated in the Article titled, NOTICE OF CLAIM FOR DELAY.

66. LIQUIDATED DAMAGES

The Work shall begin at the time stated in the Notice to Proceed issued by the Owner to the Contractor and shall be completed within the number of consecutive calendar days, or by the calendar date, stated in the accepted Bid and Contract. The time shall be computed from and including the date stated in the Notice to Proceed. It is agreed that time is of the essence of this Contract.

The Contractor agrees that said Work shall be prosecuted regularly, diligently, and uninterruptedly at such rate or progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the Work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual construction conditions prevailing in this locality.

If the Contractor shall neglect, fail, or refuse to complete the Work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, not as a penalty but as liquidated damages for such breach of Contract, as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the Contract for completing the Work.

The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages which the Owner would in such event sustain, and said amount shall be retained from time to time by the Owner from current periodic pay estimates.

67. OTHER CONTRACTS

The Owner reserves the right to award other Contracts in connection with the Work. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their Work and shall properly connect and coordinate his Work with theirs.

If any part of the Work under this Contract depends on the prior acceptable completion of Work by others under separate Contract(s), the Contractor shall inspect and promptly report to the Engineer any defects in such Work that would adversely affect the satisfactory completion of the Work under this Contract. The Contractor's failure to so inspect and report shall constitute acceptance of the Work by others as being suitable for the proper reception and completion of the Work under this Contract, excluding, however, those defects in the Work by others that occur after the satisfactory completion of the Work specified hereunder.

68. USE OF PREMISES

The Contractor shall confine his equipment, the storage of materials, and the operation of his workers to limits shown on the Drawings or indicated by law, ordinances, permits, or directions of the Engineer, and shall not unreasonably encumber the premises with his materials. The Contractor shall provide, at his own expense, the necessary rights-of-way and access to the Work which may be required outside the limits of the Owner's property.

69. SUBSTANTIAL COMPLETION DATE

The Engineer may, at his sole discretion, issue a written notice of substantial completion for the purpose of establishing the starting date for specific equipment guarantees, and to establish the date that the Owner will assume the responsibility for the cost of operating such equipment. Said notice shall not be considered as final acceptance of any portion of the Work or relieve the Contractor from completing the remaining Work within the specified time and in full compliance with the Contract Documents.

Such substantial completion shall not relieve Contractor from liquidated damages should the Owner have added costs after the completion date, i.e., if additional construction observation, interest paid, loss of revenue, or other expenses continue to be charged to the Owner.

Substantial completion of an operating facility shall be that degree of completion that will provide a minimum of 7 continuous work days of successful operation in which all performance and acceptance testing has been successfully demonstrated to the Engineer. All equipment contained in the Work, plus all other components necessary to enable the Owner to operate the facility in the manner that was intended, shall be complete on the substantial completion date. See "SUBSTANTIAL COMPLETION" under Article DEFINITIONS, of these General Conditions.

70. PERFORMANCE TESTING

Operating equipment and systems shall be performance tested in the presence of the Engineer to demonstrate compliance with the specified requirements. Performance testing shall be conducted under the specified design operating conditions or under such simulated operating conditions as recommended or approved by the Engineer. Schedule such testing with the Engineer at least 1 week in advance of the planned date for testing.

71. OWNER'S USE OF PORTIONS OF THE WORK

The Owner shall have the right to take possession of and use any completed or partially completed portions of the Work. Such use shall not be considered as final acceptance of any portion of the Work, nor shall such use be considered as cause for an extension of the Contract completion time, unless authorized by a Change Order issued by the Owner.

72. CUTTING AND PATCHING

The Contractor shall do all cutting, fitting, or patching of his Work that may be required to make its several parts come together properly and fit it to receive or be received by Work of other Contractors shown upon or reasonably implied by the Drawings. Any defective Work or material, performed or furnished by the Contractor, that may be discovered by the Engineer before the final acceptance of the Work or before final payment has been made, shall be removed and replaced or patched, in a manner as approved by the Engineer at the expense of the Contractor.

73. CLEANING UP

The Contractor shall, at all times, at his own expense, keep property on which Work is in progress and the adjacent property free from accumulations of waste material or rubbish caused by employees or by the Work. Upon completion of the construction, the Contractor shall, at his own expense, remove all temporary structures, rubbish, and waste materials resulting from his operations.

PAYMENT

74. PAYMENT FOR CHANGE ORDERS

Payment or credit for any alterations covered by a Change Order shall be determined by one or a combination of the methods set forth in A, B, or C below as applicable:

A. UNIT PRICES. If applicable, those unit prices stipulated in the Bid, shall be utilized. If such Unit Prices are not applicable, the Contractor and Owner may utilize Unit Prices as mutually agreed upon.

B. LUMP SUM. A total lump sum for the Work may be negotiated as mutually agreed upon by the Contractor and Owner.

In "A" and "B" above, Contractor's quotations for Change Orders shall be in writing and firm for a period of 90 days. Any compensation paid in conjunction with the terms of a Change Order shall comprise total compensation due the Contractor for the Work or alteration defined in the Change Order.

By signing the Change Order, the Contractor acknowledges that the stipulated compensation includes payment for the Work or alteration plus all payment for the interruption of schedules, extended overhead, delay or any other impact claim or ripple effect, and by such signing specifically waives any reservation or claim for additional compensation in respect to the subject of the Change Order.

The Owner's request for quotations on alterations to the Work shall not be considered authorization to proceed with the Work prior to the issuance of a formal Change Order, nor shall such request justify any delay in existing Work. Lump sum quotations for alterations to the Work shall include substantiating documentation with an itemized breakdown of Contractor and subcontractor costs, including labor, material, rentals, approved services, overhead, and profit calculated as specified under "C" below.

C. FORCE ACCOUNT WORK. If the method of payment cannot be agreed upon prior to the beginning of the Work, and the Owner or the Engineer directs that the Work be done by written Change Order or on a force account basis, then the Contractor shall furnish labor, equipment, and materials necessary to complete the Work in a satisfactory manner and within a reasonable period of time. For the Work performed, payment will be made for the documented actual cost of the following:

1) Labor, including foremen, who are directly assigned to the force account Work: (actual payroll cost, including wages, fringe benefits as established by negotiated labor agreements, labor insurance, and labor taxes as established by law). No other fixed labor burdens will be considered, unless approved in writing by the Owner.

2) Material delivered and used on the designated Work, including sales tax, if paid for by the Contractor or his subcontractor.

3) Rental, or equivalent rental cost of equipment, including necessary transportation for items having a value in excess of $100.

4) Additional bond, as required and approved by the Owner.

5) Additional insurance (other than labor insurance) as required and approved by the Owner.

To costs under 74C, FORCE ACCOUNT WORK, there shall be added the following fixed fees for the Contractor or subcontractor actually performing the Work:
A fixed fee not to exceed 15 percent of the cost of all items above.

The added fixed fees shall be considered to be full compensation, covering the cost of general supervision, overhead, profit, and any other general expense.

The Owner reserves the right to furnish such materials and equipment as he deems expedient, and the Contractor shall have no claim for profit or added fees on the cost of such materials and equipment.

For equipment under Item 3 above, rental or equivalent rental cost will be allowed for only those days or hours during which the equipment is in actual use. Rental and transportation allowances shall not exceed the current rental rates prevailing in the locality. The rentals allowed for equipment will, in all cases, be understood to cover all fuel, supplies, repairs, and renewals, and no further allowances will be made for those items, unless specific agreement to that effect is made.

The Contractor shall maintain his records in such a manner as to provide a clear distinction between the direct costs of Work paid for on a force account basis and the costs of other operations. The Contractor shall furnish the Engineer report sheets in duplicate of each day's force account Work no later than the working day following the performance of said Work. The daily report sheets shall itemize the materials used, and shall cover the direct cost of labor and the charges for equipment rental, whether furnished by the Contractor, subcontractor, or other forces.

The daily report sheets shall provide names or identifications and classifications of workers, the hourly rate of pay and hours worked, and also the size, type, and identification number of equipment and hours operated.

Material charges shall be substantiated by valid copies of vendors' invoices. Such invoices shall be submitted with the daily report sheets, or, if not available, they shall be submitted with subsequent daily report sheets. Said daily report sheets shall be signed by the Contractor or his authorized agent.

To receive partial payments and final payment for force account Work, the Contractor shall submit in a manner approved by the Engineer, detailed and complete documented verification of the Contractor's and any of his subcontractors' actual current costs involved in the force account Work pursuant to the issuance of an approved Change Order. Such costs shall be submitted within 30 days after said Work has been performed.
No payment will be made for Work billed and submitted to the Engineer after the 30-day period has expired. No extra or additional Work shall be performed by the Contractor, except in an emergency endangering life or property, unless in pursuance of a written Change Order, as provided in ALTERATIONS - CHANGES IN WORK.

75. PARTIAL PAYMENTS

A. GENERAL

Nothing contained in this Article shall be construed to affect the right, hereby reserved, to reject the whole or any part of the aforesaid Work, should such Work be later found not to comply with the provisions of the Contract Documents. All estimated quantities of Work for which partial payments have been made are subject to review and correction on the final estimate. Payment by the Owner and acceptance by the Contractor of partial payments based on periodic estimates of quantities of Work performed shall not, in any way, constitute acceptance of the estimated quantities used as the basis for computing the amounts of the partial payments. For public works projects, each partial payment request and final payment request shall contain an affidavit by the Contractor that all provisions of the applicable federal and state requirements regarding apprentices and payment of prevailing wages have been complied with by him and by his Subcontractors.

B. ESTIMATE AND PAYMENT

Before the first working day of each calendar month, the Contractor shall submit to the Engineer a detailed estimate of the amount earned for the separate portions of the Work, and request payment. As used in this Article, the words "amount earned" means the value, on the date of the estimate for partial payment, of the Work completed in accordance with the Contract Documents, and the value of approved materials delivered to the Project site suitably stored and protected prior to incorporation into the Work. If the Contractor's

estimate of amount earned conforms with the Engineer's evaluation, the Engineer will calculate the amount due the Contractor and make recommendation to the Owner for payment.

An estimate of monthly progress payments shall be provided for the entire job prior to the first payment request. An update of the estimate of progress payments shall be updated if the actual progress differs by more than 20 percent in any given month. Each monthly payment request shall include the required updated Schedule.

If the updated Schedule is not submitted, the Owner may withhold payment until this item is completed. The Contractor shall be paid within 30 days of approval of the payment request.

C. DEDUCTION FROM ESTIMATE

Unless modified in the Supplementary Conditions, deductions from the estimate will be as described below. The Owner will deduct from the estimate, and retain as part security, 5 percent of the amount earned for Work satisfactorily completed. However, no deduction or retainage will be made on the approved items of material delivered to and properly stored at the job site but not incorporated into the Work.

NOTE: Exception--If the Work includes water or sewer pipelines, the Contractor shall maintain the Work for a period of ninety (90) days following its acceptance by the OWNER. Up to five percent (5%) of the Contract amount shall be retained during this maintenance period. All prior payments shall be subject to correction in the final payment.

This 90-day period does not relieve the Contractor of the Performance and Payment Bond requirements regarding warranty of the Project. In such cases, the semi-final payment estimate shall indicate the initial acceptance of the Work, and the warranty shall begin on such date.

D. QUALIFICATION FOR PARTIAL PAYMENT FOR MATERIALS DELIVERED

Unless modified in the Supplementary Conditions, qualification for partial payment for materials delivered but not yet incorporated in to the Work shall be as described below. Materials, as used herein, shall be considered to be those items which are fabricated or manufactured material and equipment. To receive partial payment for materials delivered to the site, but not incorporated in the Work, it shall be necessary for the Contractor to include invoices of such materials and documentation warranting that the materials and equipment are covered by appropriate property insurance and other arrangements to protect Owner's interest therein; all of which must be satisfactory to Owner.

At the time of the next partial payment request, the Contractor must submit the following documentation relative to materials paid on the previous partial payment: paid invoices of such materials or other documentation warranting that the Owner has received the materials and equipment free and clear of all liens, charges, security interests, and encumbrances (i.e., all materials have been paid for by Contractor). Failure to submit this documentation will result in an appropriate reduction on the current partial payment estimate for such materials.

At his sole discretion, the Engineer may approve items for which partial payment is to be made. Proper storage and protection shall be provided by the Contractor, and as approved by the Engineer. Final payment shall be made only for materials actually incorporated in the Work and, upon acceptance of the Work, all materials remaining for which advance payments had been made shall revert to the Contractor, unless otherwise agreed, and partial payments made for these items shall be deducted from the final payment for the Work.

E. PAYMENT

After deducting the retainages and the amount of all previous partial payments made to the Contractor, the amount earned as of the current month will be made payable to the Contractor within 30 days of the Owner's receipt of an approved request, except where the Owner is a municipality or other agency whose laws require the approval of each payment by a council or similar body, in which case, the payment shall become due and payable 10 days after the first regularly-scheduled meeting in the month following the submittal of such payment request.

76. CLAIMS

In any case where the Contractor deems additional compensation is due him for Work or materials not clearly covered in the Contract or not ordered by the Engineer according to provisions of Article 20 ALTERATIONS - CHANGES IN WORK, the Contractor shall notify the Engineer, in writing, of his intention to make claim for such compensation before he begins the Work on which he bases the claim, in order that such matters may be settled, if possible, or other appropriate action promptly taken. If such notification is not given or the Engineer is not afforded proper facilities by the Contractor for keeping strict account of actual cost, then the Contractor hereby agrees to waive the claim for such additional compensation. Such notice by the Contractor, and the fact that the Engineer has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the claim. Claims for additional compensation shall be made in itemized detail and submitted, in writing, to the Owner and Engineer within 10 days following completion of that portion of the Work for which the Contractor bases his claim. In case the claim is found to be just, it shall be allowed and paid for as provided in the Article titled, PAYMENT FOR CHANGE ORDERS.

77. NOTICE OF CLAIM FOR DELAY

If the Contractor intends to file a claim for additional compensation for delay caused by the Owner at a particular time, he shall file a notice of claim with the Owner within 7 days of the beginning of the occurrence. The notice of claim shall be in duplicate, in writing, and need not state the amount. No claim for additional compensation will be considered unless the provisions of Article 65, DELAYS AND EXTENSION OF TIME, are complied with, and a notice of claim has been filed with the Owner in writing, as stated above.

Should the Owner be prevented or enjoined from proceeding with Work, either before or after its prosecution, or from authorizing its prosecution by reason of any litigation, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay; but time for completion of the Work will be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay, with such determination to be set forth in writing.

78. RELEASE OF LIENS OR CLAIMS

The Contractor shall indemnify and save harmless the Owner from all claims for labor and materials furnished under this Contract. Prior to the final payment, the Contractor shall furnish to the Owner, as part of his final payment request, an affidavit that all of the Contractor's obligations on the Project have been satisfied and that there are no unpaid taxes, liens, vendors' liens, rights to lien or any other type of claim against the Project, and that the hourly wages paid to all persons on the Project were in accordance with the applicable wage scale determinations.

79. FINAL PAYMENT

Upon completion of all of the Work under this Contract, the Contractor shall notify the Engineer, in writing, that he has completed his part of the Contract and shall request final inspection. Upon receipt of the Contractor's written notice that the Work is ready for final inspection, the Engineer shall make such inspection and shall submit to the Owner his recommendation as to acceptance of the completed Work and as to the final estimate of the amount due the Contractor under this Contract.

Upon approval of this final estimate by the Owner and compliance with provisions in Article titled, RELEASE OF LIENS OR CLAIMS, and other provisions as may be applicable, the Owner shall pay to the Contractor all monies due him under the provisions of these Contract Documents. On contracts for public works, final payment of the retained percentage will not be made until the Contractor has also furnished the applicable apprenticeship wage certification.

80. NO WAIVER OF RIGHTS

Neither the inspection of the Owner, through the Engineer or any of his employees, nor any order by the Owner for payment of money, nor any payment for, or acceptance of, the whole or any part of the Work by the Owner or Engineer, nor any extension of time, nor any possession taken by the Owner or its employees shall operate as a waiver of any provision of this Contract, or any power herein reserved to the Owner, or any right to damages herein provided nor shall any waiver of any breach in this Contract be held to be a waiver of any other or subsequent breach.

81. ACCEPTANCE OF FINAL PAYMENT CONSTITUTES RELEASE

The acceptance by the Contractor of the final payment shall release the Owner and the Engineer, as agent of the Owner, from all claims and all liability to the Contractor for all things done or furnished in connection with the Work, and every act of the Owner and others relating to or arising out of the Work. No payment, however, final or otherwise, shall operate to release the Contractor or his Sureties from obligations under this Contract and the Performance and Payment Bonds, and other bonds and warranties, as herein provided.

END OF GENERAL CONDITIONS

DOCUMENT 00800

SUPPLEMENTAL CONDITIONS

GENERAL

The Contractor's attention is directed to Division 1, GENERAL REQUIREMENTS, which contains other directions pertinent to the project.

REVISIONS AND ADDITIONS TO THE GENERAL CONDITIONS

The **GENERAL CONDITIONS** are hereby revised as follows:

ARTICLE 50. "MATERIALS AND APPLIANCES"

After this Article, add the following:

EQUIPMENT NAMEPLATES

All manufacturer's nameplates on equipment items are to be kept visible and are not to be obscured by other equipment or piping nor are they to be covered by any paint or insulating material.

INSTALLATION OF EQUIPMENT

Where building openings are too small to permit the passage of an assembled unit of equipment, it shall be assembled at its permanent location unless otherwise specifically shown or specified.

ARTICLE 52. "TESTS, SAMPLES, AND INSPECTIONS"

Add the following:

COMPACTION TESTS

Density tests will be performed on all areas as required by the Engineer. Contractor shall inform Engineer as to when an area is ready for testing. Contractor shall give 24 hours notice to Engineer prior to requiring a test. Engineer will not be responsible for delay to Contractor due to testing agency. Any stand-by time charged by the testing agency due to Contractor delay shall be paid for by Contractor. Engineer will determine the number and location of tests to be performed.

All tests will be performed by a materials testing agency acceptable to the Owner. The Contractor shall pay for all testing. All materials and tests shall conform to the requirements of these Specifications and as required by the Engineer.

Add the following:

CONCRETE TESTING

The Contractor will retain an independent testing laboratory, acceptable to the Owner, to determine compliance with the Specifications. Four concrete test cylinders will be made by the Contractor from each day's pour and as specified in Section 03300 - Cast-In-Place Concrete. One slump test and one air test (if required) will be performed for each set of cylinders. The Contractor shall be responsible for storage of the cylinders and for delivering test cylinders to the laboratory for testing. The Contractor will pay for all testing.

END OF SUPPLEMENTARY CONDITIONS

Title VI CONTRACT PROVISIONS
APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(1) Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

(3) Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

(4) Information and Reports: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

(a) Withholding of payments to the contractor under the contract until the contractor complies, and/or

(b) Cancelling, terminating or suspending a contract, in whole or in part.

(6) Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Revised: 5-11-16

TITLE VI CONTRACT PROVISIONS
APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non- discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.

- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);

- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);

- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;

- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);

- Airport and Airway Improvement Act of 1982, (49 USC§ 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);

- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);

- Titles II and Ill of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;

- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681et seq)

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Non-segregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
XI. Certification Regarding Use of Contract Funds for Lobbying
XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

> "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to *DBAconformance@dol.gov*. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to *DBAconformance@dol.gov*, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

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

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

(4) *Use of Optional Form WH–347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

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

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* $31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)
This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

FHWA-1273 SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY – NOTICE TO CONTRACTORS

Elsewhere in this contract are three Supplemental Specifications on Equal Employment Opportunity designated as PR-1273 Supplements. They are (1) Specific Equal Employment Opportunity Responsibilities (23 U.S.C. 140), (2) Equal Employment Opportunity – Goals and Timetables, and (3) Equal Employment Opportunity – Federal Standards. This notice is to clarify the responsibilities for review of compliance and enforcement for these separate supplemental specification requirements.

The first of the Supplemental Specifications cited above covers the requirements for the equal employment opportunity program under Title 23 for which the sponsor is responsible. The sponsor performs the necessary compliance review and enforcement of this supplemental Specification which is applicable to all contractors holding Federal-aid highway contracts.

The latter two Supplemental Specifications are for the specific equal opportunity requirements for Executive Order 11246 which is the sole responsibility of the Office of Federal Contract Compliance Programs (OFCCP), Department of Labor. Review and enforcement under these Supplemental Specifications is performed by OFCCP.

OFCCP has, under Paragraph 8 of the EEO Federal Standards Supplemental Specification, recognized the Arkansas AGC Heavy Highway Affirmative Action Plan as meeting the provisions of that Supplemental Specification and Supplemental Specification (2) cited above. With this recognition, those contractors signatory to the AGC Plan have been waived from individual review by OFCCP. However, OFCCP retains the right to review any such contractors whenever circumstances warrant. Also, contractors non-signatory to the AGC Plan are subject to OFCCP review under EO 11246.

ARDOT and OFCCP have agreed to work towards eliminating duplicative reviews on individual contractors; however, each agency may make reviews at any time notwithstanding the cited agreement.

FHWA-1273 SUPPLEMENTAL SPECIFICATION

SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)

1. General.

a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 1137S are set forth in Required Contract Provisions (Form FHWA-1273 and Supplements) and these Special Provisions which are imposed pursuant to Section 140 of Title 23, U.S.C., as established by Section 22 of the Federal-Aid Highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions. The initial measure of the contractor's good faith efforts to comply with these Special Provisions shall be its efforts to meet the goals set forth in the 'Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)' for minority and female participation expressed in percentage terms for the contractor's work force in each trade on this project.

b. The contractor will work with the sponsor and the Federal Government in carrying out equal employment opportunity obligations and in their review of his/her activities under the contract.

c. The contractor and all his/her subcontractors holding subcontracts not including material suppliers, of $10,000 or more, will comply with the following minimum specific requirement activities of equal employment opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection I of the Federal-Aid Highway Program Manual, are applicable to material suppliers as well as contractors and subcontractors.) The contractor will include these requirements in every subcontract of $10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

2. Equal Employment Opportunity Policy.

The contractor will accept as his operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, age, disability, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, age, disability, or national origin. Such action shall include: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training.

3. Equal Employment Opportunity Officer.

The contractor will designate and make known to the sponsor contracting officers an equal employment opportunity officer (hereinafter referred to as the EEO Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

4. Dissemination of Policy.

a. All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

(1) Periodic meetings of supervisory and personnel office employees will be conducted before

FHWA-1273 SUPPLEMENTAL SPECIFICATION

SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)

the start of work and then not less often than once every six months, at which time the contractor's equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

(2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the contractor.

(3) All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official in the contractor's procedures for locating and hiring minority and female employees.

b. In order to make the contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the contractor will take the following actions:

(1) Notices and posters setting forth the contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment, and potential employees.

(2) The contractor's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

5. Recruitment

a. When advertising for employees, the contractor will include in all advertisements for employees the notation: 'An Equal Opportunity Employer.' All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

b. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority and female applicants, including, but not limited to, State employment agencies, schools. colleges, and minority group organizations. To meet this requirement, the contractor will, through his EEO Officer, identify sources of potential minority and female employees, and establish with such identified sources procedures whereby minority and female applicants may be referred to the contractor for employment consideration.

In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with equal employment opportunity contract provisions. (The U.S. Department of Labor has held that where implementation of such agreements has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority and female applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In, addition, information and procedures with regard to referring minority and female applicants will be discussed with employees.

6. Personnel Actions.

Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, age, disability, or national origin. The following procedures shall be followed:

FHWA-1273 SUPPLEMENTAL SPECIFICATION

SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

7. Training and Promotion.

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training, In the event the Optional Training Special Provision is provided under this contract, this subparagraph will be superseded by that Special Provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

8. Unions.

If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the union and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below,

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, age, disability, or national origin.

c. The contractor is to obtain information as to the referral practices and policies of the labor union, except that to the extent such information is within the exclusive ion of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the sponsor and shall set forth what efforts have been made to obtain such information.

FHWA-1273 SUPPLEMENTAL SPECIFICATION

SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, age, disability, or national origin, making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the sponsor.

9. Subcontracting.

a. The contractor's attention is called to the Special Provision on Disadvantaged Business Enterprises in Federal-Aid Highway Construction.

b. The contractor will use his best efforts to ensure subcontractor compliance with their equal employment opportunity obligations.

10. Records and Reports.

a. The contractor will keep such records as are necessary to determine compliance with the contractor's equal employment opportunity obligations. The records kept by the contractor will be designed to indicate:

(1) the number of minority and non-minority group members and women employed in each work classification on the project,

(2) the progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to contractors who rely in whole or in part on unions as a source of their work force),

(3) the progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and

(4) the progress and efforts being made in securing the services of Disadvantaged Business Enterprises or subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the sponsor and the Federal Highway Administration.

c. The contractors will submit an annual report to the State Highway agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. Ibis information is to be reported on Form PR 1391.

11. Corrective Action Plans.

The contractor understands that a designated representative of the sponsor will periodically review compliance by the contractor with all contractual provisions incorporated pursuant to Executive Order 11246, as amended, and Federal Highway Administration Equal Employment Opportunity Special Provisions implementing the Federal-Aid Highway Act of 1968, where applicable.

In the event that the designated representative of the sponsor finds that the contractor has failed to comply with any of the aforementioned contractual provisions, he will notify the contractor of this finding in writing A declaration of default will result in the suspension of all future payments. No declaration of default will be made if the sponsor and the contractor formally agree to enter into a corrective action plan setting out the specified steps and timetables the contractor will be contractually obligated to perform in order to re-establish his compliance. 'Ibis collective action plan, in order to be accepted by the

FHWA-1273 SUPPLEMENTAL SPECIFICATION

SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)

sponsor, shall include the following mandatory enforcement language:

"If, at any time in the future, the Office of Federal Contract Compliance Programs or the Federal Highway Administration or the Arkansas State Highway Commission or their successor(s) believe that (name of contractor) has violated any portion of this agreement, (name of contractor) shall be promptly notified of the fact in writing. This notification shall include a statement of the facts and circumstances relied upon in forming that belief. In addition, the notification shall provide (name of contractor) with 15 days to respond in writing to the notification except where the Office of Federal Contract Compliance Programs, the Federal Highway Administration or the Arkansas State Highway Commission alleges that such delay would result in irreparable injury. It is understood that enforcement proceedings for violation of this agreement may be initiated at any time after the 15-day period has elapsed (or sooner if irreparable injury is alleged) without issuance of a show cause notice."

"It is recognized that where the Office of Federal Contract Compliance Programs and/or the Federal Highway Administration and/or the Arkansas State Highway Commission believes that (name of contractor) has breached this agreement, evidence regarding the entire scope of (name of contractor) alleged noncompliance from which this agreement resulted, in addition to evidence regarding (name of contractor) alleged violation of this agreement, may be introduced at the enforcement proceeding."

"Violation of this agreement may subject (name of contractor) to sanctions pursuant to the Arkansas State Highway Commission contract administration procedures. It is further recognized that liability for violation of this agreement may also subject (name of contractor) to sanctions set forth in Section 209 of Executive Order 11246, as amended, and/or appropriate relief."

The contractor will submit quarterly reports to the sponsor as a result of any deficiencies cited during an equal employment opportunity compliance review. The reports will indicate the affirmative action steps taken to correct the deficiencies. Instructions for submission of the reports will be furnished by the Equal Employment Opportunity Section.

FHWA-1273 SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY – GOALS & TIMETABLES

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Bidder's attention is called to the 'Equal Opportunity Clause' and the 'Standard Federal Equal Employment Specifications' set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in covered area, are as follows:

MINORITIES

COUNTY

Arkansas	16.4%	Lee	26.5%
Ashley	16.4%	Lincoln	16.4%
Baxter	3.3%	Little River	19.7%
Benton	3.3%	Logan	6.6%
Boone	3.3%	Lonoke	16.4%
Bradley	16.4%	Madison	3.3%
Calhoun	16.4%	Marion	3.3%
Carroll	3.3%	Miller	19.7%
Chicot	16.4%	Mississippi	26.5%
Clark	16.4%	Monroe	16.4%
Clay	26.5%	Montgomery	16.4%
Cleburne	16.4%	Nevada	20.2%
Cleveland	16.4%	Newton	3.3%
Columbia	20.2%	Ouachita	16.4%
Conway	16.4%	Perry	16.4%
Craighead	26.5%	Phillips	26.5%
Crawford	5.6%	Pike	20.2%
Crittenden	32.3%	Poinsett	26.5%
Cross	26.5%	Polk	6.6%
Dallas	16.4%	Pope.	16.4%
Desha	16.4%	Prairie	16.4%
Drew	16.4%	Pulaski	15.7%
Faulkner	16.4%	Randolph	26.5%
Franklin	6.6%	Saline	15.7%
Fulton	16.4%	Scott	6.6%
Garland	16.4%	Searcy	3.3%
Grant	16.4%	Sebastian	5.6%
Greene	26.5%	Sevier	20.2%
Hempstead	20.2%	Sharp	16.4%
Hot Spring	16.4%	Stone	16.4%
Howard -	20.2%	St. Francis	26.5%
Independence	16.4%	Union	16.4%
Izard	16.4%	Van Buren	16.4%
Jackson	16.4%	Washington	3.3%
Jefferson	31.2%	White	16.4%
Johnson	16.4%	Woodruff	16.4%
Lafayette	20.2%	Yell	16.4%
Lawrence	26.5%		

FEMALES
Statewide – 6.9%

FHWA-1273 SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY – GOALS & TIMETABLES

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in the Notice, and in the contract resulting from this solicitation, the 'covered area' is as described in the Proposal Form for this project.

FHWA-1273 SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY – FEDERAL STANDARDS

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:

a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

b. "Director" means Director, Office of Federal Contract Compliance Programs United States Department of Labor, or any person to whom the Director delegates authority;

c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

d. "Minority" includes:

i. Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
ii. Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
iii. Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
iv. American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations and on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall Good Faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these

FHWA-1273 SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY – FEDERAL STANDARDS

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees before the start of work and then not less often than once every six months; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

FHWA-1273 SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY – FEDERAL STANDARDS

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

g. Review the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site and then not less often than once every six months. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above describing the openings, screening procedures, and test to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from disadvantaged business enterprise construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female

FHWA-1273 SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY – FEDERAL STANDARDS

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even thou-h the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, national origin, age or disability.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Employment Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee. helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

16. In addition to the reporting requirements set forth elsewhere in this contract, the contractor and the subcontractors holding subcontracts not including material suppliers, of $10,000 or more, shall submit for every month of July during which work is performed employment data as contained under Form PR-1391 (Appendix C to 23 CFR, Part 230), and in accordance with the instructions included thereon.

FHWA-1273 SUPPLEMENTAL SPECIFICATION

POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS

	POSTER OR DOCUMENT REQUIRED	REQUIRED BY	WHERE TO OBTAIN
1.	Equal Employment Opportunity – Know Your Rights	U.S. Department of Labor (OFCCP)	ARDOT Resident Engineer
2.	Company EEO Policy (prepared by the Contractor on the Company's letterhead)	U. S. Department of Labor (OFCCP) *Union Contractors Only	Contractor to Prepare: a. EEO policy statement. b. Notice encouraging employees to refer minority and female applicants for employment. c. Notice informing employees of an available training program and the entrance requirements. d. Complaint procedures. e. Notice identifying company EEO officer by name, including address and telephone number where EEO officer can be located. f. Work environment statement. g. Certification of nonsegregated facilities. *h. Notice to unions disseminating EEO commitments and responsibilities and requesting their cooperation.
3.	Current Wage Rates (PR-1273 Supplement) or SS Revisions of PR-1273 for Off-System Projects	U. S. Department of Labor	Contained in contract. Extra copies may be obtained from Program Management - ARDOT

FHWA-1273 SUPPLEMENTAL SPECIFICATION

POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS

	POSTER OR DOCUMENT REQUIRED	REQUIRED BY	WHERE TO OBTAIN
4.	"Employee Rights Under the Davis-Bacon Act" (WH 1321)	U. S. Department of Labor	ARDOT Resident Engineer
5.	"Employee Rights Under the Davis-Bacon Act" (WH 1321 SPA)	U. S. Department of Labor	ARDOT Resident Engineer
6.	Minimum Wage Rate (WH 1088)	U. S. Department of Labor	ARDOT Resident Engineer
7.	"NOTICE" Federal Aid Projects (PR-1022)	U. S. Department of Transportation (FHWA)	ARDOT Resident Engineer
8.	Job Safety and Health Protection OSHA 3165	U. S. Department of Labor (OSHA)	ARDOT Resident Engineer
9.	Job Safety and Health Protection OSHA 3167 SPA	U. S. Department of Labor (OSHA)	ARDOT Resident Engineer
10.	Emergency Phone Numbers of Doctors, Hospital and Ambulance near Job Site for referring injured employees.	U. S. Department of Labor (OSHA)	ARDOT Resident Engineer
11.	WCC Form AR-P Workers Compensation Notice and Instructions to Employers and Employees	State of Arkansas	Insurance Carrier
	Self-Insurer	State of Arkansas	Administrator - Self-Insured Group

FHWA-1273 SUPPLEMENTAL SPECIFICATION

POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS

	POSTER OR DOCUMENT REQUIRED	REQUIRED BY	WHERE TO OBTAIN
12.	Log and Summary of Occupational Injuries and Illnesses (OSHA Form 300) The Summary portion must be posted from February 1 to April 30, of the year following the year covered by the form.	U. S. Department of Labor (OSHA) Public Law 91-596	ARDOT Resident Engineer
13.	Family and Medical Leave Act of 1993 (WH-1420) Employers who employ 50 or more employees for at least 20 workweeks in the current or preceding calendar year.	U. S. Department of Labor	ARDOT Resident Engineer
14.	Employee Polygraph Protection Act (WH-1462)	U. S. Department of Labor	ARDOT Resident Engineer
15.	Your Rights Under USERRA (The Uniformed Services Employment and Reemployment Rights Act)	U. S. Department of Labor	ARDOT Resident Engineer
16.	Arkansas Department of Labor Notice to Employer & Employee	Arkansas Department of Labor	ARDOT Resident Engineer
17.	Pay Transparency Nondiscrimination Provision	U. S. Department of Labor (OFCCP)	ARDOT Resident Engineer

"General Decision Number: AR20250175 01/03/2025

Superseded General Decision Number: AR20240175

State: Arkansas

Construction Type: Highway

Counties: Perry and Saline Counties in Arkansas.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025

SUAR2014-047 07/21/2014

	Rates	Fringes
CARPENTER, Includes Form Work	$ 14.09 **	0.00
CEMENT MASON/CONCRETE FINISHER	$ 15.11 **	0.00
FENCE ERECTOR	$ 12.69 **	0.00
HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine)	$ 13.25 **	0.00
HIGHWAY/PARKING LOT STRIPING: Painter	$ 21.75	0.00
IRONWORKER, REINFORCING	$ 14.22 **	0.00
IRONWORKER, STRUCTURAL	$ 15.36 **	0.00
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor	$ 14.45 **	0.00
LABORER: Common or General	$ 11.94 **	0.00
LABORER: Mason Tender - Cement/Concrete	$ 15.23 **	0.00
LABORER: Pipelayer	$ 14.33 **	0.00
OPERATOR: Asphalt Spreader	$ 15.80 **	0.00
OPERATOR: Backhoe/Excavator/Trackhoe	$ 17.24 **	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader	$ 16.06 **	0.00
OPERATOR: Broom/Sweeper	$ 12.00 **	0.00
OPERATOR: Bulldozer	$ 16.74 **	0.00
OPERATOR: Crane	$ 20.63	0.00
OPERATOR: Distributor	$ 14.52 **	0.00
OPERATOR: Drill	$ 14.85 **	0.00
OPERATOR: Grade Checker	$ 16.24 **	0.00
OPERATOR: Grader/Blade	$ 20.04	0.00
OPERATOR: Hydroseeder	$ 10.79 **	0.00
OPERATOR: Loader	$ 17.05 **	0.00
OPERATOR: Mechanic	$ 22.19	0.00
OPERATOR: Milling Machine	$ 17.52 **	0.00
OPERATOR: Oiler	$ 18.46	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete)	$ 17.89	0.00

OPERATOR: Post Driver
(Guardrail/Fences).....$ 16.97 ** 0.00

OPERATOR: Roller.....$ 15.69 ** 0.00

OPERATOR: Scraper.....$ 19.31 0.00

OPERATOR: Screed.....$ 15.01 ** 0.00

TRAFFIC CONTROL: Flagger.....$ 12.67 ** 0.00

TRAFFIC CONTROL:
Laborer-Cones/
Barricades/Barrels -
Setter/Mover/Sweeper.....$ 12.95 ** 0.00

TRUCK DRIVER: Dump Truck.....$ 14.81 ** 0.00

TRUCK DRIVER: Flatbed Truck.....$ 21.03 0.00

TRUCK DRIVER: Lowboy Truck.....$ 17.49 ** 0.00

TRUCK DRIVER: Servicer.....$ 15.90 ** 0.00

TRUCK DRIVER: Water Truck.....$ 14.73 ** 0.00

TRUCK DRIVER: Semi/Trailer
Truck.....$ 12.50 ** 0.00

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

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 ($17.75) or 13658 ($13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

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

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after

award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal

number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

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

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

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

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via

email to dba.reconsideration@dol.gov or by mail to:

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

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

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

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

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END OF GENERAL DECISION"

Arkansas Department of Transportation

Special Provision for Local Projects

Differing Site Conditions and Temporary Suspensions of Work

Arkansas Department of Transportation, Standard Specifications, 2014 Edition
Section 104.02(c) – Differing Site Conditions

During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the Contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and general recognized as inherent in the work provided for in the Contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before they are disturbed and before the affected work is performed.

Upon written notification, the Engineer will investigate the conditions. If the Engineer determines that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the Contract, an adjustment, excluding loss of anticipated profits, will be made and the Contract modified in writing accordingly. The Engineer will notify the Contractor of the determination whether or not an adjustment of the Contract is warranted.

No Contract adjustment that results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.

No Contract adjustment will be allowed under this clause for any effects caused on unchanged work.

Arkansas Department of Transportation, Standard Specifications, 2014 Edition
Section 108.05 – Temporary Suspension of Work

The Engineer will have the authority to suspend the work wholly or in part for such period or periods necessary, due to unsuitable weather or other conditions unfavorable for the suitable prosecution of the work. If it should become necessary to stop work for an indefinite period, the Contractor shall store all materials in such manner that they will not obstruct or impede the traveling public nor become damaged in any way, and shall take every reasonable precaution to prevent damage or deterioration of the work performed; provide suitable drainage of the roadway by opening ditches and shoulder drains; maintain the traveled way; erect temporary structures where directed; etc.

The Contractor shall not suspend the work nor remove any equipment or materials essential to the completion of the current phase of the project without the permission of the Engineer.

If the performance of all or any portion of the work is suspended or delayed by the Engineer in writing for a period of time not originally anticipated, customary, or inherent to the construction industry and the Contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the Contractor shall submit to the Engineer in writing a request for adjustment within ten (10) business days of the receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost and/or time required for the performance of the Contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the Engineer will make an adjustment (excluding profit) and modify the Contract in writing accordingly. The Engineer will notify the Contractor of a determination whether or not an adjustment of the Contract is warranted.

No Contract adjustment will be allowed unless the Contractor has submitted the request for adjustment within the time prescribed.

No Contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of the Contract.

NOTE: As defined in Section 101.01(c) of the Department's Standard Specifications, the "Engineer" is defined as "The Chief Engineer of the Department, acting directly or through duly authorized representatives, who is responsible for engineering supervision of the construction." This role may vary in name and title by the agency utilizing this Special Provision. Additional definitions may also be found in Section 101.01(c).

CITY OF BRYANT
SPECIAL PROVISION
JOB 061807

DOCUMENTATION OF PAYMENTS MADE TO DISADVANTAGED BUSINESS ENTERPRISES

Although this contract does not have a Disadvantaged Business Enterprise (DBE) Goal, in accordance with Subsection 103.08(a) of the Standard Specifications all payments made to DBE Contractors, suppliers, manufacturers, and/or non-construction service firms must be reported by the Prime Contractor.

As required by Subsection 103.08(h), the Prime Contractor must use the appropriate DBE Payment Log form included in this Special Provision during the progress of the Contract. Listed below are the instructions on when each form is required to be submitted.

- The Prime DBE Payment Log (page 3) must be submitted by the Prime Contractor when he/she is a certified DBE Contractor and work was performed by their own forces or money was earned by the DBE Prime Contractor for work performed by a Subcontractor during the estimate period.
- The DBE Subcontractor Payment Log (page 2) must be submitted by the Prime Contractor when a Subcontractor is a certified DBE Contractor and work was performed by a Subcontractor or money was earned by a Subcontractor for work performed by a Second-tier Subcontractor during the estimate period.
- The 2nd Tier DBE Payment Log (page 4) must be submitted by the Prime Contractor when a 2nd Tier Subcontractor is a certified DBE Contractor and work was performed by a 2nd Tier Subcontractor during the estimate period.
- The 2nd Tier DBE Payment Log (page 4) must be submitted by the Prime Contractor when payments are made to a Department Certified DBE supplier, manufacturer, and/or non-construction service firm by the Prime Contractor or any Subcontractor or 2nd Tier Subcontractor during the estimate period.

A separate DBE Payment Log form is required for each DBE firm receiving payments for work completed or services provided during each estimate period. The DBE Payment Log forms, along with instructions for their use, are available on the Department's website at:

http://ardot.gov/Construc/SpecBK03/DBE_Log.xls

All certifications of payments must be received by the Resident Engineer within thirty-five (35) calendar days following the end of each estimate period. Facsimile or scanned copies of the completed original payment log forms are acceptable to fulfill this requirement.

Upon completion of the contract, a final certificate of payments to all DBE firms -- page 5 of this Special Provision -- is required by Subsection 103.08 (h). The final amount paid to each DBE firm shall match the total to date reported on the last DBE payment log submitted for each firm. If necessary, an additional DBE payment log shall be submitted with the certificate of payment itemizing all payments made to DBE firms since the last estimate period. A signed, original of the Final Certificate of Payment must be furnished to the Resident Engineer.

CITY OF BRYANT

DBE Subcontractor Payment Log

Job Number _____ Prime Contractor _____

Estimate No. _____ DBE Subcontractor _____

Estimate Ending Date_____ Date Payment Made to DBE _____

Item Code*	Item Description	Subcontract Unit Price	2nd Tier Unit Price	Quantity	Value Earned By Subcontractor

* Item Codes for pay items are shown on the estimate voucher

Total This Estimate	
Retainage Withheld This Estimate	
Net Total This Estimate	
Previous Total	
Total To Date	

DBE Payment Log must be received within 35 calendar days of the ending date of the estimate.

___% Retainage

The Prime Contractor certifies that the payment listed has been made to the DBE Subcontractor and that the documentation of this payment is available for inspection upon request.

Authorized Signature_____ Title _____

Typed or Printed Name_____ Date _____

Department Use Only

Received By _____ Date _____

Verified By _____ Date _____ RE Initials _____

Rev. 9-6-17

CITY OF BRYANT

DBE Prime Contractor Payment Log

Job Number _____ DBE Prime Contractor _____

Estimate No. _____

Estimate Ending Date_____

Item Code*	Item Description	Contract Unit Price	Sub Unit Price	Quantity	Value Earned By DBE Prime

* Item Codes for pay items are shown on the estimate voucher

Total This Estimate	
Previous Total	
Total To Date	

DBE Payment Log must be received within 35 calendar days of the ending date of the estimate.

The Prime Contractor certifies that the information shown above is correct and represents the value earned by the DBE Prime Contractor during the above estimate period.

Authorized Signature_____ Title _____

Typed or Printed Name_____ Date _____

Department Use Only

Received By _____ Date _____

Verified By _____ Date _____ _____ RE Initials

Rev. 9-6-17

CITY OF BRYANT

DBE 2nd Tier Payment Log

Job Number _____ Prime Contractor _____

Estimate No. _____ Subcontractor _____

Estimate Ending Date_____ DBE 2nd Tier Subcontractor _____

Date Payment Made to DBE _____

Item Code*	Item Description	2nd Tier Unit Price	Quantity	Value Earned by 2nd Tier

* Item Codes for pay items are shown on the estimate voucher

Total This Estimate	
Retainage Withheld This Estimate	
Net Total This Estimate	
Previous Total	
Total To Date	

DBE Payment Log must be received within 35 calendar days of the ending date of the estimate.

___% Retainage

The Prime Contractor certifies that the payment listed has been made to the DBE 2nd Tier Subcontractor and that the documentation of this payment is available for inspection upon request.

Authorized Signature_____ Title _____

Typed or Printed Name_____ Date _____

Department Use Only

Received By _____ Date _____

Verified By _____ Date _____ _____ RE Initials

Rev. 9-6-17

CITY OF BRYANT
CERTIFICATE OF PAYMENT

JOB _____ **F.A.P.** _____

JOB NAME _____

ORIGINAL CONTRACT AMOUNT $_____ **DBE GOAL $**_____*
(Contract Commitment)

DBE CONTRACT GOAL ___%

FINAL PAYMENT TO DBEs

The undersigned Contractor on the above mentioned project hereby certifies that the following amount(s) were paid to:

DBE Subcontractor(s)	Amount Paid
	$
	$
	$
	$
	$
	$
	$
	$
	$
	$
	$
Total Paid to DBEs	$

Only payments related to work, services, or material actually provided by DBE firms should be shown. Payments under second tier subcontracts from DBE firms to non-DBE firms should not be included.
DBE prime Contractors should include the value of work performed by its own forces.

Contractor:			
Signature:			
Typed or Printed Name:			
Title:		Date:	

THIS "CERTIFICATE OF PAYMENT" IS TO BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO PROJECT ACCEPTANCE.

* If goal not met, brief explanation: _____

_____

_____

_____

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

061807

CARGO PREFERENCE ACT REQUIREMENTS

The requirements of the Cargo Preference Act (CPA) and implementing regulations (46 CFR 381.7(a)-(b)) are applicable to this contract. For additional information, see the FHWA's web page:

https://www.fhwa.dot.gov/construction/cqit/cargo.cfm

CITY OF BRYANT

SPECIAL PROVISION

JOB NO. 061807

RECTANGULAR RAPID FLASHING BEACON

DESCRIPTION.

A. This section covers the furnishing of all labor, materials, tools, equipment and performances of all work and services necessary or incidental for the installation of the pedestrian-activated rectangular rapid flash beacon (RRFB) systems as indicated on the drawings or as specified herein.

B. This work shall consist of furnishing and installing the solar-powered flashing beacon assembly complete with RRFBs, solar panel, battery pack with charger, LED driver, and wireless communications equipment, attached to a traffic signal pedestal or other approved mounting system as shown in the plans and as specified by the Engineer.

MATERIALS.

A. General System Requirements

1. All materials furnished, assembled, fabricated, or installed shall be corrosion resistant. All mounting hardware shall be Type 304 stainless steel.

2. All components shall be manufactured and assembled as a complete system rated for 24 hours/365 days a year operation.

3. The entire system shall have a minimum 3-year warranty.

B. Rectangular Rapid Flashing Beacons.

1. The Contractor shall furnish and install two direction RRFB units mounted to the post as indicated on the plans. The RRFB housing shall be a minimum 1/8-inch-thick aluminum.

2. Each RRFB unit shall satisfy the FHWA Interim Approval for Optional Use of Rectangular Rapid Flashing Beacons (IA-21), dated March 20, 2018, and the 2009 edition of the MUTCD, including the unit size, mounting location, flash rate, and operational parameters

C. Solar-assisted Battery-powered System.

1. The solar-powered system shall be an easy to install, fully self-contained, weather, corrosion, and vandal-resistant unit with a premium grade UV-resistant head. The system shall be power autonomous without the need for an external power supply. The system shall have an operating temperature range of -35°F to 140°F.

2. The batteries shall be sealed, maintenance free, field-replaceable and rated best-in-class. The battery pack shall have a minimum rated lifespan of 3 years.

CITY OF BRYANT

SPECIAL PROVISION

JOB NO. 061807

RECTANGULAR RAPID FLASHING BEACON

3. The system shall have the capacity to operate the beacons continuously for a minimum of 15 days without solar charging and have automatic light control to provide useful light during extreme conditions that prevent charging over an extended period of time.

D. Wireless Communication System.

1. At each crosswalk, all installed solar powered flashing beacon assemblies must communicate wirelessly using an unlicensed radio band so as to simultaneously commence operation of their alternating rapid flashing indications and cease operation simultaneously. The communication equipment shall comply with FCC requirements and the vendor representative shall field test the equipment prior to placing the units in operation to demonstrate the RRFBs ability to achieve proper operation under the requirements of FHWA IA-21. The wireless communications of one RRFB installation shall not interfere with, or cause unintended operation of, RRFBs at nearby intersections.

2. The system shall have push-button activation. Each flashing beacon unit shall have one pedestrian pushbutton meeting ADA requirements.

E. Pole and Concrete Footing.

1. The flashing beacon assembly shall be installed and mounted as indicated in the plans, using a concrete footing meeting the requirements of City of Little Rock and the plans. The footing shall include a 1-inch PVC conduit that stubs-out from the side of the footing as detailed per the plans. A traffic signal pedestal pole of the length, diameter, and material recommended by the RRFB manufacturer, shall be used to support the flashing beacon assembly hardware.

2. The pedestrian pushbuttons shall be installed on pedestrian pushbutton stations.

F. Pedestrian Pushbuttons.

1. The Accessible Pedestrian Signal (APS) pushbuttons shall be an audible-tactile pedestrian signal system and shall consist of all electronic control equipment, mounting hardware, push buttons and signs designed to provide both a pushbutton with a raised, vibrating tactile arrow on the button as well as a variety of audible indications for differing pedestrian signal functions.

2. The APS pushbuttons shall meet the following requirements:

- **a.** 2009 MUTCD, Chapter 4E – Pedestrian Control Features.
- **b.** NEMA TS 2 Section 2.1 requirements for Temperature and Humidity, Transient Voltage Protection and Mechanical Shock and Vibration.
- **c.** IEC 61000-4-4; 4-5 Transient Suppression requirements.
- **d.** FCC Title 47, Part 15, Class A, Electronic Noise requirements.

CITY OF BRYANT

SPECIAL PROVISION

JOB NO. 061807

RECTANGULAR RAPID FLASHING BEACON

3. The APS pushbutton enclosure shall meet the NEMA 250 – Type 4X enclosure requirement.

4. The APS pushbuttons shall be POLARA Model-X (XAV2E-LED) with MUTCD R10-25 signs or approved equals.

5. Upon installation, the APS shall have the following functional requirements:

a. The APS shall be programmable and adjustable. Programming and adjustments shall be made using a laptop computer or vendor supplied programmer. No additional hardware or equipment shall be required. The APS pushbuttons shall be fully compatible with the three latest versions of the Windows operating platform. The programmable features shall be:

i. Push-button locator tone.
ii. Audible push-button informational message upon pushbutton activation that says “yellow lights are flashing”. This message shall be spoken twice.
iii. Audible crossing beacon
iv. Vibrating tactile arrow.
v. Independent minimum and maximum volume limits for the Locator Tone, Walk and Audible Beaconing features.

b. All audible features shall emanate from the pedestrian pushbutton housing. The APS shall utilize digital audio technology, having a minimum 12-bit sample at a 16k Hz sample rate. Total harmonic distortion shall be less than 3% at 75 decibels. The APS shall provide independent ambient sound adjustment for the Locator Tone feature. The APS shall allow for Locator Tone volume to be set below the ambient noise level. The system shall have, at a minimum, three programmable locator tones. All sound levels shall adjust automatically utilizing an internally mounted, interval ambient sensing microphone, in accordance with the MUTCD.

c. The APS system shall log cumulative call data. The data shall be date and time stamped, and shall be accessible via laptop.

6. The APS manufacturer must provide the required voice messages in each button. Additionally, the APS manufacturer must supply backup copies of the voice messages to the City of Cedar Rapids.

7. The appropriate Braille message shall be added to the pedestrian information sign.

G. Signage.

All signs shall meet MUTCD requirements. Signs to be installed as part of the RRFB assembly and required mounting hardware shall be considered incidental to this item.

CITY OF BRYANT

SPECIAL PROVISION

JOB NO. 061807

RECTANGULAR RAPID FLASHING BEACON

H. TAPCO Rectangular Rapid Flash Beacon: RRFB-XL2 has met the above specification and shall be used.

CONSTRUCTION.

A. Construction Requirements.

1. The solar powered flashing beacon assembly and system shall be installed in strict accordance with the manufacturer's recommendations, as shown on the plans, and as directed by the Engineer.

2. Mounting of the hardware to the foundation shall follow all manufacturer recommendations. The traffic signal post and pedestal base shall be installed on the foundation in accordance with the manufacturer recommendations.

3. The beacons and solar engine shall be attached to the structure using rigid galvanized steel conduit, stainless steel straps, manufacturer recommended mounting brackets, and U-bolts.

4. The beacons shall be installed as shown on the plans. The final elevation and location of the beacons must be approved by the Engineer prior to beginning work.

5. The solar panel shall be installed at the highest point on the assembly structure, or as directed by the Engineer, and away from the travelled way. The solar engine shall be installed at a 45-degree angle facing the equator (due south) with full unobstructed solar exposure for optimum performance of the system, or as recommended by the manufacturer and directed by the Engineer.

B. Inspection. The Contractor shall inspect all the electrical equipment and shall notify the Engineer in writing before the equipment is installed if the equipment appears to be deficient in fit, form or function.

C. Coordination. It shall be the sole responsibility of the Contractor to coordinate among suppliers and contractors providing equipment for the project.

METHOD OF MEASUREMENT. Lump sum item; no measurement will be made.

BASIS OF PAYMENT. Payment will be at the lump sum price for Rectangular Rapid Flash Beacon (RRFB) System. All labor, materials, and equipment necessary for installation of a functioning pedestrian-activated flashing beacon assembly will not be paid for separately, but shall be considered incidental to this item

Each system includes, but is not limited to the following

- Programming Software Kit
- Wireless Communication System
- LED Light Bars
- Solar Panels
- APS Pushbuttons with MUTCD R10-25 signs
- Remote Pushbutton Stations
- 13-foot Pole Kits with J-Bolts for Concrete Installation
- Concrete Footings (10-inch diameter by 3-feet deep) – for pushbutton stations

CITY OF BRYANT

SPECIAL PROVISION

JOB NO. 061807

RECTANGULAR RAPID FLASHING BEACON

- Concrete Footings (2-foot diameter by 3-foot deep) – for traffic signal pedestals
- 36-inch Pedestrian Crossing Signs (MUTCD W11-2, (fluorescent yellow-green)
- 24-inch by 12-inch Down Arrow Right/Left Signs (MUTCD W16-7P, fluorescent yellow-green)
- Back-to-Back Sign Mounting Brackets
- Wiring, conduit, and other miscellaneous brackets and mounting hardware.

Payment will be made under:

Pay Item	**Pay Unit**
Rectangular Rapid Flashing Beacon	Lump Sum

SECTION 01001

BASIC REQUIREMENTS

PART 1. GENERAL

1.1 SUMMARY OF WORK

A. Section Includes:

1.2 Description of Project
1.3 Site Investigation
1.4 Existing Utilities
1.5 Payment Schedule
1.6 Application for Payment
1.7 Change Order Procedures
1.8 Cutting and Patching
1.9 Conferences
1.10 Progress Meetings
1.11 Submittal Procedures
1.12 Construction Progress Schedule
1.13 Prosecution of the Work
1.14 Shop Drawings
1.15 Product Data
1.16 Manufacturers' Instructions and Certifications
1.17 Quality Assurance
1.18 References
1.19 Manufacturer's Field Services
1.20 Testing Laboratory Services
1.21 Temporary Electric Power and Lighting
1.22 Temporary Water
1.23 Sanitary Facilities
1.24 Water for Testing
1.25 Temporary Telephone Service
1.26 Temporary Water Control
1.27 Temporary Access Roads and Parking
1.28 Temporary Heating and Ventilating
1.29 Protection of Finished Work
1.30 Progress Cleaning
1.31 Field Offices
1.32 Removal of Utilities, Facilities, and Controls
1.33 Products
1.34 Transportation, Handling, Storage, and Protection
1.35 Substitutions
1.36 System Demonstration
1.37 Contract Closeout Procedures
1.38 Final Cleaning and Inspection
1.39 Final Submittals
1.40 Project Record Documents (“As-Builts”)
1.41 Operation and Maintenance Data
1.42 Guarantees, Bonds, Affidavits, and Warranties
1.43 Spare Parts and Maintenance Materials

1.2 DESCRIPTION OF PROJECT

A. Wherever in these Documents the word "Engineer" appears, it shall be understood to mean McClelland Consulting Engineers, Inc., acting either directly or indirectly as authorized agents of the Owner. In these Documents where the word "Owner" appears, it shall be understood to mean the City of Bryant, Arkansas.

B. A General Contract to provide a direct pedestrian connection from Mills Park to Alcoa Park. Construction will include an asphalt overlay of existing sidewalk, new asphalt trail, new drainage structures, and a crosswalk upgrade.

1.3 SITE INVESTIGATION

A. Information obtained by the Owner regarding site conditions; topography; existing construction of site facilities; and subsurface investigations, including test boring logs are available for examination at the office of the Engineer.

1.4 EXISTING UTILITIES

A. Approximate locations of major utilities and structures are shown on the Drawings, there may be some discrepancies and omissions in the locations and size of utilities and structures shown.

B. Notify all utilities affected by the construction operation at least 48 hours in advance of beginning work, and contact Arkansas One-Call at 1-800-482-8998.

1.5 PAYMENT SCHEDULE

A. Payment shall be made based on the payment schedule submitted by the Contractor in accordance with the Bid Form and the Engineers observation of work completed to date.

B. Payment for pipe shall be made at 85 percent of the unit bid price upon pipe installation, backfilling and rough grading. Payment shall be increased 5 percent upon completion of testing and disinfection. Payment will be increased 10 percent of the unit price bid upon completion and acceptance of final clean-up by the Owner and Engineer and in accordance with the General Conditions.

1.6 APPLICATION FOR PAYMENT

A. Submit three copies of each application on EJCDC Form C-620 or other format approved by Engineer.

B. For payment of stored materials, the Contractor shall submit a copy of supplier/vendor’s invoice for the materials with job name, delivery date, invoice number, and invoice amount on invoice attached with the Application for Payment. Stored materials shall be on site and stored in accordance with Contract Documents prior to making Application for Payment.

C. Contractor shall submit copies of paid invoices and proof of payment in the form of a lien release from the supplier/vendor for stored materials that the Owner has paid for previously with Application for Payment. Contractor’s subsequent Applications for Payment will not be approved without copies of paid invoices and lien releases.

D. Contractor shall submit lien release for all previous progress payments for materials, labor, and equipment that has been billed to the Owner in the present pay request. Lien release shall be submitted to the Engineer with next Application for Payment. Application for Payment submitted without lien release from previous Application for Payment will not be

approved for payment until Engineer has received lien release. Submit lien release on the form found at the end of this Section.

E. Utilize Payment Schedule or Unit Prices for listing items in Application for Payment.

F. Pay Periods: Calendar Month.

1.7 CHANGE ORDER PROCEDURES

A. Submit on EJCDC Form 1910-8B.

1.8 CUTTING AND PATCHING

A. Employ a skilled and experienced installer to perform cutting and patching new Work; restore Work with new products.

B. Submit written request in advance of cutting or altering existing structures or utilities.

C. Fit work tight to adjacent elements and maintain integrity of existing work.

1.9 CONFERENCES

A. Engineer will schedule a preconstruction conference after Notice of Award for all affected parties.

B. Where required in individual specification Section, convene a pre-installation conference at project site prior to commencing Work of the Section.

1.10 PROGRESS MEETINGS

A. Schedule and administer meetings at the site throughout progress of the Work at minimum monthly intervals.

B. Preside at meetings, record minutes, and distribute typed copies within two days to those affected by decisions made.

1.11 SUBMITTAL PROCEDURES

A. The Contractor shall submit a sufficient number of copies to allow the Engineer to retain four copies (2 for himself; 2 for the Owner) for review. Submittals shall include shop drawings, electrical diagrams, and catalog cuts for fabricated items and manufactured items (including mechanical and electrical equipment) required for construction.

B. Submittal form to identify Project, Contractor, subcontractor or supplier, and pertinent Contract Document reference.

C. Apply Contractor's stamp, signed or initialed, certifying that review, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.

D. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of completed Work.

E. Revise and resubmit as required; identify all changes made since previous submittal.

1.12 CONSTRUCTION PROGRESS SCHEDULE

A. Submit initial Construction Progress Schedule in duplicate within 10 days after date of Contract. Engineer shall review Construction Progress Schedule and approve. Once approved by Engineer this Construction Progress Schedule shall become the "Approved Construction Progress Schedule" by which the Contractor shall plan, organize, direct, coordinate, and execute the Work, and the basis of evaluating progress of the Work.

B. "Approved Construction Progress Schedule" shall be a horizontal bar chart with separate lines for each major section of Work or operation, identifying first work day of each week.

C. Submit updated Construction Progress Schedule with each Application for Payment, identifying changes since previous updated Construction Progress Schedule. Indicate estimate percentage of completion for each item of Work at each submission.

D. Should updated Construction Progress Schedule show the Contractor to be 10 percent or more behind schedule, Contractor shall immediately devise a plan for recovery of lost time and submit to the Engineer for approval within 1 week. Once approved by the Engineer, the Contractor shall immediately put "Recovery Construction Progress Schedule" into action.

E. During period covered by "Recovery Construction Progress Schedule" plan, Contractor's progress will be monitored against the "Approved Construction Progress Schedule." If Contractor does not recover from delay as detailed in his "Recovery Construction Progress Schedule," the Engineer shall advise the Owner to exercise its options as described in the General Conditions.

F. Contractor shall bear all cost and expenses related to recovery from the Contractor's delays, including costs, expenses, and lost revenue by the Owner.

1.13 PROSECUTION OF THE WORK

A. It is expressly understood and agreed that the time of beginning, rate of progress, and time of completion of the Work are the essence of this Contract. The Work shall be prosecuted at such time, and in or on such part or parts of the Project as may be required, to complete the Project as contemplated in the Contract Documents and the approved construction schedule.

B. Regular Work hours shall be from 7:00 a.m. to 6:00 p.m. Monday through Friday. No Work requiring the presence of the Engineer's representative will be performed outside of regular Work hours. If, however, the Contractor works additional hours (other than specified herein), the Contractor shall pay the Owner for additional engineering services as outlined below.

C. The cost of additional engineering services shall be borne by the Contractor and will be based upon actual hours worked (labor cost x 3 x 1.5) plus out-of-pocket expenses such as lodging, mileage, materials, etc. Otherwise, the Contractor may perform clean-up work only outside of regular hours (including Saturdays and Sundays). No Work will be accomplished on holidays.

1.14 SHOP DRAWINGS

A. Submit number of copies which the Contractor requires, plus four copies which will be retained by the Engineer.

B. Include as a minimum dimensions, size, location of connections to other work, weight of equipment, and supporting calculations.

1.15 PRODUCT DATA

A. Submit number of copies which the Contractor requires, plus four copies which will be retained by the Engineer.

B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this Project.

1.16 MANUFACTURERS' INSTRUCTIONS AND CERTIFICATIONS

A. Submit as noted in individual specification Sections.

1.17 QUALITY ASSURANCE

A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship to produce work of specified quality.

B. Comply fully with manufacturer's instructions.

C. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

1.18 REFERENCES

A. Conform to reference standard by date of issue current as of date of Contract.

B. Should specified reference standard conflict with Contract Documents, request clarification from Engineer before proceeding.

1.19 MANUFACTURERS' FIELD SERVICES

A. Representative shall submit written report to Engineer listing observations and recommendations.

1.20 TESTING LABORATORY SERVICES

A. Owner will approve the Contractor's selection of a testing laboratory to perform inspections, tests, and other services required by individual Specification Sections.

B. All costs for laboratory testing of earthwork and concrete shall be paid for by the Contractor.

C. Services will be performed in accordance with requirements of governing authorities and with specified standards.

D. Contractor shall cooperate with Testing Laboratory personnel; furnish tools, samples of materials, design mix, equipment, storage and assistance as requested.
   1. Notify Engineer/Testing Laboratory 48 hours prior to expected time for operations requiring testing services.
   2. Furnish and deliver samples/cylinders to lab for testing.
   3. Pay for testing.

1.21 TEMPORARY ELECTRIC POWER AND LIGHTING

A. Provide and pay for power services required from source.

B. Provide power outlets for construction operations, branch wiring, distribution boxes, and flexible power cords as required.

1.22 TEMPORARY WATER

A. Provide water, as needed, for own use.

B. Provide an adequate supply of potable drinking water for use by employees and Engineer's employees.

1.23 SANITARY FACILITIES

A. Provide and maintain required sanitary facilities and enclosures.

B. Maintain clean and sanitary condition.

1.24 WATER FOR TESTING

A. **(For Water Distribution System)** The Owner shall provide the water for first time testing up to a maximum amount of two and half times the water capacity volume in the total length of the waterlines in the distribution system in this Project. Owner shall determine the location(s) on where the Contractor can obtain the water. If test fails, the Contractor shall be responsible to paying Owner the cost of additional water for testing until the system being tested passes.

1.25 TEMPORARY TELEPHONE SERVICE

A. Provide on-site telephone service for Contractor's and Engineer's use during the period of construction of the Contract.

1.26 TEMPORARY WATER CONTROL

A. Maintain excavations and trenches free of water. Provide and operate pumping equipment of a capacity to control water flow.

B. Provide dewatering system and pumping to maintain excavations dry and free of water inflow on a 24 hours basis.

C. Provide piping to handle pumping outflow to discharge in a manner to avoid erosion or deposit of silt.

1.27 TEMPORARY ACCESS ROADS AND PARKING

A. Construct and maintain temporary construction access roads, parking areas, and detours as are required to execute the Work.

1.28 TEMPORARY HEATING AND VENTILATING

A. Provide adequate heat and ventilation to all parts of the Work.

B. See requirements of Specifications for minimum temperature to be maintained for various trades.

C. Ventilate enclosed areas.

D. Do not use permanent systems to provide temporary heating or ventilation.

1.29 PROTECTION OF FINISHED WORK

A. Protect installed work and provide special protection where specified in individual specification Sections.

1.30 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

1.31 FIELD OFFICES

A. Contractor shall provide a field office for himself and the Owner's use, as follows:
Office shall be weather tight, secure, with lighting, electrical outlets, heating, cooling and ventilating equipment, and equipped with sturdy furniture, drawing display table, telephone, and space for project meetings with table and chairs.

1.32 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary erosion control construction, above grade or buried utilities, equipment, facilities, and materials, prior to Substantial Completion inspection.

B. Remove and repair damage caused by installation or use of temporary work.

1.33 PRODUCTS

A. Products: New material, machinery, components, equipment, and systems forming Work, but does not include machinery or equipment used for preparation, fabrication, or erection of Work.

B. Use interchangeable components of the same manufacture for similar components.

1.34 TRANSPORTATION, HANDLING, STORAGE, AND PROTECTION

A. Transport, handle, store and protect Products in accordance with manufacturer's instructions.

1.35 SUBSTITUTIONS

A. Possible substitutions ("or approved equal"/ "or equal") shall be submitted no later than 10 days prior to bid date for Engineer to review and consider requests from Contractor or Bidder for substitutions as equal . The Bidder may include substitutions not specified only if written approval is received from the Engineer prior to bidding. Otherwise, substitutions will be not be allowed.

B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.

1.36 SYSTEMS DEMONSTRATION

A. Prior to final inspection, demonstrate operation of each system to Engineer and Owner.

B. Instruct Owner's personnel in operation, adjustment, and maintenance of equipment and systems, using the operation and maintenance data as the basis of instruction.

1.37 CONTRACT CLOSEOUT PROCEDURES

A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and Work is complete in accordance with Contract Documents and ready for Engineers inspection.

B. Submit final Application for Payment identifying total adjusted Contract Price, previous payments, and amount remaining due after Engineer has given written approval of Project Record Documents.

1.38 FINAL CLEANING AND INSPECTION

A. Execute final cleaning prior to final inspection.

B. Clean interior and exterior surfaces exposed to view.

C. Clean debris, waste and surplus supplies, rubbish, and construction facilities from site.

D. After final cleaning and upon written notice from the Contractor that the Work is completed, the Engineer will make a preliminary inspection with the Owner and Contractor present. Upon completion of this preliminary inspection, the Engineer will notify the Contractor, in writing, of any particulars in which this inspection reveals that the Work is defective or incomplete.

E. Upon receiving written notice from the Engineer, the Contractor shall immediately undertake the work required to remedy defects and complete the Work to the satisfaction of the Owner.

F. When the Contractor has corrected or completed the items as listed in the Engineer's written notice, he shall inform the Engineer, in writing, that the required Work has been completed. Upon receipt of this notice, the Engineer, in the presence of the Owner and Contractor, shall make his final inspection of the Project.

G. Should the Engineer find all Work satisfactory at the time of his inspection, the Contractor will be allowed to make application for final payment in accordance with the provisions of the General Conditions. Should the Engineer still find deficiencies in the Work, the Engineer will inform the Contractor of the deficiencies and will deny the Contractor's request for final payment until the Contractor has satisfactorily completed the required Work.

H. Water courses, gutters, and ditches shall be opened and left in a condition satisfactory to the Engineer.

1.39 FINAL SUBMITTALS

A. No contract will be finalized until all of the following have been submitted:
   1. Final Shop Drawings.
   2. Record Drawings.
   3. Operations and Maintenance Manuals.
   4. Manufacturers' Certificates of Proper Installation.

1.40 PROJECT RECORD DOCUMENTS ("AS-BUILTS")

A. Maintain on Project site, one set of Contract Documents, Shop Drawings, and Product Submittals to be utilized for Record Documents.

B. Keep Record Documents and samples available for inspection by Engineer.

C. Maintain Record Documents in a clean, dry, and legible condition. **Do not use Record Documents for construction purposes**. If Contractor submits Record Documents that are in poor condition and is unacceptable by the Engineer, Contractor shall re-purchase a new set of Project Drawings and Project Manual and re-recording information on new purchased set and resubmit to Engineer.

D. Specification, Record Documents, and Shop Drawings: Legibly mark each item to record actual construction or product installed.

E. Record information in red ink on a set of blue line opaque Drawings, and in a copy of a Project Manual.

F. Record information concurrently with construction progress.

G. Contract Drawings and Shop Drawings: Legibly mark each item to record actual construction, including:
   1. Measured depths of elements of structures in relation to datum.
   2. Measured horizontal and vertical locations of underground utilities, valves, fittings, and other appurtenances incorporated in the Project, referenced to permanent surface improvements (3 each).
   3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction.
   4. Field changes of dimension and detail.
   5. Changes made by Modifications by either Field Orders or Change Orders.
   6. Details not on original Contract Drawings or referenced in Project Manual, but are part of the Project.

H. Specifications: Legibly mark each item to record actual construction, including:
   1. Manufacturer, trade name, and catalog number of each product actually installed, particularly optional items and substitute items.
   2. Changes made by Addenda, Field Orders, Change Orders, or other Modifications.

I. Other Documents: Maintain manufacturer's certifications, inspection certifications, field test records, and other required documentation required by individual Specifications Sections.

J. Transmit with cover letter in duplicate, listing:
   1. Date.
   2. Project title and number.
   3. Contractor's name, address, and telephone number.
   4. Number and title of each Record Document.
   5. Signature of Contractor or authorized representative.

K. Final Application for Payment shall not be approved until Project Record Documents ("As-Builts") are reviewed and approved by Engineer.

1.41 OPERATION AND MAINTENANCE DATA

A. Submit 2 sets prior to final inspection, bound in 8-1/2 x 11 inch text pages with durable plastic covers.

B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE MANUAL" and title of project.

C. Internally subdivide the binder contents with permanent page dividers, logically organized, with tabs clearly printed under reinforced laminated plastic tabs.

D. Contents:
   1. Directory listing names, addresses, and telephone numbers of Engineer, Contractor, Subcontractors, and major equipment suppliers.
   2. Operation and maintenance instructions, arranged by system.
   3. Certificates.
   4. Shop drawings.
   5. Product data.
   6. Warranties.

1.42 GUARANTEES, BONDS, AFFIDAVITS, AND WARRANTIES

A. Provide duplicate notarized copies.

B. Execute and assemble documents from Subcontractors, suppliers, and manufacturers.

C. No contract will be finalized until all guarantees, performance tests, bonds, certificates, licenses, affidavits, and warranties required for Work or equipment as specified are satisfactorily filed with the Engineer.

D. Submit prior to final Application for Payment.

1.43 SPARE PARTS AND MAINTENANCE MATERIALS

A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.

B. Deliver to project site and place in locations as directed; obtain receipt prior to final payment.

PART 2. PRODUCTS

Not Used.

PART 3. EXECUTION

Not Used.

END OF SECTION

Contractor's Application for Payment

Owner:	City of Bryant	**Owner's Project No.:**	
Engineer:	McClelland Consulting Engineers, Inc.	**Engineer's Project No.:**	22-5738
Contractor:		**Contractor's Project No.:**	
Project:	Alcoa Park - Mills Park Trail (Bryant) (S), F.A.P. TAPU-9061(12), ARDOT Job No. 061807		
Contract:			
Application No.:		**Application Date:**	
Application Period:	**From**	**to**	

1. Original Contract Price					$ -
2. Net change by Change Orders					$ -
3. Current Contract Price (Line 1 + Line 2)					$ -
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)					$ -
5. Retainage					
a.		X	$ -	Work Completed	$ -
b.		X	$ -	Stored Materials	$ -
c. Total Retainage (Line 5.a + Line 5.b)					$ -
6. Amount eligible to date (Line 4 - Line 5.c)					$ -
7. Less previous payments (Line 6 from prior application)					
8. Amount due this application					$ -
9. Balance to finish, including retainage (Line 3 - Line 4)					$ -

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor:

Signature: **Date:**

Recommended by Engineer		**Approved by Owner**	
By:		**By:**	
Title:		**Title:**	
Date:		**Date:**	
Approved by Funding Agency			
By:		**By:**	
Title:		**Title:**	
Date:		**Date:**	

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Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner:	City of Bryant	**Owner's Project No.:**	
Engineer:	McClelland Consulting Engineers, Inc.	**Engineer's Project No.:**	22-5738
Contractor:		**Contractor's Project No.:**	
Project:	Alcoa Park - Mills Park Trail (Bryant) (S), F.A.P. TAPU-9061(12), ARDOT Job No. 061807		
Contract:			

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
Original Contract											
					-		-		-		-
					-		-		-		-
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					-		-		-		-
				Original Contract Totals	$ -		$ -	$ -	$ -		$ -

EJCDC C-620 Contractor's Application for Payment
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Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner:	City of Bryant	**Owner's Project No.:**	
Engineer:	McClelland Consulting Engineers, Inc.	**Engineer's Project No.:**	22-5738
Contractor:		**Contractor's Project No.:**	
Project:	Alcoa Park - Mills Park Trail (Bryant) (S), F.A.P. TAPU-9061(12), ARDOT Job No. 061807		
Contract:			

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
Change Orders											
					-		-		-		-
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					-		-		-		-
				Change Order Totals	$ -		$ -	$ -	$ -		$ -
Original Contract and Change Orders											
				Project Totals	$ -		$ -	$ -	$ -		$ -

EJCDC C-620 Contractor's Application for Payment
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Stored Materials Summary

Contractor's Application for Payment

Owner:	City of Bryant	**Owner's Project No.:**	
Engineer:	McClelland Consulting Engineers, Inc.	**Engineer's Project No.:**	22-5738
Contractor:		**Contractor's Project No.:**	
Project:	Alcoa Park - Mills Park Trail (Bryant) (S), F.A.P. TAPU-9061(12), ARDOT Job No. 061807		
Contract:			

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I	J	K	L	M
						Materials Stored			Incorporated in Work			
Item No. (Lump Sum Tab) or Bid Item No. (Unit Price Tab)	Supplier Invoice No.	Submittal No. (with Specification Section No.)	Description of Materials or Equipment Stored	Storage Location	Application No. When Materials Placed in Storage	Previous Amount Stored ($)	Amount Stored this Period ($)	Amount Stored to Date (G+H) ($)	Amount Previously Incorporated in the Work ($)	Amount Incorporated in the Work this Period ($)	Total Amount Incorporated in the Work (J+K) ($)	Materials Remaining in Storage (I-L) ($)
								-			-	-
								-			-	-
								-			-	-
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								-			-	-
					Totals	$ -	$ -	$ -	$ -	$ -	$ -	$ -

EJCDC C-620 Contractor's Application for Payment
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CHANGE ORDER NO.:

Owner:	City of Bryant	Owner's Project No.:	
Engineer:	McClelland Consulting Engineers, Inc.	Engineer's Project No.:	22-5738
Contractor:		Contractor's Project No.:	
Project:	Alcoa Park – Mills Park Trail (Bryant) (S), F.A.P. TAPU-9061(12), ARDOT Job No. 061807		
Contract Name:			
Date Issued:		Effective Date of Change Order:	

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments:

Change in Contract Price	**Change in Contract Times [State Contract Times as either a specific date or a number of days]**
Original Contract Price: $ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. **[Number of previous Change Order]**: $ _____	**[Increase] [Decrease]** from previously approved Change Orders No.1 to No. **[Number of previous Change Order]**: Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: $ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: $ _____	**[Increase] [Decrease]** this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: $ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

	Recommended by Engineer (if required)	Authorized by Owner
By:	_____	_____
Title:	_____	_____
Date:	_____	_____

	Authorized by Owner	Approved by Funding Agency (if applicable)
By:	_____	_____
Title:	_____	_____
Date:	_____	_____

EJCDC® C-941, Change Order.
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LIEN RELEASE

NAME OF GENERAL CONTRACTOR:

_____

PROJECT: ALCOA PARK – MILLS PARK TRAIL (BRYANT) (S), F.A.P. TAPU-9061(12), ARDOT JOB NO. 061807

ENGINEER'S PROJECT NUMBER: 22-5738

PAY REQUEST NUMBER: _____

The undersigned Contractor certifies that: (1) all previous progress payments received from OWNER on account of Work done under the Contract referred to above have been applied to discharge in full all obligations of CONTRACTOR incurred in connection with Work covered by prior Applications for Payment numbered 1 through _____ inclusive; (2) title to all Work, materials, labor, and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all (i.e., all stored materials, subcontracted work, labor, materials, equipment, and other items incorporated into Work have been paid to date by the Contractor) liens, claims, security interest, and encumbrances; and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and not *defective* as that term is defined in Contract Documents.

If it is found that material or work has not been paid as sworn on this document, the full amount of the unpaid payment shall be withheld from the next pay estimate, and a check will be prepared by the Owner, made out jointly to the Contractor and the payee for materials or work. The check will be mailed to the payee.

Signed this _____ day of _____, 20____.

Subscribed and Sworn to before me

_____
Contractor

this ____ day of _____, 20___.

By_____

Notary Public

Title_____

My commission expires the _____ day of _____, 20____.

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:	City of Bryant	Owner's Project No.:	
Engineer:	McClelland Consulting Engineers, Inc.	Engineer's Project No.:	22-5738
Contractor:		Contractor's Project No.:	
Project:	Alcoa Park – Mills Park Trail (Bryant) (S), F.A.P. TAPU-9061(12), ARDOT Job No. 061807		
Contract Name:			

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

Date of Substantial Completion:

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

The following documents are attached to and made a part of this Certificate:

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

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State of Arkansas
Arkansas Department of Labor
Arkansas Occupational Safety and Health

10421 WEST MARKHAM • LITTLE ROCK, AR 72205-2190
Phone: 501-682-9091 Fax: 501-682-4532 TRS: 800-285-1131

CONTRACT FOR EXCAVATION REPORTING FORM

This form must be completed by any public body (state agency, county, municipality, school district, or other local tax unit or improvement district) awarding a contract for a public construction project which will involve any trench or excavation of five feet (5') or more. *Arkansas Code § 22-9-212.*

Name of Public Agency:_____

Address of Public Agency:_____

Contact Person:_____Phone number:_____

Person Filing Report:_____

Name of General Contractor:_____

Address:_____Phone number:_____

Name of any subcontractor doing trenching or excavation;_____

Subcontractor address:_____Phone number:_____

Estimated start date:_____

Estimated completion date:_____

Site location/address/street/road:_____

Arkansas Code § 22-9-212 also requires that the current federal OSHA standard for excavation and trenching be incorporated into the project's specifications and that the contract bid form include a separate pay item for trench or excavation safety systems.

The Arkansas Department of Labor provides free training on trenching and excavation safety.

SEND NOTICE TO:

Arkansas Department of Labor
Safety Division
10421 West Markham Street
Little Rock, AR 72205-2190
(501) 682-9091
fax: (501) 682-4532
e-mail: mike.watson@arkansas.gov

STATE OF ARKANSAS
DEPARTMENT OF LABOR
ARKANSAS OCCUPATIONAL SAFETY & HEALTH

10421 WEST MARKHAM • LITTLE ROCK, AR 72205-2190
Phone: 501-682-9091 Fax: 501-682-4532 TRS: 800-285-1131

REPORTING FORM FOR WORK NEAR OVERHEAD HIGH VOLTAGE POWER LINES AND CONDUCTORS

This form must be completed by any person, firm, or corporation that desires to carry on any work or activity within ten feet (10') of overhead energized electrical lines or conductors. *Arkansas Code § 11-5-307*. The ten feet clearance applies to any part of any machinery, equipment or materials, as well as any employee or person.

Name of company or individual:_____

Address:_____Phone Number:_____

Name & title of person filing report:_____

Date work to be performed:_____

Expected date of completion:_____

Has the operator of the electrical lines been notified?_____

IMPORTANT

*Arkansas Code § 11-5-307 also requires written notice to the owner or operator of the electrical lines. You must also make appropriate arrangements with the operator of the electrical lines **before** proceeding with any work which would violate the ten feet clearance requirement.*

The Arkansas Department of Labor provides free training on working safely near high voltage lines.

SEND NOTICE TO:

Arkansas Department of Labor
Safety Division
10421 West Markham Street
Little Rock, AR 72205
(501) 682-9091
fax: (501) 682-4532
e-mail: mike.watson@arkansas.gov

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1. GENERAL

1.1 RELATED SECTIONS

A. Document 00300 - Bid.

B. Section 00700 - General Conditions.

C. Section 01001 - Basic Requirements.

1.2 MEASUREMENT OF QUANTITIES

A. All work completed under the contract will be measured by the Engineer, or his/her authorized representatives, using United States Customary Units of Measure or the International System of Units.

B. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

1.3 SCOPE OF PAYMENT

A. The Amount for Work listed in the Bid, whether lump sum or unit price, shall include all costs specified on the Bid Form, including all miscellaneous amounts (mobilization, demobilization, bonds, insurance, as built record drawings, traffic control, erosion control, plans and any items not covered elsewhere) to complete the project in accordance with the Contract Documents.

B. The quantities listed in these documents are approximate, for information only, and should be verified by each bidder prior to bidding

C. Payments for lump sum items shall be made in proportion to the amount of Work accomplished, as determined by the Engineer, as of the period ending date of each Application for Payment.

D. Payment for unit price items shall be made as the work progresses. Said payments will be based upon the work performed and materials complete in place in accordance with the contract, plans, and specifications, approved by the Engineer, as of the period ending date of each Application for Payment.

E. It is understood and agreed that the Contractor shall not be entitled to partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the Engineer to be a part of the final quantity for the item of work in question.

F. No partial payments shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment.

G. The Contractor has sole responsibility for providing materials, equipment and work which meet the specifications. In the event inspection or testing reveals that materials/equipment furnished or work performed by the Contractor does not meet the specifications, payment for said materials/equipment/work will be withheld until compliance with the specifications is demonstrated by the Contractor.

1.4 UNIT PRICE ITEMS

A. Item No. 1 – Clearing and Grubbing
   1. Unit of Measure: Station
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for clearing and grubbing in accordance with the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

B. Item No. 2 – Removal and Disposal of Asphalt Driveways
   1. Unit of Measure: Square Yard
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for the removal and disposal of asphalt driveways in accordance with the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

C. Item No. 3 – Removal and Disposal of Concrete Walks
   1. Unit of Measure: Square Yard
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for the removal and disposal of concrete walks in accordance with the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

D. Item No. 4 – Removal and Disposal of Pipe Culverts
   1. Unit of Measure: Each
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for the removal and disposal of pipe culverts in accordance with the Drawings and Specifications.
   3. The work shall be done per ARDOT Standard Specifications for Roadway Construction (Item No. 202) (2014 Edition).

E. Item No. 5 – Aggregate Base Course (Class 7)
   1. Unit of measure: Ton
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for aggregate base course (class 7) per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

F. Item No. 6 – Tack Coat
   1. Unit of Measure: Gallon
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for tack coat in accordance with the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

G. Item No. 7 – Mineral Aggregate in ACHM Binder Course (1 1/2”)
   1. Unit of measure: Ton
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for 1 1/2” mineral aggregate in ACHM binder course per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

H. Item No. 8 – Asphalt Binder (PG 64-22) in ACHM Binder Course (1 1/2”)
   1. Unit of measure: Ton
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for 1 1/2” asphalt binder in ACHM binder course per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

I. Item No. 9 – Portland Cement Concrete Driveway
   1. Unit of measure: Square Yard
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for installing Portland cement concrete pavement (10” uniform thickness) per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

J. Item No. 10 – Mobilization
   1. Unit of measure: Lump Sum
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for mobilization per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

K. Item No. 11 – Maintenance of Traffic
   1. Unit of measure: Lump Sum
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for maintenance of traffic per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

L. Item No. 12 – Signs
   1. Unit of measure: Square Foot
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for installation of signs per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

NN. Item No. 13 – Traffic Drums
   1. Unit of measure: Each
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for traffic drums per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

QQ. Item No. 14 – Removable of Permanent Pavement Markings
   1. Unit of measure: Linear Foot
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for removable of permanent pavement markings per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

RR. Item No. 15 – 18” Reinforced Concrete Flared End Sections
   1. Unit of measure: Each
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for installation of 18” reinforced concrete flared end sections per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

SS. Item No. 16 – 18” Reinforced Concrete Pipe Culverts (CL. 3)
   1. Unit of measure: Linear Foot
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for installation of 18” reinforced concrete pipe culverts per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

TT. Item No. 17 – 24” Reinforced Concrete Flared End Sections
   1. Unit of measure: Each
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for installation of 24” reinforced concrete flared end sections per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon).

UU. Item No. 18 – 24” Reinforced Concrete Pipe Culverts (CL. 3)
   1. Unit of measure: Linear Foot
   2. This item shall compensate the Contractor for materials, labor, tools, and equipment for installation of 24” reinforced concrete pipe culverts per the Drawings and Specifications.
   3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

VV. Item No. 19 – Selected Pipe Bedding
1. Unit of measure: Cubic Yard
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for selected pipe bedding per the Drawings and Specifications.
3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon).

WW. Item No. 20 – Water
1. Unit of measure: M. Gal.
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for water per the Drawings and Specifications.
3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon).

XX. Item No. 21 – Rock Ditch Checks
1. Unit of measure: Cubic Yard
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for rock ditch checks per the Drawings and Specifications.
3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

YY. Item No. 22 – Silt Fence
1. Unit of measure: Linear Foot
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for installation of silt fences for erosion control per the Drawings and Specifications.
3. The Contractor shall use best management practices for inspecting and maintaining silt fences, per the Storm Water Pollution Prevention Plan.
4. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

ZZ. Item No. 23 – Sediment Removal and Disposal
1. Unit of measure: Cubic Yard
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for sediment removal and disposal per the Drawings and Specifications.
3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

AAA. Item No. 24 – Solid Sodding, Bermuda (Includes Topsoil)
1. Unit of measure: Square Yard
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for solid sodding, Bermuda (includes topsoil) per the Drawings and Specifications.
3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

BBB. Item No. 25 – Concrete Walks

1. Unit of Measure: Square Yard
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for installation of concrete walks per the Drawings and Specifications.
3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon).

CCC. Item No. 26 – Hand Railing

1. Unit of Measure: Linear Foot
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for installation of hand railing per the Drawings and Specifications.
3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon).

ZZZ. Item No. 27 – Rectangular Rapid Flashing Beacon (RRFB)

1. Unit of Measure: Each
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for installation rectangular rapid flashing beacon per the Drawings and Specifications.
3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon.

AAAA. Item No. 28 – Thermoplastic Pavement Marking White (6”)

1. Unit of Measure: Linear Foot
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for 4” thermoplastic pavement marking white per the Drawings and Specifications.
3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon).

BBBB. Item No. 29 – Thermoplastic Pavement Marking Yellow (6”)

1. Unit of Measure: Linear Foot
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for 6” thermoplastic pavement marking yellow per the Drawings and Specifications.
3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon).

CCCC. Item No. 30 – Thermoplastic Pavement Marking White (12”)

1. Unit of Measure: Linear Foot
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for thermoplastic pavement marking white per the Drawings and Specifications.
3. The work shall be done per ARDOT Special Provision Rectangular Rapid Flashing Beacon).

DDDD. Item No. 31 – Pipe Bollards

1. Unit of Measure: Each
2. This item shall compensate the Contractor for all materials, tools, labor, and equipment required for installation of pipe bollards per the Drawings and Specifications.

PART 2. PRODUCTS

Not Used.

PART 3. EXECUTION

Not Used.

END OF SECTION

SECTION 02015

MAINTENANCE OF TRAFFIC

PART 1. GENERAL

1.1 SUMMARY

A. This item shall include the erection of signs and barricades, and the maintenance of, or non-interference with traffic in accordance with MUTCD and accepted practices or as directed by the Engineer.

PART 2. PROCEDURES

2.1 CITY NOTIFICATION

A. The Contractor is to notify the Fire Chief and Police Chief 24-hours before any city street is cut or barricaded.

B. After a street closure and barricade plan has been approved by traffic control, the Contractor must notify the city one (1) hour prior to the closing of the street. This notification shall not apply where only one lane of traffic is blocked or where there is an emergency situation. In emergencies such notice shall be given to Emergency Services as soon as reasonably possible.

C. Upon receiving notification, the City shall, in its discretion, notify the Police Department, Fire Department, and Emergency Medical Services of the times that the street is expected to be closed.

2.2 FLAGMAN

A. If, in the opinion of the City, traffic congestion warrants, the Contractor may be required to hire a Flagman to direct traffic and to maintain traffic control. The Contractor will be required to pay all costs for such traffic control as may be required.

2.3 DRIVEWAYS

A. Maintenance of driveways shall be as approved by the Engineer. It shall be the Contractor's responsibility to maintain adequate access to private and commercial property at all times, except as approved by the Engineer. During the construction of driveways or at any time that the property Owner cannot use his driveway, the Contractor shall notify the property owner when the driveway will be closed and the approximate length of time that it will be closed.

B. The intent of this section of the Specifications is to cause as little inconvenience as possible to private property owners.

PART 3. Not Used

END OF SECTION

SECTION 02200

SITE PREPARATION

PART 1. GENERAL

1.1 SUMMARY

A. Remove interfering or objectionable material from designated areas of Work.

B. Preserve vegetation and existing objects designated to remain from injury or defacement.

C. Cut trees only at direction of Engineer.

D. Contractor shall be responsible for implementing and following a Storm Water Pollution Prevention Plan as required by the Arkansas Department of Environmental Quality and in accordance with NPDES ARR150000. The successful Bidder (Contractor) shall develop a Storm Water Pollution Prevention Plan to meet all State and Federal regulations and submit to the Engineer for review and approval prior to commencing work.

1.2 DEFINITIONS

A. Clearing:
   1. Cutting, removing, and disposing of trees, snags, stumps, shrubs, brush, limbs, and other vegetative growth.
   2. Removing evidence of their presence from the surface, inclusive of sticks and branches greater than 2 inches in diameter or thickness.
   3. Removing and disposing of trash piles, rubbish, and fencing.

B. Grubbing:
   1. Removing and disposing of wood or root matter below the ground surface remaining after clearing.
   2. Includes stumps, trunks, roots, or root systems greater than 2 inches in diameter or thickness to a depth of 18 inches below the ground surface.

C. Stripping: Removing and disposing of organic sod, topsoil, grass and grass roots, and other objectionable material from the areas designated to be stripped that remain after clearing and grubbing.

1.3 RELATED SECTIONS

A. Section 02300 - Earthwork.

PART 2. MATERIALS

2.1 GENERAL

A. Provide materials, suitable and in adequate quantity, required to accomplish Work of this Section.

PART 3. EXECUTION

3.1 PREPARATION

A. Review with Engineer's representative the location, limits, and methods to be used prior to commencing Work under this Section.

3.2 CUTTING TIMBER

A. Exercise care when clearing near the clearing limits to avoid damage to existing trees, vegetation, structures, or utilities which are outside of the clearing limits.

B. Trees shall be leveled into the area to be cleared.

C. Flush cut stumps not designated for grubbing by cutting to within 2 inches of the ground surface.

D. Timber is the property of the Contractor.

E. Dispose of stumps, limbs, brush, snags, non-marketable timber, and other vegetative growth off-site.

3.3 PRESERVATION OF TREES, SHRUBS, AND OTHER VEGETATION

A. Trees, shrubbery, and other vegetation not designated for removal shall be protected from damage.

B. Cut and remove tree branches only where, in the opinion of the Engineer, cutting is necessary to effect construction operation.

C. Remove branches other than those required to effect the Work to provide a balanced appearance of any tree, as approved prior to removal.

D. Treat scars resulting from the removal of branches with an approved tree sealant.

3.4 CLEARING AND GRUBBING LIMITS

A. Clear and grub areas within the limits of construction.

B. Clear and grub in stages as the construction area is increased to avoid unnecessary clearing and grubbing.

3.5 DISPOSAL OF CLEARING AND GRUBBING DEBRIS

A. Haul the material from the Work site and dispose of in accordance with state, federal, and local laws. Off-site disposal shall be at the Contractor's sole expense.

3.6 AREAS TO BE STRIPPED

A. The exact depth of stripping shall be determined by the Engineer.

B. Topsoil requirements are specified in Section 02300.

C. Strip areas that are cleared and grubbed.

D. Strip areas in stages to avoid unnecessary stripping.

3.7 DISPOSAL OF STRIPPINGS

A. Do not mix strippings with borrow excavation.

B. Stockpile topsoil from the strippings for use in landscape grading.

C. Dispose of excess topsoil.

D. Strippings not suitable for use as topsoil shall become the property of the Contractor and shall be removed from the site.

END OF SECTION

SECTION 02231

CLEARING AND GRUBBING

PART 1. GENERAL

1.1 DESCRIPTION

A. Work shall consist of cutting, removing from the ground, and properly disposing of trees, stumps, hedge, brush, roots, logs, weeds, rubbish, sod refuse dumps, sawdust piles, lumbering slash, and other materials within the designated area.

B. The work shall also include selective clearing, preserving existing vegetation, scalping, and the preservation of objects designated to remain.

1.2 DEFINITIONS

A. Clearing - The removal of all trees, brush, and other objectionable growth, and the removal and disposal of logs, rubbish piles, refuse dumps, sawdust piles, lumbering slash, and other objectionable matter from the surface of the ground in the areas shown on the plans or as designated by the Engineer.

B. Grubbing - The grubbing and removal of all stumps, roots, and other objectionable matter, lying wholly or in part below the surface of the ground.

C. Selective Clearing - The trimming of selected trees and shrubs, the removal from the ground and disposal of logs, root pods, brush, refuse dumps, and other undesirable debris, and the cutting, removal, and disposal of all undergrowth, stumps, and standing trees, except those trees and shrubs designated to be preserved. The selective clearing areas will be shown on the plans.

D. Scalping - Areas not classified as clearing and grubbing and that are within construction limits shall be scalped, if appropriate. Scalping shall include the removal and disposal of material such as saplings less than 4-inches in diameter measured 12-inches above the ground, logs, brush, roots, grass, residue of agricultural crops, refuse dumps, and decayed matter.

E. Clearing and Grubbing Trees - The cutting, grubbing and removal of individual, isolated trees and stumps greater than 4-inches diameter measured 12-inches above the ground as shown on the plans or designated by the Engineer to be removed.

PART 2. MATERIALS

2.1 GENERAL

A. Provide materials suitable and in adequate quantity required to accomplish the work of this Section.

PART 3. EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

A. The project site shall be cleared as defined above, except those objects designated to remain shall be carefully protected from abuse, marring, or damage during construction operations.

B. Trees shall be felled and removed in such a manner as to avoid injury to other trees or objects designated to remain. In case of injury to bark, limbs, or roots of vegetation designed to remain, the Contractor shall repair such damage by corrective pruning or other appropriate methods. Trees or other debris falling outside the construction area shall be removed and disposed of according to these specifications.

C. Holes remaining after removal of trees, stumps, etc. shall be backfilled with material approved by the Engineer and compacted as directed except in areas to be excavated. The Contractor shall complete the operation by blading, bulldozing, or other approved methods so that the site shall be free of holes, ditches, or other abrupt changes in elevations that resulted from the clearing and grubbing operations.

3.2 CLEARING AND GRUBBING

A. The site shall be cleared of stumps, brush, logs, rubbish, trees, and shrubs, with the exception of such trees, shrubs, and areas designed on the plans or by the Engineer for preservation. Grubbing will not be required in areas that will have a fill height of 3-feet or more above disturbed stumps cut within 6-inches of the natural ground. Sound stumps may be left outside the construction limits when they are severed flush with or below the natural ground, or the slope line in areas to be rounded at the top of the back slopes.

B. Merchantable timber in the clearing area shall become the property of Contractor, unless otherwise provided.

C. When perishable material is burned, it shall be under the constant care of a competent watcher. Contractor is responsible for obtaining any and all permits for burning. Burning shall be accomplished at such times and in such manner that the surrounding vegetation, adjacent property, or anything designated to remain on the site will not be jeopardized. Upon notice from the Engineer that meteorological conditions render burning undesirable, the Contractor shall cease all burning until notified by the Engineer that meteorological conditions are suitable for a resumption of burning operations.

D. When specified, burning will not be permitted unless the material to be burned is placed in an incineration pit and an acceptable forced air combustion device is used that will minimize the emission of smoke, fly ash, and other pollutants. This device shall be constructed so that the forced air is directed over the fire by plenums or ducts. The use of open fans or mulch blowers will not be permitted.

E. The Contractor shall comply with all Federal, State, County, and City laws, regulations, or ordinances applicable to the disposal of clearing and grubbing material. Materials and debris that cannot be burned shall be removed from the project site and disposed of at locations off the project, outside the limits of view from any public road, street, park, or other public facility. The Contractor shall make all necessary arrangements with the property owner for obtaining suitable disposal locations.

F. Disposal operations and final cleanup of the site, including seeding and stabilization, shall comply with these specification requirements. When requested by the Engineer, the Contractor shall furnish copies of all agreements with property owners.

3.3 SELECTIVE CLEARING

A. This work shall be performed in such a manner as to leave the designated areas in a park-like condition and susceptible to economical mowing. Disposal of all material shall comply with the methods set out in the Clearing and Grubbing requirements.

B. Stumps, trees, and shrubs, except those designated to be preserved, shall be severed flush with or below the ground.

C. Movement and operation of equipment shall be such that roots, branches, and trunks of trees and shrubs selected for retention will not be scarred, broken, or otherwise damaged to the extent that the life of the plant is endangered.

3.4 PRESERVED VEGETATION

A. Trees, shrubs, brush, vines, and other natural perennial vegetation shall be protected in the areas designated as Preserved Vegetation.

B. Areas designated as Preserved Vegetation shall not be used for parking, storage, or other construction support activities that will damage vegetation or compact the soil. Care shall be taken to prevent spills of materials hazardous to vegetation such as oil, hydraulic fluid, salts, etc.. Erosion and sedimentation control shall be such that sediment is not deposited in depths greater than 2-inches within any portion of the Preserved Vegetation area.

C. Clearing and grubbing may be required through preserved vegetation areas for drainage outlets, channels, or other required construction.

3.5 SCALPING

A. The Contractor shall scalp areas where excavation or embankment is to be made, except that mowed sod need not be removed where the embankment to be constructed is more than 3-feet in height.

B. All suitable material resulting from the scalping operation shall be placed on finished slopes, adjacent to the area from which it is obtained, after excavation or embankment operations are complete.

C. Unsuitable material shall be disposed of as specified for Clearing and Grubbing.

END OF SECTION

SECTION 02300

EARTHWORK

PART 1. GENERAL

1.1 SUMMARY

A. Perform earthwork.

B. Meet requirements for excavation safety, or to facilitate construction due to wet conditions.

C. Perform excavation regardless of type, nature, or condition of materials encountered.

D. Contractor shall make his own estimate of the type and extent of the various materials to be excavated in order to accomplish the work.

E. There will be no extra compensation for dewatering.

1.2 RELATED SECTIONS

A. Section 01001 - Basic Requirements.

B. Section 02200 - Site Preparation.

C. Section 02315 - Trench Excavation, Backfill, and Compacting.

1.3 REFERENCES

A. Arkansas Department of Transportation, Standard Specifications for Highway Construction, latest edition.
   1. ARDOT Section 303 - Aggregate Base Course.

B. ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959 USA Phone: (610) 832-9585 Fax: (610) 832-9555.
   1. ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb Rammer and 12-in. Drop.
   2. ASTM D1556 - Test Method for Density of Soil in Place by the Sand-Cone Method.
   3. ASTM D1557 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 10 lb Rammer and 18-in. Drop.
   4. ASTM D2216 - Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil-Aggregate Mixtures.
   5. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
   6. ASTM D3017 - Test Method for Moisture Content of Soil and Soil-Aggregate in Place of Nuclear Methods (Shallow Depth).

C. Occupational Safety and Health Administration (OSHA) Standard for Excavation and Trenches Safety System, 29 CFR 1926, Subpart P: Excavations.

D. Arkansas Statute 291 of 1993.

1.4 DEFINITIONS

A. Relative Compaction:
   1. The ratio, in percent, of the as-compacted field dry density to the laboratory maximum dry density as determined by the Standard Proctor Test, ASTM D698, or as determined by the Modified Proctor Test, ASTM D1557, as applicable.
   2. Corrections for oversize material may be applied to either the as-compacted field dry density or the maximum dry density, as determined by the Engineer.

B. Optimum Moisture Content:
   1. Moisture content of the material for which the maximum dry density is obtained as determined by ASTM D698 or D1557.
   2. Field moisture contents shall be determined on the basis of the fraction passing the 3/4-inch sieve.

C. Completed Course: A course or layer that is ready for the next layer or the next phase of construction.

1.5 SUBMITTALS

A. Submit in accordance with Section 01001.

B. Provide the following:
   1. Samples of imported material.
   2. Samples of onsite material to be used as fill.
   3. Certification that imported materials conform to the Specification requirements along with copies of the test results from a qualified commercial testing laboratory.
   4. Proctor curves on fill material as prepared by approved laboratory.

1.6 PROJECT CONDITIONS

A. Beginning work of this Section means acceptance of existing conditions.

PART 2. PRODUCTS

2.1 FILL

A. Free from roots, organic matter, trash, and debris with maximum particle size of 1-1/2 inches.

B. It is intended that structural backfill material be obtained from on site to the maximum extent possible.

2.2 IMPORTED GRANULAR FILL

A. Provide granular fill beneath structures as noted on Drawings.

B. Imported granular fill to consist of a natural or artificial mixture of gravel and soil mortar, uniformly well graded from coarse to fine.

C. Conform to the ARDOT Section 303 classifications for Class 7 as designated on the Drawings.

2.3 TOPSOIL

A. Selected topsoil at the site, properly stored and protected, free from roots, sticks, hard clay, and stones which will not pass through a 2-inch square opening.

B. Provide imported topsoil of equal quality if required to accomplish the work.

2.4 COMPACTION EQUIPMENT

A. Provide compaction equipment of suitable type and adequate to obtain the densities specified.

B. Operate compaction equipment in strict accordance with the manufacturer's instructions and recommendations.

C. Hand-operated equipment shall be capable of achieving the specified densities.

2.5 MOISTURE CONTROL EQUIPMENT

A. Provide equipment for applying water of a type and quality adequate for the work; it shall not leak; and be equipped with a distributor bar or other approved device to assure uniform application.

B. Provide equipment for mixing and drying out material consisting of blades, discs, or other approved equipment.

2.6 WATER REMOVAL EQUIPMENT

A. Provide and operate equipment adequate to keep excavation and trenches free of water.

2.7 IMPORTED MATERIAL ACCEPTANCE

A. Import only if insufficient material is available on-site.

B. Locate and arrange use of a site near the construction area for obtaining borrow material.

C. Additional tests required at the borrow area:
   1. Standard Proctor.

2. Remolded permeability.
3. Atterberg limits.

D. Upon completion of removal of borrow material, grade the site to drain, place topsoil on disturbed areas, and establish grass.

E. Cost for testing and imported material shall be the responsibility of the Contractor.

2.8 SELECTED MATERIAL ACCEPTANCE

A. Provide samples for testing representative of the actual material to be installed in the work. Take samples from each 2,000 cubic yards of material stockpiled. Depending on the uniformity of the material, Engineer may request more frequent samples.

B. Forward test results to the Engineer at least 10 days before the material is required for use. If tests indicate that the material does not meet Specification requirements, the material shall not be installed in the work.

C. Material which is placed in the work but does not conform to the Specification requirements shall be removed and replaced at the Contractor's sole expense.

PART 3. EXECUTION

3.1 CLEARING AND GRUBBING

A. Complete clearing and grubbing work as specified in Section 02231 prior to beginning work in this Section.

3.2 STRIPPING TOPSOIL

A. Remove existing grass and overburden before excavating topsoil.

B. Prior to beginning excavation or fill, strip the topsoil to a depth of at least 6 inches or to a depth sufficient to remove organic material and stockpile for future use.

C. In general, remove topsoil where structures are to be built, trenches dug, and roads, parking lots, walks, and similar improvements constructed within the areas presently covered with topsoil.

D. Store topsoil clear of the construction area.

E. Take reasonable care to prevent the topsoil from becoming mixed with subsoil or eroding.

3.3 STRUCTURAL EXCAVATION

A. Contractor shall be solely responsible for trench and excavation safety systems in accordance with ACT 291 of 1993 and OSHA requirements.

B. Identify required lines, levels, and grades.

C. Identify known underground utilities. Contractor will be responsible for locating utilities.

D. The method of excavation is optional, however, no equipment shall be operated in a manner that will endanger existing structures and their integrity.

E. Use excavation support system such as sheet piling where ever necessary.

F. Allow for forms, working space, granular base, and finish topsoil where shown on Drawings or required.

G. Do not carry excavation for footings and slabs deeper than the elevation shown on Drawings after allowing for base material. Excavation of material to depths below the grades indicated, unless so directed by the Engineer or Owner's representative, will be deemed unauthorized excavation.

H. If undercutting occurs below the planned dirt grade, the same fill material as specified for backfill shall be placed and compacted to 100 Percent Standard Proctor Density as defined in this Section up to the planned dirt grade in 8 inch lifts, at no additional cost to the Owner. Do not attempt to over compact excessively wet soil. Allow to dry first by scarifying and aerating before remolding.

3.4 DEWATERING EXCAVATION

A. Remove water during periods when concrete is being deposited, pipe is being laid, and placing of backfill unless water settling is required, and at other times as required for efficient and safe execution of the work.

B. Accomplish removal of groundwater in a manner that will preserve the strength of the foundation soils, will not cause instability of the excavation slopes, and will not result in damage to existing structures.

C. Where necessary to these purposes, lower the water level in advance of excavation, utilizing wells, well points, or similar methods.

D. Maintain the water level in the gravel stratum as measured in piezometers, a minimum of 3 feet below the prevailing excavation level or as needed to prevent bottom heave of the excavation.

E. Open pumping, sumps, and ditches: If these result in boils, loss of fines, softening of the ground or instability of slopes, areas shall not be accepted.

F. Install wells and well points with suitable screens and filters so that continuous pumping of fines does not occur.

G. Operate well points continuously to prevent boils and loss of consolidation.

H. Arrange discharge to facilitate collection of samples by Engineer.

I. Avoid settlement or damage to adjacent property.

J. Dispose of water in a manner that will not damage adjacent property, as approved.

3.5 GRANULAR FILL MATERIAL UNDER FACILITIES

A. Place fill granular material as specified in this Section within the influence area beneath slabs, walks, structures, roads, and parking areas, and as shown on the Drawings.

B. Do not exceed loose lifts of 6 inches.

C. Compact each lift to not less than 95 Percent Modified Proctor Density.

D. Place and compact a 6-inch layer of granular fill to at least 95 Percent Modified Proctor density immediately beneath spread footings, slabs on grade, or other concrete structures.

E. Moisten material as required to aid compaction (± 2 percent optimum moisture).

F. Place material in horizontal lifts and in a manner to avoid segregation.

G. Correct and repair subsequent damage to slabs, piping, concrete structures, facilities, or other structures caused by settlement of fill material.

3.6 BACKFILL AND STRUCTURES

A. Remove form materials and trash from excavation before placing backfill.

B. Do not operate earth-moving equipment within 5 feet of walls of concrete structures for the purpose of depositing or compacting backfill material.

C. Compact backfill adjacent to concrete walls with hand-operated tampers or similar equipment that will not damage the structure.

D. Backfill water-holding basins only after satisfactory leakage tests have been conducted.

E. Place earth fill in areas not designated to be structural fill or granular fill.

F. Deposit material in maximum 6-inch loose lifts, and compact each lift to not less than 95 Percent Standard Proctor.

3.7 FILL NOT BENEATH STRUCTURES OR FACILITIES

A. Place earth fill to the lines and grades shown.

B. Place fill material in maximum 6-inch loose lifts and compact each lift to not less than 95 Percent Standard Proctor.

C. Make proper allowance for topsoil where required.

3.8 MOISTURE CONTROL

A. During compacting operations, maintain optimum practicable moisture content required for compaction purposes in each lift of fill.

B. Maintain moisture content uniform throughout the lift.

C. Add water to the material at the site of excavation. Supplement, if required, by sprinkling the fill.

D. At the time of compaction, maintain the water content of the material at optimum moisture content, plus or minus 2 percentage points, except as otherwise specified for embankments.

E. Do not attempt to compact fill material that contains excessive moisture.

F. Aerate material by blading, discing, harrowing, or other methods, to hasten the drying process.

3.9 FIELD DENSITY TESTS

A. Test Methods: ASTM D2922, D1556, D2216, and D3017.

B. Cooperate with testing work by leveling small test areas designated by the Engineer.

C. Backfill test areas.

D. Field density test shall be performed for every 3,000 cubic yards of fill material placed.

E. Engineer may order testing of lift of fill at any time, location, or elevation.

3.10 SITE GRADING

A. Perform earthwork to lines and grades as shown on Drawings with proper allowance for topsoil where specified or shown on Drawings.

B. Shape, trim, and finish slopes to conform with the lines, grades, and cross sections shown.

C. Slopes shall be free of loose exposed roots and stones exceeding 3-inch diameter.

D. Round tops of banks to circular curbs, in general, not less than a 6-foot radius.

E. Neatly and smoothly trim rounded surfaces; over-excavating and backfilling to the proper grade are not acceptable.

F. Finished site grading shall be reviewed by the Engineer.

3.11 DISPOSAL OF EXCESS EXCAVATION

A. Dispose of excess excavated materials, not required or suitable for use as backfill or fill, outside of the area of work.

B. Compact excess material as specified for fill, dress the completed disposal area to slopes no greater than 4:1 (horizontal:vertical), and slope to drain.

3.12 SETTLEMENT

A. Settlement in backfill, fill, or in structures built over the backfill or fill, that may occur within the 1-year guarantee period in the General Conditions shall be considered to be caused by improper compaction methods.

B. Restore structures damaged by settlement to original condition.

END OF SECTION

SECTION 02315

TRENCH EXCAVATION, BACKFILL, AND COMPACTING

PART 1. GENERAL

1.1 SUMMARY

A. Work of this Section also includes:
   1. Replacing topsoil that contains regenerative material.
   2. Disposal of trees, stumps, brush, roots, limbs, and other waste materials from clearing operations.
   3. Imported topsoil.
   4. Crush rock backfill required by over-excavation.
   5. Imported pipe zone material.
   6. Trench settlement repair, including replacing roadway surfacing, sidewalk, or other structures.
   7. Replacing damaged culverts.

B. Trench excavation is classified as common excavation and includes removal of material of whatever types encountered including rock to depths shown or as directed by Engineer.

C. Pipe zone includes full width of excavated trench from bottom of pipe to a point 6 inches above top outside surface of pipe barrel.

D. Conform to federal, state, and local codes governing safe loading of trenches with excavated material.

E. The right is reserved to modify the use, location, and quantities of the various types of backfill during construction as Engineer considers to be in the best interest of Owner.

F. There shall be no extra compensation for dewatering and rock excavation.

1.2 REFERENCES

A. Arkansas Department of Transportation, P.O. Box 2261, Little Rock, Arkansas 72203, latest edition.
   1. ARDOT 303 - Aggregate Base Course.

B. ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959.
   1. ASTM D448 - Classifications for Standard Sizes of Aggregate and Bridge Construction.
   2. ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5-lb. (2.49-kg.) Rammer and 12-inch (304.8-mm) Drop.
   3. ASTM D1557 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 10-lb. (4.54-kg.) Rammer and 18-inch (457-mm) Drop.

4. ASTM D2487 - Standard Classification of Soils for Engineering Purposes.
5. ASTM D2922 - Test Methods for Density of Soils and Soil-Aggregates in Place by Nuclear Method.

C. Occupational Safety and Health Administration (OSHA) Standard for Excavation and Trenches Safety System, 29 CFR 1926, Subpart P: Excavations.

D. The Contractor shall be solely responsible for trench and excavation safety systems in accordance with Act 291 of 1993.

PART 2. PRODUCTS

2.1 FOUNDATION STABILIZATION

A. Crushed gravel or crushed rock, free from dirt, clay balls, or organic material, well graded from coarse to fine, containing sufficient finer material for proper compaction, and meeting ASTM D448 Size No. 67 (Concrete Aggregate).

2.2 PIPE ZONE MATERIAL

A. Select material shall consist of fine loose earth or sand free from clods or rocks larger than 3/4 inches in dimension and of proper moisture content for maximum consolidation.

B. Crushed granular material conforming to ASTM D448, Size No. 67.

C. Washed stone bedding size 1/4-inch to 3/4-inch.

2.3 COMMON FILL MATERIALS

A. Material shall not contain pieces larger than 3 inches, and shall be free of roots, debris, or organic matter.

2.4 SELECT FILL MATERIALS

A. Class 7, Class 3, and Class 4 as established by Section 303 of Arkansas Department of Transportation Standard Specifications for Highway Construction.

B. ASTM Soil Classification GC as set forth in ASTM Designation D2487. On site material may be used, provided it is in accordance with ASTM D2487.

2.5 BEDDING MATERIAL

A. Pea gravel, sand, or other locally available bedding material, as approved.

2.6 TRENCH BACKFILL

A. Granular Backfill:
1. Natural or artificial mixture of gravel and soil mortar uniformly well graded from coarse to fine.

2. ARDOT Section 303 Class 3, Class 4, or Class 7 as specified in this Section.

2.7 PVC WATER AND SEWER PIPE TRENCH

A. See Drawings for trench details.

2.8 COMPACTION EQUIPMENT

A. Suitable type and adequate to obtain the amount of compaction specified.

B. Operate in strict accordance with manufacturer's instructions and recommendations and maintain in such condition so that it will deliver manufacturer's rated compactive effort.

2.9 IMPORTED TOPSOIL

A. Suitable sandy loam from an approved source.

B. Must possess friability and a high degree of fertility.

C. Free of clods, roots, gravel, and other inert material.

D. Free of quackgrass, horsetail, and other noxious vegetation and seed.

PART 3. EXECUTION

3.1 PREPARATION

A. Where clearing or partial clearing of right-of-way is necessary, complete prior to start of trenching.

B. Cut trees and brush as near to surface of ground as practicable, remove stumps, and pile for disposal.

C. Do not permit excavated materials to cover brush or trees prior to disposal.

3.2 PREVENT TRENCH WATER AND ANIMALS FROM ENTERING PIPE

A. When pipe laying is not in progress, including noon hours, open ends of pipe shall be closed; and no trench water, animals, or foreign material shall be permitted to enter the pipe.

3.3 DISPOSAL OF CLEARED MATERIAL

A. Dispose of material in such a manner to meet requirements of state, county, and local regulations regarding health, safety, and public welfare.

B. Dispose of nonflammable and flammable material off the construction site in an approved location.

C. Do not leave material on the Project site, shove onto abutting private properties, or bury in embankments or trenches.

3.4 REMOVAL OF OBSTRUCTIONS

A. Remove obstructions within trench area or adjacent thereto such as tree roots, stumps, abandoned piling, logs, and debris.

B. Engineer may, if requested, make changes in the trench alignment to avoid major obstructions, if such alignment changes can be made within the easement or right-of-way without adversely affecting the intended function of the facility.

C. Dispose of obstructions in accordance with this Section.

3.5 REMOVAL AND REPLACEMENT OF TOPSOIL

A. Where trenches cross lawns, garden areas, pasturelands, cultivated fields, or other areas on which reasonable topsoil conditions exist, remove topsoil for a depth of 6 inches for full width of trench to be excavated.

B. Use equipment capable of removing a uniform depth of material.

C. Stockpile removed topsoil at regular intervals, and do not mix with other excavated material.

D. Locate stockpiles so that material of one ownership is not transported and stockpiled on property of another ownership.

E. Minimum finished depth of topsoil over trenches: 5 inches.

F. Imported topsoil may be substituted for stockpiling and replacing topsoil.

G. Maintain finished grade of topsoil level with area adjacent to trench until final acceptance by Engineer.

H. Repair damage to adjacent topsoil caused by work operations.
   1. Remove rock, gravel, clay, and other foreign materials from the surface.
   2. Regrade.
   3. Add topsoil as required.

3.6 TRENCH WIDTH

A. Minimum width of unsheeted trenches where pipe is to be laid shall be 18 inches greater than the outside diameter of the pipe, or as approved.

B. Maximum width at top of trench will not be limited, except where excess width of excavation would cause damage to adjacent structures or property or cause undue stresses on the pipe.

C. Confine trench widths to dedicated rights-of-way or construction easements, unless special written agreements have been made with affected property owner.

3.7 EXCAVATION

A. Excavate trench to lines and grades shown or as established by Engineer with proper allowance for pipe thickness and for pipe base or special bedding when required.

B. If trench is excavated below required grade, correct with foundation stabilization material.

C. Place material over full width of trench in compacted layers not exceeding 6 inches deep to established grade with allowance for pipe base or special bedding.

3.8 PREPARATION OF TRENCH - LINE AND GRADE

A. Do not deviate more than ½ inch from line or ½ inch from grade. Measure for grade at the pipe invert, not at the top of the pipe, because of permissible variation in pipe wall thickness.

B. Grade the bottom of the trench by hand to the line and grade where the pipe is to be laid, with proper allowance for pipe thickness and for pipe base when specified or indicated.

C. Remove hard spots that would prevent a uniform thickness of bedding.

D. Check the grade with a straightedge and correct irregularities found.

E. The trench bottom shall form a continuous and uniform bearing and support for the pipe at every point between bell holes, except that the grade may be disturbed for the removal of lifting tackle.

3.9 SHORING, SHEETING, AND BRACING OF TRENCHES

A. Sheet and brace trench when necessary to prevent caving during excavation in unstable material or to protect adjacent structures, property, workers, and the public.

B. Increase trench widths accordingly by the thickness of the sheeting.

C. Maintain sheeting in place until pipe has been placed and backfilled at pipe zone.

D. Remove shoring and sheeting as backfilling is done in a manner that will not damage pipe or permit voids in backfill.

E. Conform to safety requirements of federal, state, or local public agency having jurisdiction for sheeting, shoring, and bracing of trenches; the most stringent of these requirements shall apply.

3.10 LOCATION OF EXCAVATED MATERIALS

A. Place excavated material only within construction easement, right-of-way, or approved working area.

B. Do not obstruct private or public traveled roadways or streets.

3.11 REMOVAL OF WATER

A. Provide and maintain ample means and devices to promptly remove and dispose of water entering trench during time trench is being prepared for pipe laying, during laying of pipe, and until backfill at pipe zone is completed.
   1. These provisions apply during the noon hour as well as overnight.
   2. Provide necessary means and devices, as approved, to positively prevent under water from entering the construction area of another contractor.

B. Dispose of water in a manner to prevent damage to adjacent property.

C. Drainage of trench water through the pipeline under construction is prohibited.

3.12 FOUNDATION STABILIZATION

A. When existing material in bottom of trench is unsuitable for supporting pipe, excavate unsuitable material.

B. Backfill trench to subgrade of pipe base with foundation stabilization material specified.

C. Place foundation stabilization material over the full width of trench and compact in layers not exceeding 6 inches deep to required grade by making passes with a vibratory compactor (or equivalent).

D. Material shall be considered unsuitable when it contains more than 5 percent organic material by volumetric sampling or when it will not support a reading of 1.5 on a hand penetrometer.

3.13 ROCK IN PIPE TRENCH

A. Where rock is encountered in bottom of trench, support pipe on bedding material.

B. Minimum Bedding Thickness: Minimum of 4 inches or one eighth of the outside diameter of pipe, whichever is greater.

C. Extend bedding up pipe sides one sixth of outside diameter of the pipe, minimum.

D. Backfill over pipe according to pipe zone type.

3.14 PIPE ZONE BACKFILL

A. Depth of the pipe zone above pipe barrel varies with pipe material.

B. Particular attention must be given to area of pipe zone from flow line to centerline of pipe to ensure firm support is obtained to prevent lateral movement of pipe during final backfilling of pipe zone.

C. Backfill area of pipe zone from bottom of pipe to horizontal centerline of pipe by hand-placing material around pipe in 4-inch layers.

D. Achieve continuous support beneath pipe haunches by "walking in" and slicing with shovel.

E. Backfill area of pipe zone from horizontal centerline to top of pipe zone with pipe zone material as determined by class of backfill.

F. In lieu of selected material for pipe zone in upper portion of pipe zone, imported pipe zone material approved by Engineer for trench backfill may be substituted.

G. If the Engineer determines that the existing material is insufficient or unsuitable at trench side for selected material for pipe zone in upper portion of pipe zone, provide suitable material from other trench excavation along pipeline or imported pipe zone material.

3.15 TRENCH BACKFILL ABOVE PIPE ZONE

A. When backfill is placed mechanically, push backfill material onto slope of backfill previously placed and allow to slide down into trench.

B. Do not push backfill into trench in such a way as to permit free fall of material until at least 2 feet of cover is provided over top of pipe.

C. Under no circumstances allow sharp, heavy pieces of material to drop directly onto pipe or tamped material around pipe.

D. Do not use backfill material of consolidated masses larger than ½ cubic foot.

3.16 EXCESS EXCAVATED MATERIAL

A. Dispose of excess excavated material off project site in an approved area.

3.17 DRAINAGE CULVERTS

A. Replace drainage culverts which are removed on near right angles to pipe centerline.

B. If pipe cannot be reused or is damaged during removal, dispose of it and provide new pipe.

C. Protect culverts from damage or restore to equivalent condition.

D. Replace culverts to existing lines and grades.

E. Do not replace culverts until proposed pipeline is installed and backfill of trench has been completed to subgrade of culvert.

3.18 PIPE COVER

A. Place select material from excavation over pipe to provide minimum coverage, as shown on Drawings or as directed by Engineer.

3.19 DRAINAGE DITCH RESTORATION

A. Undercrossings of minor drainage ditches not covered in another Specification Section shall be backfilled so that upper 1 foot of material in ditch between ditch banks is clay.

B. Compact material for full ditch width by 6 passes of vibratory compactor (or equivalent).

C. Where indicated on Drawings, provide concrete arch, and/or riprap on ditch banks.

3.20 SETTLEMENT

A. Correct settlement noted in backfill, fill, or in structures built over backfill or fill within warranty period.

3.21 IMPORTED TOPSOIL

A. Should regenerative material be present in soil, remove both surface and root which appears in within 1 year following acceptance of Project in a manner satisfactory to Owner.

END OF SECTION

SECTION 02631

REINFORCED CONCRETE PIPE AND FITTINGS

PART 1. GENERAL

1.1 SECTION INCLUDES

A. Reinforced Concrete Pipe.

B. Pipe Joint Material.

C. Inlets and Junction Boxes.

1.2 RELATED SECTIONS

A. Section 02315 - Trench Excavation and Backfill.

1.3 REFERENCES

A. American Association of State Highway and Transportation Officials, 444 North Capitol Street, N.W., Suite 225, Washington, DC 20001.
   1. AASHTO M176 - Porous Concrete Pipe.

B. American Concrete Institute, 22400 W. Seven Mile Road, Detroit, Michigan 48219.
   1. ACI 301 - Specification for Structural Concrete for Buildings.

C. American Society for Testing and Materials, 1961 Race Street, Philadelphia, Pennsylvania 19103.
   1. ASTM C14 - Specification for Concrete Sewer, Storm Drain, and Culvert Pipe.
   2. ASTM C76 - Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
   3. ASTM C443 - Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets.
   4. ASTM C444 - Specification for Preformed Concrete Pipe.
   5. ASTM C478 - Specification for Precast Reinforced and Nonreinforced Masonry.

PART 2. PRODUCTS

2.1 PIPE

A. Reinforced Concrete Pipe:
   1. Class III or as shown on Drawings.
   2. Conform to ASTM C76.
   3. Joints shall conform to ASTM C990.

2.2 PIPE JOINT MATERIAL

A. Cold applied preformed plastic gaskets, AASHTO M198, Type B or Polymer modified asphalt sealants, AASHTO M198 75 1, Type B and ASTM C990.

B. Primer shall be per gasket manufacturer's recommendations.

2.3 MATERIALS FOR CAST-IN-PLACE CONCRETE

A. Design mix to attain minimum 3,000 psi compressive strength at 28 days.

PART 3. EXECUTION

3.1 INSTALLATION OF PIPE

A. Lay sections on properly compacted granular bedding (4-inch minimum) to lines and grades shown on Drawings.

B. Backfill with approved imported granular materials as specified in Section 02315.

C. Storm drains shall have a minimum cover of 24 inches.

D. Pipes (storm, sanitary, water) that cross each other with less than 1-1/2-foot clearance shall have a concrete encased intersection.

END OF SECTION

SECTION 02722

AGGREGATE BASE COURSE

PART 1. GENERAL

1.1 SUMMARY

A. This item shall consist of a foundation course for surface course, for other base courses, or for pavements.

B. It shall be constructed on the prepared subgrade, subbase, or other completed base course according to these specifications and in substantial conformity with the lines, grades, compacted thickness, and typical cross section shown on the plans.

PART 2. PRODUCTS

2.1 MATERIALS

A. Aggregate Base Course shall be either gravel and/or crushed stone so proportioned as to meet the requirements for a class of aggregate specified in the following table:

Sieve,mm	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8
				PERCENT PASSING				
75 (3")	100	100	100					
50 (2")	95-100	95-100	95-100					
37.5 (1-1/2")				85-100	100	100	100	
25.0 (1")								100
19.0 (3/4")	60-100	60-100	60-100	60-100	60-100	50-90	50-90	65-100
9.5 (3/8")	40-8-	40-80	40-80	40-80	40-80			
4.75 (#4)	30-60	30-60	20-60	30-60	30-60	25-55	25-55	25-55
2.0 (#10)	20-50	20-50	20-45	20-45	20-45			
0.425 (#40)	10-35	10-35	10-35	10-35	10-35	10-30	10-30	10-30
0.075 (#200)	3-15	3-15	3-12	3-12	3-12	3-10	3-10	3-10
MAX. PLASTICITY INDEX (MINUS								
0.425 MATL.)	13	10	6	6	6	6	6	6
(#40) MINIMUM PERCENT CRUSHED (RETAINED ON 4.75 mm [#4] SIEVE					15			
MINIMUM PERCENT CRUSHER-RUN MATERIAL						90	90	90

B. Class 7 and 8 shall be any mechanically crushed natural rock or stone of igneous, sedimentary, and/or metamorphic origin produced from a solid geological formation by quarrying method.

C. The Contractor shall have the option of using any higher numbered class Aggregate Base Course than that specified, provided that payment will be for the class specified.

D. Material furnished for Aggregate Base Course, Class 3 through Class 8, shall have a percent of wear by the Los Angeles Test not greater than 45 as determined by AASHTO T 96.

E. When it is necessary to blend two or more materials, each material shall be proportioned separately through mechanical feeders to ensure uniform production. Premixing or blending to avoid separate feedings will not be permitted. Production of material by blending materials on the roadway to obtain a mixture that will comply with the requirements specified herein will not be permitted.

F. For the purpose of this specification, shale and slate are not considered to be gravel or stone. The material furnished shall not obtain more than 5percent by weight of shale, slate, and other objectionable, deleterious, or injurious matter.

G. For Class 1 and 2 materials, the fraction passing the 0.075 mm (#200) sieve shall not be greater than three-fourths of the fraction passing the 0.425 (#40) sieve. For Classes 3 through 8, the fraction passing the 0.075 mm (#200) sieve shall not be greater than two-thirds of the fraction passing the 0.425 mm (#40) sieve. For Classes 3 through 8 the fraction passing the 0.425 mm (#40) sieve shall have a liquid limit not greater than 25.

H. To ensure that gravel is uniformly graded, the difference between the percent passing the various sieves shall be as follows for Classes 3, 4 and 5:

Sieve		**Percent**
19.0 mm - 9.5 mm	(3/4" - 3/8")	5 min.
9.5 mm - 4.75 mm	(3/8" - #4)	5 min.
4.75 mm - 2.00 mm	(#4 - #10)	5 min.
2.0 mm - 0.425 mm	(#10 - #40)	4 min.

I. When the material contains aggregate larger than that specified above for the class called for in the Contract, the oversize aggregate shall be removed by screening or by screening and crushing. The removal of large size aggregate by hand methods will not be permitted.

PART 3. EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

A. The base course material shall be placed on a completed and approved subgrade or existing base that has been bladed to substantially conform to the grade and cross section shown on the plans.

B. The subgrade shall be prepared as specified in Section 02300 - Earthwork, and shall be free from an excess or deficiency of moisture at the time of placing base course material.
   1. The subgrade shall also comply, where applicable, with the requirements of other items that may be contained in the Contract that provide for the construction, reconstruction, or shaping of the subgrade or the reconstruction of the existing base course.

C. Base course material shall not be placed on a frozen subgrade or subbase.

D. The aggregate shall be placed on the subgrade or other base course material and spread uniformly to such depth and lines that when compacted it will have the thickness, width, and cross section shown on the Drawings.

E. If the required compacted depth of the base course exceeds 150 mm (6 inches), the base shall be constructed in two or more layers of approximate equal thickness. The maximum compacted thickness of any one layer shall not exceed 150 mm (6 inches) except when vibrating or other approved types of special compacting equipment are used, the compacted depth of a single layer of base course may be increased to 200 mm (8 inches) upon approval of the Engineer.

F. The material shall be spread the same day that it is hauled. Spreading shall be performed in such a manner that no segregation of course and fine particles nor nests or hard areas caused by dumping the aggregate on the subgrade will exist. Care shall be taken to prevent mixing of subgrade or unspecified material with the base course material during the blading and spreading operation.

G. Aggregate shall not be dumped or mixed on an existing or newly constructed ACHM course or PCC Pavement that will not be overlaid under the same Contract nor on any open graded base course. Mechanical spreading equipment shall be used, if necessary, to place the base course on the subgrade.

H. If sufficient working space is not available to allow proper aeration or addition of water to the base, the base material shall be mixed by any satisfactory method before placement.

I. Each course shall be thoroughly mixed for the full depth of the course and shall be compacted by any satisfactory method that will produce the density thereinafter specified.
   1. The aggregate shall be maintained substantially at optimum moisture during the mixing, spreading, and compacting operations, water being added or the material aerated as may be necessary.
   2. The specified grade and cross section shall be maintained by blading throughout the compaction operation.
   3. The material in each course shall be compacted to a density, as determined by AASHTO T 238, Method B, of not less than 98 percent of the maximum laboratory density determined in the laboratory by AASHTO T 180, Method D.
   4. The aggregate shall be compacted across the full width of application.

J. The compacted base course shall be tested for depth and any deficiencies corrected by scarifying, placing additional material, mixing, reshaping, and recompacting to the specified density, as directed.

K. Where neither prime coat nor surfacing is provided in the same Contract with the base course, the material in the base course shall be uniformly compacted, stable, and free of segregated areas.

L. The Contractor shall maintain the base course in a satisfactory condition until accepted.

3.2 QUALITY CONTROL

A. To assure that the material used meets the requirements of the specifications, certain tests for quality control and acceptance will be performed as specified herein. The properties for which quality control and acceptance testing will be performed are gradation, density, moisture content, plasticity index, and thickness as specified in each Section.

B. The maximum laboratory density shall be determined as follows:

% Retained - 4.75 mm (#4) Sieve	Test Method
10 Max.	AASHTO T 99, Method A
11 - 30	AASHTO T 99, Method C
31 Min.	AASHTO T 180, Method D

Note: In lieu of AASHTO T224, correction for coarse particles retained on the 3/4" (19.0 mm) sieve shall be determined by replacing with an equal mass of material passing the 3/4" (19.0 mm) sieve and retained on the #4 (4.75 mm) sieve.

C. The in-place density shall be determined by using AASHTO T 310, Direct Transmission. The moisture content shall be determined by AASHTO T 310 or ARDOT Test Method 347 or 348. A new maximum laboratory density and optimum moisture will be determined whenever the Engineer deems necessary or upon evidence provided by the Contractor.

D. Tests for gradation, liquid limit, and plasticity index shall be performed by AASHTO T 11, T 27, T 89, and T 90.

E. The Contractor shall furnish all personnel, equipment, and facilities necessary to perform the required sampling and testing.

F. The Contractor shall provide the Engineer with the opportunity to observe all quality control sampling and testing.

G. All quality control sampling and testing shall be performed by or under the direct supervision of a technician acceptable to the Owner and in accordance with ARDOT's Manual of Field Sampling and Testing Procedures. Test reports shall be signed and copies made available to the Engineer if requested.

H. If the results of any test shows that the required minimum density has not been obtained, corrective action shall be taken, followed by a re-test at the same location. The original and re-test reports shall be cross referenced. All corrective actions shall be performed by the Contractor at no cost to the Owner.

3.3 ACCEPTANCE

A. Acceptance testing for thickness (when specified on the Drawings), gradation, plasticity index, density, and moisture content will be based on lots. The size of standard lots will be 100 cubic yards. Partial lots, of any size, may be established by the Engineer at any time.

B. Test methods for acceptance shall be the same as specified for quality control testing.

C. The item of work being tested shall not be considered complete or accepted until passing test reports are submitted to the Engineer.

D. The Contractor shall take one test for all properties in each lot or partial lot at a location randomly selected by the Engineer.

E. In addition to the required acceptance tests, the Engineer may require the Contractor to test any location that, by visual observation, appears to be defective.

F. The Contractor's acceptance sampling and testing procedures and results will be subject to independent assurance sampling and testing conducted by the Owner. The Contractor shall be required to make changes to the equipment and/or procedures if the such tests are unable to verify the Contractor's test results.

G. All acceptance testing performed by the Contractor is subject to observation by the Engineer. All test reports shall be signed and submitted to the Engineer the next business day after the tests are performed.

H. If a lot or a partial lot fails to meet the specifications, the Contractor shall remove and replace that lot or partial lot with acceptable material at no cost to the Owner. Tests will be performed on the replacement material as required for the original material. Acceptance of the replacement material will be the same as for the original material.

I. Payment for the quantity in the original lot will be withheld or recovered, and released after the removal and replacement has been acceptably performed.

END OF SECTION

SECTION 02748

PORTLAND CEMENT CONCRETE PAVING

PART 1. GENERAL

1.1 SUMMARY

A. Construction of concrete curbs, gutters, sidewalks, and streets.

1.2 RELATED SECTIONS

A. Section 02200 - Site Preparation.

B. Section 02300 - Earthwork.

C. Section 02315 - Trench Excavation, Backfill, and Compacting.

1.3 REFERENCES

A. American Concrete Institute, 22400 W. Seven Mile Road, Detroit, Michigan 48219.
   1. ACI 614.

B. American Society for Testing and Materials, 1961 Race Street, Philadelphia, Pennsylvania 19103.
   1. ASTM C94 - Specification for Ready-Mixed Concrete.
   2. ASTM C309 - Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
   3. ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5-lb (2.49-kg) Rammer and 12-in (304.8-mm) Drop.
   4. ASTM D994 - Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).

1.4 SUBMITTALS

A. Submit complete information regarding concrete mix to Engineer for review in accordance with the requirements of ASTM C94, Alternate 2.

PART 2. PRODUCTS

2.1 CURB FORMS

A. 2-inch dressed dimension lumber or metal of equal strength, free from defects that would impair appearance or structural quality of completed curb.
   1. Metal forms: Subject to approval of Engineer.

B. Short-Radius Forms: 1-inch dressed lumber or plywood.

C. Curb Face: No horizontal joints in form material closer than 7 inches from top of curb.

D. Stakes and Bracing Materials: Provide as required to hold forms securely in place.

2.2 SIDEWALK FORMS

A. 2-inch dressed lumber, straight and free from defects, or standard metal forms.

B. Short-Radius Forms: 1-inch dressed lumber or plywood.

C. Stakes and Bracing Materials: Provide as required to hold forms securely in place.

2.3 CRUSHED ROCK BASE

A. Clean gravel or crushed rock conforming to requirements for granular fill as specified in Section 02315.

2.4 EXPANSION JOINT FILLER

A. 1/2-inch thick preformed asphalt-impregnated expansion joint material conforming to ASTM D994.

2.5 CONCRETE

A. Ready mixed conforming to ASTM C94, Alternate 2.

B. Compressive Strength: 3,000 psi at 28 days.

C. Maximum Strength of Aggregate: 1-1/2-inch.

D. Slump: 2 to 4 inches.

2.6 CURING COMPOUND

A. Liquid membrane-forming, clear or translucent, suitable for spray application.

B. Conform to ASTM C309, Type 1.

2.7 ACCEPTANCE OF MATERIALS

A. Materials shall be subject to inspection for suitability by the Engineer prior to or during incorporation into the work.

PART 3. EXECUTION

3.1 EXCAVATION AND BACKFILL

A. Excavate and backfill in accordance with Section 02315.

3.2 PREPARATION OF SUBGRADE

A. Bring the areas where curbs and sidewalks are to be constructed to required grade on undisturbed ground and compact by sprinkling and rolling or mechanical tamping.

B. As depressions occur, refill with suitable material and recompact until the surface is at the proper grade.

C. Compact subgrade on fill to 95 percent of maximum density at optimum moisture content as determined by ASTM D698.

3.3 PLACING CRUSHED ROCK BASE

A. After subgrade for sidewalks and curbs is compacted and at proper grade, spread at least 4 inches granular fill and compact to at least 95 percent of maximum density as determined by ASTM D698.

B. Sprinkle with water and compact by rolling or other method.

C. Top of compact granular fill shall be at proper level to receive concrete.

3.4 SETTING FORMS

A. Construct forms to the shape, lines, grades, and dimensions called for on the Drawings.

B. Stake wood or metal forms securely in place, true to line and grade.

C. Brace forms to prevent change of shape or movement in any direction resulting from the weight of the concrete during placement.

D. Construct short-radius curved forms to exact radius.

E. Tops of forms shall not depart from grade line more than 1/8 inch when checked with a 10 foot straightedge.

F. Alignment of straight sections shall not vary more than 1/8 inch in 10 feet.

G. Forms shall be cleaned and oiled thoroughly after each use and before concrete is placed.

3.5 CURB CONSTRUCTION

A. Construct curbs to line and grade shown or established by the Engineer, and conform to the details shown on Drawings.

B. Place, process, finish, and cure concrete in conformance with this Section and the applicable requirements of ACI 614. Wherever requirements differ, the more stringent shall govern.

C. Cast in uniform lengths of approximately 10 to 20 feet, except at closures where lengths may not be less than 6 feet.

D. Placement of Preformed Asphalt-Impregnated Expansion Joints:
   1. At intervals not exceeding 40 feet.
   2. Beginning and end of curved portions of the curb.
   3. Connections to existing curbs.

E. Contraction Joints:
   1. Place at intervals not exceeding 10 feet.
   2. Open type joint.
   3. Provide by inserting thin, oiled steel sheet vertically in fresh concrete to force coarse aggregate away from joint.
   4. Steel sheet shall be inserted the full depth of the curb.
   5. After initial set has occurred in the concrete and prior to removing the front curb form, steel sheet shall be removed with a sawing motion.

F. As soon as concrete has set sufficiently to support its own weight, remove the front form and finish all exposed surfaces.
   1. Finish top of curb with a steel trowel.
   2. Finish edges with a steel edging tool.
   3. Rub formed faces with burlap sack or similar device to produce a uniformly textured surface, free from form marks, honeycomb, and other defects.

G. Curing:
   1. Upon completion of finishing, apply approved curing compound to exposed surfaces of curb.
   2. Curing shall continue for a minimum of 5 days.

H. Backfilling Curb: Upon completion of curing period, but not before 7 days has elapsed since pouring the concrete, backfill the curb as specified in Section 02315.

I. Adjusting:
   1. Finished curb shall present a uniform appearance for both grade and alignment
   2. Remove curb sections showing abrupt changes in alignment or grade or that are more than 1/4 inch away from location as staked or that are defective for any reason.
   3. Construct new curb at Contractor's expense.

3.6 SIDEWALK CONSTRUCTION

A. Thickness of sidewalks shall a minimum of 4 inches or as shown on the Drawings, with a turned down edge. Concrete shall be placed true to grade to ensure that ponding of water will not occur.

B. Place, process, finish, and cure concrete in conformance with this Section and the applicable requirements of ACI 614. Where the requirements differ, the more stringent shall govern.

C. Placement of Preformed Asphalt Expansion Joints:
   1. Where sidewalk ends.
   2. Around posts, poles, or other objects protruding through the sidewalk.
   3. At maximum intervals of 15 feet.

D. Contraction Joints:
   1. Provide transversely to the walks.
   2. Saw cut weakened plane joints shall be straight and at right angles to the surface of the walk. Saw cuts shall be constructed midway between expansion joints to a depth of 25 percent of slab thickness. Saw cuts shall be performed within 24 hours of placement.

E. Reinforcing: 6 by 6 inch, No. 10 mesh shall be installed.

F. Finish:
   1. Broom surface with fine hair broom at right angles to length of walk and tool at edges, joints, and markings.
   2. Walks shall be scored at no less than 5-foot intervals and within 24 hours of concrete placement.

G. Curing:
   1. Upon completion of finishing, apply an approved curing compound to exposed surfaces.
   2. Protect sidewalks from damage for period of 7 days.

3.7 CONCRETE STREET PAVING

A. In areas shown to receive concrete paving on the Drawings, concrete shall be placed in accordance with Division 3 (Site Concrete Work).

END OF SECTION

SECTION 02767

THERMOPLASTIC PAVEMENT MARKING

PART 1. GENERAL

1.1 SUMMARY

A. Furnish and place thermoplastic pavement markings, including words, arrows and emblems of the color and type specified, and remove pavement markings, all according to these specifications and in conformity with the dimensions and at the locations shown on the plans or as specified.

B. Markings are to be placed under existing traffic conditions.

C. The work shall comply with the Manual on Uniform Traffic Control Devices except as modified by these specifications.

1.2 REFERENCES

A. Arkansas Department of Transportation (ARDOT) Standard Specifications for Highway Construction, latest edition.

B. Manual on Uniform Traffic Control Devices, latest edition.

PART 2. PRODUCTS

2.1 MATERIALS

A. The material used shall be a product especially compounded for traffic markings. Each container shall be clearly and adequately marked to indicate the color, weight, batch or lot number, and type of material.

B. White thermoplastic material, after drying, shall be pure white and free from dirt or tint, and shall comply with the Federal Highway Administration's standard white. The white color is to have a minimum reading of 75% relative to magnesium oxide when tested according to ARDOT Test Method 703.

C. Other colored thermoplastic material shall comply in color with the Federal Highway Administration's standard for that color. The material shall not change appreciably in its color and brightness characteristics after prolonged exposure to sunlight.

D. The material, when placed as a stripe, shall not be slippery when wet and it shall not lift from the pavement in freezing weather.

E. In its plastic state, the material shall not give off fumes that are toxic or otherwise injurious to persons on property. The material shall not break down or deteriorate if held at the plastic temperature for a period of 4 hours nor by reason of 4 re-heatings to the plastic temperature.

F. The material shall not deteriorate by contact with sodium chloride, calcium chloride, or other chemical formations on the roadway or streets, or because of the oil contact on pavement materials, or from oil droppings from traffic.

2.2 TEMPERATURE-VISCOSITY CHARACTERISTICS

A. The temperature-viscosity characteristics of the thermoplastic material shall remain consistent through 4 re-heatings and shall be the same from batch to batch. There shall be no obvious change in the color of the material as a result of up to 4 re-heatings or from batch to batch.

2.3 PIGMENTED BINDER

A. The pigmented binder shall be well dispersed and free from all skins, foreign objects, or other ingredients that will cause bleeding, staining, or discoloration. The pigment shall be evenly dispersed throughout the material. After application and proper drying time, material shall show no appreciable deformation nor discoloration under local traffic conditions and in air or road temperatures ranging from -18 degrees C (0EF) to 71 degrees C (160EF). The material shall not smear or spread under normal traffic conditions at temperatures below 71 degrees C (160EF).

B. The material shall not soften at 82 degrees C (180EF) when tested by ASTM E 28.

2.4 DRYING TIME

A. "Drying Time" shall be defined as the minimum elapsed time after application when the stripe shall have and retain the characteristics required in the preceding paragraphs. In addition, drying time shall be established by the minimum elapsed time after application when traffic will leave no impression or imprint on the applied marking. The drying time shall not exceed a characteristic straight-line curve, the limits of which are 2 minutes at 10 degrees C (50 F) and 15 minutes at 32 degrees C (90 F), measured at a maximum relative humidity of 70 percent.

B. The stripe shall maintain its original dimension and placement. The exposed surface shall be free of tack. Cold ductility of the material shall be such as to permit normal movement with the road surface without chipping or cracking.

C. The marking shall have a uniform cross section. The density and character of the material shall be uniform throughout its thickness and shall be completely reflectorized both internally and externally.

2.5 REFLECTORIZED BEADS

A. During manufacture, reflectorized beads shall be mixed into the material to the extent of not less than 40 percent nor more than 50 percent by weight of the material. The glass beads used in the intermix formulation and for the drop-on application shall meet AASHTO M 247 with a Type I gradation. The beads for intermix shall be uncoated. The drop-on beads shall be suitably treated to resist moisture and retain free flow properties.

2.6 MOISTURE RESISTANCE

A. Moisture resistance will be tested by ARDOT Test Method 702. Beads shall not be specially treated to enhance flotation. The beads shall be automatically applied at a minimum uniform rate of 39 kg (8 pounds) of glass beads to every 100 sq m (100 square feet) of surface.

PART 3. EXECUTION

3.1 GENERAL

A. The thermoplastic compound shall be screed or ribbon extruded to the pavement surface unless a specific application method is specified.

3.2 EQUIPMENT

A. The equipment used to apply the thermoplastic compound onto the pavement shall be suitably equipped for heating and controlling the flow of the material. The equipment shall be constructed to provide continuous mixing and agitation of the material. The conveying parts of the equipment, between the main material reservoir and applicator, shall be so constructed as to prevent accumulation and clogging. The equipment shall be constructed so that all mixing and conveying parts, up to and including the applicator, maintain the material at the plastic temperature. The thermoplastic material shall be dispensed at a temperature recommended by the manufacturer. The applicator shall include a cutoff device remotely controlled to provide clean, square stripe ends and to provide a method for applying skip lines.

B. The thermoplastic reservoir shall be insulated and equipped with an automatic thermostatic control to maintain the proper temperature of the material.

C. The thermoplastic machine shall comply with the requirements of the National Board of Fire Underwriters.

D. Beads applied to the surface of the completed stripe shall be applied by an automatic bead dispenser attached to the pavement marking equipment in such a manner that the beads are immediately dispensed upon the completed line. The bead dispenser shall be equipped with an automatic cutoff control, synchronized with the cutoff of the pavement marking equipment.

3.3 SURFACE PREPARATION

A. On pavements where no pavement markings exist or where the existing pavement markings are paint or thermoplastic and do not conflict with proposed pavement markings, blasting with water or sand or a combination thereof will be required to remove any curing compound, oxidized paint or thermoplastic, or dirt to ensure a good bond. This blasting is considered surface preparation.

B. Conflicting pavement markings that exist shall be removed by blasting with water and/or sand or by grinding. This blasting or grinding is considered pavement marking removal.

3.4 APPLICATION

A. Thermoplastic markings shall not be applied to the pavement when the pavement surface temperature is less than 10 degrees C (50 F) or when the pavement surface shows evidence of moisture.

B. The thickness of all thermoplastic markings above the roadway surface shall be 2.3 mm (90 mils) (a minimum of 446 kg/km [1584 pounds per mile] of 100 mm [4 inch] line). The thickness of the plastic will be measured by a device supplied by the Contractor during the course of the project capable of measuring the thickness of the plastic as installed on the pavement.

C. The minimum thickness, as required above, will be measured in the center of the line when gauged by the equipment described above. The minimum thickness 12 mm (1/2 inch) from the edges shall not be less than 75 percent of the thickness required in the center. Maximum thickness of markings is 5 mm (3/16 inch).

D. On concrete pavements, paint pavement markings according to Section 718 of the 1996 ARDOT Standard Specifications for Highway Construction, shall be applied as a primer for the thermoplastic markings, except where thermoplastic markings are to be applied over existing thermoplastic markings. A primer other than paint may be used when recommended by the thermoplastic manufacturer.

E. A primer is not required for asphalt pavements, but paint pavement markings complying with Section 718 of the 1996 ARDOT Standard Specifications for Highway Construction, may be used by the Contractor as a primer at no cost to the Owner.

F. Spotting of the center line and lane line locations, if required, shall be the responsibility of the Contractor. Establishment of no passing zone, if required, will be done by the Arkansas Department of Transportation and will be completed at such time as the Contractor begins work. Edge lines shall not be broken for driveways. The trace of the thermoplastic line shall be uniform.

G. The finished lines shall have well defined edges, shall be uniform in thickness, and shall be straight and true. No stripe shall be less than the specified width. Any corrections of variations in width or alignment of the stripes shall not be made abruptly. Lines that cannot be correct to meet these requirements shall be removed at the Contractor’s expense.

H. Line removal as specified on the plans shall be performed in such a manner that no conflicting pavement marking will be left in place. Removal of the pavement marking by a means that will gouge the surface will not be permitted.

END OF SECTION

SECTION 02770

CONCRETE CURBS AND SIDEWALKS

PART 1. GENERAL

1.1 SUMMARY

A. Construction of concrete curbs and sidewalks.

1.2 RELATED SECTIONS

A. Section 02315 - Trench Excavation, Backfill, and Compacting.

1.3 REFERENCES

A. American Concrete Institute, 22400 W. Seven Mile Road, Detroit, Michigan 48219.
   1. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete.

B. American Society for Testing and Materials, 1961 Race Street, Philadelphia, Pennsylvania 19103.
   1. ASTM C94 - Specification for Ready-Mixed Concrete.
   2. ASTM C309 - Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
   3. ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5-lb (2.49-kg) Rammer and 12-in (304.8-mm) Drop.
   4. ASTM D994 - Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).

1.4 SUBMITTALS

A. Submit complete information regarding concrete mix to Engineer for review in accordance with the requirements of ASTM C94, Alternate 2.

PART 2. PRODUCTS

2.1 CURB FORMS

A. 2-inch dressed dimension lumber or metal of equal strength, free from defects that would impair appearance or structural quality of completed curb.
   1. Metal forms: Subject to approval of Engineer.

B. Short-Radius Forms: 1-inch dressed lumber, plywood, or metal.

C. Curb Face: No horizontal joints in form material closer than 7 inches from top of curb.

D. Stakes and Bracing Materials: Provide as required to hold forms securely in place.

2.2 SIDEWALK FORMS

A. 2-inch dressed lumber, straight and free from defects, or standard metal forms.

B. Short-Radius Forms: 1-inch dressed lumber or plywood.

C. Stakes and Bracing Materials: Provide as required to hold forms securely in place.

2.3 CRUSHED ROCK BASE

A. Clean gravel or crushed rock conforming to requirements for granular fill as specified in Section 02315.

2.4 EXPANSION JOINT FILLER

A. 1/2-inch thick preformed asphalt-impregnated expansion joint material conforming to ASTM D994.

2.5 CONCRETE

A. Ready mixed conforming to ASTM C94, Alternate 2.

B. Compressive Strength: 3,000 psi at 28 days.

C. Maximum Size of Aggregate: 1-1/2-inch.

D. Slump: 2 to 4 inches.

2.6 CURING COMPOUND

A. Liquid membrane-forming, clear or translucent, suitable for spray application.

B. Conform to ASTM C309, Type 1.

2.7 ACCEPTANCE OF MATERIALS

A. All materials shall be subject to inspection for suitability, as the Engineer may elect, prior to or during incorporation into the work.

PART 3. EXECUTION

3.1 EXCAVATION AND BACKFILL

A. Excavate and backfill in accordance with Section 02315.

3.2 PREPARATION OF SUBGRADE

A. Bring the areas on which curbs and sidewalks are to be constructed to required grade on undisturbed ground and compact by sprinkling and rolling or mechanical tamping.

B. As depressions occur, refill with suitable material and recompact until the surface is at the proper grade.

C. Compact subgrade on fill to 95 percent of maximum density at optimum moisture content as determined by ASTM D698.

3.3 SETTING FORMS

A. Construct forms to the shape, lines, grades, and dimensions called for on the Drawings.

B. Stake wood or metal forms securely in place, true to line and grade.

C. Brace forms to prevent change of shape or movement in any direction resulting from the weight of the concrete during placement.

D. Construct short-radius curved forms to exact radius.

E. Tops of forms shall not depart from grade line more than 1/8 inch when checked with a 10-foot straightedge.

F. Alignment of straight sections shall not vary more than 1/8 inch in 10 feet.

3.4 CURB CONSTRUCTION

A. Construct curbs to line and grade shown or established by the Engineer, and conform to the details shown.

B. Place, process, finish, and cure concrete in conformance with this Section and the applicable requirements of ACI 614. Wherever requirements differ, the more stringent shall govern.

C. Placement of Preformed Asphalt-Impregnated Expansion Joints (1/2 inch thick):
   1. Beginning and end of curved portions of the curb.
   2. Connections to existing curbs.
   3. At drainage structures.

D. Contraction Joints: All contraction joints shall be formed by sawing unless otherwise specified, and filled with a commercially available silicone product approved by the Engineer.
   1. Contraction joints shall be constructed at 15 foot intervals.
   2. Contraction joints shall be 1/8 inch to 3/8 inch in width and 1-1/2 inch in depth.
   3. Contraction joints shall be constructed at right angles to the centerline and perpendicular to the surface of the curb and gutter.

4. When curb and gutter is constructed adjacent to, or on rigid pavement, the same joint layout for pavement shall be used, where practicable.

E. As soon as concrete has set sufficiently to support its own weight, remove the front form and finish all exposed surfaces.
   1. Finish top of curb with a steel trowel.
   2. Finish edges with a steel edging tool.
   3. Rub formed faces with burlap sack or similar device to produce a uniformly textured surface, free from form marks, honeycomb, and other defects.

F. Fill contraction joints with a commercially available silicone product approved by the Engineer.

G. Curing:
   1. Upon completion of finishing, apply approved curing compound to exposed surfaces of curb.
   2. Curing shall continue for a minimum of 5 days.

H. Backfilling Curb: Upon completion of curing period, but not before 7 days has elapsed since pouring the concrete, backfill the curb as specified in Section 02315.

I. Adjusting:
   1. Finished curb shall present a uniform appearance for both grade and alignment.
   2. Remove curb sections showing abrupt changes in alignment or grade or which are more than 1/4 inch away from location as staked or which are defective for any reason.
   3. Construct new curb at Contractor's expense.

3.5 SIDEWALK CONSTRUCTION

A. Thickness of sidewalks shall be as shown on the Drawings.

B. Place, process, finish, and cure concrete in conformance with this Section and the applicable requirements of ACI 614. Where the requirements differ, the more stringent shall govern.

C. Placement of Preformed Asphalt Expansion Joints (1/2 inch thick):
   1. Where sidewalk ends.
   2. Around posts, poles, or other objects protruding through the sidewalk.
   3. Drainage structures.
   4. Adjacent to curb and gutter

D. Transverse Joints:
   1. Joints shall be cut with a 1/4 inch joint at intervals not greater than the width of the walk being constructed, or as directed.

E. Finish:
   1. Broom surface with fine hair broom at right angles to length of walk and tool at all edges, joints, and markings.
   2. Edges shall be rounded in a 1/4 inch radius, including edges at joints.

F. Curing:
   1. Upon completion of finishing, apply an approved curing compound to exposed surfaces.
   2. Protection sidewalk from damage for period of 7 days.

END OF SECTION

SECTION 02924

SODDING

PART 1. GENERAL

1.1 SUMMARY

A. Provide slab sod, fertilizer, and water to establish and maintain grass. Owner shall provide access to water at no cost.

B. Planting Period: As recommended by sod producer for time of year, subject to Landscape Architect's approval.

1.2 REFERENCES

A. Federal Specifications.
   1. FS O-F-241 - Fertilizers, Mixed, Commercial.

1.3 DEFINITIONS

A. Weeds: Includes Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perrenial Sorrel, and Brome Grass.

1.4 REGULATORY REQUIREMENTS

A. Comply with regulatory agencies for herbicide composition.

1.5 QUALITY CONTROL

A. Grass that has been cut more than 48 hours before placing shall not be used.

B. Sod shall not be loaded in bulk on vehicles and dumped in bulk on planting site.

C. Soil Analysis: For each un-amended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory approved by the Landscape Architect prior to setting Sod. Cooperative Extension Service is an acceptable soil testing lab.
   1. The soil-testing laboratory shall oversee soil sampling.
   2. Report suitability of tested soil for turf growth.
      a. State recommendations for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
      b. Report presence of problem salts, minerals, or heavy metals; if present, provide additional recommendations for corrective action.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver to site, store, and protect products at site.

B. Sod:
   1. Cut sod with approved sod cutters to minimum depth of 2-1/2 inches in satisfactory and uniform widths and convenient lengths for handling.
   2. Place cut sod flat, grass side up, on boards and haul to site with soil intact.
   3. Sod shall not hang over the edges of the boards.

C. Fertilizer: Deliver in waterproof bags showing weight, chemical analysis, and name of manufacturer.

PART 2. MATERIALS

2.1 TOPSOIL

A. Existing topsoil shall be reused where practical.

B. Imported Topsoil:
   1. Furnished at sole expense of Contractor.
   2. Friable loam free from subsoil, roots, grass, excessive amounts of weeds, stone, and foreign matter; acidity range (pH) of 5.5 to 7.5; and containing a minimum of 4 percent and a maximum of 50 percent organic matter.

2.2 SLAB SODDING

A. Type: Common Bermuda or as indicated on Landscape plans.

B. Certified nursery grade cultivated grass sod, 95 percent weed free.

C. Sod shall be live, fresh, and uninjured at time of placing.

2.3 FERTILIZER

A. FS O-F-241, Type and Grade as recommended for grass, with fifty percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil to the proportions of nitrogen, phosphoric acid, and soluble potash as recommended by County Extension Agent and/or seed manufacturer, subject to Engineer's approval.

2.4 WATER

A. Clean, fresh, and free of substances or matter which could inhibit vigorous growth of grass.

2.5 HERBICIDES

A. As recommended by sod producer and as approved by Landscape Architect.

PART 3. EXECUTION

3.1 PREPARATION

A. Fine grade to eliminate uneven areas and low spots. Allow for thickness of topsoil and sod.

B. Spread topsoil to minimum 4-inch depth and rake smooth.

3.2 FERTILIZING

A. Apply approximately 90 percent over entire area to receive slab sodding.

B. Apply remaining 10 percent over sod after placing and rolling.

3.3 SODDING

A. Upon delivery to site transfer sod from boards to soil surface.

B. Place slabs closely, leaving a minimum amount of space between slabs.

C. Use appropriate tools to pull together slabs that do not fit closely.

D. Do not handle sod by hand except when filling small cracks or at locations where it would be impractical to use boards.

3.4 ROLLING

A. Roll slab sod as soon after planting as practicable with plain rollers or cultipackers.

B. Tamp sod with approved hand methods where rolling is impractical.

3.5 MAINTENANCE

A. Water to prevent grass and soil from drying out.

B. Control growth of weeds.

C. Apply herbicides in accordance with manufacturer's instructions.

D. Remedy damage resulting from improper use of herbicides.

E. Immediately re-sod areas which show bare spots.

F. Protect sodded areas with warning signs during maintenance period.

END OF SECTION

APPENDIX

Contractor is responsible for adherence to all applicable Federal and State Laws and Regulations including, but not limited to, the following and any applicable amendments:

Ark Act 291 of 1993
Trench and Excavation Safety Systems

****

Code of Federal Regulations Title 29
website: http://ecfr.gpoaccess.gov/

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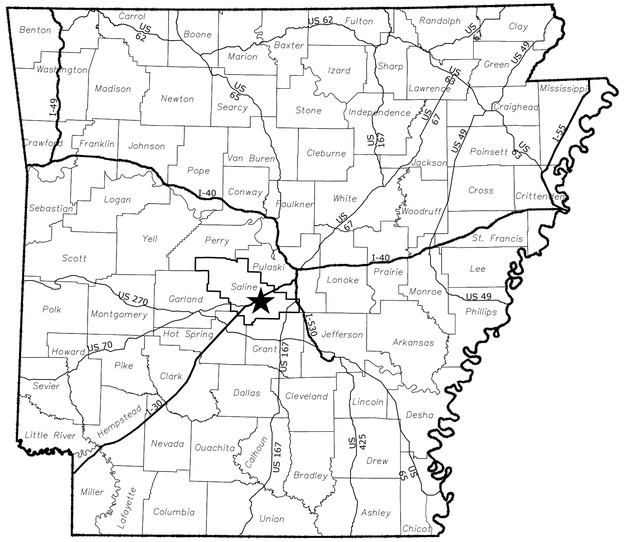
Arkansas State Licensing Law for Commercial Contractors
website: www.arkansas.gov/clb

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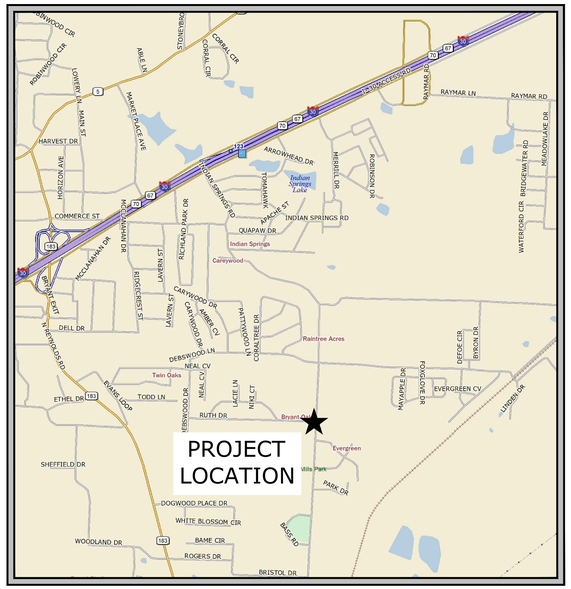
ALCOA PARK - MILLS PARK TRAIL (BRYANT) (S)

F.A.P. TAPU-9061(12)

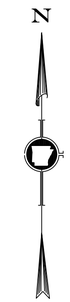
BRYANT, ARKANSAS



LOCATION MAP



VICINITY MAP



INDEX TO DRAWINGS

1	COVER SHEET
2	PROJECT OVERVIEW
3 - 4	TOPOGRAPHIC SURVEY
5	TYPICAL SECTIONS OF IMPROVEMENT
6 - 7	EROSION CONTROL DETAILS
8 - 9	MAINTENANCE OF TRAFFIC DETAILS
10 - 11	PERMANENT PAVEMENT MARKING DETAILS
12 - 14	QUANTITIES
15	SUMMARY OF QUANTITIES
16 - 18	SURVEY CONTROL DETAILS
19 - 22	PLAN & PROFILE SHEETS
23 - 27	CROSS SECTION SHEETS

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
DR-2	DETAILS OF DRIVEWAYS & ISLANDS	05-19-22
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PM-1	PAVEMENT MARKING DETAILS	02-27-20
SES-1	SAFETY END SECTION FOR CIRCULAR AND ARCH PIPES	10-18-96
SI-1	DETAILS OF SPECIAL ITEMS	10-25-18
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	11-07-19
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	05-20-21
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-12-21
TEC-1	TEMPORARY EROSION CONTROL DEVICES	11-16-17
TEC-3	TEMPORARY EROSION CONTROL DEVICES	11-03-94

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REVISIONS

REV	DATE	DESCRIPTION

PROJECT OVERVIEW

DESIGNED BY:	DRAWN BY:
JLW	JLW
DATE: 3/27/25	REVISION:
SCALE: 1" = 50'	JOB NUMBER: 22-5738

2

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SURVEYOR'S NOTES:

HORIZONTAL COORDINATES FOR THIS PROJECT ARE ARKANSAS STATE PLANE SOUTH ZONE NAD83AND ELEVATIONS ARE NAVD88 BASED ON THE ARDOT CONTINUOUSLY OPERATING REFERENCE STATIONS.

CONTOUR INTERVAL = 1 FOOT.

THIS IS A TOPOGRAPHIC SURVEY ONLY AND IN NO WAY SHOULD BE INTERPRETED AS A PROPERTY BOUNDARY SURVEY. ANY PROPERTY LINES SHOWN ARE FOR REFERENCE ONLY AND HAVE NOT BEEN VERIFIED.

FIELD WORK FOR THIS SURVEY WAS COMPLETED MAY, 2022.

NO STATEMENT IS MADE CONCERNING SUBSURFACE CONDITIONS.

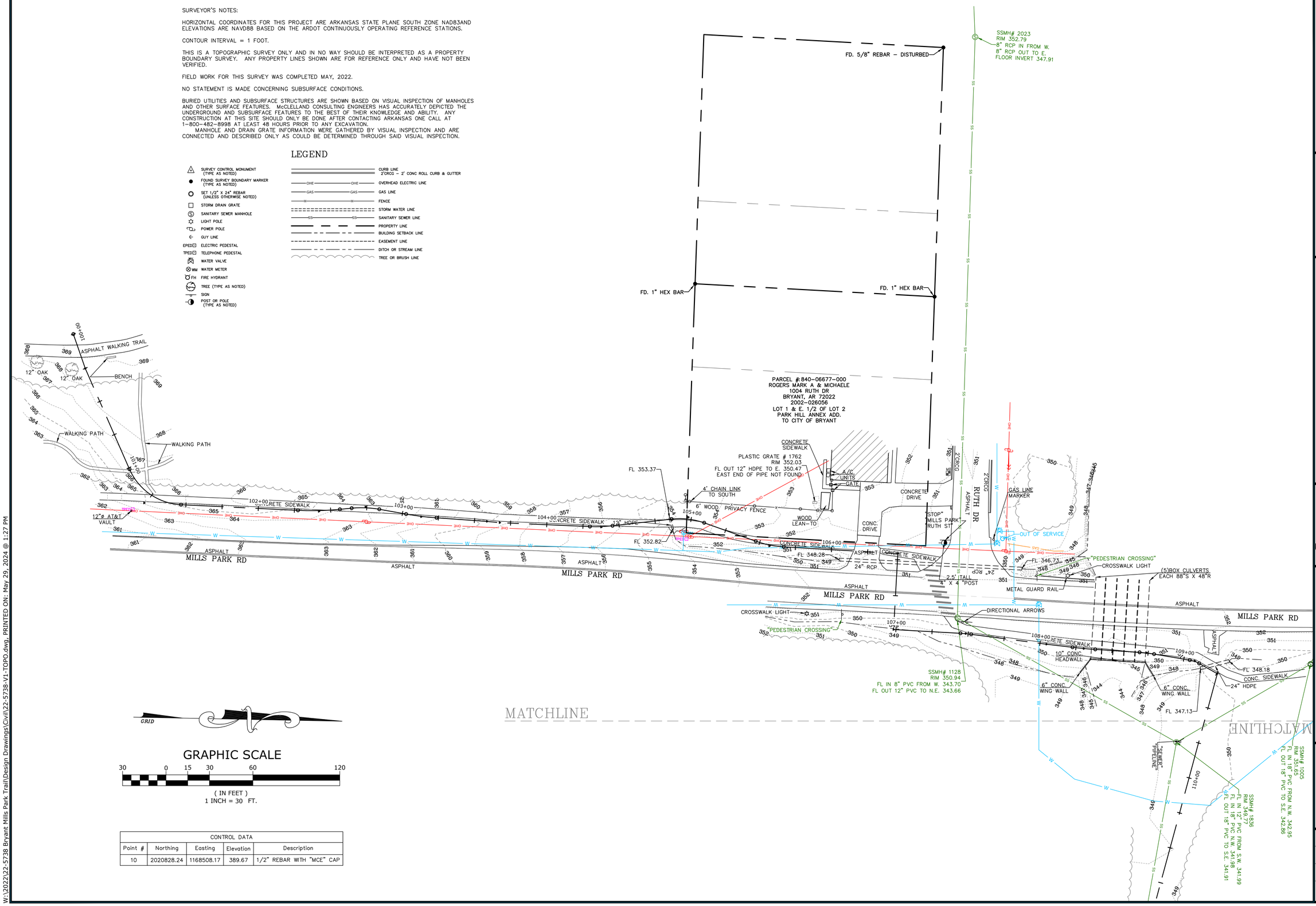
BURIED UTILITIES AND SUBSURFACE STRUCTURES ARE SHOWN BASED ON VISUAL INSPECTION OF MANHOLES AND OTHER SURFACE FEATURES. McCLELLAND CONSULTING ENGINEERS HAS ACCURATELY DEPICTED THE UNDERGROUND AND SUBSURFACE FEATURES TO THE BEST OF THEIR KNOWLEDGE AND ABILITY. ANY CONSTRUCTION AT THIS SITE SHOULD ONLY BE DONE AFTER CONTACTING ARKANSAS ONE CALL AT 1-800-482-8998 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.

MANHOLE AND DRAIN GRATE INFORMATION WERE GATHERED BY VISUAL INSPECTION AND ARE CONNECTED AND DESCRIBED ONLY AS COULD BE DETERMINED THROUGH SAID VISUAL INSPECTION.

LEGEND

- SURVEY CONTROL MONUMENT (TYPE AS NOTED)
- FOUND SURVEY BOUNDARY MARKER (TYPE AS NOTED)
- SET 1/2" X 24" REBAR (UNLESS OTHERWISE NOTED)
- STORM DRAIN GRATE
- SANITARY SEWER MANHOLE
- LIGHT POLE
- POWER POLE
- GUY LINE
- EPED ELECTRIC PEDESTAL
- TPED TELEPHONE PEDESTAL
- WATER VALVE
- WM WATER METER
- FH FIRE HYDRANT
- TREE (TYPE AS NOTED)
- SIGN
- POST OR POLE (TYPE AS NOTED)

- CURB LINE — 2'CRCG - 2' CONC ROLL CURB & GUTTER
- OHE — OVERHEAD ELECTRIC LINE
- GAS — GAS LINE
- FENCE
- STORM WATER LINE
- SS — SANITARY SEWER LINE
- PROPERTY LINE
- BUILDING SETBACK LINE
- EASEMENT LINE
- DITCH OR STREAM LINE
- TREE OR BRUSH LINE



GRID

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 INCH = 30 FT.

CONTROL DATA				
Point #	Northing	Easting	Elevation	Description
10	2020828.24	1168508.17	389.67	1/2" REBAR WITH "MCE" CAP

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BRYANT MILLS PARK

ALCOA PARK - MILLS PARK TRAIL (BRYANT) (S)

BRYANT, ARKANSAS

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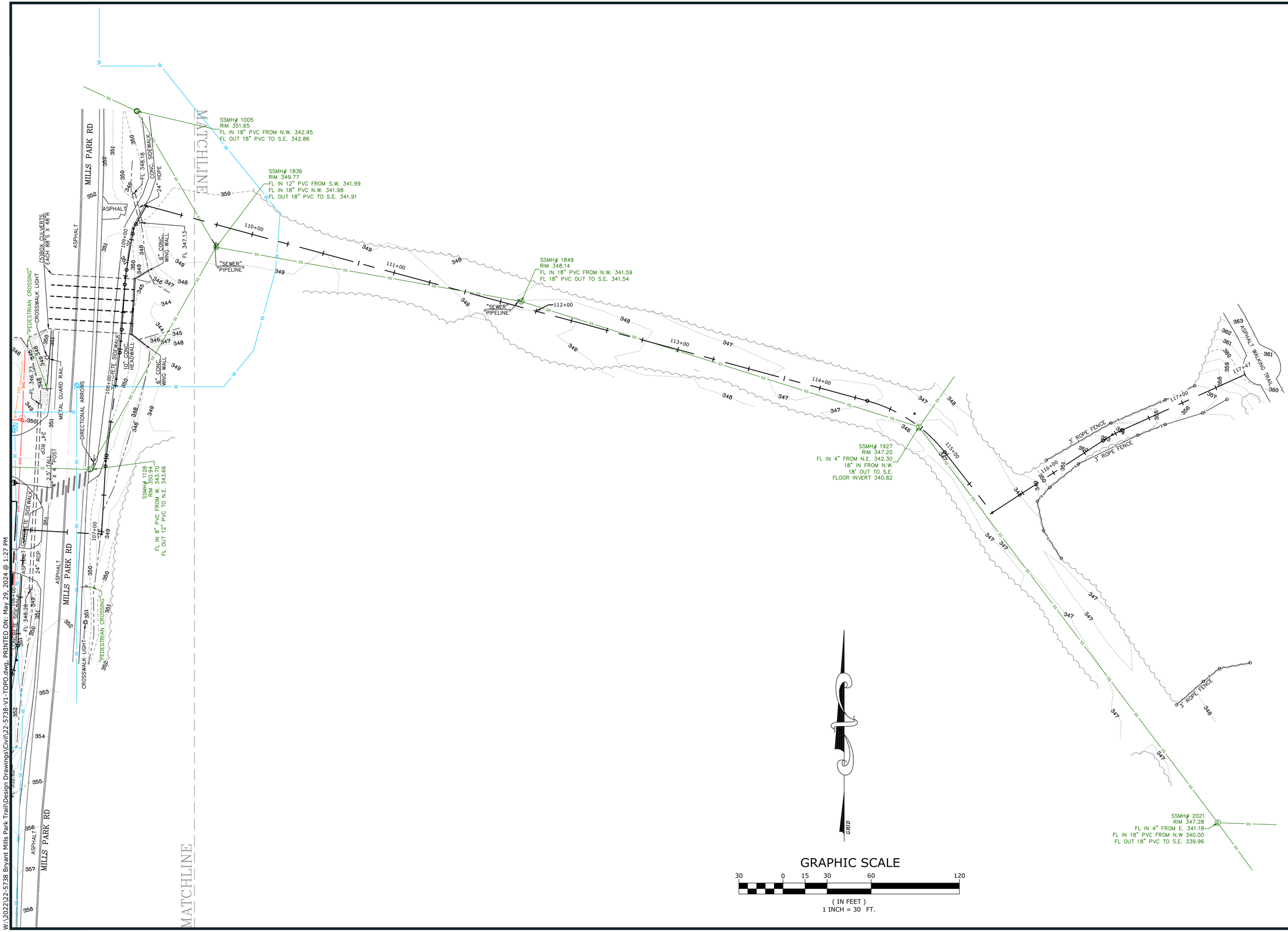
REVISIONS	DESCRIPTION	DATE	REV

TOPOGRAPHIC SURVEY

SURVEY MANAGER:	DRAWN BY :
awm	JDM
DATE:	REVISION:
06/06/2022	
SCALE:	JOB NUMBER:
1" = 30'	22-5738

3

W:\2022\22-5738 Bryant Mills Park Trail\Design Drawings\Civil\22-5738-V1-TOPO.dwg, PRINTED ON: May 29, 2024 @ 1:27 PM



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JOB NO. 061807

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REVISIONS

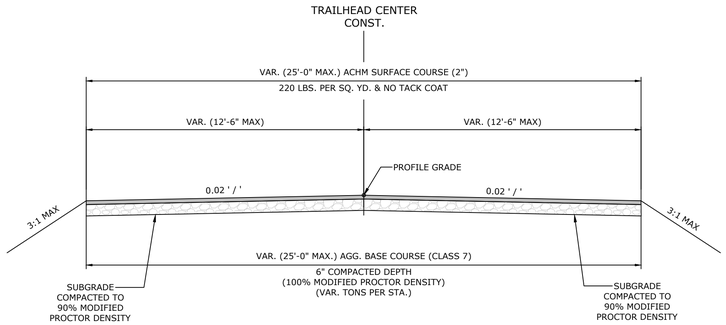
REV	DATE	DESCRIPTION

TOPOGRAPHIC SURVEY

SURVEY MANAGER:	DRAWN BY :
awm	JDM
DATE:	REVISION:
06/06/2022	
SCALE:	JOB NUMBER:
1" = 30'	22-5738

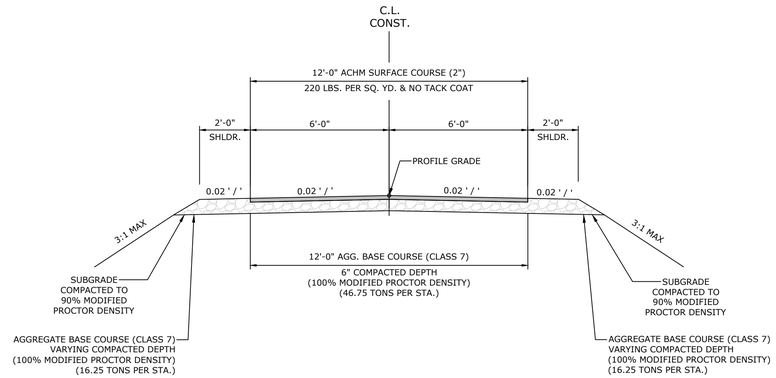
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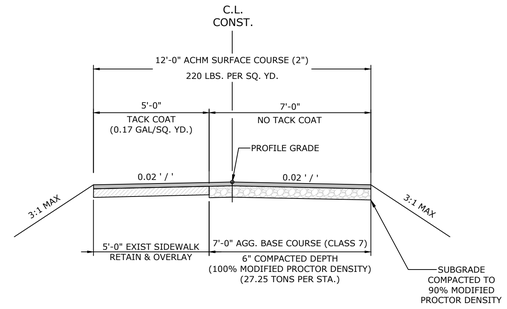
TRAILHEAD FULL DEPTH - TANGENT SECTION

(SHOWN IN DIRECTION OF STATIONING)
STA. 100+00.00 TO STA. 100+25.00
STA. 109+12.97 TO STA. 109+37.97
STA. 115+37.64 TO STA. 115+62.64



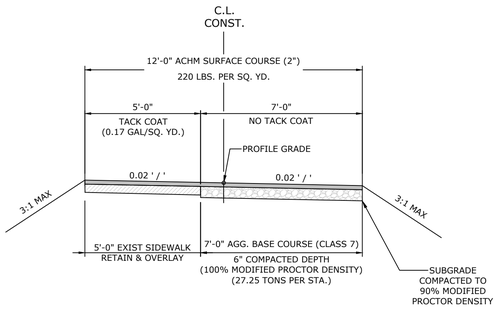
12' ASPHALT TRAIL W/ SHOULDERS FULL DEPTH - TANGENT SECTION

(SHOWN IN DIRECTION OF STATIONING)
STA. 100+25.00 TO STA. 101+46.59
STA. 107+04.41 TO STA. 107+52.02
STA. 109+37.97 TO STA. 115+37.64
STA. 115+62.64 TO STA. 117+46.85



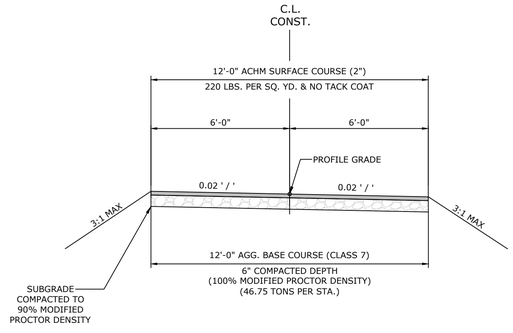
12' ASPHALT TRAIL MODIFIED & CROWNED FULL DEPTH - TANGENT SECTION

(SHOWN IN DIRECTION OF STATIONING)
STA. 101+46.59 TO STA. 102+13.73



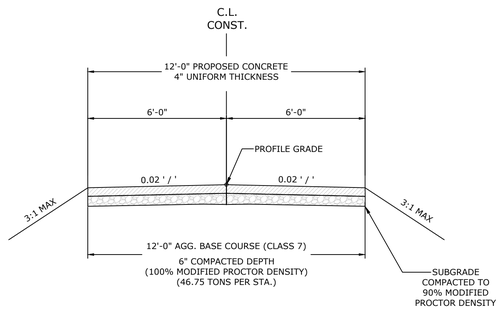
12' ASPHALT TRAIL MODIFIED & SLANTED FULL DEPTH - TANGENT SECTION

(SHOWN IN DIRECTION OF STATIONING)
STA. 102+13.73 TO STA. 102+27.39
STA. 103+23.71 TO STA. 104+29.79
STA. 105+66.93 TO STA. 106+17.30
STA. 107+52.02 TO STA. 108+35.19



12' ASPHALT TRAIL SLANTED NO SHOULDERS - TANGENT SECTION

(SHOWN IN DIRECTION OF STATIONING)
STA. 102+27.39 TO STA. 103+23.71
STA. 104+29.79 TO STA. 105+66.93
STA. 108+35.19 TO STA. 109+12.97



12' CONCRETE SECTION BY CROSSWALK FULL DEPTH - TANGENT SECTION

(SHOWN IN DIRECTION OF STATIONING)
STA. 106+17.30 TO STA. 106+52.02
STA. 106+87.08 TO STA. 107+04.41

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STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18021
JUSTIN L. TAYLOR, CLASS II
3-27-25

JOB NO. 061807
ALCOA PARK - MILLS PARK TRAIL (BRYANT) (S)
BRYANT, ARKANSAS

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REVISIONS

REV	DESCRIPTION	DATE

TYPICAL SECTIONS OF IMPROVEMENT

DESIGNED BY:	DRAWN BY:
JLW	JLW
DATE: 3/27/25	REVISION:
SCALE: N.T.S.	JOB NUMBER: 22-5738

W:\2022\22-5738 Bryant Mills Park Trail\Design Drawings\Civil\22-5738-DESIGN.dwg, PRINTED ON: March 27, 2025 @ 12:31 PM

EROSION CONTROL QUANTITIES:

SILT FENCE =	2625 LIN. FT.
SOLID SODDING =	1191 SQ. FT.
ROCK DITCH CHECKS =	21 CU. YD.

LEGEND

E-6 = SILT FENCE

E-11 = SILT FENCE

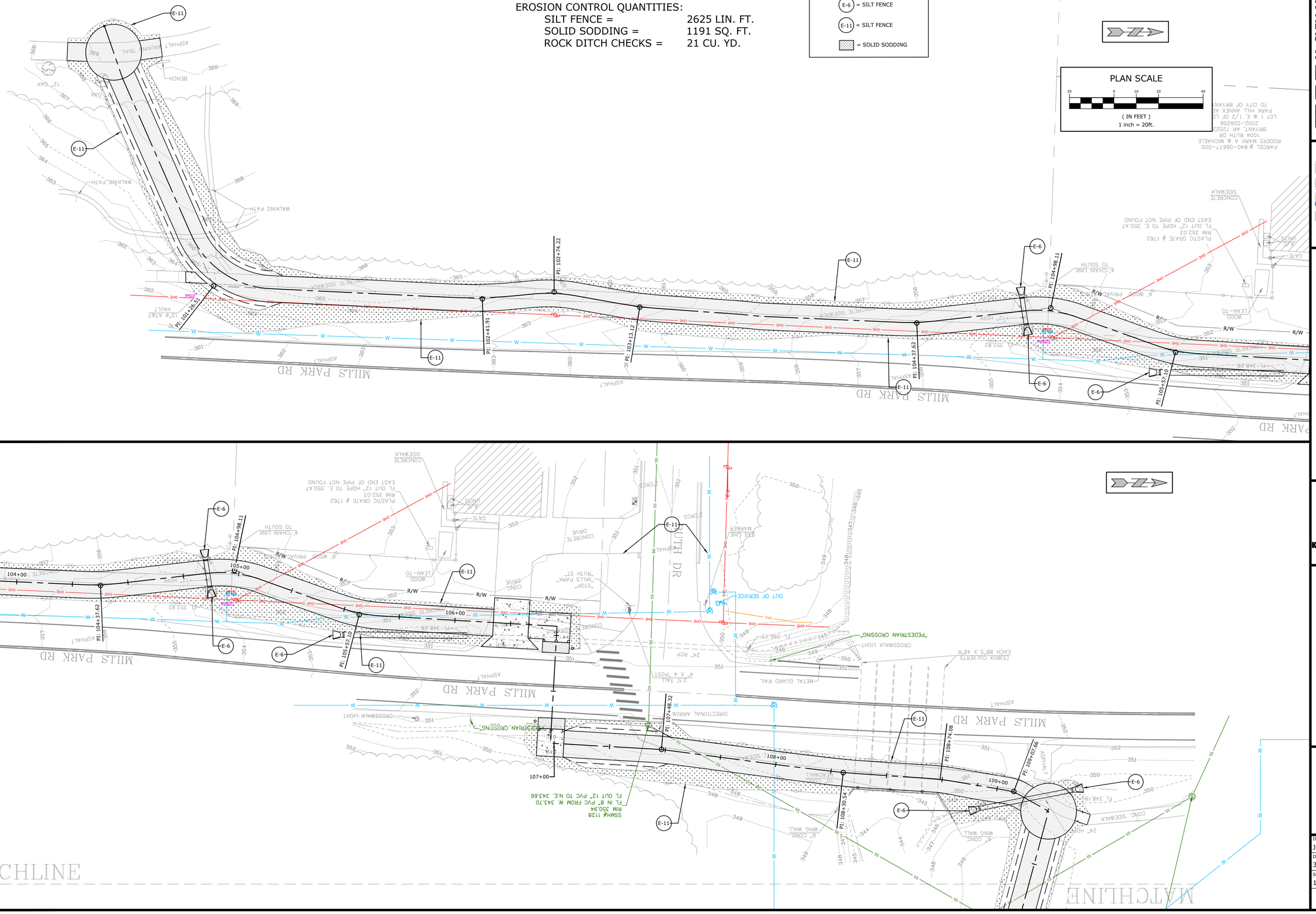
= SOLID SODDING

PLAN SCALE

20 0 10 20 40

(IN FEET)

1 inch = 20ft.



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TAYLOR CLARK
3-27-25

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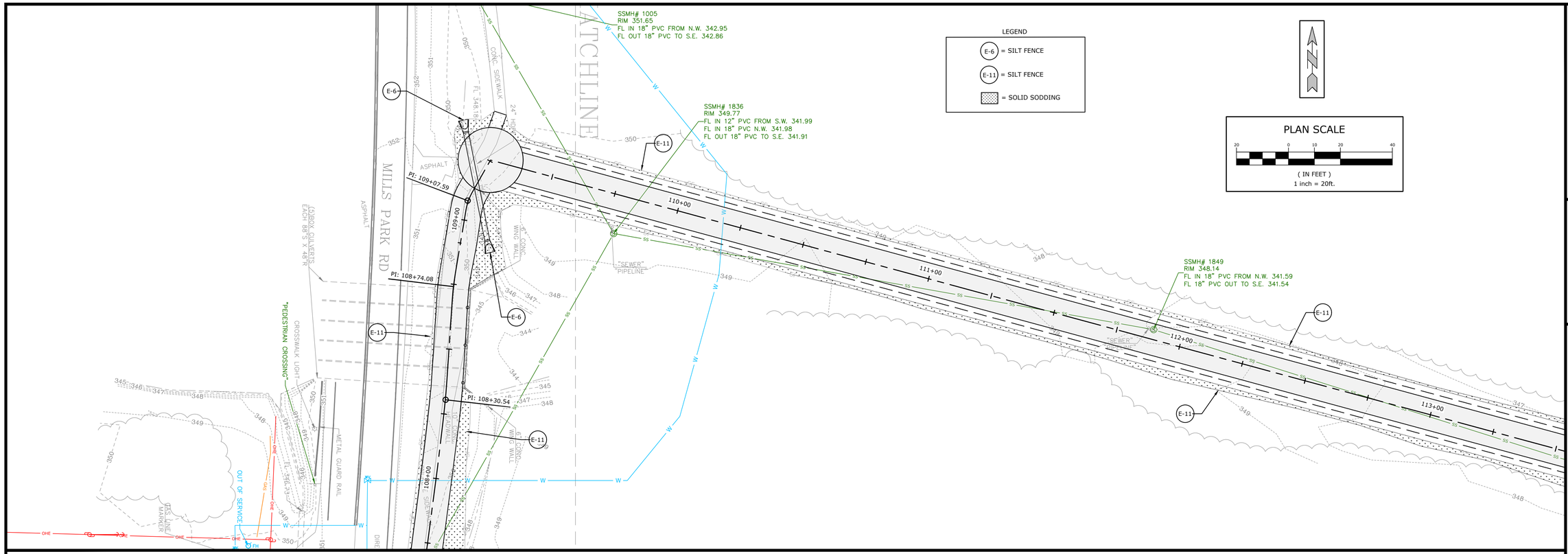
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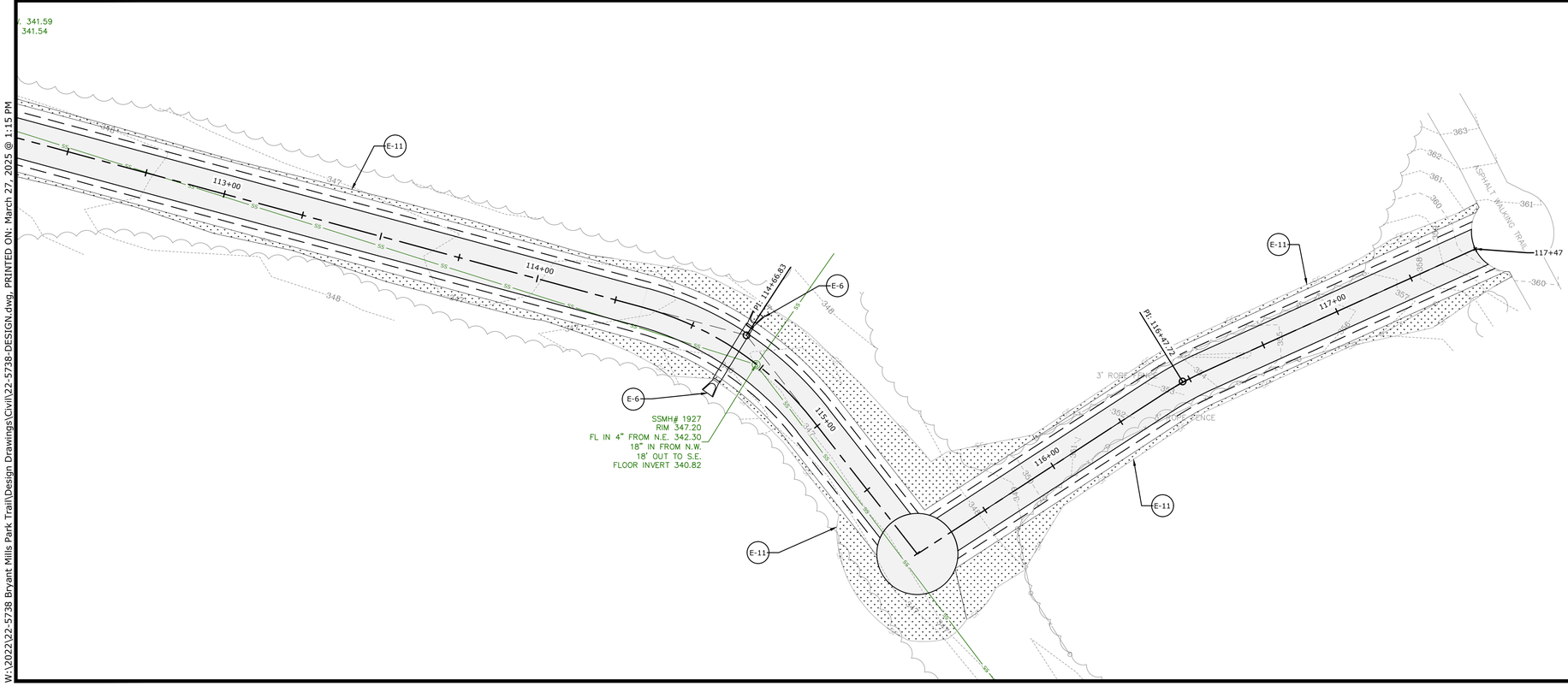
REVISIONS		
REV	DATE	DESCRIPTION

EROSION CONTROL DETAILS

DESIGNED BY: JLW	DRAWN BY: JLW
DATE: 3/27/25	REVISION:
SCALE: 1" = 20'	JOB NUMBER: 22-5738

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REV	DATE	DESCRIPTION

EROSION CONTROL DETAILS

DESIGNED BY:	DRAWN BY:
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DATE:	REVISION:
3/27/25	
SCALE:	JOB NUMBER:
1" = 20'	22-5738

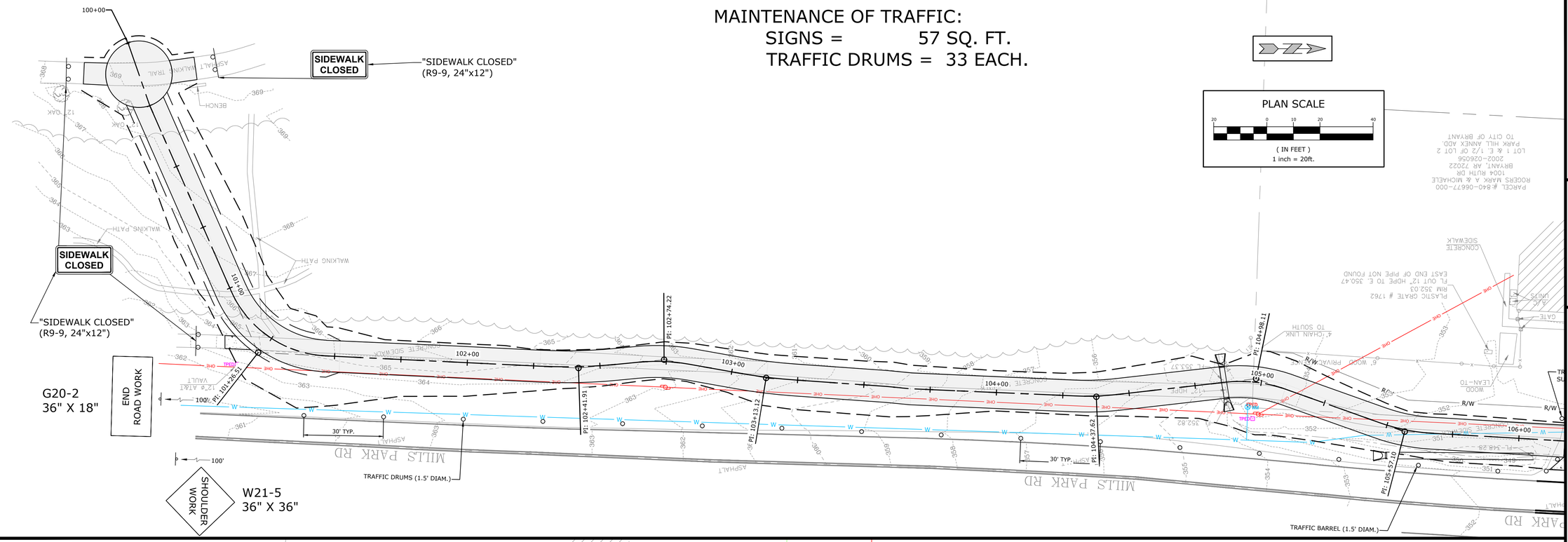
7

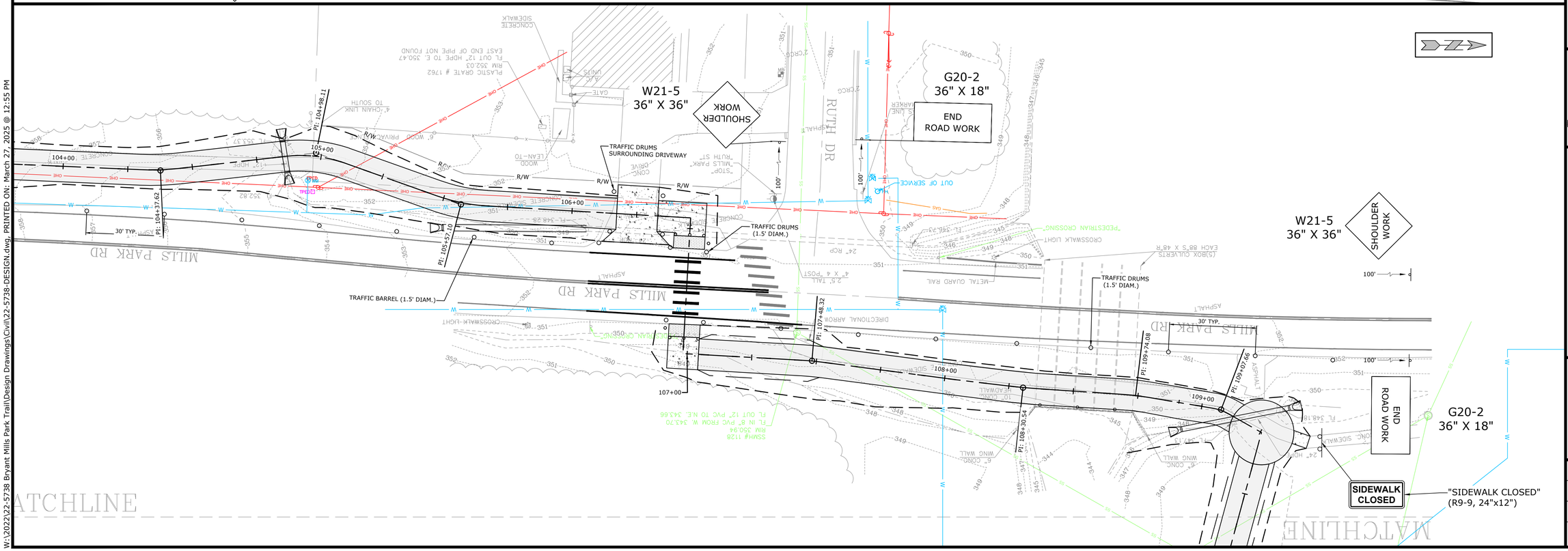
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MAINTENANCE OF TRAFFIC:

SIGNS = 57 SQ. FT.

TRAFFIC DRUMS = 33 EACH.





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REVISIONS	DESCRIPTION	DATE
REV		

MAINTENANCE OF TRAFFIC DETAILS

DESIGNED BY:	DRAWN BY:
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DATE: 3/27/25	REVISION:
SCALE: 1" = 20'	JOB NUMBER: 22-5738

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W21-5
36" X 36"

SHOULDER WORK

END ROAD WORK

G20-2
36" X 18"

SIDEWALK CLOSED

"SIDEWALK CLOSED" (R9-9, 24"x12")

SSMH# 1005
RIM 351.65
FL IN 18" PVC FROM N.W. 342.95
FL OUT 18" PVC TO S.E. 342.86

SSMH# 1836
RIM 349.77
FL IN 12" PVC FROM S.W. 341.99
FL IN 18" PVC N.W. 341.98
FL OUT 18" PVC TO S.E. 341.91

SSMH# 1849
RIM 348.14
FL IN 18" PVC FROM N.W. 341.59
FL OUT 18" PVC TO S.E. 341.54

PLAN SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20ft.

ATCHLINE

MILLS PARKWAY

ASPHALT

30' TYP.

PI: 109+07.59

PI: 108+74.08

PI: 108+30.54

TRAFFIC DRUMS (1.5' DIAM.)

"PEDESTRIAN CROSSING" CROSSWALK LIGHT

METAL GUARD RAIL

6' CONC. WING WALL

CONC. HEADWALL

"SEWER" PIPELINE

CONC. SIDEWALK

END ROAD WORK

OUT OF SERVICE

LANE DIVIDER

DIRECTIONAL ARROW

ASPHALT WALKING TRAIL

3' ROPE FENCE

FENCE

SSMH# 1927
RIM 347.20
FL IN 4" FROM N.E. 342.30
18" IN FROM N.W.
18" OUT TO S.E.
FLOOR INVERT 340.82

PI: 114+66.83

PI: 116+47.72

117+47

341.59
341.54

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REVISIONS

REV	DATE	DESCRIPTION

MAINTENANCE OF TRAFFIC DETAILS

DESIGNED BY:	DRAWN BY:
JLW	JLW
DATE:	REVISION:
3/27/25	
SCALE:	JOB NUMBER:
1" = 20'	22-5738

9

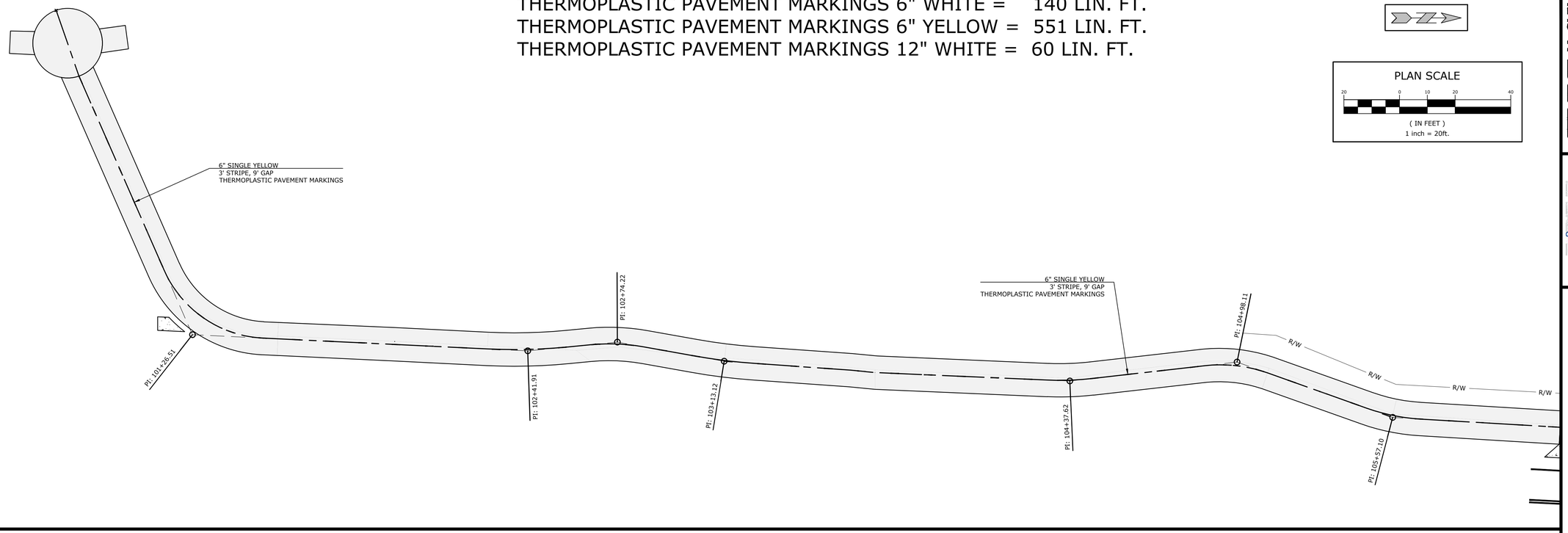
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PERMANENT PAVEMENT MARKINGS:

THERMOPLASTIC PAVEMENT MARKINGS 6" WHITE = 140 LIN. FT.

THERMOPLASTIC PAVEMENT MARKINGS 6" YELLOW = 551 LIN. FT.

THERMOPLASTIC PAVEMENT MARKINGS 12" WHITE = 60 LIN. FT.

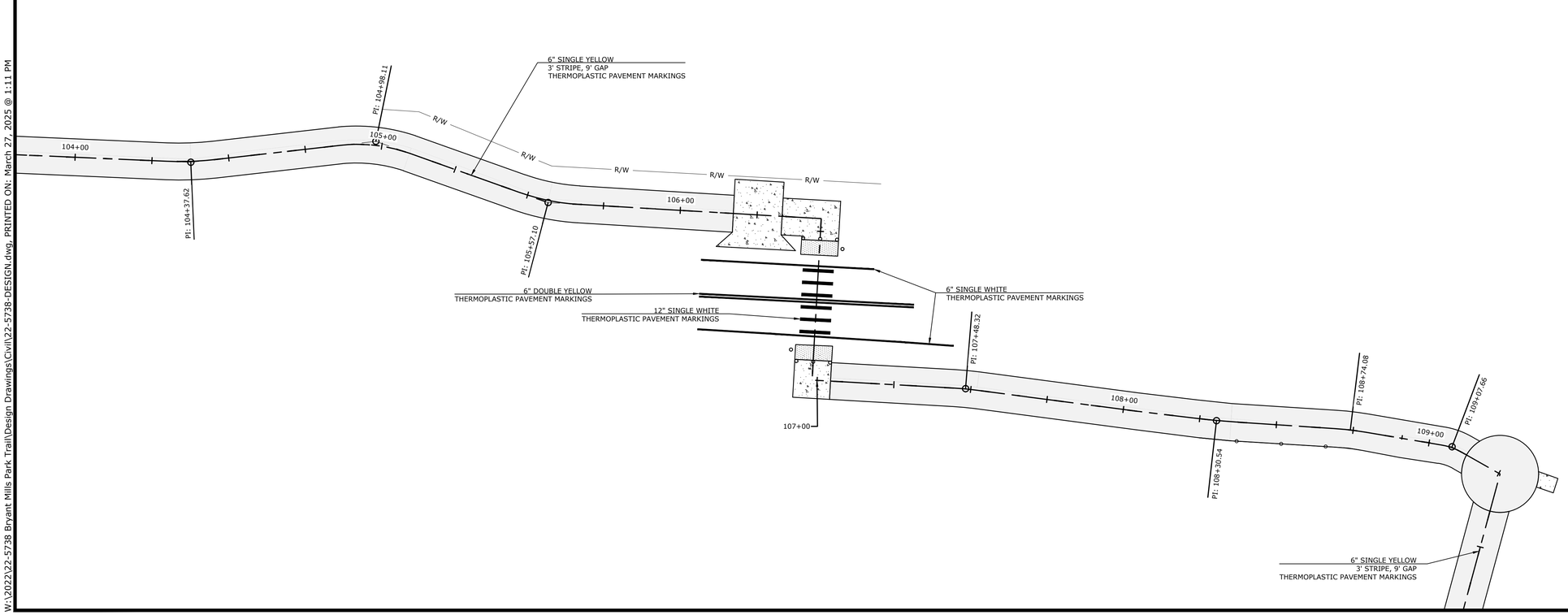


PLAN SCALE

20 0 10 20 40

(IN FEET)

1 inch = 20ft.



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JAYLEE W. TAYLOR, CLASS "A"
3-27-25

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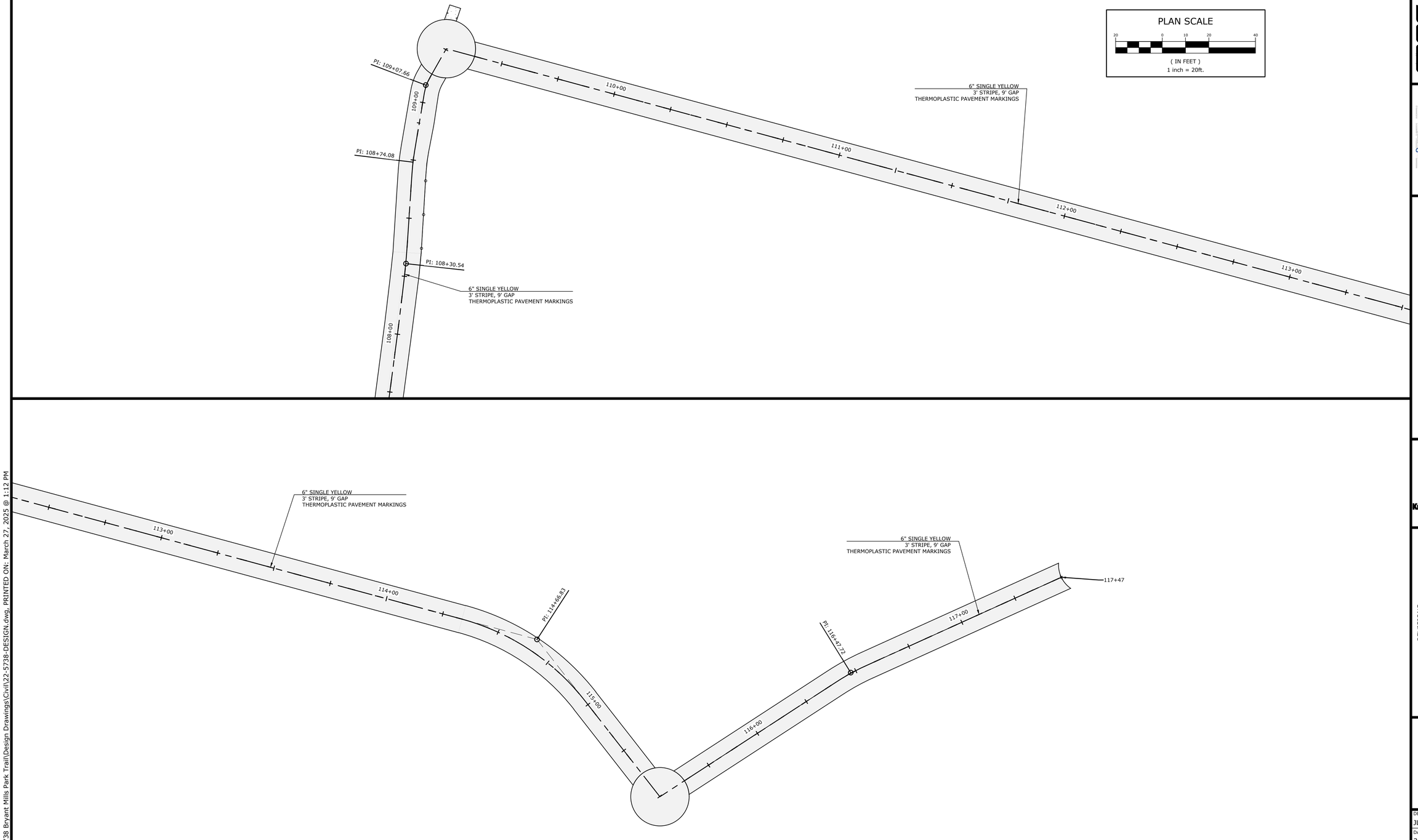
REV	DATE	DESCRIPTION

PERMANENT PAVEMENT MARKING DETAILS

DESIGNED BY:	DRAWN BY:
JLW	JLW
DATE:	REVISION:
3/27/25	
SCALE:	JOB NUMBER:
1" = 20'	22-5738

10

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PLAN SCALE

20 0 10 20 40

(IN FEET)

1 inch = 20ft.

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REV	DATE	DESCRIPTION

PERMANENT PAVEMENT MARKING DETAILS

DESIGNED BY:	DRAWN BY:
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DATE:	REVISION:
3/27/25	
SCALE:	JOB NUMBER:
1" = 20'	22-5738

11

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BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM SURFACE COURSE (1/2")				
				TON / STATION	TON	(0.17 GAL. PER SQ. YD.) TOTAL WID.	SQ.YD.	GALLON	TOTAL GALLONS	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	TOTAL PG 64-22
			FEET			FEET				FEET			TON	TON
MAIN LANES														
100+00.00	100+25.00	MILLS PARK TRAIL	25.00	76.40	19.10					19.64	54.56	220.00	6.00	6.00
100+25.00	101+46.59	MILLS PARK TRAIL	121.59	79.25	96.36					12.00	162.12	220.00	17.83	17.83
101+46.59	102+13.73	MILLS PARK TRAIL	67.14	27.25	18.30	5.00	37.30	6.34	6.34	12.00	89.52	220.00	9.85	9.85
102+13.73	102+27.39	MILLS PARK TRAIL	13.66	27.25	3.72	5.00	7.59	1.29	1.29	12.00	18.21	220.00	2.00	2.00
102+27.39	103+23.71	MILLS PARK TRAIL	96.32	46.75	45.03					12.00	128.43	220.00	14.13	14.13
103+23.71	104+29.79	MILLS PARK TRAIL	106.08	27.25	28.91	5.00	58.93	10.02	10.02	12.00	141.44	220.00	15.56	15.56
104+29.79	105+66.93	MILLS PARK TRAIL	137.14	46.75	64.11					12.00	182.85	220.00	20.11	20.11
105+66.93	106+17.30	MILLS PARK TRAIL	50.37	27.25	13.73	5.00	27.98	4.76	4.76	12.00	67.16	220.00	7.39	7.39
106+17.30	106+52.02	MILLS PARK TRAIL	34.72	46.75	16.23							220.00		
106+87.08	107+04.41	MILLS PARK TRAIL	17.33	46.75	8.10							220.00		
107+04.41	107+52.02	MILLS PARK TRAIL	47.61	79.25	37.73					12.00	63.48	220.00	6.98	6.98
107+52.02	108+35.19	MILLS PARK TRAIL	83.17	27.25	22.66	5.00	46.21	7.86	7.86	12.00	110.89	220.00	12.20	12.20
108+35.19	109+12.97	MILLS PARK TRAIL	77.78	46.75	36.36					12.00	103.71	220.00	11.41	11.41
109+12.97	109+37.97	MILLS PARK TRAIL	25.00	76.40	19.10					19.64	54.56	220.00	6.00	6.00
109+37.97	115+37.64	MILLS PARK TRAIL	599.67	79.25	475.24					12.00	799.56	220.00	87.95	87.95
115+37.64	115+62.64	MILLS PARK TRAIL	25.00	76.40	19.10					19.64	54.56	220.00	6.00	6.00
115+62.64	117+46.85	MILLS PARK TRAIL	184.21	79.25	145.99					12.00	245.61	220.00	27.02	27.02
TOTALS:					**1069.77**		**178.01**	**30.27**	**30.27**		**2276.66**		**250.43**	**250.43**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.4% MIN. AGGR.....5.6% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

PERMANENT PAVEMENT MARKINGS

DESCRIPTION	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	THERMOPLASTIC PAVEMENT MARKING		
			6"		12"
			WHITE	YELLOW	WHITE
	LIN. FT. - EACH	LIN. FT.	LIN. FT.		
REMOVAL OF PERMANENT PAVEMENT MARKINGS	354	354			
THERMOPLASTIC PAVEMENT MARKING WHITE (6")	140		140		
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	551			551	
THERMOPLASTIC PAVEMENT MARKING WHITE (12")	60				60
TOTALS:		**354**	**140**	**551**	**60**

STANDARD SIGNS

DESCRIPTION	BOLLARDS	RECTANGULAR RAPID FLASHING BEACON
BOLLARDS	6	
RECTANGULAR RAPID FLASHING BEACON WITH APS BUTTON		2
	6	**2**

NOTE: THIS IS A LOW TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS
			LIN. FT. - EACH		NO.	SQ. FT.	EACH
G20-2	END ROAD WORK	48"x24"	3	3	3	24.0	
R9-9	SIDEWALK CLOSED	24"X12"	3	3	3	6.0	
W21-5	SHOULDER WORK	36"x36"	3	3	3	27.0	
	TRAFFIC DRUMS		33	33			33
TOTALS:						**57.0**	**33**

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No.18021
TAYLOR CLARK
3-27-25

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BRYANT, ARKANSAS

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REVISIONS

REV	DATE	DESCRIPTION

QUANTITIES I

DESIGNED BY:	DRAWN BY:
JLW	JLW
DATE:	REVISION:
3/27/25	
SCALE:	JOB NUMBER:
N.T.S.	22-5738

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EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL		TEMPORARY EROSION CONTROL		
			WATER	SOLID SODDING	ROCK DITCH CHECKS (E-6)	SILT FENCE (E-11)	*SEDIMENT REMOVAL & DISPOSAL
			M.GAL.	SQ.YD.	CU.YD.	LIN. FT.	CU. YD.
ENTIRE	PROJECT	MILLS PARK TRAIL	15.0	1191	21	2624.72	104
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.							
TOTALS:			**15.0**	**1191**	**21**	**2625**	**104**

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

*QUANTITIES ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	ASPHALT DRIVEWAYS	WALKS
			SQ. YD.	SQ. YD.
101+12	101+47	MILLS PARK TRAIL		4
102+27	103+24	MILLS PARK TRAIL		11
104+30	105+67	MILLS PARK TRAIL		15
106+17	107+52	MILLS PARK TRAIL	46	36
108+35	108+91	MILLS PARK TRAIL		6
109+13	109+30	MILLS PARK TRAIL		2
TOTALS:			**46**	**74**

CONCRETE WALKS & HAND RAILING

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS	HAND RAILING
			LIN. FT.	SQ.YD.	LIN. FT.
101+12	101+19	MILLS PARK TRAIL	7	4	
106+33	106+53	MILLS PARK TRAIL	20	27	
106+92	107+04	MILLS PARK TRAIL	12	16	
108+25	108+78	MILLS PARK TRAIL			53
109+19	109+25	MILLS PARK TRAIL	6	3	
TOTALS:				**46**	**53**

NOTE: DETECTABLE WARNING DEVICE WILL BE SUBSIDIARY AND INCLUDED IN PRICE BID FOR CONCRETE WALKS

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
			CU. YD.	
ENTIRE	PROJECT	MILLS PARK TRAIL	245.12	1259.00
ENTIRE	PROJECT	APPROACHES	5	
TOTALS:			**250.12**	**1259.00**

NOTE: EARTHWORK QUANTITIES ARE INFORMATION ONLY. EARTHWORK SHALL BE CONSIDERED SUBSIDIARY TO SIDEWALK AND DRIVEWAY CONSTRUCTION AND INCLUDED WITHIN THE PRICE FOR THOSE RESPECTIVE ITEMS.

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HTTP://WWW.MCE.US.COM

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18021
TAYLOR CLARK
3-27-25

JOB NO. 061807
ALCOA PARK - MILLS PARK TRAIL (BRYANT) (S)
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QUANTITIES II

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STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE (CLASS III)		FLARED END SECTIONS FOR R.C. PIPE CULVERTS		STD. DWG. NOS.
		18"	24"	18"	24"	
		LIN. FT.		EACH		
104+86	MILLS PARK TRAIL	13		2		FES-1, FES-2, PCC-1
105+78	MILLS PARK TRAIL		56		1	FES-1, FES-2, PCC-1
109+12	MILLS PARK TRAIL	43		2		FES-1, FES-2, PCC-1
114+67	MILLS PARK TRAIL		20		2	FES-1, FES-2, PCC-1
TOTALS:		**56**	**76**	**4**	**3**	

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	
AND WHERE DIRECTED BY THE	20
ENGINEER	
TOTAL:	**20**

NOTE: QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	PORTLAND CEMENT CONCRETE DRIVEWAY	STANDARD DRAWINGS
			FEET	SQ. YD.	
106+25	LT.	MILLS PARK TRAIL	16	27.93	DR-2
TOTALS:				**27.93**	

REMOVAL AND DISPOSAL OF CULVERTS

STATION	DESCRIPTION	PIPE CULVERTS
		EACH
104+87	MILLS PARK TRAIL	1
109+17	MILLS PARK TRAIL	1
TOTALS:		**2**

NOTE: QUANTITIES SHOWN ABOVE SHALL INCLUDE REMOVAL & DISPOSAL OF ALL HEADWALLS AND FLARED END SECTIONS IF APPLICABLE.

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
100+25	101+25	MILLS PARK TRAIL	1	1
115+75	117+25	MILLS PARK TRAIL	2	2
TOTALS:			**3**	**3**

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QUANTITIES III

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SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING & GRUBBING	3	STATION
202	REMOVAL AND DISPOSAL OF ASPHALT DRIVEWAYS	46	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE WALKS	74	SQ. YD.
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	2	EACH
SP, SS, & 303	AGGREGATE BASE COURSE (CLASS 7)	1070	TON
SS & 401	TACK COAT	30	GAL.
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	236	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	14	TON
SP, SS, & 505	PORTLAND CEMENT CONCRETE DRIVEWAY	27.93	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	57	SQ. FT.
SS & 604	TRAFFIC DRUMS	33	EACH
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	354	LIN. FT.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	56	LIN. FT.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	76	LIN. FT.
SS & 606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	4	EACH
SS & 606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	3	EACH
SS & 606	SELECTED PIPE BEDDING	20	CU. YD.
620	WATER	15.0	M. GAL.
621	SILT FENCE	2625	LIN. FT.
621	SEDIMENT REMOVAL AND DISPOSAL	104	CU. YD.
621	ROCK DITCH CHECKS	21	CU. YD.
624	SOLID SODDING	1191	SQ. YD.
SS & 633	CONCRETE WALKS	46	SQ. YD.
SS & 633	HAND RAILING	53	LIN. FT.
SP	RECTANGULAR RAPID FLASHING BEACON (RRFB)	2	EACH
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	140	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	60	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	551	LIN. FT.
SP	PIPE BOLLARDS	6	EACH

PAY ITEM NOTES:
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ALL REMOVAL AND DISPOSAL ITEMS PAID FOR UNDER SITE PREPARATION.

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SURVEYOR'S NOTES:

HORIZONTAL COORDINATES FOR THIS PROJECT ARE ARKANSAS STATE PLANE SOUTH ZONE NAD83AND ELEVATIONS ARE NAVD88 BASED ON THE ARDOT CONTINUOUSLY OPERATING REFERENCE STATIONS.

CONTOUR INTERVAL = 1 FOOT.

THIS IS A TOPOGRAPHIC SURVEY ONLY AND IN NO WAY SHOULD BE INTERPRETED AS A PROPERTY BOUNDARY SURVEY. ANY PROPERTY LINES SHOWN ARE FOR REFERENCE ONLY AND HAVE NOT BEEN VERIFIED.

FIELD WORK FOR THIS SURVEY WAS COMPLETED MAY, 2022.

NO STATEMENT IS MADE CONCERNING SUBSURFACE CONDITIONS.

BURIED UTILITIES AND SUBSURFACE STRUCTURES ARE SHOWN BASED ON VISUAL INSPECTION OF MANHOLES AND OTHER SURFACE FEATURES. McCLELLAND CONSULTING ENGINEERS HAS ACCURATELY DEPICTED THE UNDERGROUND AND SUBSURFACE FEATURES TO THE BEST OF THEIR KNOWLEDGE AND ABILITY. ANY CONSTRUCTION AT THIS SITE SHOULD ONLY BE DONE AFTER CONTACTING ARKANSAS ONE CALL AT 1-800-482-8998 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.

MANHOLE AND DRAIN GRATE INFORMATION WERE GATHERED BY VISUAL INSPECTION AND ARE CONNECTED AND DESCRIBED ONLY AS COULD BE DETERMINED THROUGH SAID VISUAL INSPECTION.

CONTROL DATA				
Point #	Northing	Easting	Elevation	Description
10	2020828.24	1168508.17	389.67	1/2" REBAR WITH "MCE" CAP

ALIGNMENT NAME: MILLS PARK TRAIL

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	100+00.00	2019268.0655	1167415.5839
8001	PI	100+25.00	2019276.2097	1167439.2623
8002	PC	101+01.12	2019306.7880	1167508.9319
8004	PT	101+46.59	2019342.3544	1167533.4023
8005	PC	102+27.39	2019423.0560	1167537.2940
8007	PT	102+56.38	2019452.0154	1167536.5902
8008	PC	102+64.60	2019460.1951	1167535.7961
8010	PT	102+83.73	2019479.2497	1167536.5560
8011	PC	103+02.51	2019497.7452	1167539.8546
8013	PT	103+23.71	2019518.7726	1167542.4647
8014	PI	103+58.69	2019553.6594	1167544.9283
8015	PI	103+67.46	2019562.3929	1167545.7842
8016	PC	104+29.79	2019624.6637	1167548.4879
8018	PT	104+45.41	2019640.2572	1167547.9465
8019	PC	104+86.51	2019681.0960	1167543.3204
8021	PT	105+09.30	2019703.5425	1167545.9006
8022	PC	105+47.13	2019739.1822	1167558.5752
8024	PT	105+66.93	2019758.5298	1167562.5011
8025	PI	106+45.86	2019837.3213	1167567.1326
8026	PI	106+98.38	2019834.3612	1167619.5722
8027	PC	107+44.62	2019880.5225	1167622.1831
8029	PT	107+52.02	2019887.8938	1167622.8745
8030	PI	108+04.58	2019940.0028	1167629.7165
8031	PC	108+22.58	2019957.8805	1167631.8477
8033	PT	108+38.38	2019973.6079	1167633.3067
8034	PC	108+69.05	2020004.2106	1167635.3404
8036	PT	108+79.11	2020014.1969	1667636.5106
8037	PC	109+04.09	2020038.8336	1167640.6622
8039	PT	109+11.02	2020045.3274	1167642.9681
8040	PI	109+25.44	2020057.8724	1167650.0752
8041	PC	114+33.51	2019925.0574	1168140.4830
8043	PT	114+97.83	2019890.0947	1168193.1480
8044	PI	115+50.13	2019848.8804	1168225.3430
8045	PC	116+40.13	2019897.9741	1168300.7752
8047	PT	116+55.29	2019905.2504	1168314.0575
8048	POE	117+46.79	2019943.0097	1168397.4065

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TAYLOR CLARK
3-27-25

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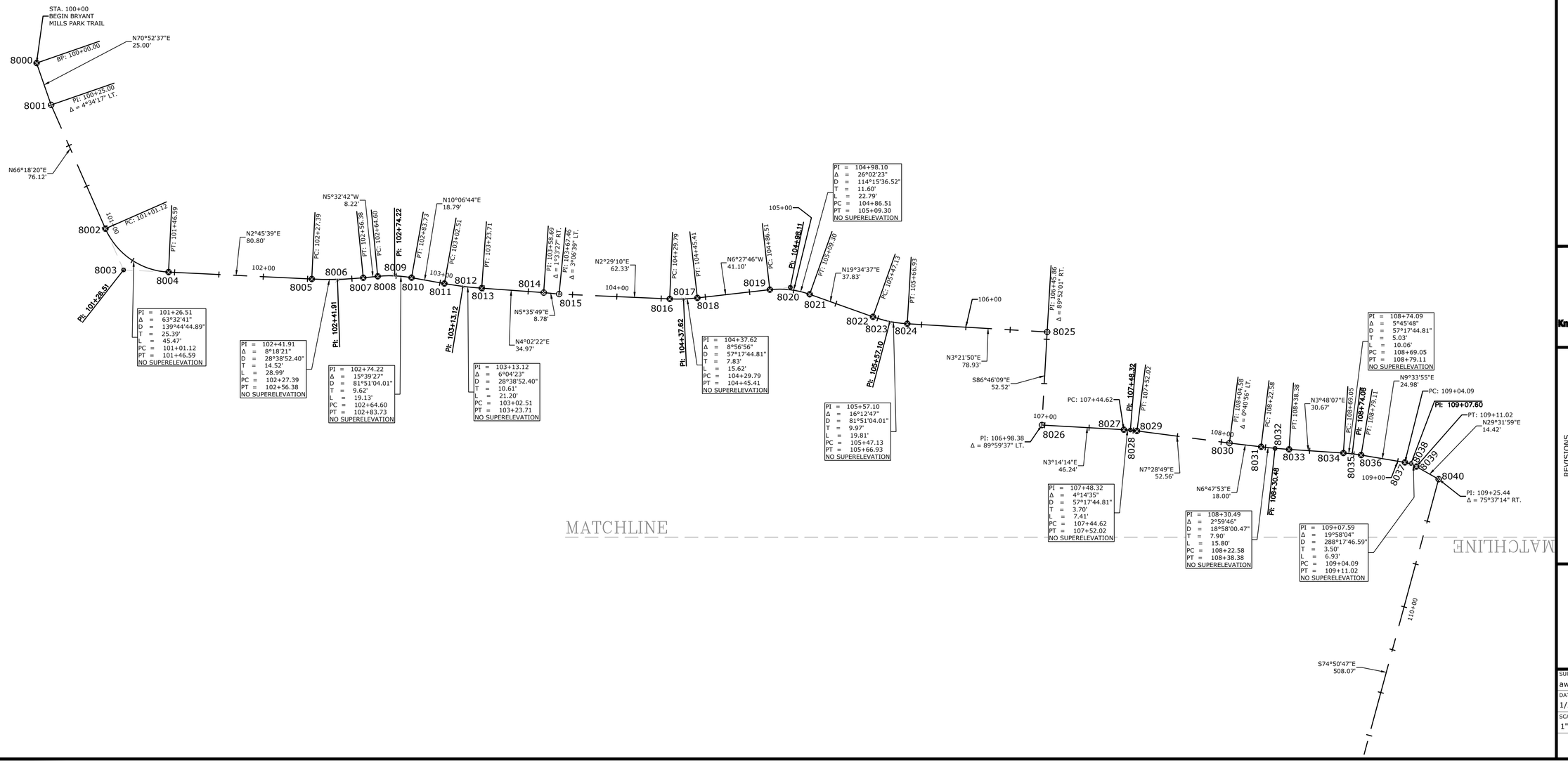
REV	DATE	DESCRIPTION

SURVEY CONTROL DETAILS

SURVEY MANAGER:	DRAWN BY :
awm	JDM
DATE:	REVISION:
1/28/25	
SCALE:	JOB NUMBER:
N.T.S.	22-5738

16

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GRID

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 INCH = 30 FT.

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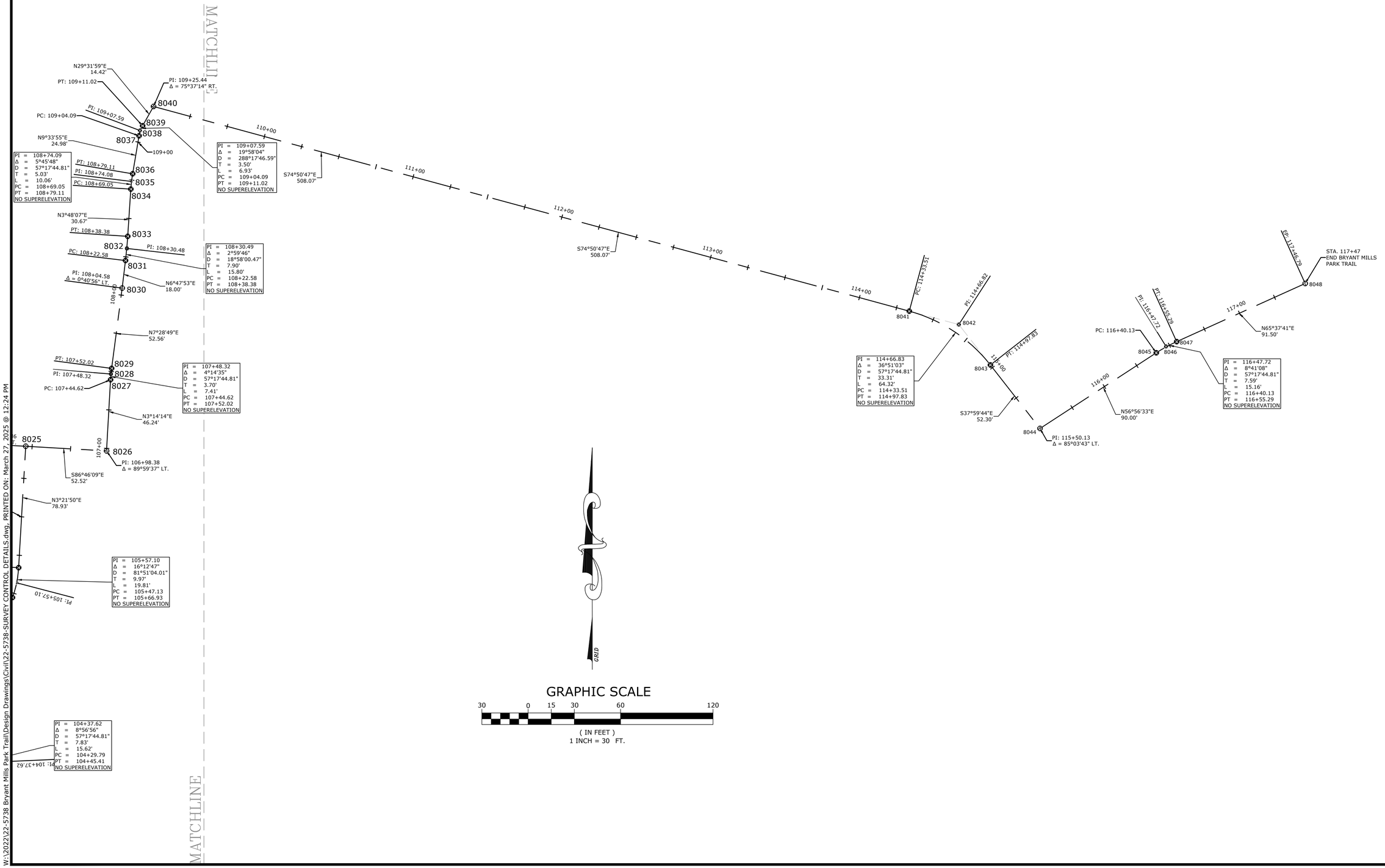
REVISIONS	DESCRIPTION	DATE	REV

SURVEY CONTROL DETAILS

SURVEY MANAGER:	DRAWN BY :
awm	JDM
DATE:	REVISION:
1/28/25	
SCALE:	JOB NUMBER:
1" = 30'	22-5738

17

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GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 INCH = 30 FT.

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SCALE:	JOB NUMBER:
1" = 30'	22-5738

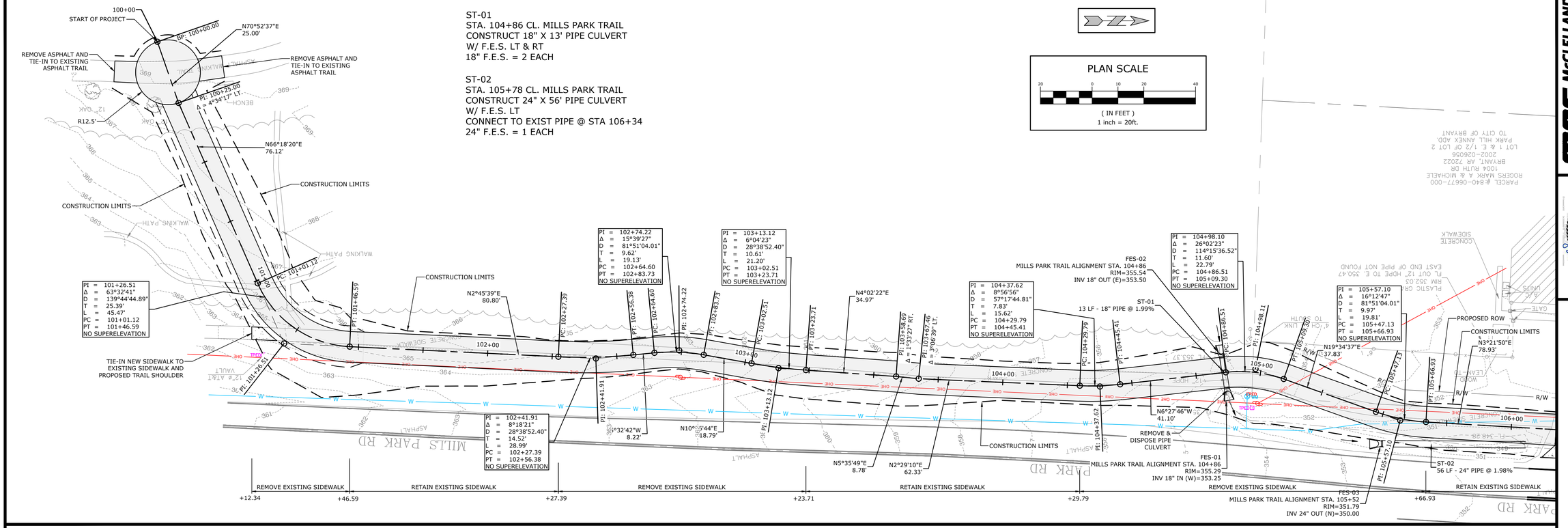
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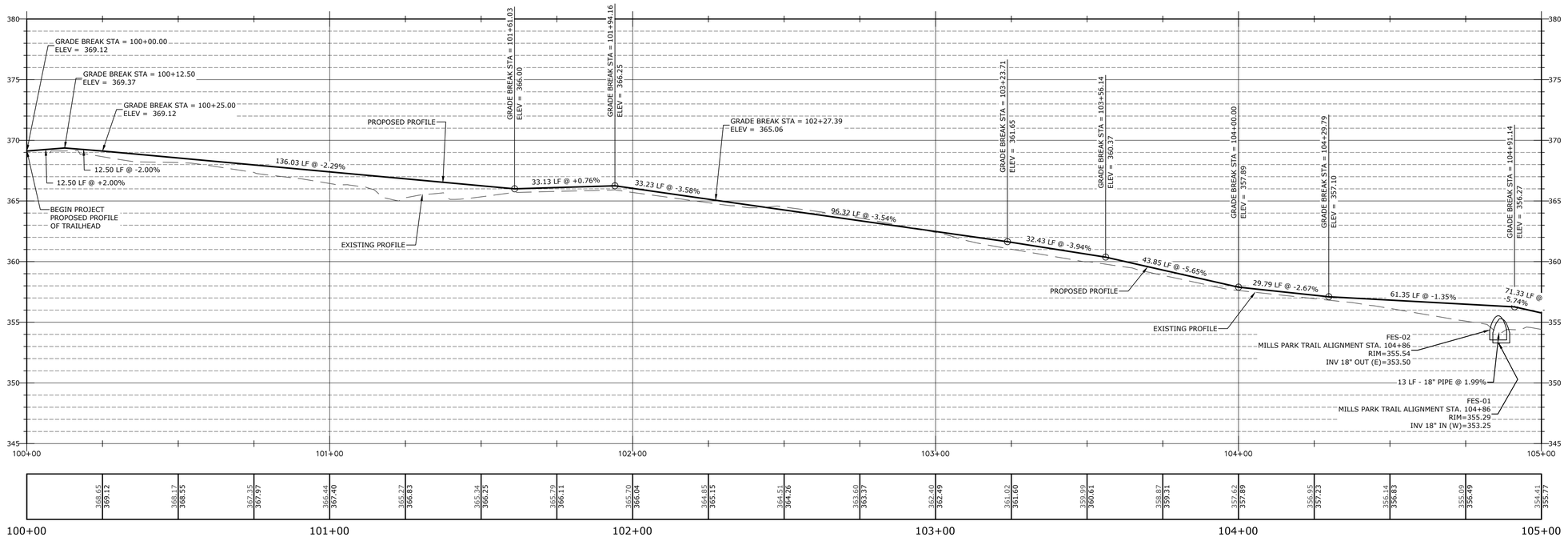
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ST-01
STA. 104+86 CL. MILLS PARK TRAIL
CONSTRUCT 18" X 13' PIPE CULVERT
W/ F.E.S. LT & RT
18" F.E.S. = 2 EACH

ST-02
STA. 105+78 CL. MILLS PARK TRAIL
CONSTRUCT 24" X 56' PIPE CULVERT
W/ F.E.S. LT
CONNECT TO EXIST PIPE @ STA 106+34
24" F.E.S. = 1 EACH

PLAN SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20ft.





MILLS PARK TRAIL ALIGNMENT PROFILE

SCALE
VERT. 1" = 5'
HORIZ. 1" = 20'

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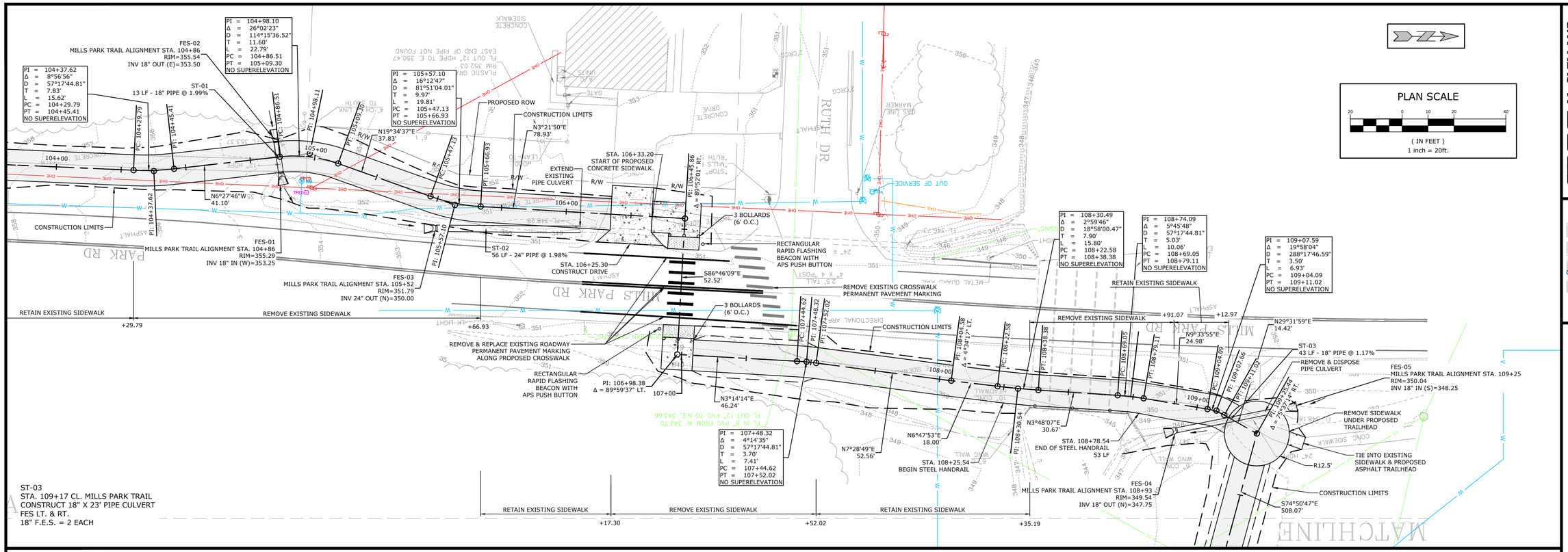
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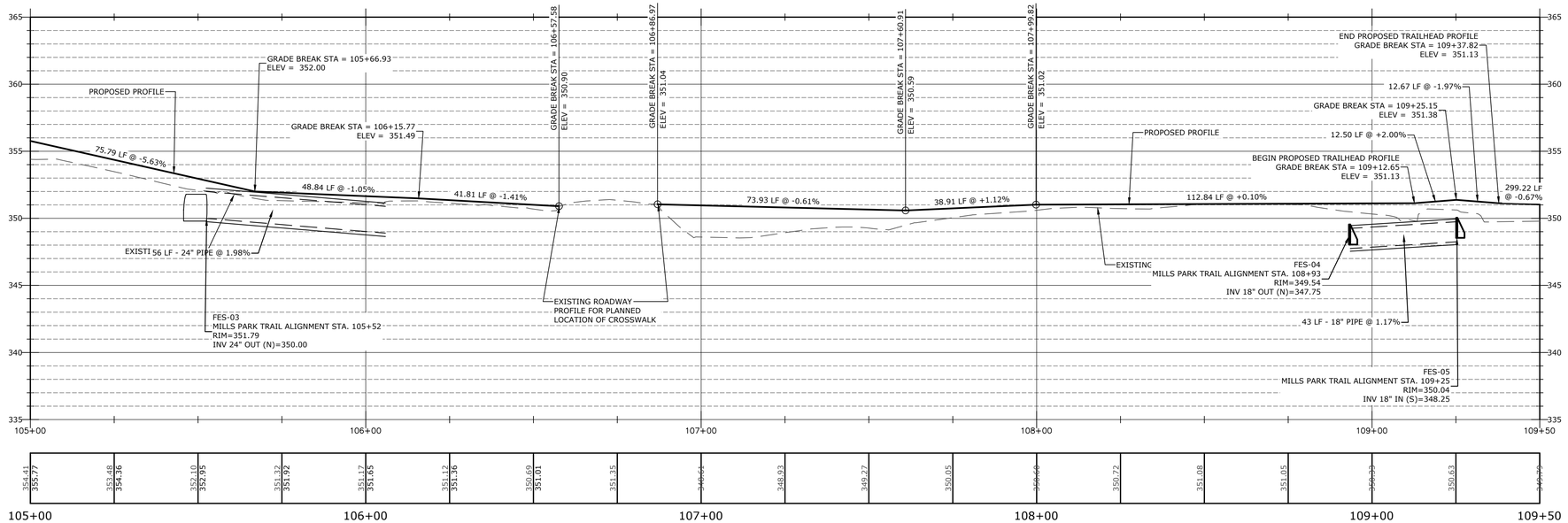
PLAN AND PROFILE SHEETS

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JLW	JLW
DATE:	REVISION:
3/27/25	
SCALE:	JOB NUMBER:
1" = 20'	22-5738

19

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MILLS PARK TRAIL ALIGNMENT PROFILE

SCALE
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HORIZ. 1" = 20'

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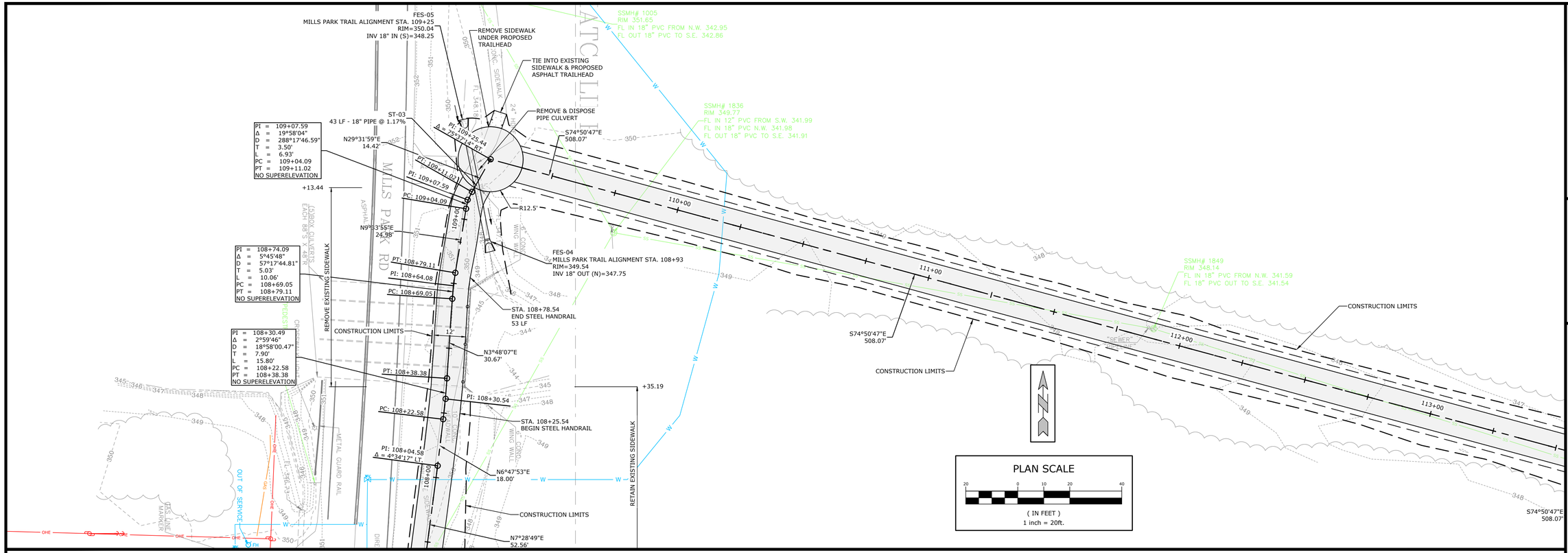
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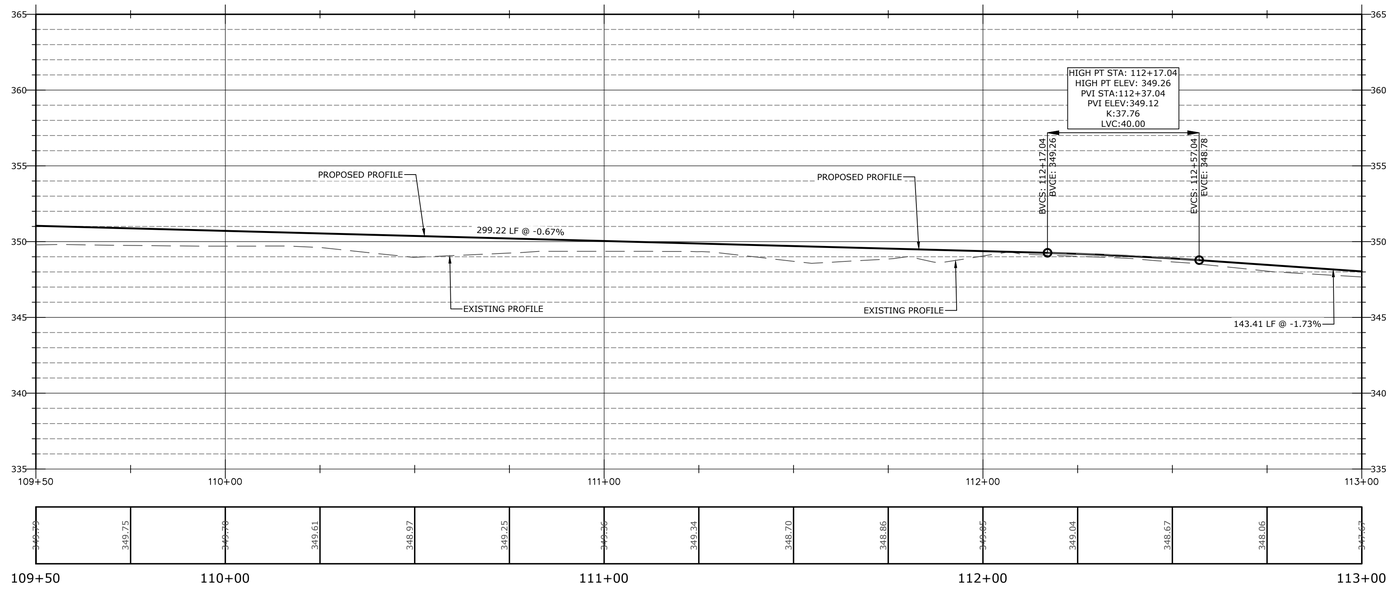
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DESIGNED BY:	DRAWN BY:
JLW	JLW
DATE:	REVISION:
3/27/25	
SCALE:	JOB NUMBER:
1" = 20'	22-5738

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MILLS PARK TRAIL ALIGNMENT PROFILE

SCALE
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HORIZ. 1" = 20'

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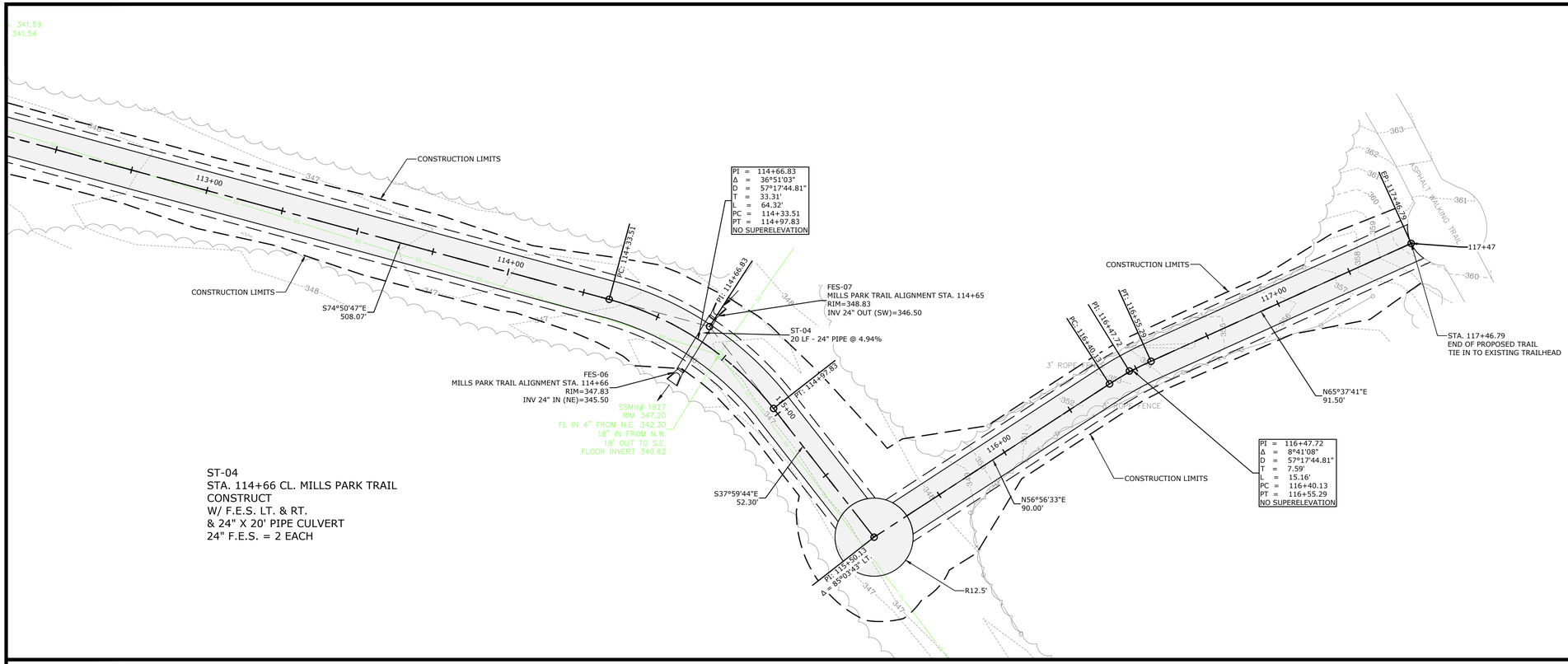
REV	DATE	DESCRIPTION

PLAN AND PROFILE SHEETS

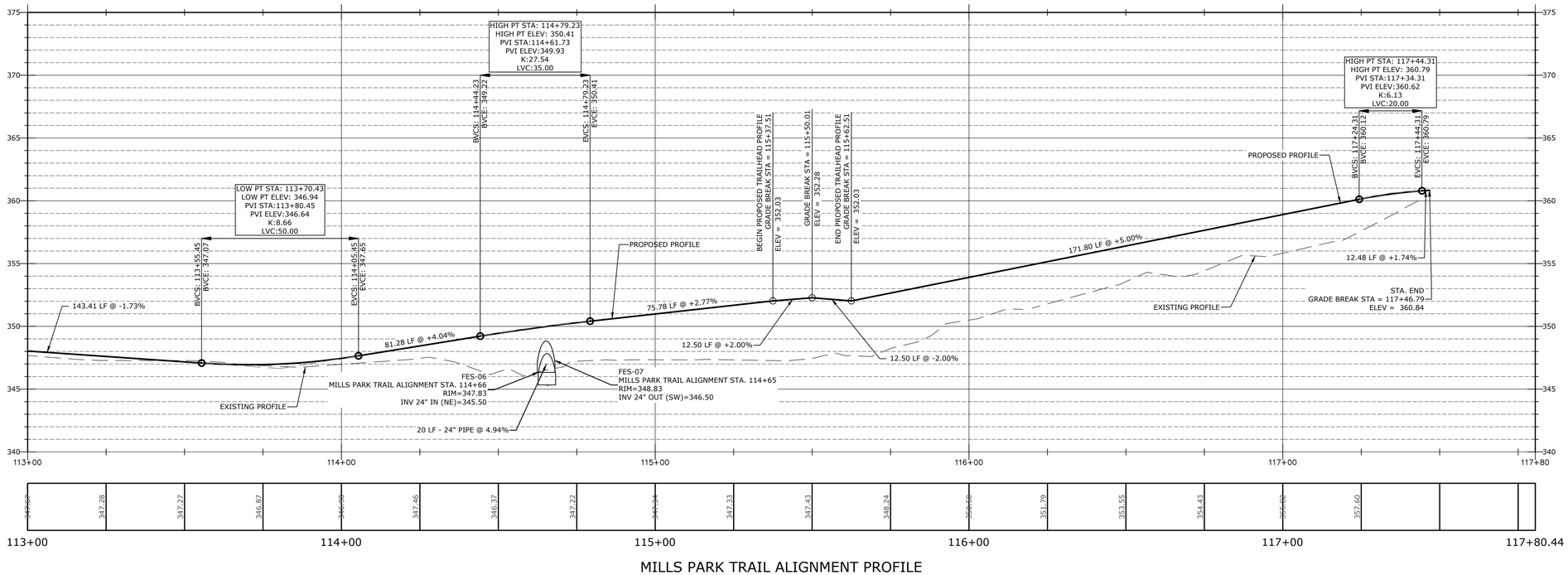
DESIGNED BY:	DRAWN BY:
JLW	JLW
DATE: 3/27/25	REVISION:
SCALE: 1" = 20'	JOB NUMBER: 22-5738

21

W:\2022\22-5738 Bryant Mills Park Trail\Design Drawings\Civil\22-5738-DESIGN.dwg, PRINTED ON: March 27, 2025 @ 12:44 PM



ST-04
STA. 114+66 CL. MILLS PARK TRAIL
CONSTRUCT
W/ F.E.S. LT. & RT.
& 24" X 20' PIPE CULVERT
24" F.E.S. = 2 EACH



MILLS PARK TRAIL ALIGNMENT PROFILE

SCALE
VERT. 1" = 5'
HORIZ. 1" = 20'

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STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18021
JAMES L. WILLIS TAYLOR, CLASS
3-27-25

JOB NO. 061807
ALCOA PARK - MILLS PARK TRAIL (BRYANT) (S)
BRYANT, ARKANSAS

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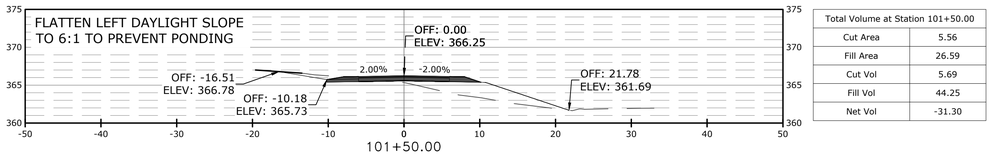
REV	DATE	DESCRIPTION

PLAN AND PROFILE SHEETS

DESIGNED BY:	DRAWN BY:
JLW	JLW
DATE:	REVISION:
3/27/25	
SCALE:	JOB NUMBER:
1" = 20'	22-5738

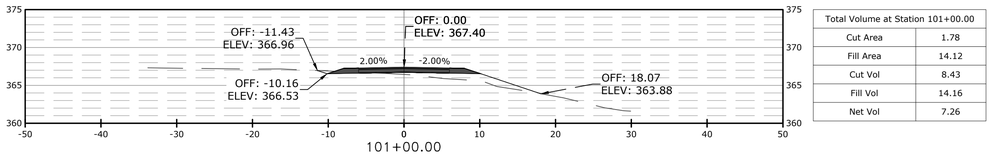
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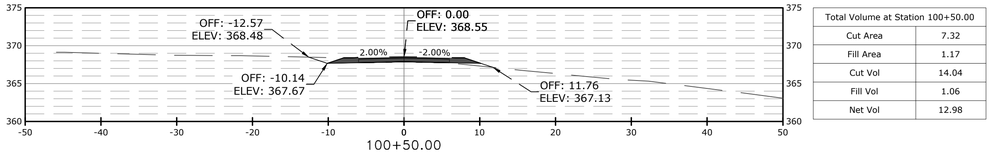
Total Volume at Station 101+50.00	
Cut Area	5.56
Fill Area	26.59
Cut Vol	5.69
Fill Vol	44.25
Net Vol	-31.30

ORIGINAL ELEV: 365.34
DESIGN ELEV: 365.58



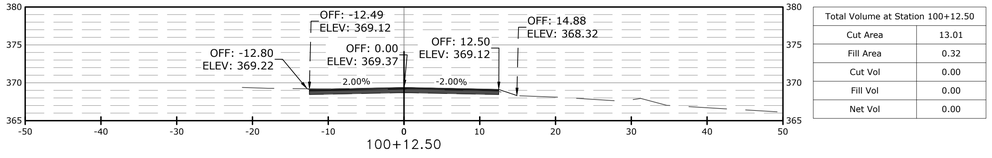
Total Volume at Station 101+00.00	
Cut Area	1.78
Fill Area	14.12
Cut Vol	8.43
Fill Vol	14.16
Net Vol	7.26

ORIGINAL ELEV: 366.44
DESIGN ELEV: 366.73



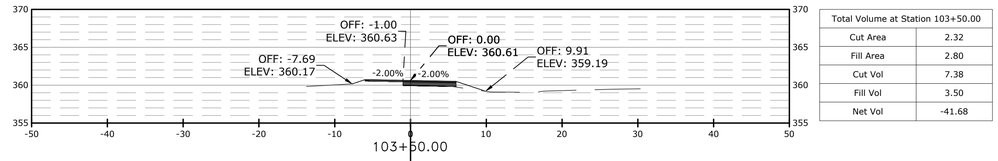
Total Volume at Station 100+50.00	
Cut Area	7.32
Fill Area	1.17
Cut Vol	14.04
Fill Vol	1.06
Net Vol	12.98

ORIGINAL ELEV: 368.17
DESIGN ELEV: 367.88



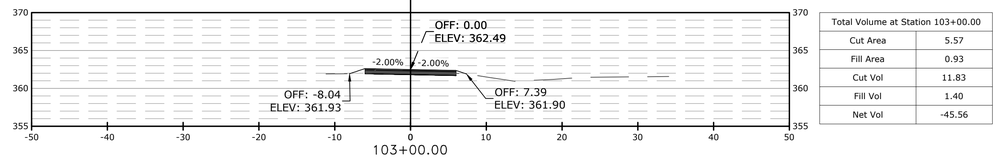
Total Volume at Station 100+12.50	
Cut Area	13.01
Fill Area	0.32
Cut Vol	0.00
Fill Vol	0.00
Net Vol	0.00

ORIGINAL ELEV: 369.13
DESIGN ELEV: 368.70



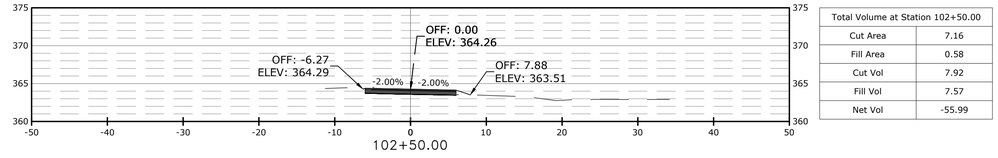
Total Volume at Station 103+50.00	
Cut Area	2.32
Fill Area	2.80
Cut Vol	7.38
Fill Vol	3.50
Net Vol	-41.68

ORIGINAL ELEV: 359.99
DESIGN ELEV: 359.94



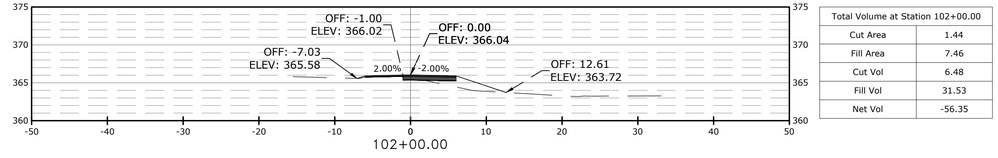
Total Volume at Station 103+00.00	
Cut Area	5.57
Fill Area	0.93
Cut Vol	11.83
Fill Vol	1.40
Net Vol	-45.56

ORIGINAL ELEV: 362.40
DESIGN ELEV: 361.82



Total Volume at Station 102+50.00	
Cut Area	7.16
Fill Area	0.58
Cut Vol	7.92
Fill Vol	7.57
Net Vol	-55.99

ORIGINAL ELEV: 364.51
DESIGN ELEV: 363.59



Total Volume at Station 102+00.00	
Cut Area	1.44
Fill Area	7.46
Cut Vol	6.48
Fill Vol	31.53
Net Vol	-56.35

ORIGINAL ELEV: 365.70
DESIGN ELEV: 365.37

SCALE:
1" = 10' HORIZ.
1" = 10' VERT.

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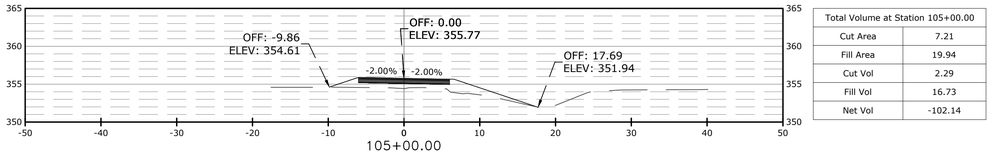
REVISIONS

REV	DESCRIPTION	DATE

CROSS SECTIONS SHEETS

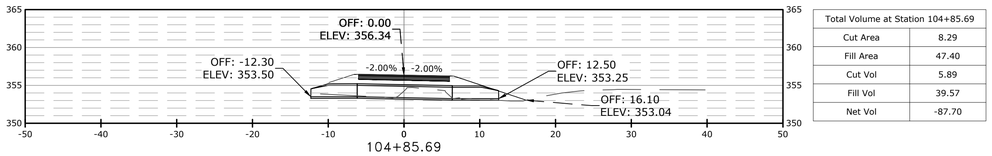
DESIGNED BY:	DRAWN BY:
JLW	JLW
DATE:	REVISION:
3/27/25	
SCALE:	JOB NUMBER:
AS SHOWN	22-5738

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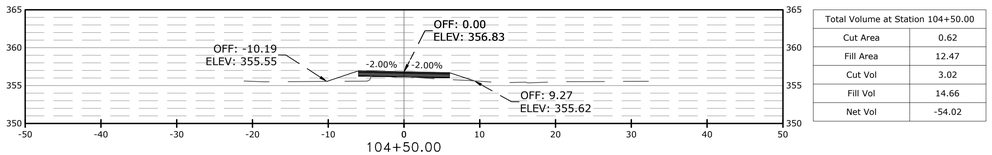
Total Volume at Station 105+00.00	
Cut Area	7.21
Fill Area	19.94
Cut Vol	2.29
Fill Vol	16.73
Net Vol	-102.14

ORIGINAL ELEV: 354.42
DESIGN ELEV: 355.10



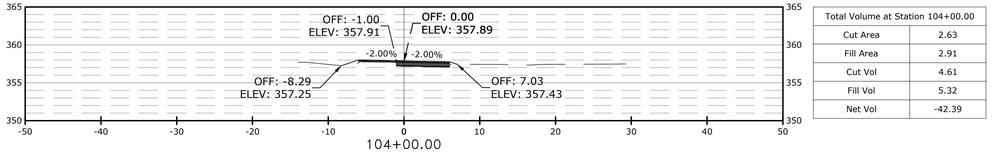
Total Volume at Station 104+85.69	
Cut Area	8.29
Fill Area	47.40
Cut Vol	5.89
Fill Vol	39.57
Net Vol	-87.70

ORIGINAL ELEV: 354.25
DESIGN ELEV: 355.67



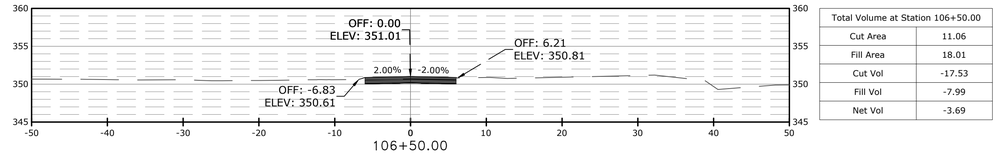
Total Volume at Station 104+50.00	
Cut Area	0.62
Fill Area	12.47
Cut Vol	3.02
Fill Vol	14.66
Net Vol	-54.02

ORIGINAL ELEV: 356.14
DESIGN ELEV: 356.16



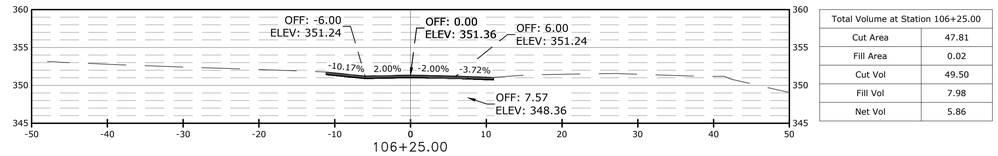
Total Volume at Station 104+00.00	
Cut Area	2.63
Fill Area	2.91
Cut Vol	4.61
Fill Vol	5.32
Net Vol	-42.39

ORIGINAL ELEV: 357.62
DESIGN ELEV: 357.22



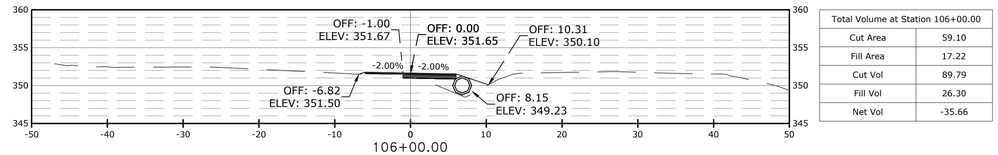
Total Volume at Station 106+50.00	
Cut Area	11.06
Fill Area	18.01
Cut Vol	-17.53
Fill Vol	-7.99
Net Vol	-3.69

ORIGINAL ELEV: 350.69
DESIGN ELEV: 350.17



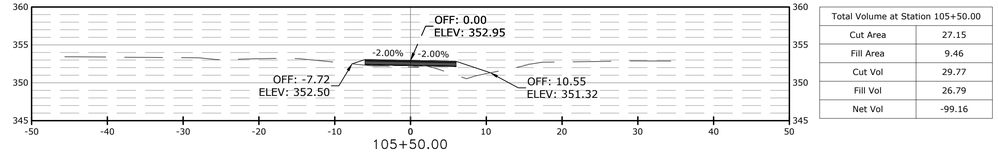
Total Volume at Station 106+25.00	
Cut Area	47.81
Fill Area	0.02
Cut Vol	49.50
Fill Vol	7.98
Net Vol	5.86

ORIGINAL ELEV: 351.12
DESIGN ELEV: 351.02



Total Volume at Station 106+00.00	
Cut Area	59.10
Fill Area	17.22
Cut Vol	89.79
Fill Vol	26.30
Net Vol	-35.66

ORIGINAL ELEV: 351.17
DESIGN ELEV: 350.98



Total Volume at Station 105+50.00	
Cut Area	27.15
Fill Area	9.46
Cut Vol	29.77
Fill Vol	26.79
Net Vol	-99.16

ORIGINAL ELEV: 352.10
DESIGN ELEV: 352.28

SCALE:
1" = 10' HORIZ.
1" = 10' VERT.

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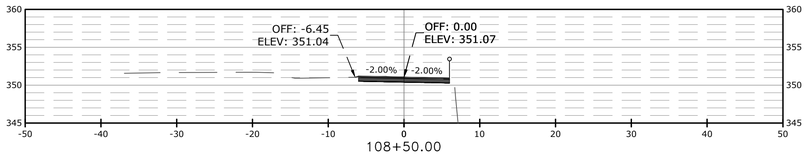
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CROSS SECTIONS SHEETS

DESIGNED BY:	DRAWN BY:
JLW	JLW
DATE: 3/27/25	REVISION:
SCALE: AS SHOWN	JOB NUMBER: 22-5738

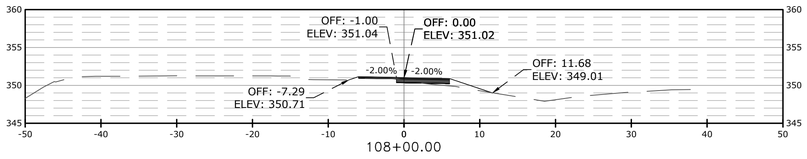
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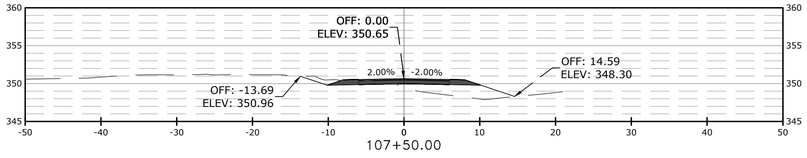
Total Volume at Station 108+50.00	
Cut Area	7.88
Fill Area	160.94
Cut Vol	19.13
Fill Vol	161.72
Net Vol	-174.38

ORIGINAL ELEV: 351.08
DESIGN ELEV: 350.40



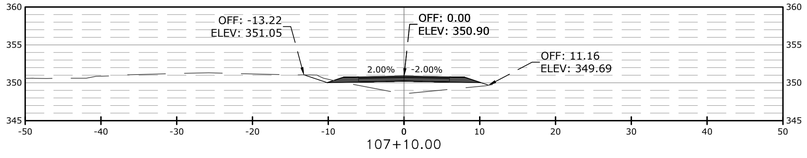
Total Volume at Station 108+00.00	
Cut Area	12.29
Fill Area	8.60
Cut Vol	21.50
Fill Vol	24.44
Net Vol	-31.79

ORIGINAL ELEV: 350.60
DESIGN ELEV: 350.35



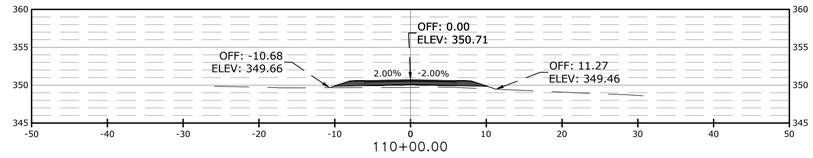
Total Volume at Station 107+50.00	
Cut Area	11.04
Fill Area	17.89
Cut Vol	13.27
Fill Vol	16.43
Net Vol	-28.85

ORIGINAL ELEV: 349.27
DESIGN ELEV: 349.98



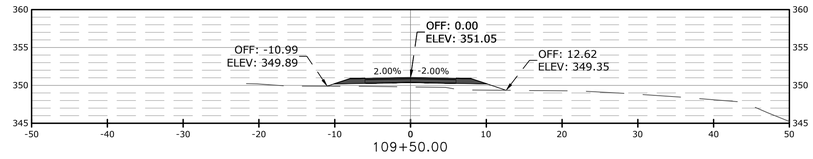
Total Volume at Station 107+10.00	
Cut Area	6.48
Fill Area	4.38
Cut Vol	17.41
Fill Vol	39.41
Net Vol	-25.68

ORIGINAL ELEV: 348.55
DESIGN ELEV: 348.98



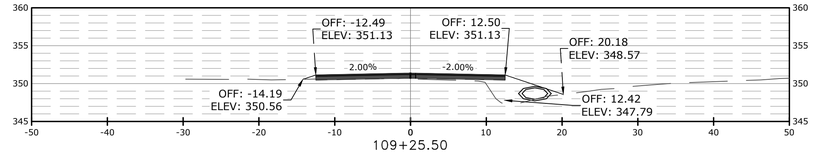
Total Volume at Station 110+00.00	
Cut Area	0.00
Fill Area	13.30
Cut Vol	28.74
Fill Vol	25.53
Net Vol	-338.48

ORIGINAL ELEV: 349.70
DESIGN ELEV: 350.04



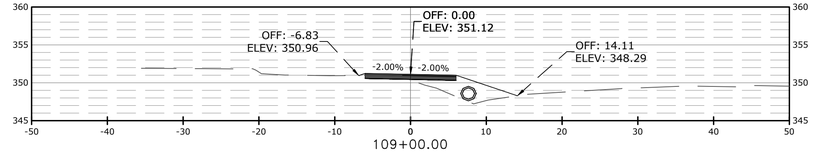
Total Volume at Station 109+50.00	
Cut Area	31.04
Fill Area	14.27
Cut Vol	15.06
Fill Vol	36.33
Net Vol	-341.69

ORIGINAL ELEV: 349.79
DESIGN ELEV: 350.38



Total Volume at Station 109+25.50	
Cut Area	2.16
Fill Area	65.81
Cut Vol	-14.95
Fill Vol	2.27
Net Vol	-320.42

ORIGINAL ELEV: 350.61
DESIGN ELEV: 350.71



Total Volume at Station 109+00.00	
Cut Area	29.07
Fill Area	21.41
Cut Vol	32.49
Fill Vol	161.32
Net Vol	-303.20

ORIGINAL ELEV: 350.33
DESIGN ELEV: 350.45

SCALE:
1" = 10' HORIZ.
1" = 10' VERT.

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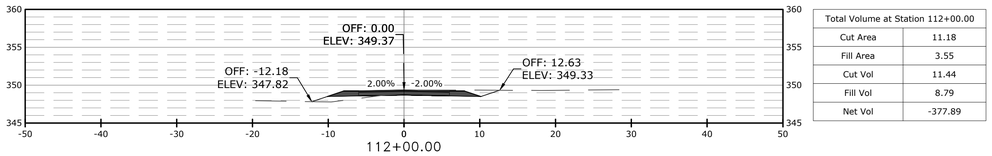
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JLW	JLW
DATE: 3/27/25	REVISION:
SCALE: AS SHOWN	JOB NUMBER: 22-5738

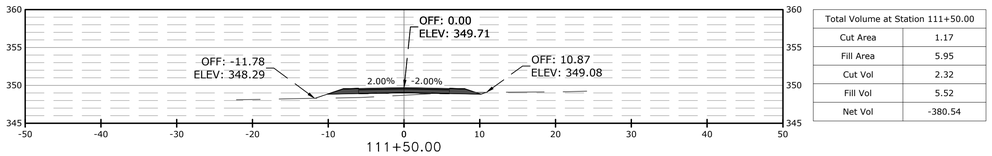
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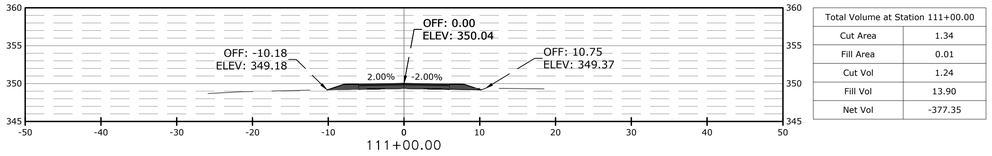
Total Volume at Station 112+00.00	
Cut Area	11.18
Fill Area	3.55
Cut Vol	11.44
Fill Vol	8.79
Net Vol	-377.89

ORIGINAL ELEV: 349.05
DESIGN ELEV: 348.70



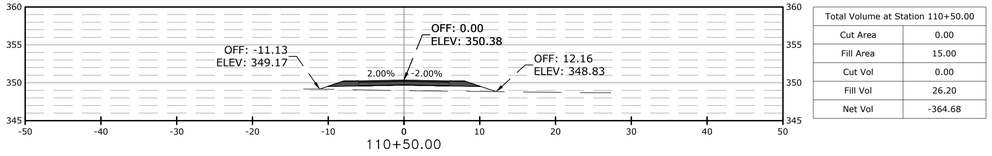
Total Volume at Station 111+50.00	
Cut Area	1.17
Fill Area	5.95
Cut Vol	2.32
Fill Vol	5.52
Net Vol	-380.54

ORIGINAL ELEV: 348.70
DESIGN ELEV: 349.04



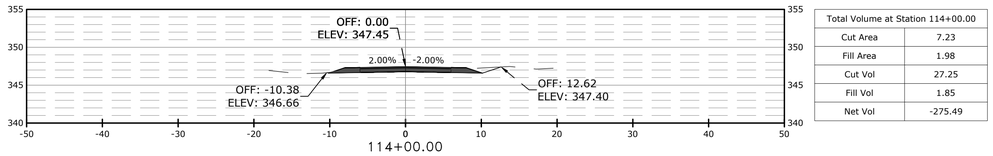
Total Volume at Station 111+00.00	
Cut Area	1.34
Fill Area	0.01
Cut Vol	1.24
Fill Vol	13.90
Net Vol	-377.35

ORIGINAL ELEV: 349.36
DESIGN ELEV: 349.37



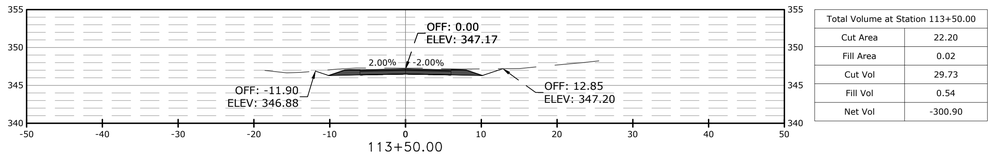
Total Volume at Station 110+50.00	
Cut Area	0.00
Fill Area	15.00
Cut Vol	0.00
Fill Vol	26.20
Net Vol	-364.68

ORIGINAL ELEV: 348.97
DESIGN ELEV: 349.71



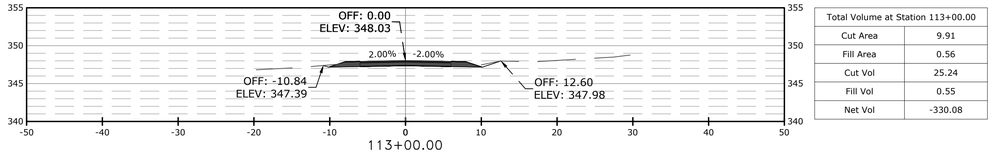
Total Volume at Station 114+00.00	
Cut Area	7.23
Fill Area	1.98
Cut Vol	27.25
Fill Vol	1.85
Net Vol	-275.49

ORIGINAL ELEV: 346.98
DESIGN ELEV: 346.78



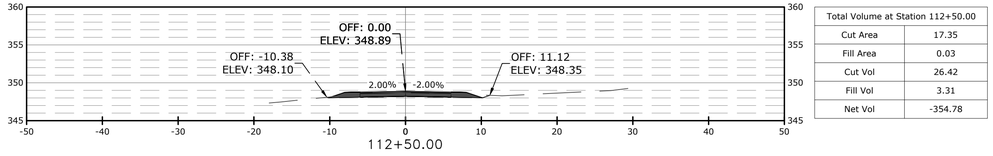
Total Volume at Station 113+50.00	
Cut Area	22.20
Fill Area	0.02
Cut Vol	29.73
Fill Vol	0.54
Net Vol	-300.90

ORIGINAL ELEV: 347.27
DESIGN ELEV: 346.50



Total Volume at Station 113+00.00	
Cut Area	9.91
Fill Area	0.56
Cut Vol	25.24
Fill Vol	0.55
Net Vol	-330.08

ORIGINAL ELEV: 347.67
DESIGN ELEV: 347.36



Total Volume at Station 112+50.00	
Cut Area	17.35
Fill Area	0.03
Cut Vol	26.42
Fill Vol	3.31
Net Vol	-354.78

ORIGINAL ELEV: 348.67
DESIGN ELEV: 348.22

SCALE:
1" = 10' HORIZ.
1" = 10' VERT.

EARTHWORK QUANTITIES ARE INFORMATION ONLY. EARTHWORK SHALL BE CONSIDERED SUBSIDIARY TO SIDEWALK AND DRIVEWAY CONSTRUCTION AND INCLUDED WITHIN THE PRICE FOR THOSE RESPECTIVE ITEMS.

McCLELLAND CONSULTING ENGINEERS, INC.
DESIGNED TO SERVE
7302 KANIS ROAD
LITTLE ROCK, ARKANSAS 72204
PH: (501) 371-0272
HTTP://WWW.MCE.US.COM

JOB NO. 061807

ALCOA PARK - MILLS PARK TRAIL (BRYANT) (S)

BRYANT, ARKANSAS

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Know what's below. Call before you dig.

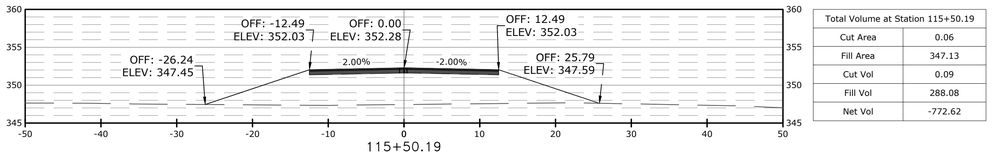
REVISIONS

REV	DESCRIPTION	DATE

CROSS SECTIONS SHEETS

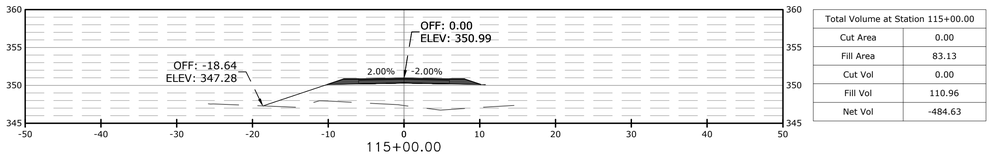
DESIGNED BY:	DRAWN BY:
JLW	JLW
DATE: 3/27/25	REVISION:
SCALE: AS SHOWN	JOB NUMBER: 22-5738

W:\2022\22-5738 Bryant Mills Park Trail\Design Drawings\Civil\22-5738-DESIGN.dwg, PRINTED ON: March 27, 2025 @ 12:36 PM



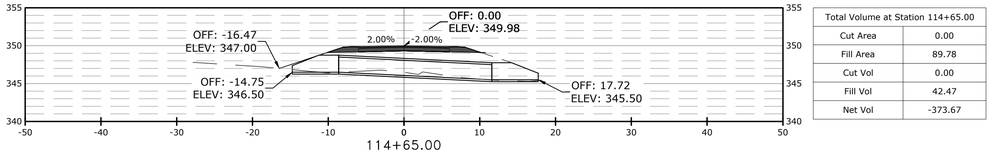
Total Volume at Station 115+50.19	
Cut Area	0.06
Fill Area	347.13
Cut Vol	0.09
Fill Vol	288.08
Net Vol	-772.62

ORIGINAL ELEV: 347.44
DESIGN ELEV: 351.61



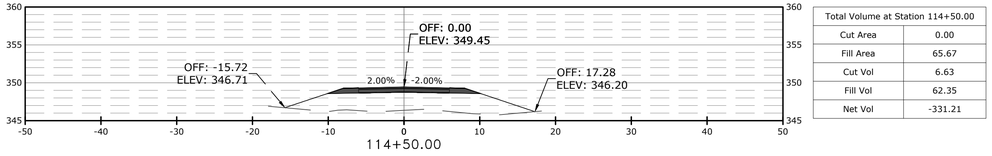
Total Volume at Station 115+00.00	
Cut Area	0.00
Fill Area	83.13
Cut Vol	0.00
Fill Vol	110.96
Net Vol	-484.63

ORIGINAL ELEV: 347.34
DESIGN ELEV: 350.32



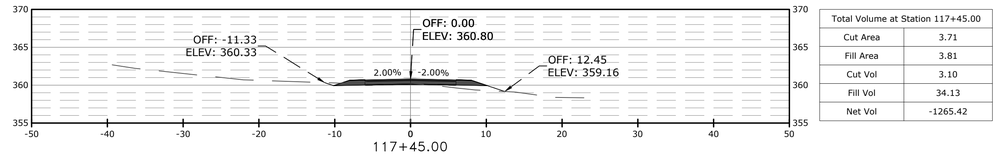
Total Volume at Station 114+65.00	
Cut Area	0.00
Fill Area	89.78
Cut Vol	0.00
Fill Vol	42.47
Net Vol	-373.67

ORIGINAL ELEV: 346.50
DESIGN ELEV: 349.31



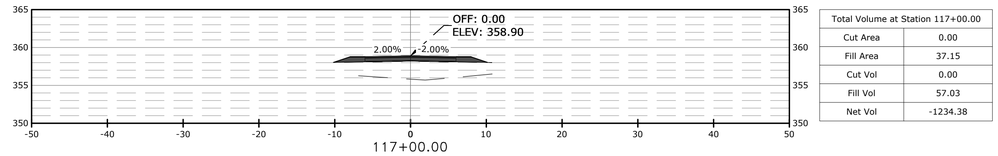
Total Volume at Station 114+50.00	
Cut Area	0.00
Fill Area	65.67
Cut Vol	6.63
Fill Vol	62.35
Net Vol	-331.21

ORIGINAL ELEV: 346.37
DESIGN ELEV: 348.78



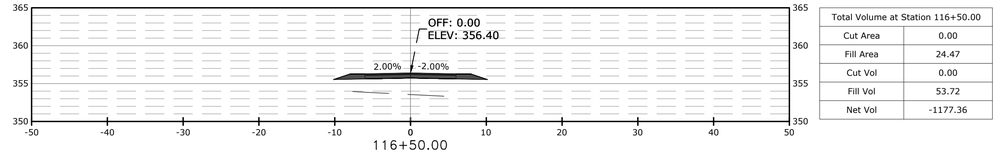
Total Volume at Station 117+45.00	
Cut Area	3.71
Fill Area	3.81
Cut Vol	3.10
Fill Vol	34.13
Net Vol	-1265.42

ORIGINAL ELEV: 360.24
DESIGN ELEV: 360.13



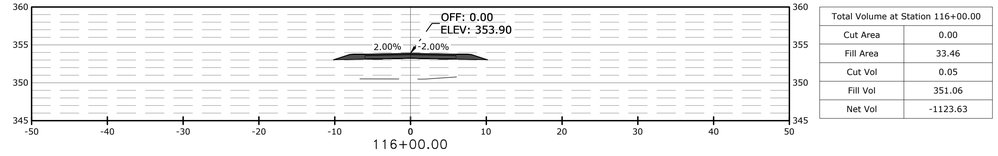
Total Volume at Station 117+00.00	
Cut Area	0.00
Fill Area	37.15
Cut Vol	0.00
Fill Vol	57.03
Net Vol	-1234.38

ORIGINAL ELEV: 355.82
DESIGN ELEV: 358.23



Total Volume at Station 116+50.00	
Cut Area	0.00
Fill Area	24.47
Cut Vol	0.00
Fill Vol	53.72
Net Vol	-1177.36

ORIGINAL ELEV: 353.55
DESIGN ELEV: 355.73



Total Volume at Station 116+00.00	
Cut Area	0.00
Fill Area	33.46
Cut Vol	0.05
Fill Vol	351.06
Net Vol	-1123.63

ORIGINAL ELEV: 350.50
DESIGN ELEV: 353.23

SCALE:
1" = 10' HORIZ.
1" = 10' VERT.

EARTHWORK QUANTITIES ARE INFORMATION ONLY. EARTHWORK SHALL BE CONSIDERED SUBSIDIARY TO SIDEWALK AND DRIVEWAY CONSTRUCTION AND INCLUDED WITHIN THE PRICE FOR THOSE RESPECTIVE ITEMS.

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ALCOA PARK - MILLS PARK TRAIL (BRYANT) (S)

BRYANT, ARKANSAS

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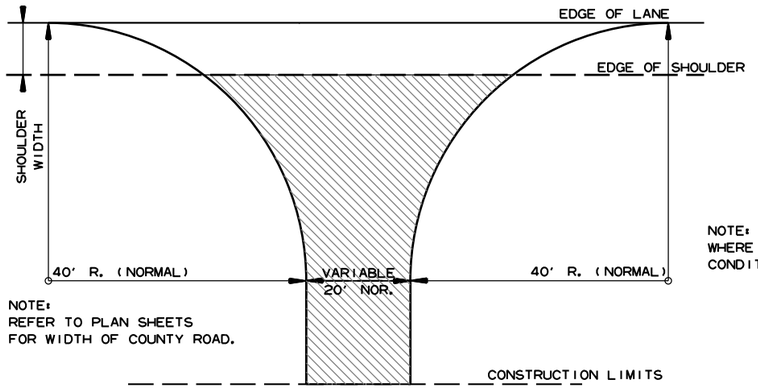
REVISIONS

REV	DESCRIPTION	DATE

CROSS SECTIONS SHEETS

DESIGNED BY:	DRAWN BY:
JLW	JLW
DATE: 3/27/25	REVISION:
SCALE: AS SHOWN	JOB NUMBER: 22-5738

W:\2022\22-5738 Bryant Mills Park Trail\Design Drawings\Civil\22-5738-DESIGN.dwg, PRINTED ON: March 27, 2025 @ 12:36 PM

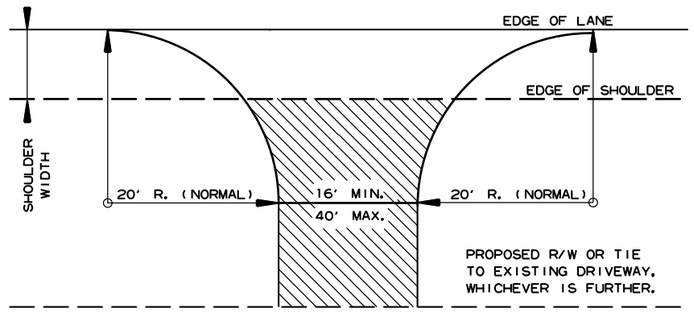


NOTE:
REFER TO PLAN SHEETS
FOR WIDTH OF COUNTY ROAD.

NOTE: TURNOUTS SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

ACHM SURFACE COURSE (1/2")
(220 LBS. PER SQ. YD.) AND
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH, UNLESS OTHERWISE
SPECIFIED IN PLANS.

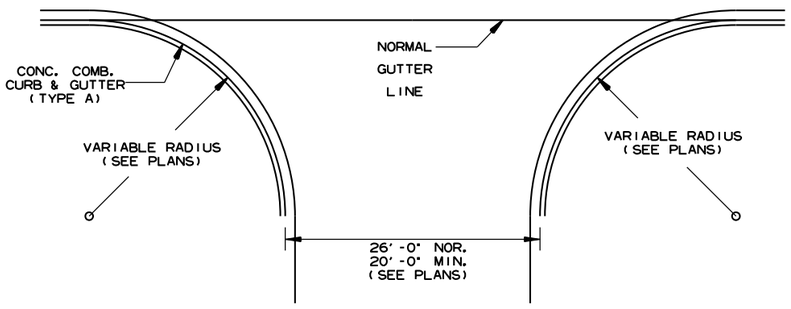
DETAIL FOR COUNTY ROAD TURNOUTS OPEN SHOULDER SECTION



NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

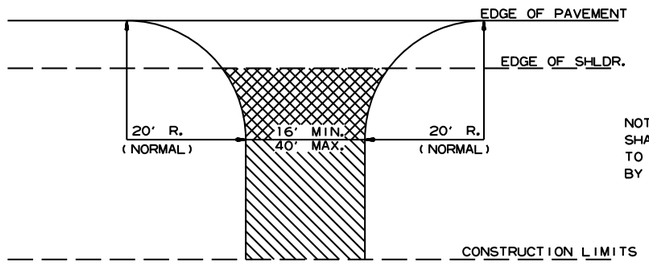
ACHM SURFACE COURSE (1/2")
(220 LBS. PER SQ. YD.) AND
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH IF ASPHALT OR
GRAVEL DRIVE EXISTING; OR 6"
CONCRETE IF CONCRETE DRIVE
EXISTING.

DETAIL FOR DRIVEWAY TURNOUTS OPEN SHOULDER SECTION (ARTERIALS)



NOTE:
PAVEMENT STRUCTURE FOR STATE HIGHWAYS, CITY STREETS,
& COUNTY ROADS TO BE SAME AS MAIN LANES.

DETAIL OF TURNOUTS, ASPHALT STREETS, COUNTY ROADS & STATE HIGHWAYS CURB & GUTTER SECTION



NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

ASPHALT CONCRETE HOT MIX SURFACE
COURSE (220 LBS. PER SQ. YD.)
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH IF ASPHALT DRIVE EXIST OR
6" CONCRETE IF CONCRETE DRIVE EXIST.

AGGREGATE BASE COURSE (CLASS 7)
9" COMP. DEPTH OR CONFORM
TO EXISTING DRIVEWAY

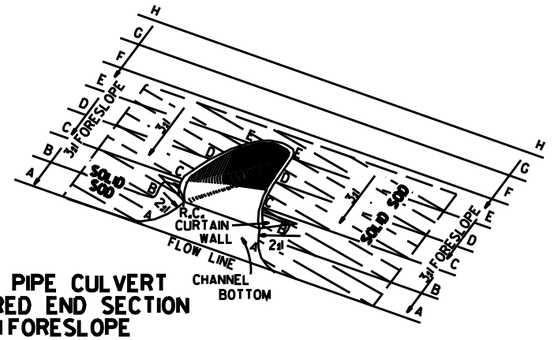
DETAIL FOR DRIVEWAY TURNOUTS (COLLECTORS)

DATE REV	DATE FILMED	DESCRIPTION
5-19-22		ISSUED

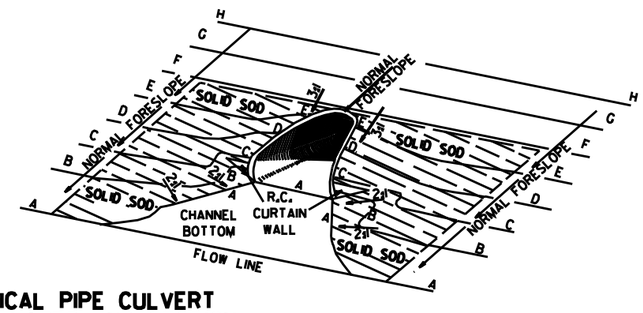
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & STREET TURNOUTS

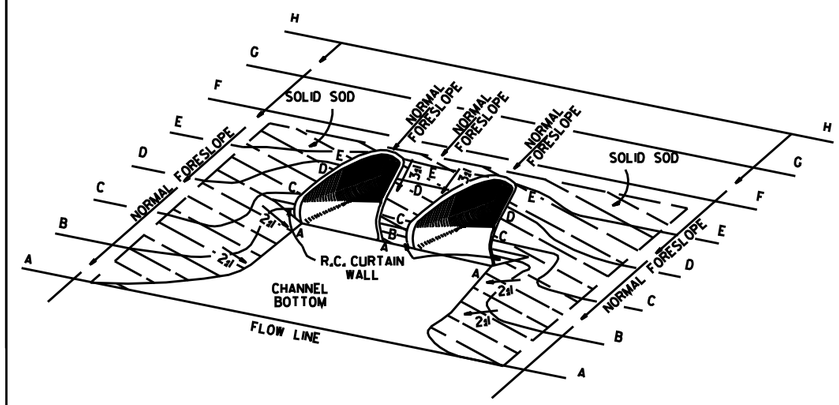
STANDARD DRAWING DR-2



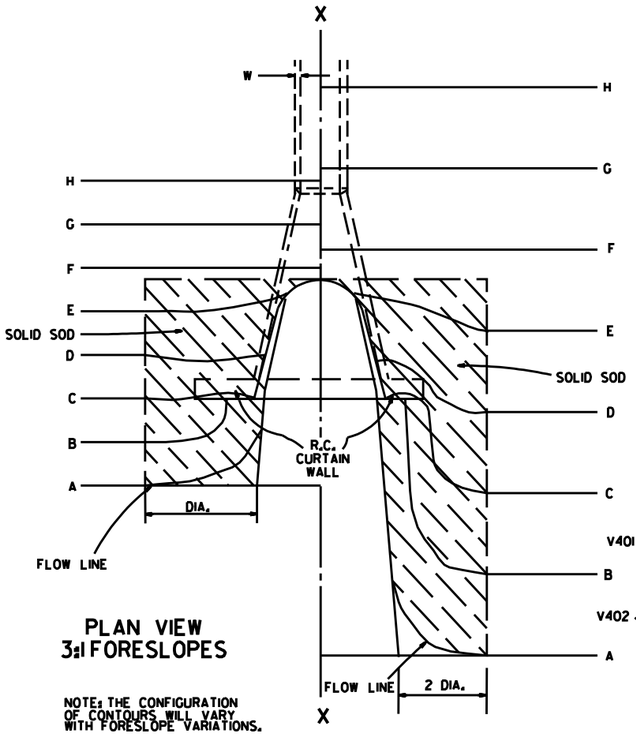
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT
WITH FLARED END SECTIONS
& FLATTENED ADJACENT SLOPES



PLAN VIEW
3:1 FORESLOPES

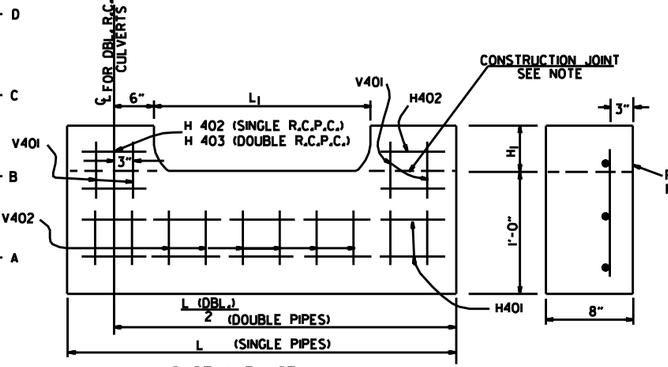
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

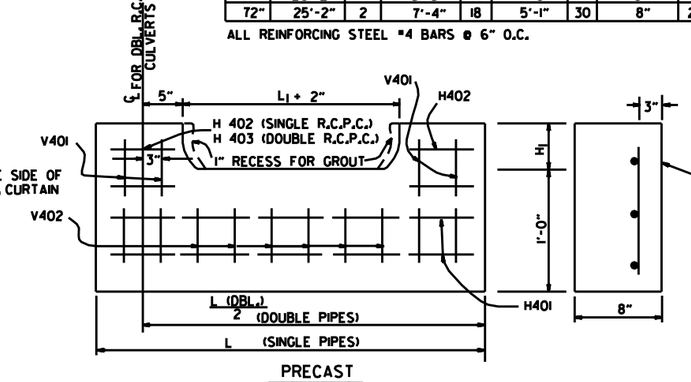
PIPE DIA.	H_1	L_1	L	L (DBL.)/2	SINGLE R.C.P.C. CONC. CU. YDS.	SINGLE R.C.P.C. REINF. STEEL LBS.	DOUBLE R.C.P.C. CONC. CU. YDS.	DOUBLE R.C.P.C. REINF. STEEL LBS.
18"	11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1½"	7'-3"	15'-6"	12'-0"	0.82	77.1	1.10	100.7
48"	2'-5"	7'-10"	17'-0"	13'-0"	0.98	94.9	1.27	120.4
54"	2'-9½"	8'-5"	18'-6"	14'-0"	1.16	115.8	1.47	143.7
60"	3'-4"	9'-0"	20'-6"	15'-6"	1.47	149.7	1.84	180.3
72"	4'-5"	10'-2"	25'-6"	18'-6"	2.31	232.6	2.73	271.0

NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.



CAST-IN-PLACE

NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



PRECAST

NOTE: THE PRECAST CURTAIN WALL WILL BE SET AND BACKFILLED WITH COMPACTED MATERIAL. THE FLARED END SECTION SHALL THEN BE SET IN PLACE AND THE 1" RECESS FILLED WITH GROUT. WHERE "L" EXCEEDS 11' THE CURTAIN WALL MAY BE CAST IN TWO (2) OR MORE SECTIONS. THE METHOD OF JOINING THE SECTIONS FOR INSTALLATION SHALL BE APPROVED BY THE ENGINEER.

R.C. CURTAIN WALL DETAILS

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	V401 L	V401 NO.	V402 L	V402 NO.	DOUBLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	H403 L	H403 NO.	V401 L	V401 NO.	V402 L	V402 NO.
18"	7'-8"	2	1'-11½"	4	1'-7½"	8	8"	8	12'-2"	2	1'-11½"	4	8"	2	1'-7½"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8½"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8½"	12	8"	18
30"	10'-8"	2	2'-4½"	4	1'-11½"	10	8"	12	17'-8"	2	2'-4½"	4	8"	2	1'-11½"	14	8"	22
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9½"	8	2'-9½"	16	8"	15	23'-8"	2	3'-9½"	8	8"	4	2'-9½"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8½"	12	3'-5½"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5½"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

ALL REINFORCING STEEL #4 BARS @ 6" O.C.

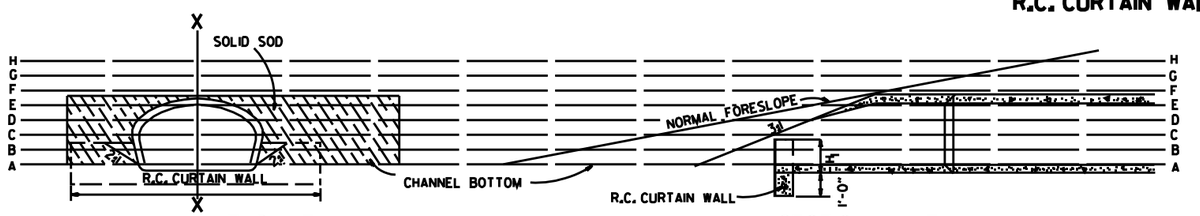
SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C. 3:1	4:1	6:1	DOUBLE R.C.P.C. 3:1	4:1	6:1
	SQ. YDS.			SQ. YDS.		
18"	5	7	12	6	8	13
24"	8	12	19	9	13	20
30"	13	18	29	14	19	30
36"	17	26	41	18	28	43
42"	23	35	55	25	37	57
48"	29	46	68	31	48	70
54"	35	57	85	37	59	87
60"	45	62	104	48	65	107
72"	64	92	156	67	95	159

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

GENERAL NOTES

1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".
3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
4. WELDED WIRE MESH 3 x 3 W10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

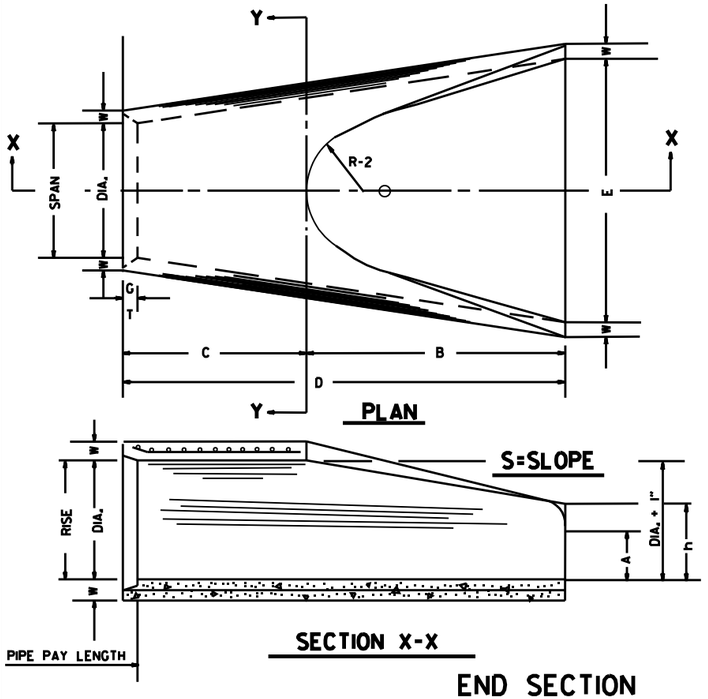
SECTIONAL VIEW "X-X"

DATE	REVISION	FILMED
10-18-96	ADDED NOTE TO SOLID SODDING	
10-12-95	CORRECTED SPELLING	
11-3-94	ADDED GENERAL NOTE NO. 4	
8-15-91	REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.	
3-2-81	ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES	
5-15-80	ADDED PRECAST WALL & GENERAL NOTES	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

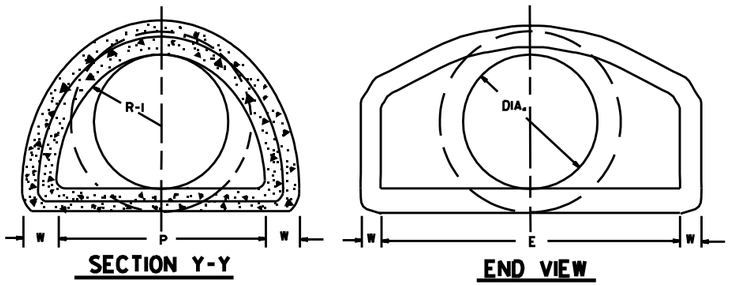
STANDARD DRAWING FES-1



END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3st	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-1½"	4'-0"	3st	25"	33⅜"	16⅛"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7¾"	6'-1¾"	5'-0"	3st	31"	37"	18½"	15"	3¼"	1940	1'-4⅝"
36"	4"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	6'-0"	3st	37"	47⅛"	24⅝"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3st	43"	53⅞"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3st	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3st	55"	65½"	33⅛"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3st	61"	72½"	36⅛"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3st	73"	77⅛"	38⅝"	24"	5"	13250	4'-6"

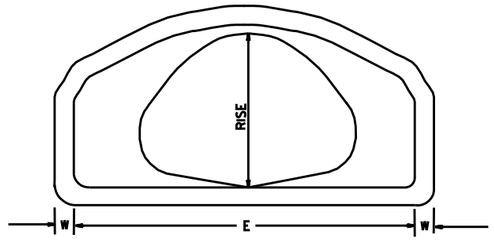


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

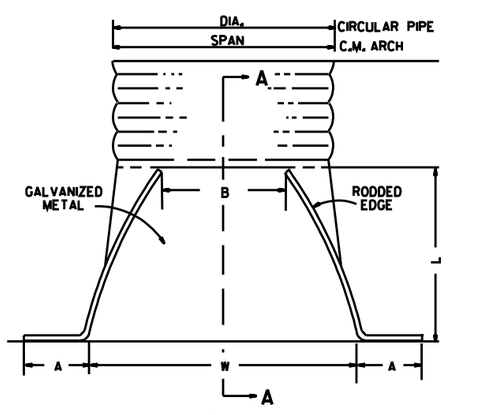
ARCH PIPE

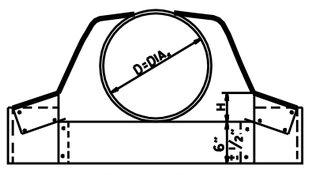
EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½st
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½st
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½st
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36⅛"	15"	2½"	2½st
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47⅛"	20"	3"	2½st
36	43¾	44	26⅝	27	4"	10½"	4'-0"	2'-1½"	6'-1½"	6'-6"	54⅞"	22"	3½"	2½st
42	51⅛	51	31⅝	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½st
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	7'-10"	70⅜"	24"	4¼"	2½st
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72⅛"	24"	4¾"	2¼st
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77⅛"	24"	5"	2¼st

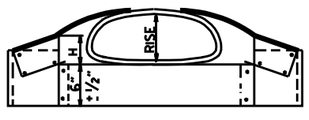
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



END VIEW
CONCRETE ARCH PIPE







CIRCULAR PIPE

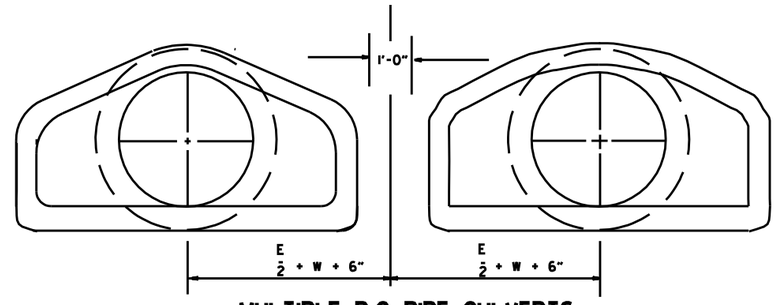
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½st
15	16	7	8	6	26	30	2½st
18	16	8	10	6	31	36	2½st
21	16	9	12	6	36	42	2½st
24	16	10	13	6	41	48	2½st
30	14	12	16	8	51	60	2½st
36	14	14	19	9	60	72	2½st
42	12	16	22	11	69	84	2½st
48	12	18	27	12	78	90	2½st
54	12	18	30	12	84	102	2st
60	12	18	33	12	87	114	1½st
66	12	18	36	12	87	120	1½st
72	12	18	39	12	87	126	1 1/3st

C.M. ARCH PIPE

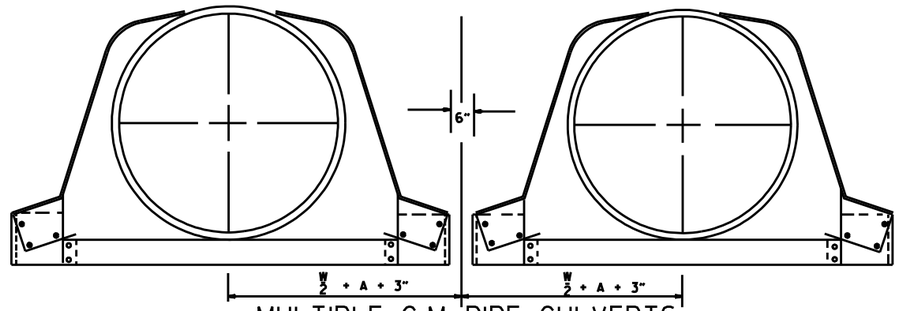
EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1½" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2½st	16
18"	21	15	7	10	6	23	36	2½st	16
21"	24	18	8	12	6	28	42	2½st	16
24"	28	20	9	14	6	32	48	2½st	16
30"	35	24	10	16	6	39	60	2½st	14
36"	42	29	12	18	8	46	75	2½st	14
42"	49	33	13	21	9	53	85	2½st	12
48"	57	38	18	26	12	63	90	2½st	12
54"	64	43	18	30	12	70	102	2½st	12
60"	71	47	18	33	12	77	114	2½st	12

NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



MULTIPLE R.C. PIPE CULVERTS



MULTIPLE C.M. PIPE CULVERTS

DATE	REVISION	FILMED
10-18-96	REVISED ASTM REF. TO AASHTO	
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74
5-24-73	CMP END SECTION, SHOW PIPE PAY LENGTH	627-5-24-73
10-2-72	REVISED AND REDRAWN	760-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

STANDARD DRAWING FES-2

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	ARDOT NOMINAL	AASHTO M 206	ARDOT NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31⅜	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(f)(1).

NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

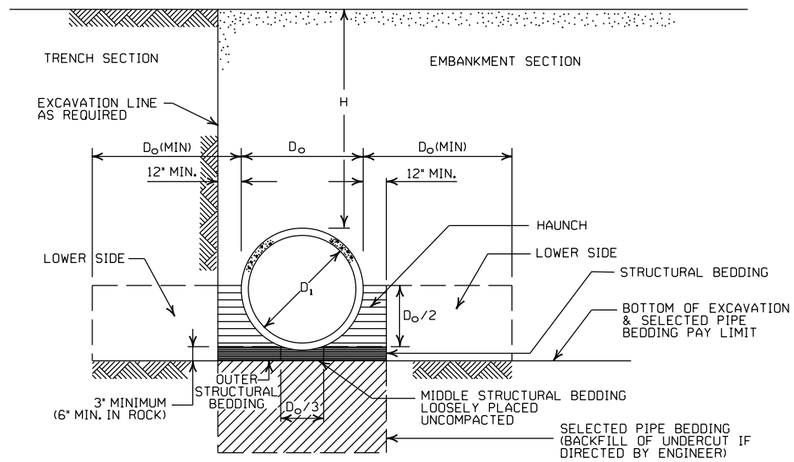
- LEGEND -

D_1 = NORMAL INSIDE DIAMETER OF PIPE
D_O = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
= UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

* SM-3 WILL NOT BE ALLOWED.

** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

	CLASS OF PIPE			
	CLASS III		CLASS IV	CLASS V
INSTALLATION TYPE	TYPE 1 OR 2	TYPE 3	ALL	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
	FEET		
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2	13	21
TYPE 3	10	16

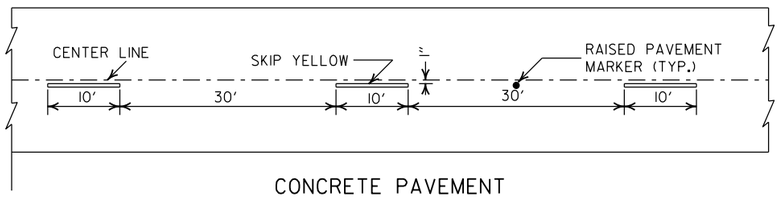
NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

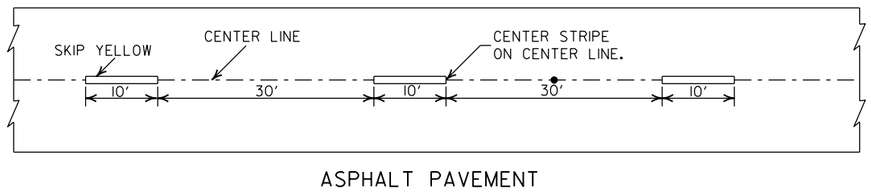
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

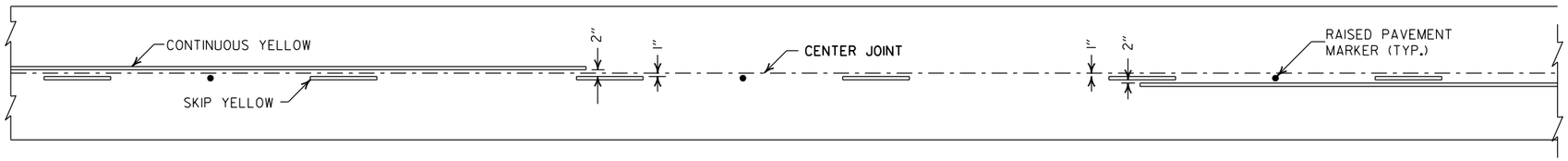


CONCRETE PAVEMENT

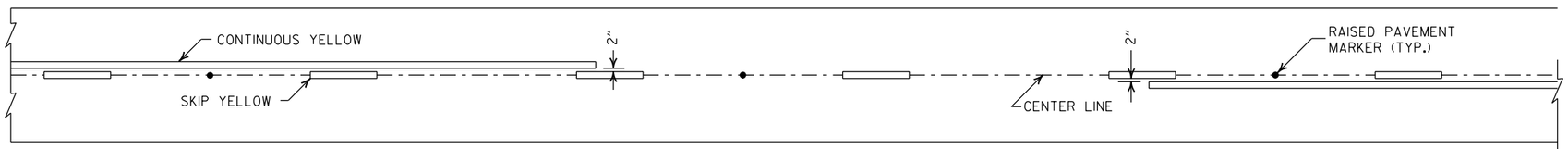


ASPHALT PAVEMENT

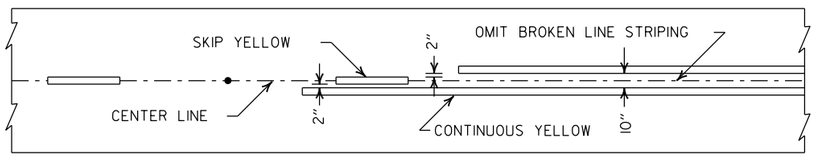
BROKEN LINE STRIPING



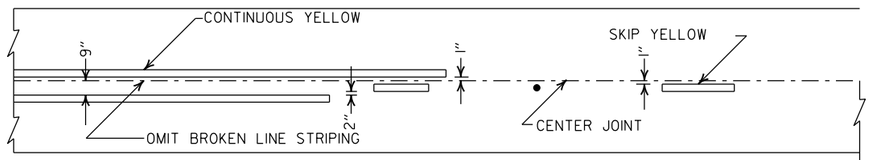
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

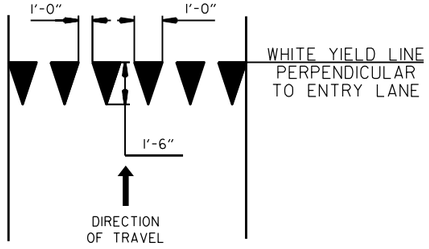


ASPHALT PAVEMENT

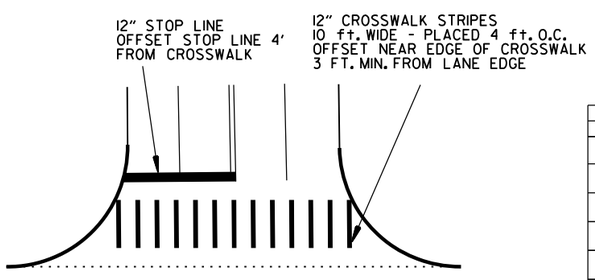


CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

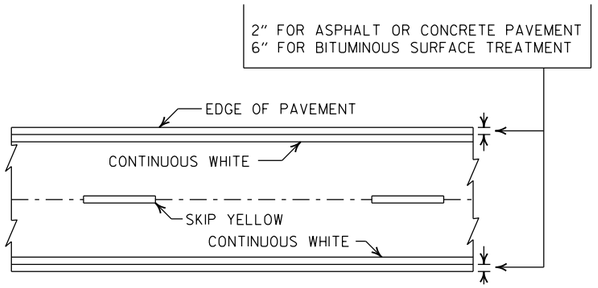


YIELD LINE DETAIL



CROSSWALK AND STOP LINE DETAILS

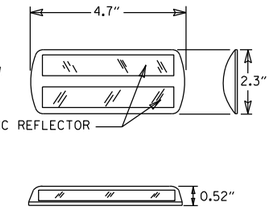
NOTES:
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



PAVEMENT EDGE LINE MARKING

NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.

TYPE II
RED/CLEAR OR
YELLOW/YELLOW



NOTE:
DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.

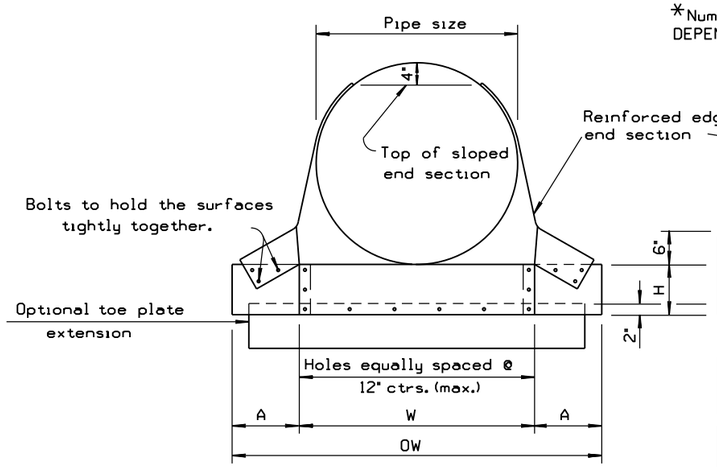
DETAIL OF STANDARD RAISED PAVEMENT MARKERS

DATE	REVISION	FILMED
2-27-20	REVISED STOP LINE DETAILS	
6-1-17	ADDED YIELD LINE DETAIL	
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

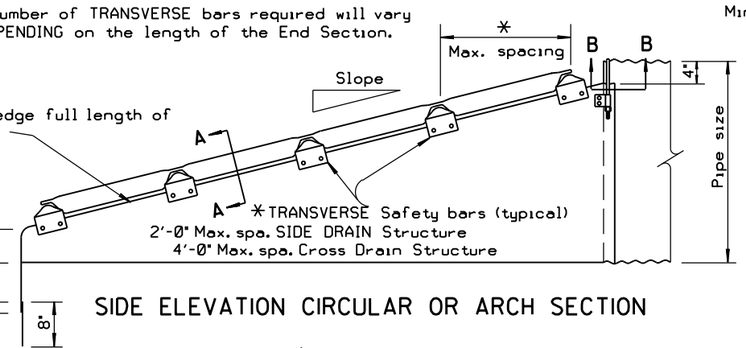
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PAVEMENT MARKING DETAILS

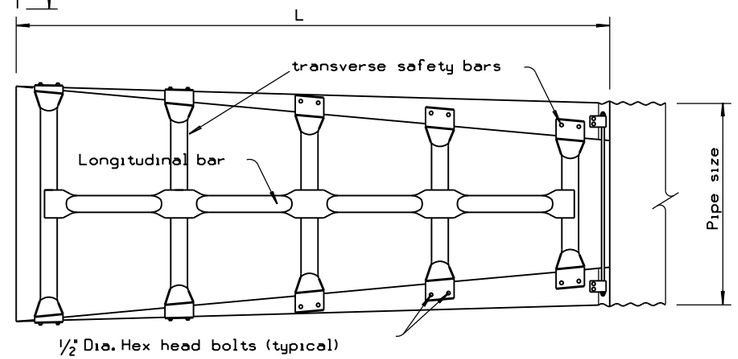
STANDARD DRAWING PM-1



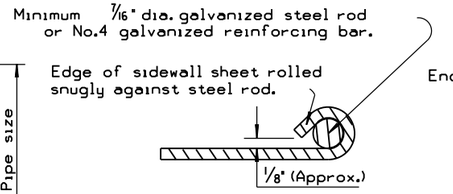
FRONT VIEW CIRCULAR PIPE



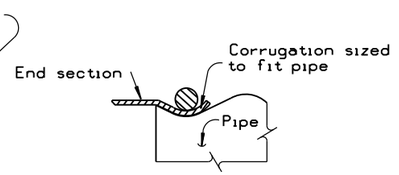
SIDE ELEVATION CIRCULAR OR ARCH SECTION



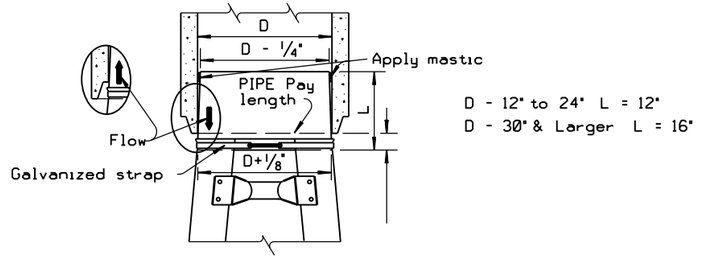
TOP VIEW CIRCULAR OR ARCH SECTION



SECTION A-A



SECTION B-B

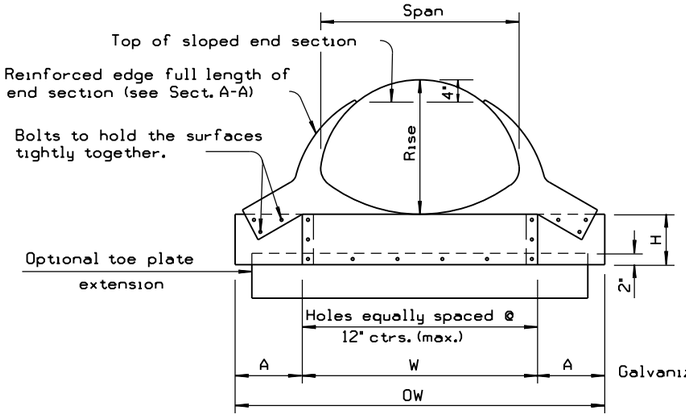


D - 12" to 24" L = 12"
D - 30" & Larger L = 16"

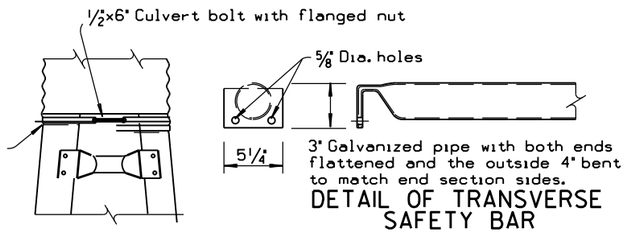
Note: Metal end section to be firmly wedged INTO PIPE END BEFORE BACKFILLING PIPE.

(Tapered sleeve to be 12 Ga. smooth galvanized steel in accordance with AASHTO M 218.)

STEEL END SECTION FOR CONCRETE PIPE
(Alternate for Concrete End Section)



FRONT VIEW ARCH PIPE



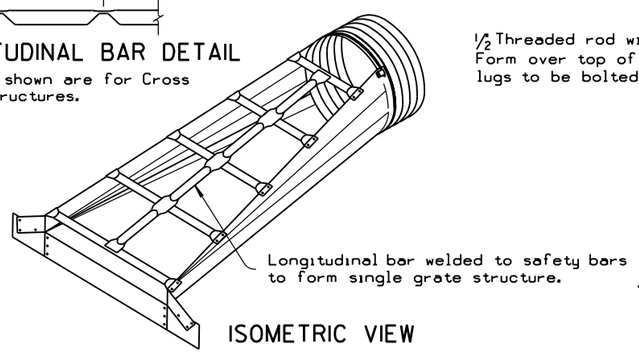
DETAIL OF TRANSVERSE SAFETY BAR

TYPE #1 CONNECTOR DETAIL
For 15" thru 24" pipe

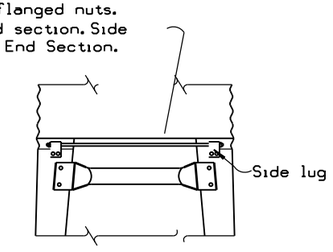


LONGITUDINAL BAR DETAIL

Note: Bars shown are for Cross Drain Structures.



ISOMETRIC VIEW



TYPE #2 CONNECTOR DETAIL
For 30" and larger round pipes & 21"x15" thru 64"x43" arch pipes

GENERAL NOTES

End sections shall be fabricated from galvanzied steel meeting the requirements of SUBSECTION 606.02(c)(1) OF THE STANDARD SPECIFICATIONS.
When specified optional toe plate extension shall be punched and bolted to end section apron lip with ⅜" diameter galvanized bolts.
Steel for toe plate extension shall be same gauge as end section.
Dimensions shall be overall width less 6" by 8" high.
Attachment to circular pipes 15" through 24" diameter shall be made with Type #1 straps. All other sizes shall be attached with Type #2 rods and lugs.
Safety bars shall be fabricated from steel pipe meeting the requirements of ASTM A-53 Schedule 40 Specifications. Safety bars shall be hot dipped galvanized after fabrication.
All work and materials required for construction and installation of safety end section shall be included in the PRICE BID EACH FOR SAFETY END SECTIONS FOR PIPE CULVERTS.
Longitudinal and transverse bars will be required for cross drain structures when span is greater than 30". no safety bars will be REQUIRED FOR 30" SPAN OR LESS WHEN USED ON CROSS DRAIN STRUCTURES.
Transverse bars will be required for all sizes of side drain structures.
Class 1 safety end sections shall be end sections with a 4:1 slope.
Class 2 safety end sections shall be end sections with a 6:1 slope.

SAFETY END SECTIONS FOR ARCH PIPES

Equv. Dia.	Nom. W.W. Area Sq Ft	Pipe Arch Span (In.)	Pipe Arch Rise (In.)	Min. Gauge End Sect.	Dimensions in Inches A	H	W	OW	Slope	L (In)	Slope	L (In)
18"	1.6	21	15	16	8	6	27	43	4:1	20	6:1	30
21"	2.2	24	18	16	8	6	30	46	4:1	32	6:1	48
24"	2.9	28	20	16	8	6	34	50	4:1	40	6:1	60
30"	4.5	35	24	14	12	9	41	65	4:1	56	6:1	84
36"	6.5	42	29	12	12	9	48	72	4:1	76	6:1	114
42"	8.9	49	33	12	16	12	55	87	4:1	92	6:1	138
48"	11.6	57	38	12	16	12	63	95	4:1	112	6:1	168
54"	14.7	64	43	12	16	12	70	102	4:1	132	6:1	198
60"	18.1	71	47	12	16	12	77	109	4:1	148	6:1	222
72"	26.0	83	57	12	16	12	89	121	4:1	188	6:1	282

SAFETY END SECTIONS FOR CIRCULAR PIPES

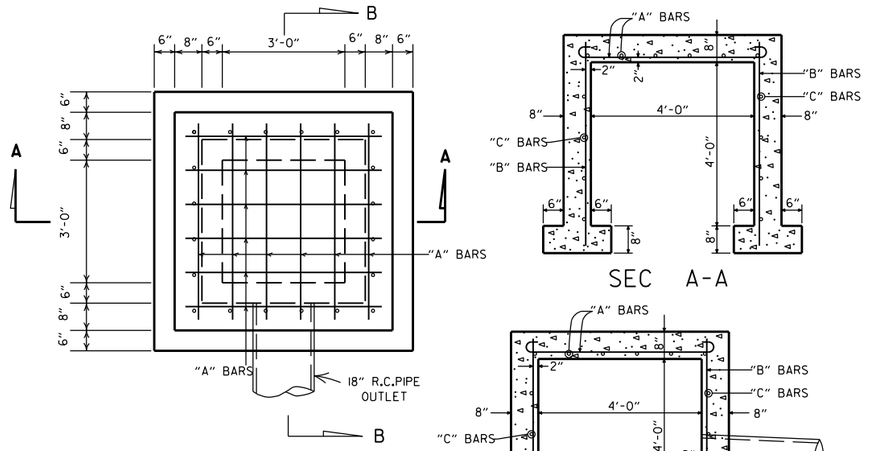
Pipe Dia.	Min. Gauge Ends	Dimensions in Inches A 1"Tol	H 1"Tol	W 2"Tol	OW	Slope	L	L Dimensions in Inches Slope	L
15"	16	8	6	21	37	4:1	20	6:1	30
18"	16	8	6	24	40	4:1	32	6:1	48
21"	16	8	6	27	43	4:1	44	6:1	66
24"	16	8	6	30	46	4:1	56	6:1	84
30"	12	12	9	36	60	4:1	80	6:1	120
36"	12	12	9	42	66	4:1	104	6:1	156
42"	12	16	12	48	80	4:1	128	6:1	192
48"	12	16	12	54	86	4:1	152	6:1	228
54"	12	16	12	60	92	4:1	176	6:1	264
60"	12	16	12	66	98	4:1	200	6:1	300

DATE	REVISION	DATE FILMED
10-18-96	REVISED ASTM REF. TO AASHTO	
8-15-91	DRAWN & ISSUED	

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SAFETY END SECTION FOR CIRCULAR AND ARCH PIPES

STANDARD DRAWING SES-1



SEC A-A

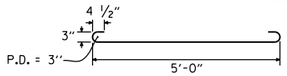
SEC B-B

NOTE: MAX FILL HEIGHT ABOVE TOP OF BOX = 13'-0".

STEEL SCHEDULE

BARS	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 ½"
"C"	16	5'-0"	12"

ALL STEEL TO BE #4 BARS



"A" BARS

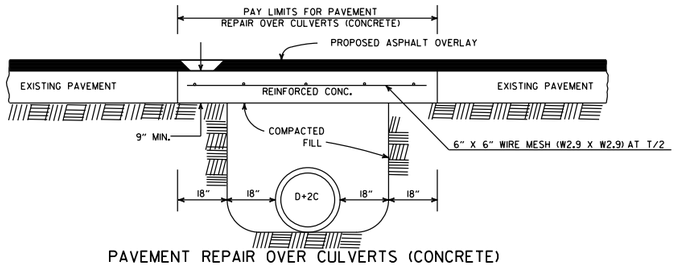
QUANTITIES

CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

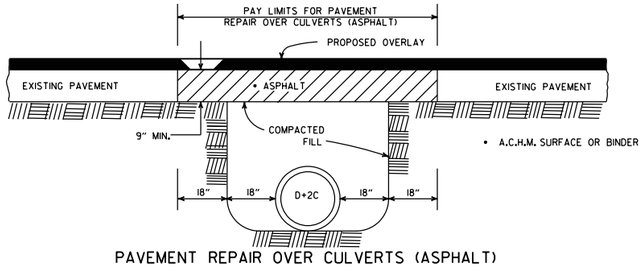
GENERAL NOTE:

THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

REINFORCED CONCRETE SPRING BOX



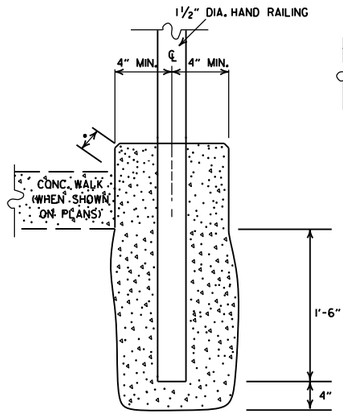
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



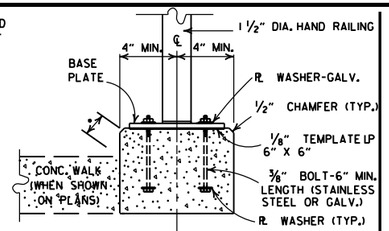
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

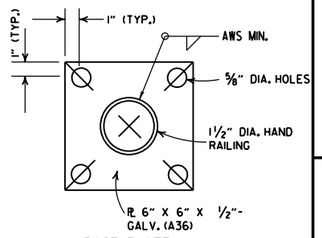
• A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

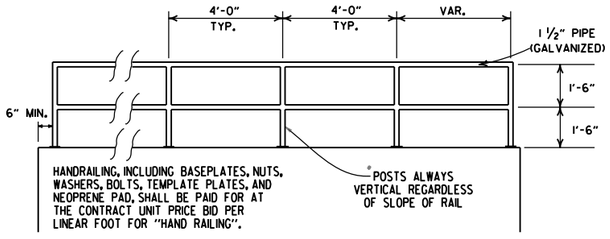


POST CONNECTION TO WALL

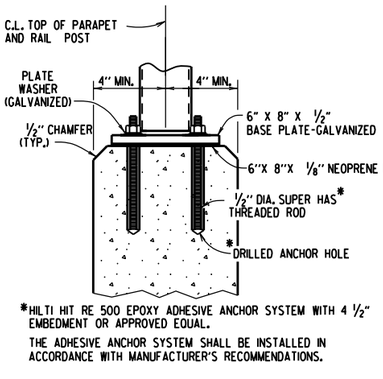


BASE PLATE

POST CONNECTION DETAILS



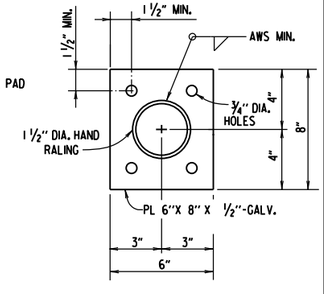
HAND RAILING SHALL CONFORM TO SECTION 633.



*HILTI HIT RE 500 EPOXY ADHESIVE ANCHOR SYSTEM WITH 4 ½" EMBEDMENT OR APPROVED EQUAL.

THE ADHESIVE ANCHOR SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

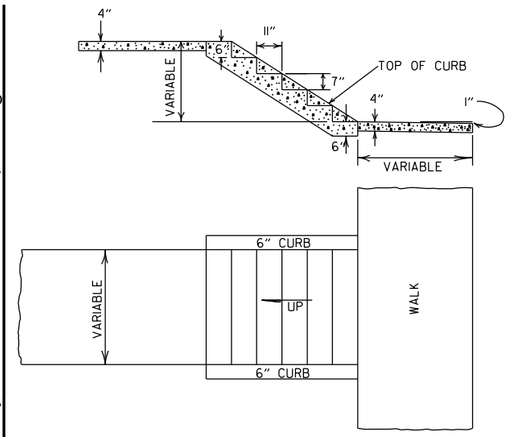
POST CONNECTION TO WALL



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



GENERAL NOTES

1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
10-25-18	REVISED DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS	
9-12-13	REVISED REINFORCED CONCRETE SPRING BOX	
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-94	ADD WEEP HOLE;REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V. BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	649-7-15-88
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET& PAVEMENT REPAIR	674-4-20-79
2-2-76	12"MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
4-10-75	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
5-22-74	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72

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DETAILS OF SPECIAL ITEMS

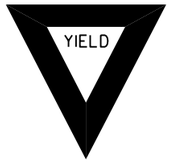
STANDARD DRAWING SI - 1

R1-1



STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

R1-2



STD. 36"X36"X36"
EXPWY. 48"X48"X48"
FWY. 60"X60"X60"

R2-1



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

W3-5



STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

W3-5a



STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

R4-1



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R4-2



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R5-1



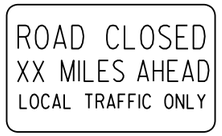
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

R11-2



48"X30"

R11-3A



60"X30"

R11-4



60"X30"

W21-5a



STD. 36"X36"
FWY. 48"X48"

W1-1



STD. 36"X36"
FWY. 48"X48"

W1-2



STD. 36"X36"
FWY. 48"X48"

W1-3



STD. 48"X48"

W1-4



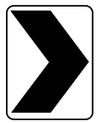
STD. 48"X48"

W1-6



STD. 48"X24"
SPECIAL 60"X30"

W1-8



STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

W3-1



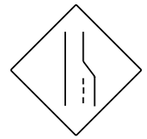
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



STD. 36"X36"
FWY. 48"X48"

W5-1



STD. 36"X36"
SPECIAL 48"X48"

W6-3



EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7



EXPWY. 36"X36"
FWY. 48"X48"

W9-2



STD. 36"X36"
FWY. 48"X48"

W13-1



STD. 24"X24"

W20-1



STD. 48"X48"

W20-2



STD. 48"X48"

W20-3



STD. 48"X48"

W20-4



STD. 48"X48"

W20-5



STD. 48"X48"

W20-7a



STD. 36"X36"
FWY. 48"X48"

W21-2



STD. 30"X30"
SPECIAL 36"X36"

W21-5



STD. 30"X30"
SPECIAL 36"X36"

W24-1



STD. 36"X36"

W1-4b



STD. 48"X48"

R56-1



STD. 18"X18"

W8-11



STD. 36"X36"
FWY. 48"X48"

W8-9



STD. 36"X36"
FWY. 48"X48"

G20-1



60"X24"

G20-2

48"X24"

OM-3L OM-3R

12"X36"

M4-9

STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10

48"X18"

R55-1

36"X60"

• USE 6" C LETTERS
•• USE 4" D LETTERS

ADVANCE DISTANCES
(XXXX)

500 FT	½ MILE
1000 FT	¾ MILE
1500 FT	1 MILE AHEAD

GENERAL NOTES:

1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.
3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.
- 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
- 5. SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.
6. POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.
7. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.
8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
10. R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

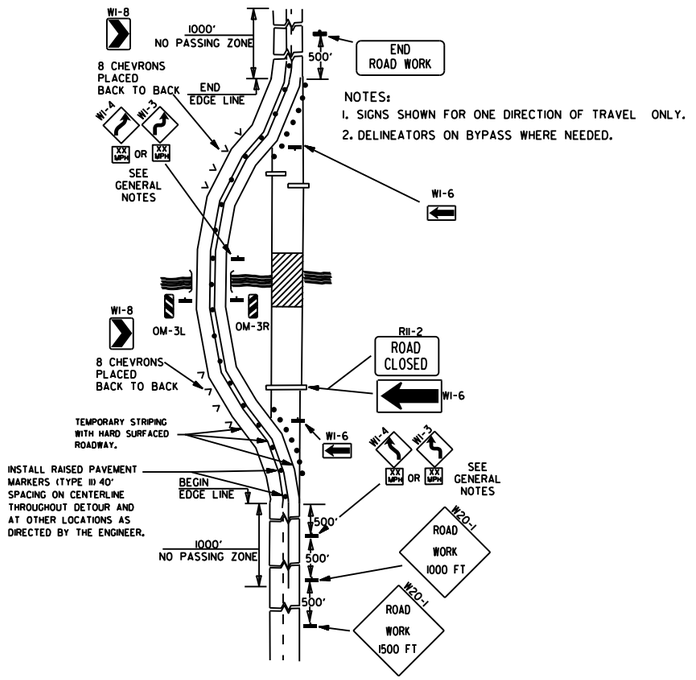
- NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

DATE	REVISION	FILMED
11-07-19	REVISED FOR MASH	
4-13-17	DELETED RSP-1 & ADDED W21-5a	
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION

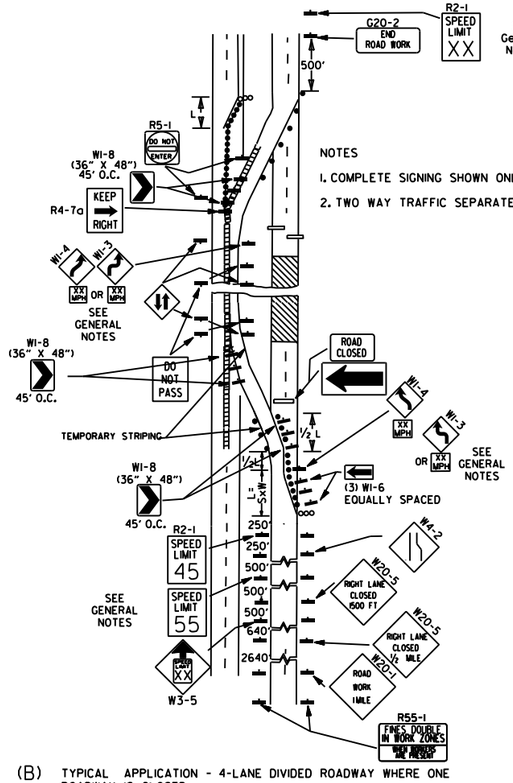
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



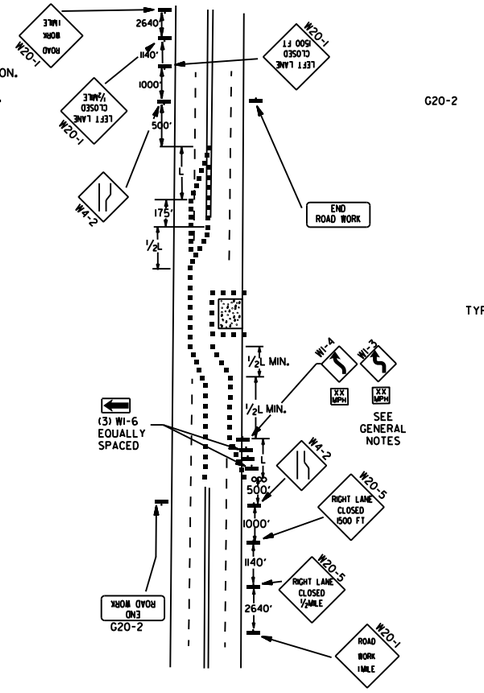
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.

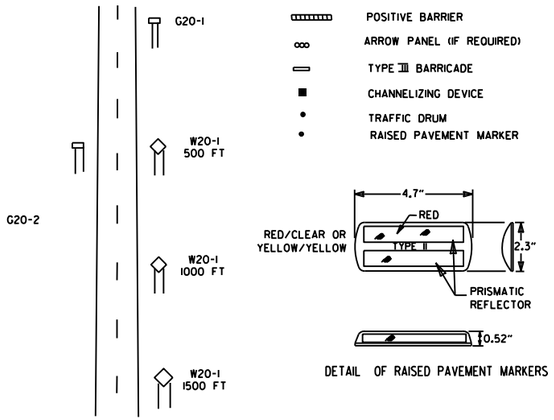


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



DETAIL OF RAISED PAVEMENT MARKERS

TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

L=SXW FOR SPEEDS OF 45MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.

WHERE:

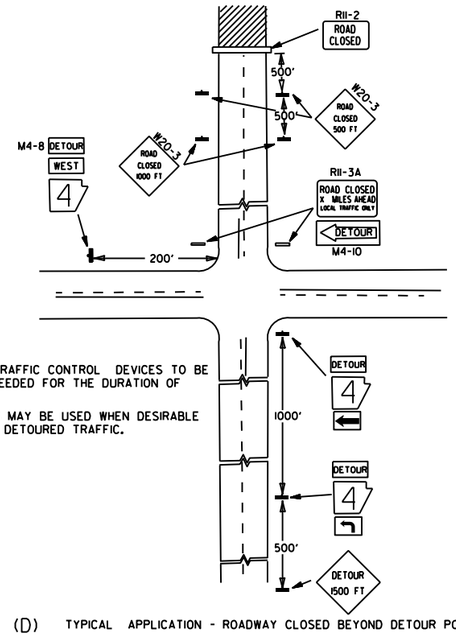
L= MINIMUM LENGTH OF TAPER.

S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.

W= WIDTH OF OFFSET.

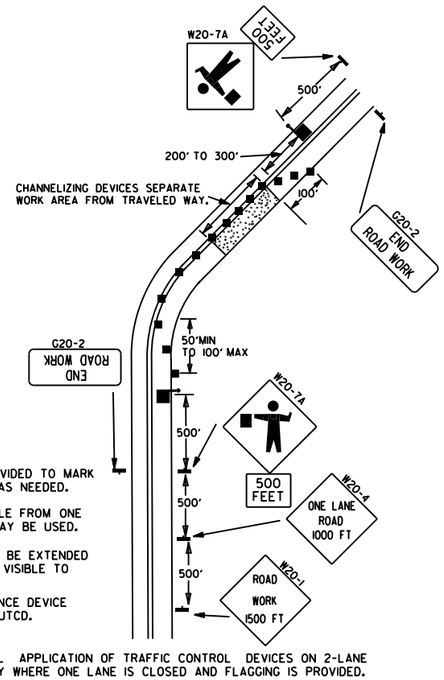
GENERAL NOTES:

1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON WI-3 OR WI-4 CURVE WARNING SIGNS. USE WI-4 WHEN SPEED IS GREATER THAN 30MPH AND WI-3 WHEN 30MPH OR LESS
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.
9. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).



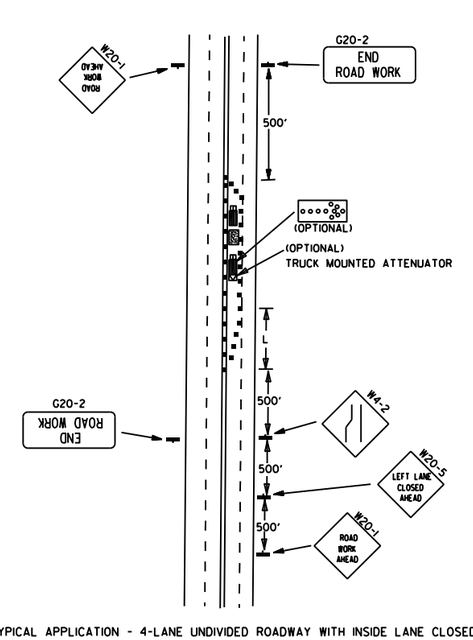
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



NOTES:
1. FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
2. IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.
3. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
4. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) OPTIONAL. REFER TO MUTCD.

(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



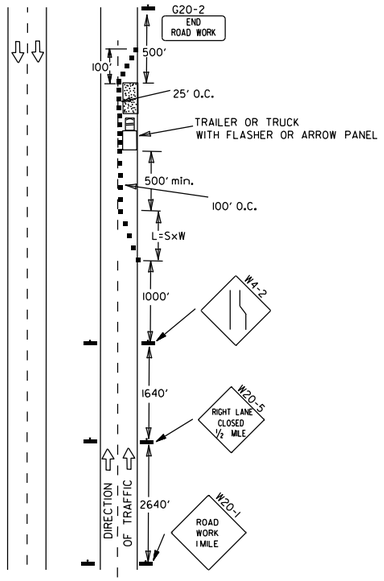
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE	REVISION	FILMED
05-20-21	REVISED NOTE 7	
11-07-19	REVISED NOTE 1, ADDED NOTE 9	
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

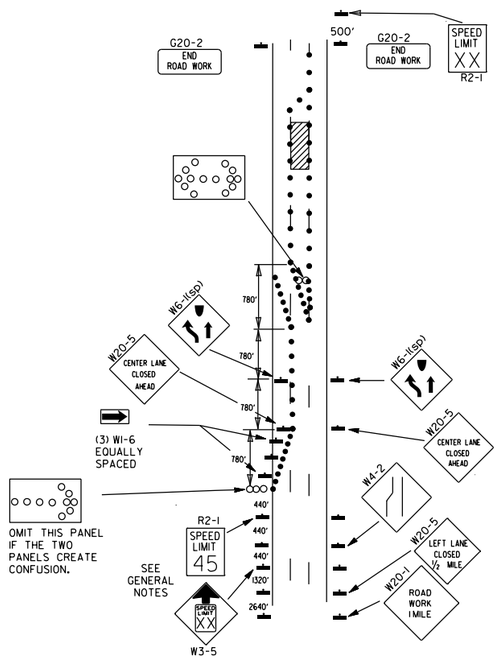
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-2



(A) TYPICAL APPLICATION - DAYTIME MAINTENANCE OPERATIONS OF SHORT DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.

KEY:

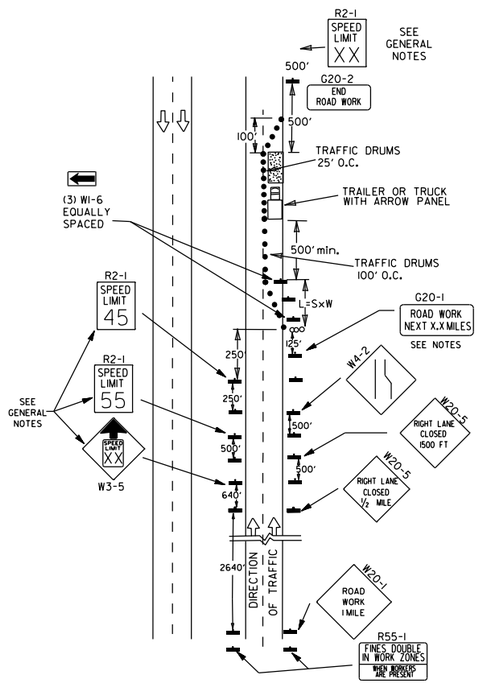
ARROW PANEL (IF REQUIRED)

■ CHANNELIZING DEVICE

● TRAFFIC DRUM

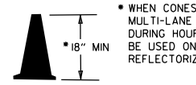
GENERAL NOTES:

1. A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-1 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS, AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. THE G20-1 SIGN WILL BE REQUIRED ON JOBS OF OVER TWO MILES IN LENGTH. WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT, THE G20-1 SIGN SHALL BE ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1 (1 MILE) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS.
8. FLAGGERS SHALL USE STOP/SLOW PADDLES FOR CONTROLLING TRAFFIC THROUGH WORK ZONES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. ALL PLASTIC DRUMS AND CONES SHALL MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
10. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
11. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).



(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

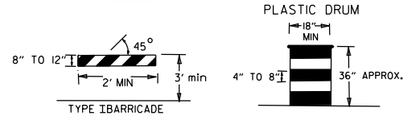
CHANNELIZING DEVICES



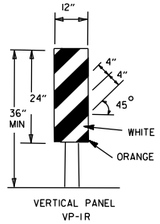
* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

CONES

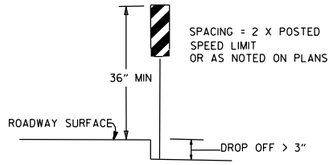
PLASTIC DRUM



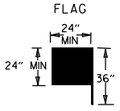
NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.



VERTICAL PANEL PLACEMENT



FLAG



FLAG SHALL BE OF GOOD GRADE RED MATERIAL

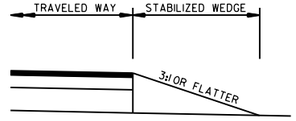
TRAFFIC CONTROL DEVICES			
NON-INTERSTATE			
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL	
		≤ 45 MPH	> 45 MPH
≤ 1"	CENTERLINE	W8-11	W8-11
> 1" ≤ 3"	CENTERLINE	W8-11 AND CENTERLINE LANE STRIPING	W8-11 AND CENTERLINE LANE STRIPING
> 3"	CENTERLINE	STANDARD LANE CLOSURE[6]	STANDARD LANE CLOSURE[6]
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9 AND TRAFFIC DRUMS[1]	W8-9 AND TRAFFIC DRUMS[1]
> 3" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]
> 6" ≤ 18"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[2]
> 18" ≤ 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]	A STABILIZED WEDGE, W8-17, EDGE LINE STRIPING AND TRAFFIC DRUMS[3]
> 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER[4] & EDGE LINES	PRECAST CONCRETE BARRIER[4] & EDGE LINES

INTERSTATE		
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL
≤ 3"	CENTERLINE	W8-11 AND LANE STRIPING
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS[2]
> 3" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[2]
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER & EDGE LINES

INTERSTATE AND NON-INTERSTATE		
FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

GENERAL NOTES:

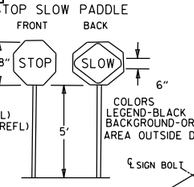
1. WHEN THE SHOULDER AREA IS USED AS PART OF THE TRAVELED LANE AND THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, THEN VERTICAL PANELS SHALL BE USED.
2. WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL BE USED.
3. PRECAST CONCRETE BARRIER WALL CAN BE USED IN LIEU OF A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS, IF AND WHERE DIRECTED BY THE ENGINEER.
4. A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS CAN BE USED IN LIEU OF PRECAST CONCRETE BARRIER WALL, IF AND WHERE DIRECTED BY THE ENGINEER.
5. W21-5, W21-5a, AND/OR W21-5b SIGNS SHALL BE USED WHERE THE ROADWAY IS UNOBSTRUCTED IF AND WHERE DIRECTED BY THE ENGINEER.
6. TIME LIMITATIONS MUST CONFORM TO SECTION 603 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).

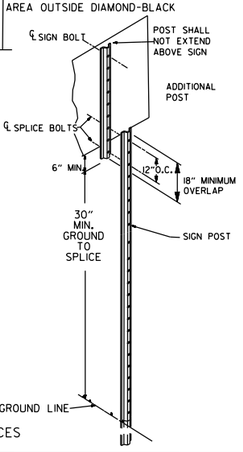


STABILIZED WEDGE

NOTE:
MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.

STOP SLOW PADDLE

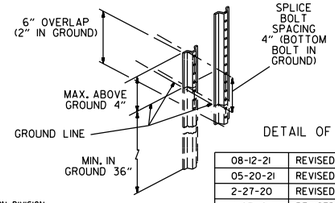




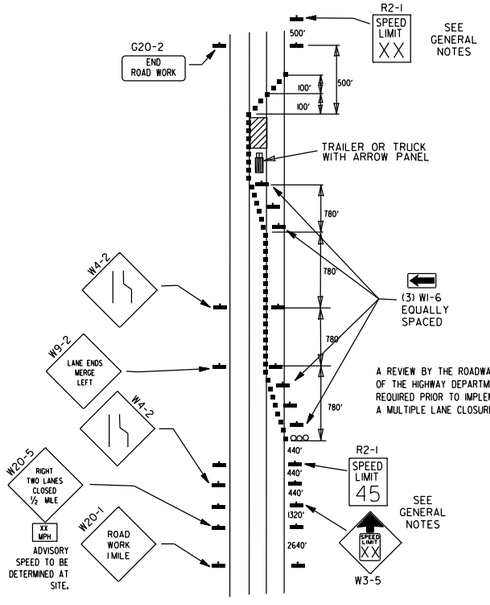
NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-21)

NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS.

SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.



DETAIL OF SPLICES



A REVIEW BY THE ROADWAY DESIGN DIVISION OF THE HIGHWAY DEPARTMENT WILL BE REQUIRED PRIOR TO IMPLEMENTING A MULTIPLE LANE CLOSURE.

(D) TYPICAL APPLICATION - CLOSING MULTIPLE LANES OF A MULTILANE HIGHWAY.

DATE	REVISION	FILMED
08-12-21	REVISED TRAFFIC CONTROL DEVICES AND NOTES	
05-20-21	REVISED NOTE 10	
2-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS	
11-07-19	REVISED NOTE 9, ADDED NOTE 11	
7-25-19	REVISED TRAFFIC CONTROL DEVICES DETAILS	
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1& REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

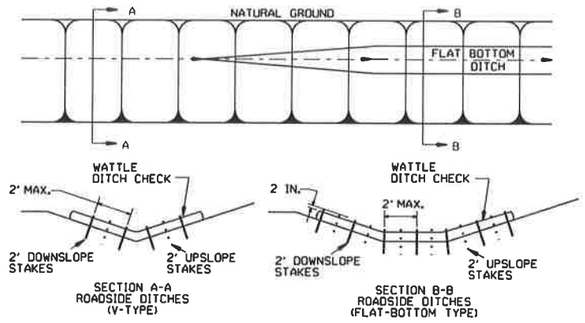
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

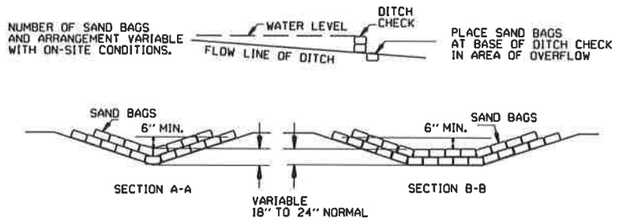
STANDARD DRAWING TC-3

GENERAL NOTES

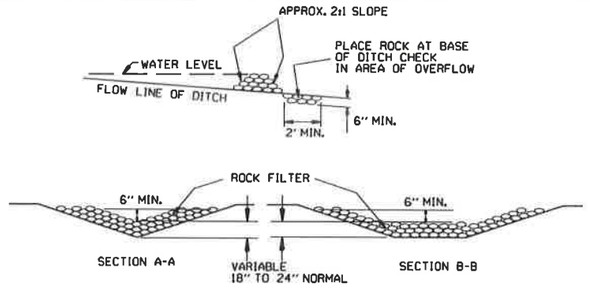
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

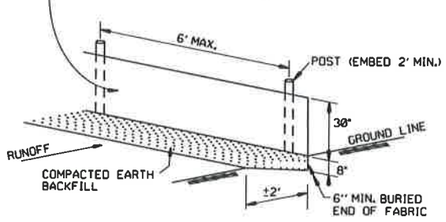


ROCK DITCH CHECK (E-6)

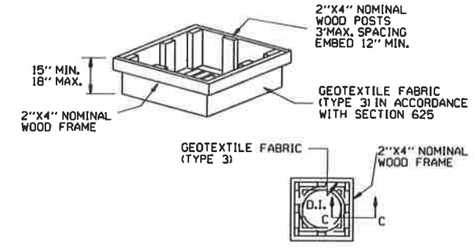
GENERAL NOTES

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

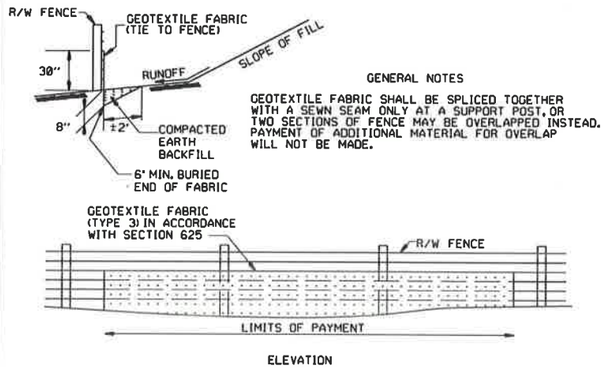
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)



DROP INLET SILT FENCE (E-7)



GENERAL NOTES

GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

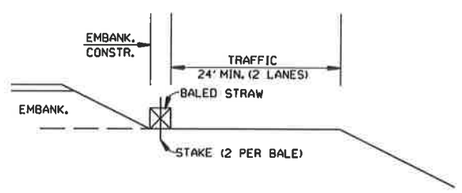
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

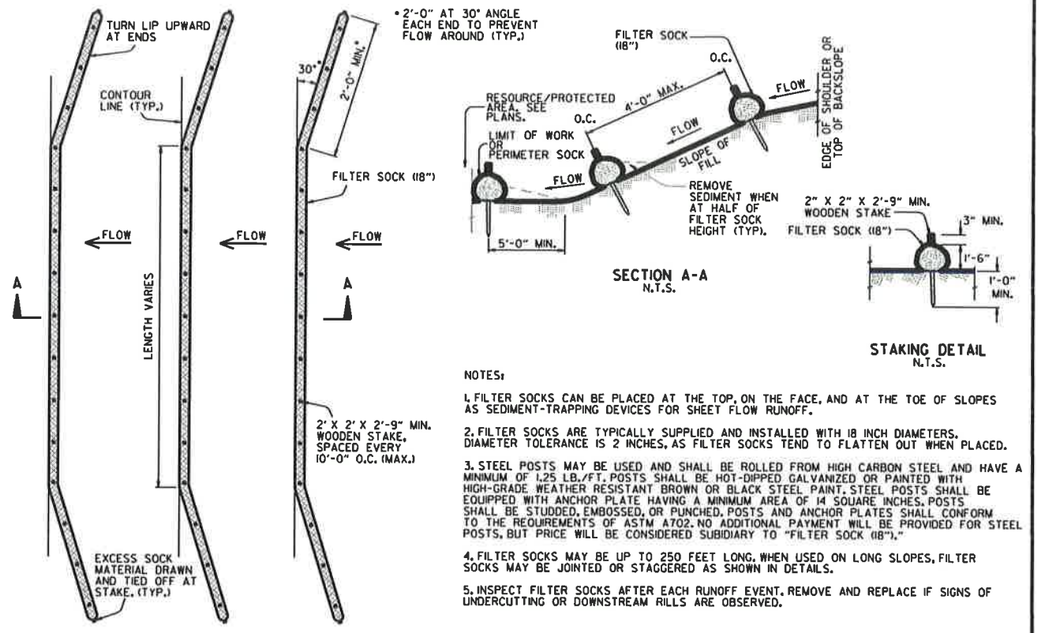
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)



NOTES:

1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.

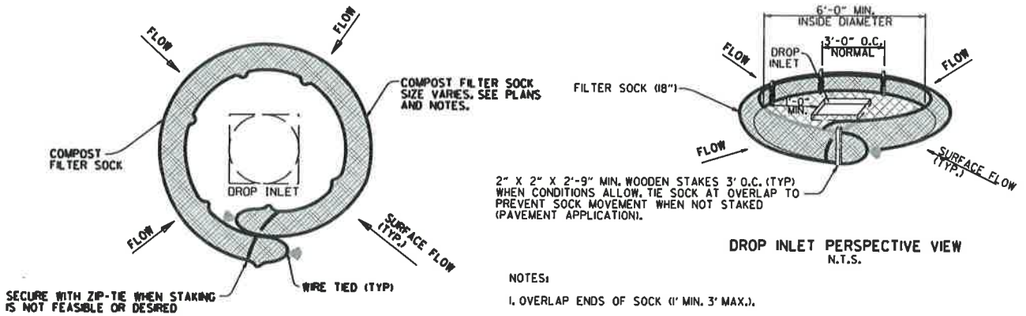
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBIDIARY TO "FILTER SOCK (18")."

4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

FILTER SOCK ALONG SLOPE (E-3)



NOTES:

1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).

2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

DATE	REVISION	FILMED
11-16-17	ADDED FILTER SOCK E-3 AND E-13	
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
07-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
07-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
06-02-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
04-01-93	REDRAWN	
10-01-92	REDRAWN	
08-02-76	ISSUED R.D.M.	298-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

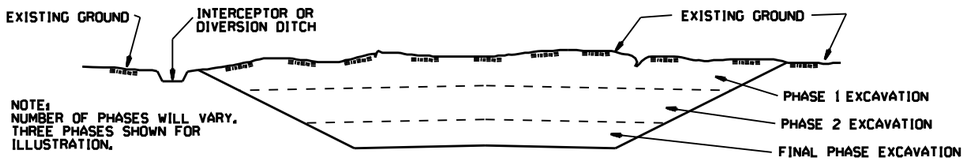
STANDARD DRAWING TEC-1

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES , DIVERSION DITCHES, SEDIMENT BASINS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION.

EXCAVATION



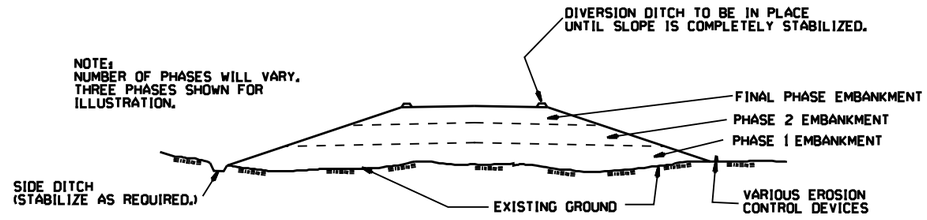
GENERAL NOTE

ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES. CONSTRUCT DITCH CHECKS, DIVERSION DITCHES, SEDIMENT BASINS, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT



GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
4. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PLACE DIVERSION DITCHES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3

City of Bryant
Mills Park Trail Resurfacing

Preliminary Construction Costs

Item No.	Item No.	Description	Unit	Estimated Quantity	Estimated Unit Costs	Estimated Cost
1	SP, SS, & 407	Mineral Aggregate in ACHM Surface Course (1/2")	TON	855		
2	SP, SS, & 407	Asphalt Binder (PG 64-22) in ACHM Surface Course (1/2")	TON	45		
3	412	Cold Milling Asphalt Pavement	SQ. YD.	8000		

***Total Estimate of Construction Costs _____**