

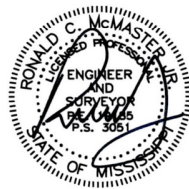


CITY OVERLAY PROJECT, BYRAM MISSISSIPPI
City of Byram

Project documents obtained from www.CentralBidding.com

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CONTRACT DOCUMENTS
for
CITY OVERLAY PROJECT
CITY OF BYRAM, MISSISSIPPI



McMASTER & ASSOCIATES, INC.
CIVIL ENGINEERS & LAND SURVEYORS

212 WATERFORD SQUARE
SUITE 300
MADISON, MS 39110
601.605.1090

City of Byram
Hinds County, Mississippi

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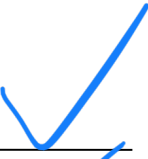
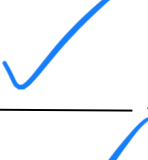
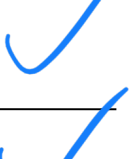


024100	Selective Site Demolition
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DIVISION 31 – EARTHWORK

312000	Earthwork
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321216	Asphalt Paving

BIDDER CHECK LIST

(Items requiring completion and/or signature at bid letting)

-  _____ Envelope has required information on outside and is sealed. (See Section 002113)
-  _____ Affidavit regarding Non-Collusion, Debarment and Suspension, etc.: Executed (signed and notarized) in duplicate.
-  _____ Bidder's Proposal - All pages Completed and Executed.
-  _____ Proposal Guaranty
-  _____ Any issued addenda included and acknowledged as required.
- _____ Non-resident Bidders: A copy of the current laws regarding any preference for local Contractors from state wherein domiciled have been included.

DO NOT remove any part of the contractor documents. A stripped proposal is considered as an irregular bid and will be cause for rejection.

This checklist is to assist the contractor in the submission of a complete Bid Proposal. This checklist in no way relieves the contractor of the responsibility to submit a complete Proposal. Failure to complete any or all of the applicable requirements will be cause for the proposal to be considered irregular.

SECTION 000115

DRAWING INDEX

The Contract Drawings consist of the sheets tabulated below, each dated August 13, 2021, and bearing the general title "City Overlay Project, City of Byram, Mississippi".

Sheet Number	Sheet Title
1	Cover Sheet
1-A	Layout Sheet
2	Quantity and Index Sheet
2-A	Typical Section Sheet
2-B	Estimated Quantity Sheet
2-C	Base Repair and Leveling Schedule
2-D	Traffic Control Plan
SA-PSM-1	Pavement Striping and Marking Details
SA-TSP-1	Traffic Sign Placement
6358	Highway Sign and Barricade Details for Construction Projects

END OF SECTION

SECTION 001113

ADVERTISEMENT FOR BIDS

Sealed bids for bridge construction in the City of Byram, Mississippi will be received by the Mayor and Board of Alderman at 5901 Terry Road, Byram, Mississippi, 39272, until 2:00 P.M., September 8, 2021 and shortly thereafter publicly opened and read aloud. Electronic bids will be received at www.centralbidding.com and shall include a copy of their Certificate of Responsibility as an attachment to the electronic bid. Bids received after this time will not be accepted and will be returned unopened. All bids shall be clearly marked "CITY OVERLAY PROJECT, BYRAM MISSISSIPPI" with the date and time of the bid opening on the outside of the sealed envelope. Each bidder shall write his Certificate of Responsibility number and Mississippi License number on the outside of the sealed envelope containing his bid.

A pre-bid meeting will be held on August 25, 2021 at 2:00 P.M. in City Hall in Byram, Mississippi.

The City of Byram hereby notifies all Bidders that it will affirmatively insure that in any contract entered into pursuant to this notice, disadvantaged, and women's business enterprises will be afforded the full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Contract Time is 60 consecutive calendar days.

The award, if made, will be made to the lowest qualified bidder on the basis of the published quantities. The Mayor and Board of Alderman for the City of Byram, Mississippi reserves the right to reject any and all bids and to waive any informalities or irregularities in the bids received.

Bidders must be qualified under Mississippi Law and show a current Certificate of Responsibility issued by the Mississippi Board of Public Contractors establishing classification as to the value and type of construction work on which he is authorized to bid.

Plans and Contract Documents are on file in City Hall at Byram, Mississippi and may be ordered at www.centralbidding.com. Please contact Ron McMaster, P.E., McMaster and Associates, Inc. at 601-605-1090, Ext. 102.

Each bid shall be accompanied by a Certified Check on a solvent bank or a Bidder's Bond issued by a Surety Company licensed to operate in the State of Mississippi, in the amount of five (5) percent of his bid, payable to the City of Byram, Mississippi as bid security. The successful Bidder will be required to execute a Performance Bond and a Payment Bond, each in the amount of 100 percent of the Contract, issued by a Surety company licensed to operate in the State of Mississippi. Bidders shall submit a current financial statement if requested by the County. Attorneys-in-fact who sign Payment Bonds must file with each bond a certified and effective dated copy of their Power of Attorney.

The bidder shall guarantee to hold his bid good and may not withdraw his bid for a period of 60 calendar days after the scheduled closing time for receiving bids.

Publication Dates:
August 9, 2021
August 16, 2021

Richard White, Mayor
City of Byram, Mississippi

SECTION 002113

INSTRUCTIONS TO BIDDERS

1. RECEIPT OF BIDS

The City of Byram, Mayor and Board of Alderman hereinafter called the Owner, invites bids on the proposal form(s) enclosed herein, for work described herein, for which all blanks must be appropriately completed. Bids will be received until 2:00 P.M. local time on September 8, 2021, at which time they will be publicly opened and read aloud.

2. Any proposal received after closing time will be returned unopened.
3. Enclosed are contract proposal forms for the project titled "City Overlay Project, City of Byram, Mississippi" and all associated items of work necessary for the complete construction of the project.
4. The contract will be awarded to the successful Contractor, based on the low bid received for the work meeting the outlined requirements of these specifications. All supporting documents (including, but not limited to, Proposal Form, Bid Bond, Non-Collusion Affidavit, etc.) for each contract must be completed and enclosed with the bid for that bid to be eligible for consideration. **DO NOT remove any part of the contract Documents. A stripped proposal is considered as an irregular bid and will be cause for rejection.**
5. Each bid received shall be enclosed in a sealed envelope, the outside of which shall clearly indicate the following:
 - a. The name of the Project with date and time of bid opening.
 - b. The name of the Bidder and the Bidder's permanent address.
 - c. The Bidder's/Contractor's license number as issued by the State Board of Mississippi. (For a bid, the total amount of which is in excess of Fifty Thousand Dollars (\$50,000), the bidder must have a Contractor's license number. If the bid is less than Fifty Thousand Dollars, a statement signifying that the bid is not in excess of Fifty Thousand Dollars (\$50,000) must be shown on the outside of the sealed envelope containing the bid).

If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed to the Owner.

The attention of prospective bidders is directed to all State fees and taxes required for the privilege of doing business within the State.

Any proposal received which does not comply with these provisions will be returned unopened.

6. The name of the Project is:

**City Overlay Project
City of Byram, Mississippi**

7. The Bidder understands that the unit prices included on the proposal form as a part of its bid shall be held good, and may not be altered or withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.
8. Each bid shall be accompanied by a Certified Check on a solvent bank or a Bidder's Bond issued by a Surety Company licensed to operate in the State of Mississippi, in the amount of five percent of his bid, payable to the City of Byram, Mississippi as bid security.
9. The successful Bidder will be required to execute a Performance Bond and a Payment Bond, each in the amount of 100 percent of the Contract, issued by a Surety company licensed to operate in the State of Mississippi. Bidders shall submit a current financial statement if requested by the City. Attorneys-in-fact who sign Payment Bonds must file with each bond a certified and effective dated copy of their Power of Attorney.
10. The Owner's intent in performing this work is to improve roadways in the City of Byram.
11. The time allowed for this project is as follows:
 1. Base Bid – 60 calendar days From Notice To Proceed.
 2. Additive Alternate No.1 – An additional 5 calendar days.
 3. Additive Alternate No.2 – An additional 5 calendar days.

Failure to complete the work within the allowable contract time will result in the assessment of liquidated damages of \$500.00 per day for each calendar day after the expiration of contract time.

12. The Engineer shall provide a Resident Project Representative to observe and document construction of this project. The Contractor(s) shall be responsible for notifying the Engineer and/or its resident project representative (RPR) of days when construction activities will not take place. If the Contractor(s) fails to do so, it shall pay all expenses of the RPR being at the site on those days when work was scheduled to be performed, but was not. The costs incurred by the Engineer or its RPR shall be deducted from the monthly invoices submitted to the Owner for work performed by the Contractor(s).

END OF SECTION

SECTION 004100

BIDDER'S PROPOSAL
CITY OVERLAY PROJECT
CITY OF BYRAM, MISSISSIPPI

DATE: Sept 8, 2021

PROPOSAL OF AJ Construction Inc.
(Name of Bidder)

PO Box 2024 Madison, MS 39130
(Address of Bidder)

For a Asphalt Overlay Project in the City of Byram, Mississippi.

The documents on which this Proposal is based include the Instructions to Bidders, Bid Forms, General Conditions, Supplementary Conditions, Technical Specifications, Contract Drawings, and all supplements, amendments and addenda for this Project and are made a part hereof by reference.

TO: MAYOR AND BOARD OF ALDERMAN
CITY OF BYRAM
5901 TERRY ROAD
BYRAM, MISSISSIPPI 39272

Gentlemen:

The following Proposal is submitted on behalf of the undersigned Bidder(s) and no others. Evidence of my (our) authority to submit the Proposal is hereby furnished. The Proposal is submitted without collusion on the part of any person, firm or corporation.

I (We), the undersigned Bidder(s), certify that I (we) have carefully examined the site of the proposed Work and have inspected the location and condition of all public utilities and existing structures or other facilities on the site or adjacent thereto which may be affected by the proposed construction and fully understand all conditions relative to construction difficulties, hazards, labor, transportation and all other factors affecting the prosecution of the work covered by this Proposal.

In accordance with the requirements of the Instructions to Bidders, Bid Forms, Technical Specifications Supplementary Conditions, General Conditions, Contract Drawings, and any Addenda, I (we) propose to furnish all necessary materials, equipment, labor, tools and other means of construction and will do all Work called for by the Contract Documents within the specified Contract Time.

The following is my (our) proposal for the City Overlay Project, City of Byram, Mississippi.

I (We) further propose to execute the Contract Agreement as bound herein within ten working days after receipt of Contract Forms from the Owner and to complete the work within designated time period from the date of the Notice to Proceed. I (We) agree to pay as liquidated damages the sum of \$500.00 for each consecutive calendar day beyond the specified Contract Time as provided in the Contract Documents.

Special Damages: In addition to the amounts provided for liquidated damages, Contractor, in the event of such default, shall pay to the Owner the actual costs, expenses and other losses reasonably incurred by Owner.

I (We) also propose to execute a Performance Bond and a Payment Bond, as shown in the bid package, each in an amount of not less than one hundred percent (100%) of the total of my (our) Bid. These Bonds shall not only serve to guarantee the completion of the Work on my (our) part, but also to guarantee the excellence of both workmanship and materials until the Work is finally accepted.

I (We) enclose a Bid Bond or Certified Check for 5 percent of BID
_____, Dollars (\$ 5% of BID)
(Total Bid Amount)

and hereby agree that in case of my (our) failure to execute the Contract and furnish the Bonds within ten calendar days after delivery of the Notice of Award, the amount of this check (Bid Bond) will be forfeited to the City of Byram, Mississippi as liquidated damages arising out of my (our) failure to execute the Contract as proposed.

It is understood that in case I (we) am (are) not awarded the Work, the Certified Check or Bid Bond submitted as Bid security will be returned as stipulated in the Contract Documents.

Bidder acknowledges receipt of the following Addenda:

No. <u>1</u> Dated <u>8/31/21</u>	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____

Respectfully Submitted,



AJ Construction Inc.
Contractor(s)

By: [Signature]

Title: President

Address: PO Box 2024

Madison, MS 39130

The names and addresses of all person and parties who will be utilized for subcontract Work in the foregoing Bidder's Proposal are listed below. (The Contractor must list all Subcontractors to be utilized on the Work. Failure to list Subcontractors may cause the Bidder's Proposal to be rejected by the Owner as nonresponsive.) If the Bidder does not propose Subcontractors, so state.

END OF SECTION

Tuesday August 31st, 2021
McMaster & Associates, Inc.
212 Waterford Square, Suite 300
Madison, MS 39110
601-605-1090

ADDENDUM NO. ONE (1)
City Overlay Project, City of Byram, MS
McMaster & Associates, Inc. – M-2873

Plan Holders,

The following changes and clarifications are hereby made a part of and take precedence over conflicting sections of the Drawings and Specifications.

GENERAL INFORMATION AND CLARIFICATIONS:

- 1.1 The Pre-Bid Meeting for the above referenced project was held on August 25, 2021, at 2:00 P.M.
A copy of the sign-in sheet and meeting minutes are attached for your review.

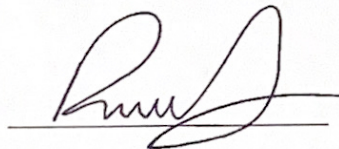
PERTAINING TO THE SPECIFICATIONS:

- 1.2 The revised specifications pertaining to Addendum No. One (1) are attached.
1.3 Section 000115 Drawing Index – A leveling schedule has been added.
1.4 Section 002113 Instruction to Bidders – (time allowed) has been revised.
1.5 Section 004100 Bid Form – has been revised.
1.6 Section 011105 Measurement and Payment – leveling has been added.
1.7 Section 012300 Alternates – has been added to the specifications.

PERTAINING TO THE DRAWINGS:

- 1.8 The revised drawings pertaining to Addendum No. One (1) are attached.
1.9 Owens Cove (Add. Alt. No.1) and Chevron Cove (Add. Alt. No.2) have been added to the plans.
1.10 Leveling has been added to Rozell Cove (see sheet 2-C).
1.11 There is one asphalt speed bump on Meagan Drive. The speed bump is to remain in place during construction. Contractor is to mill/pave up to both sides of the speed bump.

Please acknowledge this addendum by signing and emailing it back and to enclose it with your bid proposal.



Ron McMaster, Jr. P.E., P.S.

Acknowledge and email back:

ron@mcmastereng.com
kohl@mcmastereng.com

Company Name: *AS Construction Inc.*

By: 

END OF ADDENDUM NO. ONE (1)

**BID FORM
CITY OVERLAY PROJECT
CITY OF BYRAM, MISSISSIPPI**

*** SPECIAL NOTICE TO BIDDERS:***

BIDS WILL NOT BE CONSIDERED UNLESS BOTH UNIT PRICES AND ITEM TOTALS ARE ENTERED

BASE BID - ROADS "A" THRU "G"

ROADWAY ITEMS

PAY ITEM NO.	DESCRIPTION	APPROX. QUANTITY	UNIT	UNIT PRICE		ITEM TOTAL	
				DOLLAR	CENT	DOLLAR	CENT
1	Mobilization	XXXXXXX XXXXXXX	LS	XXXXXXXXXXXXX XXXXXXXXXXXXX	XXX XXX	\$ 21,504.	91
2	Excess Excavation (F.M.)	541.0	CY.	\$ 19.25		\$ 10,411.	58
3	Hot Mix Asphalt, SC-1, Type 8	2,783.0	Ton	\$ 95.24		\$ 265,041.	87
4	Hot Mix Asphalt, Base Repair, BB-1, Type 6	907.0	Ton	\$ 126.01		\$ 114,290.	53
5	Hot Mix Asphalt, Leveling, SC-1, Type 8	13.0	Ton	\$ 95.24		\$ 1,238.	07
6	Cold Milling of Bituminous Pavement, All Depths	6,561.0	SY.	\$ 5.90		\$ 38,740.	99
7	Maintenance of Traffic	XXXXXXX XXXXXXX	LS	XXXXXXXXXXXXX XXXXXXXXXXXXX	XXX XXX	\$ 14,396.	31
8	Additional Construction Signs	0.0	SF.		10 00	\$ 0.	00
9	Legend (White) Traffic Striping	288.0	LF.	\$ 3.50		\$ 1,008.	00
TOTAL BASE BID						\$ 466,632.	26

**BID FORM
CITY OVERLAY PROJECT
CITY OF BYRAM, MISSISSIPPI**

*** SPECIAL NOTICE TO BIDDERS:***

ADDITIVE ALTERNATE NO.1 - ROAD "H" - OWENS COVE

ROADWAY ITEMS

PAY ITEM NO.	DESCRIPTION	APPROX. QUANTITY	UNIT	UNIT PRICE		ITEM TOTAL	
				DOLLAR	CENT	DOLLAR	CENT
2	Excess Excavation (F.M.)	44.0	CY.	\$ 25	00	\$ 1,100	00
3	Hot Mix Asphalt, SC-1, Type 8	132.0	Ton	\$ 150	00	\$ 19,800	00
4	Hot Mix Asphalt, Base Repair, BB-1, Type 6	87.0	Ton	\$ 200	00	\$ 17,400	00
7	Maintenance of Traffic	XXXXXXX XXXXXXX	LS	XXXXXXXXXXXXX XXXXXXXXXXXXX	XXX XXX	\$ 4,500	00
8	Additional Construction Signs	0.0	SF.		10 00		0 00
9	Legend (White) Traffic Striping	15.0	LF.	15	00	\$ 225	00
TOTAL ADDITIVE ALTERNATE NO.1						\$ 43,025	00

ADDITIVE ALTERNATE NO.2 - ROAD "I" - CHEVON COVE

ROADWAY ITEMS

PAY ITEM NO.	DESCRIPTION	APPROX. QUANTITY	UNIT	UNIT PRICE		ITEM TOTAL	
				DOLLAR	CENT	DOLLAR	CENT
2	Excess Excavation (F.M.)	27.0	CY.	\$ 25	00	\$ 675	00
3	Hot Mix Asphalt, SC-1, Type 8	173.0	Ton	\$ 150	00	\$ 25,950	00
4	Hot Mix Asphalt, Base Repair, BB-1, Type 6	52.0	Ton	\$ 200	00	\$ 10,400	00
7	Maintenance of Traffic	XXXXXXX XXXXXXX	LS	XXXXXXXXXXXXX XXXXXXXXXXXXX	XXX XXX		
8	Additional Construction Signs	0.0	SF.		10 00		0 00
9	Legend (White) Traffic Striping	18.0	LF.	15	00	\$ 270	00
TOTAL ADDITIVE ALTERNATE NO.2						\$ 37,295	00

GRANITE RE, INC.

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we

AJ Construction, Inc., 850 N. Bierdeman, Pearl, MS 39208

as principal, hereinafter called the Principal, and **Granite Re, Inc., 14001 Quailbrook Drive, Oklahoma City, OK 73134**, a corporation duly organized under the laws of the State of Minnesota as Surety, hereinafter called the Surety, are held and firmly bound unto

Mayor and Board of Aldermen, City of Byram, MS, 5901 Terry Road, Byram, MS 39272

as Oblige, hereinafter called the Oblige, in the sum of *** Five percent of the bid amount (5%) ***

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for

Project: City Overlay Project, City of Byram, MS / Asphalt Paving

Bid Date: 09/08/2021


The conditions of this Bond are such that if the Oblige accepts the bid of the Principal within the time specified in the bid documents or within such time period as may be agreed to by the Oblige and Principal, and the Principal either (1) enters into a contract with the Oblige in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Oblige, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Oblige the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Oblige may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Oblige and Principal to extend the time in which the Oblige may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids, and the Oblige and Principal shall obtain the Surety's consent for an extension beyond sixty (60) days.

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

Signed and sealed this 09/08/2021.

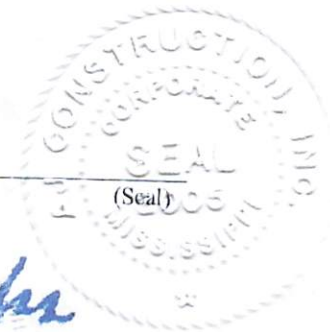

Witness

AJ Construction, Inc.


Title

Granite Re, Inc.


Hugh Weeks, Attorney in Fact



(Seal)

GRANITE RE, INC.
GENERAL POWER OF ATTORNEY

Know all Men by these Presents:

That **GRANITE RE, INC.**, a corporation organized and existing under the laws of the State of MINNESOTA and having its principal office at the City of OKLAHOMA CITY in the State of OKLAHOMA does hereby constitute and appoint:

HUGH WEEKS its true and lawful Attorney-in-Fact(s) for the following purposes, to wit:

To sign its name as surety to, and to execute, seal and acknowledge any and all bonds, and to respectively do and perform any and all acts and things set forth in the resolution of the Board of Directors of the said **GRANITE RE, INC.** a certified copy of which is hereto annexed and made a part of this Power of Attorney; and the said **GRANITE RE, INC.** through us, its Board of Directors, hereby ratifies and confirms all and whatsoever the said:

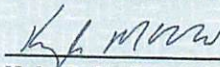
HUGH WEEKS may lawfully do in the premises by virtue of these presents.

In Witness Whereof, the said **GRANITE RE, INC.** has caused this instrument to be sealed with its corporate seal, duly attested by the signatures of its President and Assistant Secretary, this 3rd day of January, 2020.

STATE OF OKLAHOMA)
) SS:
COUNTY OF OKLAHOMA)



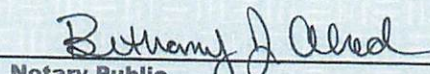

Kenneth D. Whittington, President


Kyle P. McDonald, Assistant Secretary

On this 3rd day of January, 2020, before me personally came Kenneth D. Whittington, President of the **GRANITE RE, INC.** Company and Kyle P. McDonald, Assistant Secretary of said Company, with both of whom I am personally acquainted, who being by me severally duly sworn, said, that they, the said Kenneth D. Whittington and Kyle P. McDonald were respectively the President and the Assistant Secretary of **GRANITE RE, INC.**, the corporation described in and which executed the foregoing Power of Attorney; that they each knew the seal of said corporation; that the seal affixed to said Power of Attorney was such corporate seal, that it was so fixed by order of the Board of Directors of said corporation, and that they signed their name thereto by like order as President and Assistant Secretary, respectively, of the Company.

My Commission Expires:
April 21, 2023
Commission #: 11003620




Notary Public

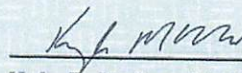
GRANITE RE, INC.
Certificate

THE UNDERSIGNED, being the duly elected and acting Assistant Secretary of Granite Re, Inc., a Minnesota Corporation, HEREBY CERTIFIES that the following resolution is a true and correct excerpt from the July 15, 1987, minutes of the meeting of the Board of Directors of Granite Re, Inc. and that said Power of Attorney has not been revoked and is now in full force and effect.

"RESOLVED, that the President, any Vice President, the Assistant Secretary, and any Assistant Vice President shall each have authority to appoint individuals as attorneys-in-fact or under other appropriate titles with authority to execute on behalf of the company fidelity and surety bonds and other documents of similar character issued by the Company in the course of its business. On any instrument making or evidencing such appointment, the signatures may be affixed by facsimile. On any instrument conferring such authority or on any bond or undertaking of the Company, the seal, or a facsimile thereof, may be impressed or affixed or in any other manner reproduced; provided, however, that the seal shall not be necessary to the validity of any such instrument or undertaking."

IN WITNESS WHEREOF, the undersigned has subscribed this Certificate and affixed the corporate seal of the Corporation this
8th day of September, 2021.




Kyle P. McDonald, Assistant Secretary

SECTION 004519

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of Mississippi

County of Hinds

John Harrel, being first dully sworn, deposes and says:

- (1) He is President of AJ Construction Inc., the Bidder that has submitted the attached bid;
- (2) Such Bid is genuine and is not a collusive or sham Bid;
- (3) Neither the said bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such contract, or has communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the bid price of any other bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Owner or any person interested in the proposed Contract; and
- (4) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

John Harrel (signature)

President (title)

Subscribed and sworn to before me
this the 8th day of September, 2021

[Signature]
(signature)

Notary
(title)

My commission expires 7/1/24



SECTION 004519

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of Mississippi

County of Hinds

John Harrelld, being first dully sworn, deposes and says:

- (1) He is President of AJ Construction Inc., the Bidder that has submitted the attached bid;
- (2) Such Bid is genuine and is not a collusive or sham Bid;
- (3) Neither the said bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such contract, or has communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the bid price of any other bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Owner or any person interested in the proposed Contract; and
- (4) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

John C. Harrelld (signature)

President (title)

Subscribed and sworn to before me
this the 8th day of September, 2021

[Signature]
(signature)

Notary
(title)

My commission expires 7/1/24



SECTION 005100

NOTICE OF AWARD

Date _____

TO:

RE: **City Overlay Project,
City of Byram, Mississippi**

NOTICE OF AWARD

Gentlemen:

The City of Byram, Mayor and Board of Alderman has considered the Proposal submitted by you for the above referenced Work in response to its Advertisement for Bids and Instructions to Bidders.

You are hereby notified that your Proposal has been accepted in the amount of \$ _____.

You are required by the Instruction to Bidders to execute the Contract and furnish to the City of Byram the required Contractor's Performance Bond, Payment Bond, insurance policy endorsements, waiver of subrogation, and certificates of insurance within 10 calendar days from the date of delivery of this Notice to you. We have enclosed five copies of the necessary contract forms and bond forms. Please return all five copies of these documents to the offices of McMaster & Associates, Inc., 212 Waterford Square, Suite 300, Madison, MS 39110.

If you fail to execute said Contract and to furnish said Bonds within 10 days from the date of delivery of this Notice, the Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your proposal as abandoned and as a forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by Law.

You are required by the General Conditions and Supplementary Conditions to submit to McMaster & Associates, Inc. an estimated progress schedule, a preliminary schedule of Shop Drawing submissions and a preliminary schedule of values of the Work within 10 days after the effective date of this Contract, all in accordance with Article 2.5 of the General Conditions.

You are required to return an acknowledged copy of this Notice of Award directly to the City of Byram.

Attention: City of Byram, Mississippi

Very truly yours,

McMaster & Associates, Inc.

Pc: Mayor and Board of Alderman
City of Byram
5901 Terry Road
Byram, Mississippi 39272

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged by _____

this, the _____ day of _____, 2021.

By _____

Title _____

END OF SECTION

SECTION 005200

AGREEMENT

THIS AGREEMENT is dated as of the _____ day of _____ in the year 2021.
by and between _____, hereinafter called the Owner, and
_____, hereinafter called the Contractor.

Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1. WORK

Contractor shall complete all Work as specified or indicated in the Contract Documents for the above Contract. The Work is generally described as follows:

CITY OVERLAY PROJECT CITY OF BYRAM, MISSISSIPPI

ARTICLE 2. ENGINEER

The Project has been designed by McMaster & Associates, Inc. who is hereinafter called Engineer and who will assume all duties and responsibilities and have the rights and authority assigned to Engineer in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 3. CONTRACT TIME

- 3.1 The Contractor shall be final completed with the Work and ready for final acceptance in accordance with Paragraph 14.9 of the General Conditions within the project time.
- 3.2 Liquidated Damages – Owner and Contractor recognize that the Owner will suffer direct financial loss if Work is not completed within the Contract times specified in paragraph 3.1 above plus any extensions thereof allowed in accordance with Article 12 of the General Conditions, and therefore, time is of the essence. They also recognize the delays, expense and difficulties involved in proving in a legal proceeding the Actual loss suffered by Owner if the Work is not completed on time. According, instead of requiring any such proof, Contractor and Surety agree to forfeit and pay Owner as liquidated damages for delay (but not as a penalty) the amount of Five Hundred Dollars (\$500.00) for each calendar day that expires after the Contract Time specified in Paragraph 3.1. These amounts represent a reasonable estimate of Owner's expenses for extended delays and for inspection, engineering services and administrative costs associated with such delay. This provision shall be effective between the parties ipso facto and without demand or putting in default, it being specifically agreed that the Contractor by his mere failure to complete the work on or before the date specified shall be deemed in default.

ARTICLE 4. CONTRACT PRICE

- 4.1 Owner shall pay Contractor for performance of the Work in accordance with the Contract Documents in current funds at the lump sum or unit prices presented in the Price Bid Table in Section 004100 attached to this Agreement.
- 4.2 The parties expressly agree that the Contract Price is a stipulated sum except with regard to the items in the Bid which are subject to unit prices.

ARTICLE 5. PAYMENT PROCEDURES

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

5.1 Intentionally left blank.

5.2 Retainage. Retainage shall be withheld and payment will be made by the Owner in the payment amount of ninety-five percent (95%) of the approved payment applications on the Contract amount of less than two hundred and fifty thousand dollars (\$250,000) and in the payment amount of ninety-five percent (95%) of the approved payment applications on a Contract amount of two hundred and fifty thousand dollars (\$250,000) or more, and 95% on all payments on such contracts with sub-contractors.

5.3 Final Acceptance and Payment. Upon the completion of all work and upon completion of the lists of items to be completed or corrected which accompanied the Certificate of Substantial Completion, the Contractor may request a final inspection and may make an Application for Payment as provided by Paragraph 14.7 thru 14.9 of the General Conditions, upon the Owner's certificated of final acceptance.

Final acceptance of the Work, based upon the certificate of final acceptance, shall be by resolution of the Owner.

The Contractor shall furnish the Owner a notarized affidavit certifying that all claims, liens and other outstanding obligations incurred by him and his subcontractors in the performance of the work have been paid and settled at the submission of the Application for Final Payment.

ARTICLE 6. CONTRACTOR'S REPRESENTATIONS

In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

6.1 Contractor has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and laws and regulations that in any manner may affect cost, progress, performance or finishing of the work.

6.2 Contractor has obtained and carefully studied (or assumed responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in Paragraph 6.1 above) which pertain to the subsurface or physical conditions at or contiguous to the site or which otherwise may affect the cost, progress, performance or furnishing of the Work as Contractor considers necessary for the performance of furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 4.2 of the General Conditions. In exercising its responsibility with respect to subsurface conditions and physical conditions at the site, Contractor has or will obtain or perform at no additional cost to the Owner such additional examinations, investigations, explorations, tests, reports, studies, or similar information or data as may be required by Contractor FOR SUCH PURPOSES.

ARTICLE 7. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between Owner and Contractor are attached to the Agreement, made a part hereof and consist of the following:

- 7.1 Agreement (Section 005200), (including the General Terms and Conditions and Supplementary Conditions).
- 7.2 Authority to Execute Contract (Section 005200).
- 7.3 Construction Performance and Payment Bond (Section 006100) and Insurance Certificates.
- 7.4 Intentionally left blank.
- 7.5 Notice of Award (Section 005100).
- 7.6 Contractor's Bid Form (Section 004100).
- 7.7 Non-Collusion Affidavit (Section 004519),
- 7.8 Drawing Index (Section 000115).
- 7.9 Addenda (Numbers _____ to _____, inclusive).
- 7.10 Drawings, consisting of a cover sheet and the sheets dated August 13, 2021 listed in Section 000115, Drawing Index, each sheet bearing the following general title:

City Overlay Project
City of Byram, Mississippi
- 7.11 Contract Documents and Specifications for City Overlay Project, City of Byram, Mississippi consisting of Divisions 0 through 32.

There are no Contract Documents other than those listed above in this Article 7. The Contract may only be amended, modified or supplemented as provided for in the General Conditions.

ARTICLE 8. MISCELLANEOUS

- 8.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions shall have the meanings indicated in the General Conditions, as modified in the Supplementary Conditions.
- 8.2 Owner and Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto, his partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.
- 8.3 It is hereby agreed and understood by the parties hereto that any and all disputes that may result in litigations shall be resolved in accordance with the Article 16 of the General Conditions.
- 8.5 Contractor shall pay promptly, before final payment, any and all claims or liens incurred in and about this work and shall execute a final receipt form.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. All portions of the Contract Documents have been signed or identified by Owner and Contractor or by Engineer on their behalf.

This Agreement will be effective on _____, 2021.

Owner: _____ Contractor: _____

By: _____ By: _____

Title: _____ Title: _____

Signature: _____ Signature: _____

Attest: _____ Attest: _____

(SEAL)

(SEAL)

Address for giving notices:

Mississippi State Contractor
License No. _____

Agent for Service of Process:

(If Contractor is a corporation, attach evidence of authority to sign.)

PARTNERSHIP CERTIFICATE

STATE OF MISSISSIPPI

COUNTY OF _____

On this _____ day of _____, 20____, before me personally appeared _____, known to me and known by me to be the person who executed the above instrument, who being by me first duly sworn, did depose and say that he is a general partner in the firm of _____, that said firm consists of himself and _____; and that he executed the foregoing instrument on behalf for the uses and purposes stated herein.

Notary Public in the

County of


Notarial Seal

State of

My Commission Expires:

CORPORATE CERTIFICATE

I, John Harrel _____ certify that I am the Secretary of the Corporation named as Contractor in the foregoing Contract; that John Harrel _____, who signed said Contract on behalf of the Contractor was then President _____ of said Corporation; that said Contract was duly signed for and in behalf of said Corporation by authority of its governing body and is within the scope of its corporate powers.


Secretary

Corporate Seal



END OF SECTION

SECTION 006100

GENERAL INSTRUCTIONS FOR BONDS

1. The surety on each Bond must be a responsible surety company, which is qualified to do business in Mississippi and satisfactory to the City of Byram, Mississippi.
2. The name, including full Christian name, and residence of each individual party to the Bond shall be inserted in the body thereof, and each such party shall sign the Bond with his usual signature on the line opposite the seal and if signed in Maine, Massachusetts or New Hampshire and adhesive seal shall be affixed opposite the signature. The bond must be either signed or countersigned by a Mississippi Resident Agent of the Surety company.
3. If the principals are partners, their individual names will appear in the body of the Bond with the recital that they are partners composing a firm, naming it; and all the members of the firm shall execute the Bond as individuals.
4. The signature of a witness shall appear in the appropriate place, attesting to the signature of each individual party to the Bond.
5. If the principal or surety is a corporation, the name of the State in which incorporated shall be inserted in the appropriate place in the body of the Bond, and said instrument shall be executed and attested under the corporate seal as indicated in the form. If the corporation has no corporate seal the fact shall be stated, in which case, a scroll or adhesive seal shall appear following the corporate name.
6. The official character and authority of the person or persons executing the Bond for the principal, if a corporation, shall be certified by the secretary or assistant secretary, according to the form attached hereto. In lieu of such certification there may be attached to the Bond copies of so much of the records of the corporation as will show the official character and authority of the officer signing, duly certified by the secretary or assistant secretary, under the corporate seal, to be true copies.
7. The date of this Bond must not be prior to the date of the Contract in connection with which it is given.
8. Surety Companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____ hereinafter called Principal, and
(Corporation, Partnership, or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

Mayor and Board of Alderman, City of Byram, Mississippi

(Name of Owner)

5901 Terry Road, Byram, Mississippi 39272

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____

_____, (\$ _____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 2021, a copy of which is hereto attached and made a part hereof for the construction of:

City Overlay Project

City of Byram, Mississippi

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertaking covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

NOW, THEREFORE, if the Principal shall promptly make payment of all taxes, licenses, assignments, contributions, damages, penalties, and interest thereon, when and as the same may lawfully be due the State of Mississippi, or any county, municipality, board, department, commission, or political subdivision thereof, by reason of and directly connected with the performance of said Contract or any part thereof as provided by Sections 27-65-1, 27-65-21, 27-67-301 and 31-5-3, supra, or any other applicable statute of other authority, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that not final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this statement is executed in five counterparts, each one of which shall be deemed and original, this the _____ day of _____, 2021.

ATTEST:

Principal

(Principal) Secretary

(SEAL)

By _____(s)

(Address)

Witness as to Principal

(Address)

ATTEST:

Witness as to Surety

(Address)

Surety
By _____
Attorney-in-Fact

(Address)

NOTE: Date of BOND must not be prior to date of Contract.
If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS THAT

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal, and
(Corporation, Partnership, or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

Mayor and Board of Alderman, City of Byram, Mississippi

(Name of Owner)

5901 Terry Road, Byram, Mississippi 39272

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____,
(\$ _____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 2021, a copy of which is hereto attached and made a part hereof for the construction of:

City Overlay Project

City of Byram, Mississippi

NOW, THEREFORE, if the Principal shall promptly make payment to all person, firms, SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in five counterparts, each one of which shall be deemed an original, this the _____ day of _____, 2021.

ATTEST:

_____	_____
(Principal) Secretary	Principal
(SEAL)	
	By _____(s)

	(Address)
_____	_____
Witness as to Principal	

(Address)	
_____	_____
	Surety

ATTEST:

	By _____
	Attorney-In-Fact

	(Address)
_____	_____
Witness as to Surety	

(Address)	

NOTE: Date of BOND must not be prior to date of Contract.
If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

CERTIFICATE OF SUFFICIENCY

**CITY OVERLAY PROJECT
CITY OF BYRAM, MISSISSIPPI**

I, _____, ATTORNEY FOR THE CITY OF BYRAM, MISSISSIPPI, DO
HEREBY CERTIFY THAT I HAVE EXAMINED THIS AGREEMENT, THE BONDS AND EVIDENCE OF
INSURANCE OFFERED BY THE CONTRACTOR AND FIND THEM TO BE PROPERLY EXECUTED,
ADEQUATE AND SUFFICIENT.

(Signature)

Date: _____

SECTION 006200

CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, _____,
the duly authorized and acting legal representative of _____
and do hereby certify as follows:

I have examined the attached Contract(s) and Surety Bonds and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions, and provisions thereof.

Signed: _____

(SEAL) _____

Date: _____

END OF SECTION

SECTION 007200
GENERAL CONDITIONS
ARTICLES
CITY OVERLAY PROJECT
CITY OF BYRAM, MISSISSIPPI

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ARTICLE 1 – DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof.

Defined Terms:

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

Agreement: The written agreement between **OWNER** and **CONTRACTOR** covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

Application for Payment: The form accepted by **ENGINEER** which is to be used by **CONTRACTOR** in requesting progress or final payment and which is to include such supporting documentation as is required by the Contract Documents.

Bid: The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

Bidder: Any person, firm or corporation submitting a Bid for the Work.

Bidding Documents: Notice to bidders or advertisement, if any; instructions to bidders; other bidding information and requirements; bidding forms and attachments; contract and bond forms, and the proposed Contract Documents, including any addenda issued prior to receipt of bids.

Bonds: Bid, performance, and labor and material payment bonds and other instruments of security.

Change Order: A written order to the **CONTRACTOR** signed by the **OWNER** authorizing an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time issued after the effective date of the Agreement that shall be approved in advance and set forth in the public minutes of the Owner.

Contract Documents: The Agreement, Addenda, **CONTRACTOR'S** Bid (including documentation accompanying the Bid and any post-Bid documentation submitted prior to the Notice of Award when attached as an exhibit to the Agreement), the Bonds, these General Conditions, the Supplementary Conditions, the Special Conditions, the Instructions to Bidders, the Technical Specifications, the Drawings as the same may be more specifically identified in the Agreement, together with all Modifications issued after execution of the Agreement.

Contract Price: The moneys payable by **OWNER** to **CONTRACTOR** under the Contract Documents as stated in the Agreement.

Contract Time: The number of days (computed as provided in Paragraph 17.2) or the date stated in the Agreement for the completion of the Work.

CONTRACTOR: The person, firm or corporation with whom **OWNER** has executed the Agreement. Whenever the Project is to be constructed under multiple direct contracts, the term "**CONTRACTOR**" shall mean the appropriate prime **CONTRACTOR**. Whenever a specific prime **CONTRACTOR** is referred to, terms such as "General **CONTRACTOR**", "Electrical **CONTRACTOR**", etc. will be used.

Day: A calendar day of twenty-four hours measured from midnight to the next midnight.

Defective: An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to **ENGINEER'S** recommendation for final payment (unless responsibility for the protection thereof has been assumed by **OWNER** at Substantial Completion in accordance with Paragraph 14.5).

Drawings: The Drawings which show the character and scope of the Work to be performed and which have been prepared or approved by **ENGINEER** and are referred to in the Contract Documents.

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

ENGINEER: The person, firm or corporation named as such in the Agreement.

Field Order: A written order issued by **ENGINEER** which orders minor changes in the Work in accordance with Paragraph 10.2 but which does not involve a change in the Contract Price or the Contract Time.

General Requirements: Sections of the Technical Specifications.

Modifications: (a) A written amendment of the Contract Documents signed by both parties, (b) a Change Order, or (c) a Field Order. A modification may only be issued after the effective date of the Agreement.

Notice of Award: The written notice by **OWNER** to the apparent successful Bidder stating that upon compliance by the apparent successful Bidder with the conditions precedent enumerated therein, within the time specified, **OWNER** will sign and deliver the Agreement.

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

OWNER: The public body or authority, corporation, association, partnership, or individual with whom **CONTRACTOR** has entered into the Agreement and for whom the Work is to be provided.

Project: The total construction of which the Work to be provided under the Contract Documents may be the whole or a part as indicated elsewhere in the Contract Documents.

Project Manual: The bond documentary information prepared for bidding and constructing the Project. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the tables of contents.

Resident Project Representative: The authorized representative of **ENGINEER** whom is assigned to the site or any part thereof.

Samples: Physical examples furnished by the **CONTRACTOR** to illustrate materials, equipment or ownership, and to establish standards by which some portions of the Work will be judged.

Shop Drawings: All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for **CONTRACTOR** to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a manufacturer, fabricator, supplier or distributor and submitted by **CONTRACTOR** to illustrate material or equipment for some portion of the Work.

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.

Subcontractor: An individual, firm or corporation having a direct contract with **CONTRACTOR** or with any other Subcontractor for the performance of a part of the Work at the site.

Supplementary Conditions: Modifications and additions to the General Conditions.

Work: The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

Order of Preference: The plans, standard specifications, general conditions, supplemental conditions, technical specifications and all supplemental plans and documents are essential parts of the contract, and a requirement occurring in one is just as binding as though occurring in all. They are intended to be complementary and to describe and provide for the complete work. In case of discrepancy, computed dimensions, unless obviously incorrect, shall govern over scaled dimensions. Plans shall govern over standard specifications. Supplemental conditions shall govern over general conditions.

The Contractor shall not take advantage of any apparent error or omission in the plans. In the event the Contractor discovers any apparent error or discrepancy, he shall immediately notify the Engineer in writing requesting his interpretation and the Engineer will make such corrections and decisions in writing as may be deemed necessary to carry out the intent of the plans.

ARTICLE 2 – PRELIMINARY MATTERS

- A. Delivery of Bonds and Insurance Certificates:
 - B. When **CONTRACTOR** executes agreement with **OWNER**, **CONTRACTOR** shall deliver to **OWNER** such Bonds as **CONTRACTOR** may be required to furnish in accordance with Article 5.
 - C. When **CONTRACTOR** executes Agreement with **OWNER**, **CONTRACTOR** shall deliver to **OWNER**, with a copy to **ENGINEER**, certificates (and other evidence of insurance requested by **OWNER**) which **CONTRACTOR** is required to purchase and sustain in accordance with Article 5, and **OWNER** shall deliver to **CONTRACTOR** certificates (and other evidence of insurance requested by **CONTRACTOR**) which **OWNER** is required to purchase and maintain in accordance with ARTICLE 5.
- 2.2 Copies of Documents: **OWNER** shall furnish to **CONTRACTOR** up to two copies (unless otherwise provided in the General Requirements) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.
- 2.3 Commencement of Contract Times Notice to Proceed: The Contract Time will commence to run on the thirtieth day after the Effective Date of the Agreements or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed but in no event shall the Contract Time commence to run later than the ninetieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement. A Notice to Proceed may be given at any time within thirty days after the Effective Date of the Agreement.
- 2.4 Starting the Project: **CONTRACTOR** shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run.
- 2.5 Before Starting Construction:
- A. Before undertaking each part of the Work, **CONTRACTOR** shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. **CONTRACTOR** shall promptly report in writing to **ENGINEER** and conflict, error or discrepancy which he may discover and shall obtain a affected thereby however, **CONTRACTOR** shall not be liable to **OWNER** or **ENGINEER** for the failure to report any conflict, error or discrepancy in the Contract Documents, unless **CONTRACTOR** had actual knowledge thereof or should reasonably have known thereof.
 - B. Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements) **CONTRACTOR** shall submit to **ENGINEER** for review and acceptance, an estimated progress schedule indicating the starting and completion dates of the various stages of the Work, a preliminary schedule of Shop Drawing submissions, and a preliminary schedule of values of the Work.
- 2.6 Preconstruction Conference: Within twenty days after the Effective Date of the Agreement, but before **CONTRACTOR** starts the Work at the site, a conference will be held for review and acceptance of the schedules, referred to in Paragraph 2.5.B, to establish procedures for handling Shop Drawings and other submittals and for processing Applications for Payment, and to establish a working understanding among the parties as to the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT AND REUSE

3.1 Intent:

- A. The Contract Documents comprise the entire Agreement between **OWNER** and **CONTRACTOR** concerning the Work. They may be altered only by a written modification through a change order duly signed in advance of contract work necessitated by such modification and set forth in the public minutes of **OWNER**.
- B. The Contract Documents are complementary meaning that what is called for by one is as binding as if called for by all. If during the performance of the Work, **CONTRACTOR** finds a conflict, error or discrepancy in the Contract Documents, he shall report it to **ENGINEER** in writing at once and before proceeding with the Work affected thereby however, **CONTRACTOR** shall not be liable to **OWNER** or **ENGINEER** for failure to report any conflict, error or discrepancy in the Specifications or Drawings unless **CONTRACTOR** had a actual knowledge thereof or should reasonably have known thereof.
- C. It is the intent of the Specifications and Drawings to describe a complete Project or part thereof to be constructed in accordance with the Contract Documents. Any Work that may reasonably be inferred from the Specifications or Drawings as being required to produce the intended result shall be supplied whether or not it is specifically called for at no additional cost to **OWNER**.
- D. The Specifications may describe or the Drawings may show the general arrangement of an item of material or equipment when the actual details of said arrangement will vary with the source of the material or equipment. In such cases, **CONTRACTOR** shall bear all direct and indirect costs to accommodate the item of material or equipment furnished, whether the item of material or equipment is furnished by a manufacturer named in the Specifications or is furnished as an approved substitute or for equals item of material or equipment.
- E. When words in the Specifications or on the Drawings, which have a well-known technical or trade meaning, are used to describe Work, materials or equipment such words shall be interpreted in accordance with such meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the code of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual or code in effect at the time of opening of Bids (or on the effective date of the Agreement if there were no Bids), except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall change the duties and responsibilities of **OWNER**, **CONTRACTOR** or **ENGINEER**, or any of their agents or employees from those set forth in the Contract Documents. Clarifications and interpretations of the Contract Documents shall be issued by **ENGINEER** as provided for in Paragraph 9.3.
- F. The Contract Documents will be governed by the law of the place of the Project.

- 3.2 Re-use of Documents: Neither **CONTRACTOR** nor any Subcontractor, manufacturer, fabricator, supplier or distributor shall have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents for copies of any thereof prepared by or bearing the seal of **ENGINEER** and they shall not reuse any of them on extensions of the Project or any other project without written consent of **OWNER** and **ENGINEER** and specific written verification or adaption by **ENGINEER**.

ARTICLE 4 – AVAILABILITY OF LANDS, PHYSICAL CONDITIONS, AND REFERENCE POINTS

- 4.1 Availability of Lands: **OWNER** shall furnish, as indicated in the Contract Documents the lands upon which the Work is to be performed, rights-of-way for access thereto, and such other lands which are designated for the use of **CONTRACTOR**. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by **OWNER**, unless otherwise provided in the Contract Documents. If **CONTRACTOR** believes that any delay in **OWNER'S** furnishing these lands or easements entitles **CONTRACTOR** to an extension of the Contract Time, **CONTRACTOR** may make a claim therefor as provided in Article 12. **CONTRACTOR** shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.
- 4.2 Physical Conditions-Investigations and Reports: Reference is made to the Supplementary Conditions for identification of those reports of investigations and tests of subsurface and latent physical conditions at the site or those reports that otherwise may affect cost, progress or performance of the Work which have been utilized by **ENGINEER** in preparation of the Drawings and Specifications. These reports are not intended to constitute any explicit or implicit representation as to the nature of the subsurface and latent physical conditions which may be encountered at the site or to constitute explicit or implicit representations as to any other matter contained in any report. Such reports are not guaranteed as to accuracy or completeness and are not part of the contract Documents.
- 4.3 Unforeseen Physical Conditions: **CONTRACTOR** shall promptly notify **OWNER** and **ENGINEER** in writing of any subsurface or latent physical conditions at the site or in an existing structure differing materially from those indicated or referred to in the Contract Documents. **ENGINEER** will promptly review those conditions and advise **OWNER** in writing if further investigations or tests are necessary. Promptly thereafter, **ENGINEER** shall obtain at **OWNER'S** approved expense the necessary **ENGINEER** finds that the results of such investigations or tests indicate that there are subsurface or latent physical conditions which differ materially from those intended in the Contract Documents, and which could not reasonably have been anticipated by **CONTRACTOR**, a Change Order shall be issued incorporating the necessary revisions.
- 4.4 Reference Points: **OWNER** shall provide engineering surveys for construction to establish reference points which in **OWNER'S** judgement are necessary to enable **CONTRACTOR** to proceed with the work. **CONTRACTOR** shall be responsible for laying out the Work (unless otherwise specified in the General Requirements), and shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of **OWNER**. **CONTRACTOR** shall report to **ENGINEER** whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations and shall be responsible for replacement or relocation of such reference points by professionally qualified personnel.

ARTICLE 5 – BONDS AND INSURANCE

5.1 Performance, Payment and Other Bonds:

- A. **CONTRACTOR** shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all **CONTRACTOR'S** obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date of final payment, except as otherwise provided by law. **CONTRACTOR** shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall be in the forms prescribed by the Bidding Documents or Supplementary Conditions and be executed by such sureties as:
1. Are licensed to conduct business in the state where the Project is located, and
 2. Are named in the current list of Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act.
- B. If the surety of any Bond furnished by **CONTRACTOR** is declared a bankrupt or becomes insolvent or its right to do business is terminating any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.1.A, **CONTRACTOR** shall within five days thereafter substitute another Bond and surety, both of which shall be acceptable to **OWNER**.

5.2 Contractor's Liability Insurance:

- A. **CONTRACTOR** shall purchase and maintain such comprehensive general liability and other insurance as will provide protection from claims set forth below which may arise out of or result from **CONTRACTOR'S** performance of the Work and **CONTRACTOR'S** other obligations under the Contract Documents, whether such performance of the Work is by **CONTRACTOR**, by any Subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:
1. Claims under workers' or workmen's compensation, disability benefits and other similar employee benefit acts:
 2. Claims for damages because of bodily injury, occupational sickness or disease, or death of **CONTRACTOR'S** employees:
 3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than **CONTRACTOR'S** employees:
 4. Claims for damages insured by personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by **CONTRACTOR**, or (b) by any other person for any other reason.
 5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefor.
 6. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
 7. Claims for damages because of bodily injury or death of any person arising out of operation of law.
- B. The insurance required by Paragraph 5.2.A shall include the specific coverages and be written for not less than the limits of liability and coverages provided in the Supplementary Conditions, or required by law, whichever is greater. All such insurance shall remain in effect until final payment and at all times thereafter when **CONTRACTOR** may be correcting, removing or replacing defective Work in accordance with Paragraph 13.9. The comprehensive general liability insurance shall include completed operations

insurance and shall include **OWNER** and **ENGINEER** and their agents and employees as additional insureds. **CONTRACTOR** shall maintain such completed operations insurance for at least two years after final payment and shall furnish **OWNER** with evidence of continuation of such insurance at final payment and one year thereafter.

5.3 Contractual Liability Insurance: The comprehensive general liability insurance required by Paragraph 5.2.A shall include contractual liability insurance applicable to **CONTRACTOR'S** obligations under Paragraph 6.15.

5.4 Owner's Liability Insurance: **OWNER** shall be responsible for purchasing and maintaining **OWNER'S** own liability insurance and, at **OWNER'S** option, may purchase and maintain such insurance as will protect **OWNER** against claims that may arise from operations under the Contract Documents.

5.5 Property Insurance:

A. Unless otherwise provided in the Supplementary Conditions, **CONTRACTOR** shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or as required by law). This insurance shall include the interests of the **ENGINEER**, **CONTRACTOR**, and Subcontractors in the Work, shall insure against the perils of fire and extended coverage shall include tail risks insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be specified in the Supplementary Conditions shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including fees and charges of engineers, architects, attorneys and other professionals) shall provide that all insure proceeds are to be paid to **OWNER** "as Trustee". If not covered under the "all risk" insurance or otherwise provided in the Supplementary Conditions, **CONTRACTOR** shall purchase and maintain similar property insurance on portions of the Work stored on or off the site or in transit when such portions of the Work are to be included in an Application for Payment.

B. **OWNER** shall purchase and maintain such boiler and machinery insurance as may be required by the Supplementary Conditions or by law. This insurance shall include the interest of **OWNER**, **CONTRACTOR** and Subcontractors in the Work. **OWNER** shall file a copy of all policies required by this Paragraph with **CONTRACTOR** before an exposure to loss may occur.

C. The policies of insurance required under this Paragraph 5.5 shall provide that neither the **OWNER** nor the **CONTRACTOR**, nor their insurers, shall have any right of subrogation against any of the other parties enumerated in Paragraph 5.6. It is the intention of the **OWNER** and **CONTRACTOR** that the policies shall protect all of the enumerated parties and be primary coverage for any and all losses covered by the insurance described in Paragraphs 5.5.A and 5.5.B.

5.6 Waiver of Rights: **OWNER** and **CONTRACTOR** waive all rights against each other and the Subcontractors and their agents and employees and against **ENGINEER** and separate contractors (if any) and their subcontractors', agent and employees, for damages caused by fire or other perils to the extent covered by insurance provided under Paragraph 5.5., or any other property insurance applicable to the Work, except such rights as they may have to the proceeds of such insurance held by **OWNER** as trustee. **OWNER** or **CONTRACTOR**, as appropriate, shall require similar waivers in writing by Engineer and from each separate contractor and each Subcontractor, each such waiver will be in favor of all other parties enumerated in this Paragraph 5.6.

5.7 Receipt and Application of Proceeds:

A. Any insured loss under the policies of insurance required by Paragraph 5.5 shall be adjusted with **OWNER** and made payable to **OWNER** as trustee for the insureds, as their

interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.7.B. **OWNER** shall deposit in a separate account any money so received, and he shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof and the Work and the cost thereof covered by an appropriate Change Order.

- B. **OWNER** as trustee shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within fifteen days after each occurrence of loss to **OWNER'S** exercise of this power. If such objection be made, **OWNER** as trustee shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If required in writing by any party in interest, **OWNER** as trustee shall upon the occurrence of an insured loss, give bond for the proper performance of his duties.
- 5.8 Partial Utilization – Property Insurance: If **OWNER** finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all of the Work, such use or occupancy may be accomplished in accordance with Paragraph 14.6; provided that no such use or occupancy shall commence before the insurers providing the property insurance have acknowledged notice thereof and in writing effected the changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy of policies, but the property insurance shall not be canceled or lapse on account of any such partial use or occupancy.
- 5.9 Certificates of Insurance: All certificates of the insurance required to be purchased by **CONTRACTOR** pursuant to Article 5 shall be filed in accordance with Paragraph 2.1.B. Certificates shall be acceptable to **OWNER** and shall contain a provision that coverages afforded under the policies will not be canceled, materially changed or renewal refused until at least thirty days' prior written notice has been given to **OWNER** and **ENGINEER** by certified mail.
- 5.10 Additional Bonds and Insurance: **OWNER** may require **CONTRACTOR** to furnish such other Bonds and such additional insurance, in such form and with such sureties or insurers as **OWNER** may specify. If such other Bonds or such other insurance are specified in the Contract Documents, the premiums shall be paid by **CONTRACTOR**. If subsequent thereto, they shall be paid by **OWNER** except as otherwise provided in Paragraph 6.3.A and Paragraph 13.8.B.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

- 6.1 Supervision and Superintendence:
- A. **CONTRACTOR** will supervise and direct Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the work in accordance with the Contract Documents. **CONTRACTOR** shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but he shall not be solely responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. **CONTRACTOR** shall be responsible to see that the finished Work complies accurately with the Contract Documents.
- B. **CONTRACTOR** shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to **OWNER** and **ENGINEER** except under extraordinary circumstances. The superintendent will be **CONTRACTOR'S** representative at the site and shall have authority to act on behalf of **CONTRACTOR**. All communications given to the superintendent shall be as binding as if given to **CONTRACTOR**.

6.2 Labor, Materials and Equipment:

- A. **CONTRACTOR** shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. **CONTRACTOR** shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Supplementary Conditions, all Work at the site shall be performed during regular working hours, and **CONTRACTOR** will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without **OWNER'S** written consent given after prior written notice to **ENGINEER**.
- B. **CONTRACTOR** shall furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances and all other facilities and incidentals necessary for the execution, testing, initial operation and completion of the Work. Except as otherwise specified in the General Requirements, **CONTRACTOR** shall furnish all fuel, power, light, heat, telephone, water and sanitary facilities necessary for the execution, testing, initial operation and completion of the Work.
- C. All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by **ENGINEER**, **CONTRACTOR** shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment.
- D. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, supplier or distributor, except as otherwise provided in the Contract Documents but no provision of any such instructions will be effective to impose on **ENGINEER** responsibility for the means, methods, techniques, sequences or procedures of construction or for safety precautions incident thereto.

6.3 Substitutions: Whenever materials or equipment are specified or described in the Drawings or Specifications by using the name of a proprietary item or the name of a particular manufacturer, fabricator, supplier or distributor, the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other manufacturers, fabricators, suppliers or distributors may be accepted by **ENGINEER** if sufficient information is submitted by **CONTRACTOR** to allow **ENGINEER** to determine that the material or equipment proposed is equivalent to that named. The procedure for review by **ENGINEER** will be set forth in Paragraph 6.3.A and 6.3.B below and as supplemented in the General Requirements.

- A. Requests for review of substitute items of material and equipment will not be accepted by **ENGINEER** from anyone other than **CONTRACTOR**. If **CONTRACTOR** wishes to furnish or use a substitute item of material or equipment, **CONTRACTOR** shall make written application to **ENGINEER** for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice **CONTRACTOR'S** timely achievement of Substantial change in the Drawings or Specifications to adapt the design to the substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified shall be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain a statement

that **CONTRACTOR** agrees to pay all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change. **ENGINEER** may require **CONTRACTOR** to furnish at **CONTRACTOR'S** expense additional data about the proposed substitute. **ENGINEER** will be allowed a reasonable time within which to evaluate the proposed substitute. **ENGINEER** will be sole judge of acceptability and no substitute will be ordered or installed without **ENGINEER'S** prior written acceptance. **OWNER** may require **CONTRACTOR** to furnish at **CONTRACTOR'S** expense a special performance guarantee or other surety with respect to any substitute.

- B. **ENGINEER** will record time required by **ENGINEER** and **ENGINEER'S** consultants in evaluating substitutions proposed by **CONTRACTOR** and in making changes in the Drawings or Specifications occasioned thereby, whether or not **ENGINEER** accepts a proposed substitute, **CONTRACTOR** shall reimburse **OWNER** for the charges of **ENGINEER** and **ENGINEER'S** consultants for evaluating any proposed substitute that does not meet the requirements of the Drawings and Specifications.

6.4 Concerning Subcontractors:

- A. **CONTRACTOR** shall not employ any Subcontractor or other person or organization (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom **OWNER** or **ENGINEER** may have reasonable objection. A Subcontractor or other person or organization identified in writing to **OWNER** and **ENGINEER** by **CONTRACTOR** prior to the Notice of Award and not objected to in writing by **OWNER** and **ENGINEER** prior to the Notice of Award will be deemed acceptable to **OWNER** and **ENGINEER**. If **OWNER** or **ENGINEER** after due investigation has reasonable objection to any Subcontractor, other person or organization proposed by **CONTRACTOR** after the Notice of Award, **CONTRACTOR** shall submit an acceptable substitute and the Contract Price shall be increased or decreased by the difference in cost occasioned by such substitution, and an appropriate Change Order shall be issued. **CONTRACTOR** shall not be required to employ any Subcontractor, other person or organization against whom **CONTRACTOR** has reasonable objection. Acceptance of any Subcontractor, other person or organization by **OWNER** or **ENGINEER** shall not constitute a waiver of any right of **OWNER** or **ENGINEER** to reject defective work.
- B. **CONTRACTOR** shall be fully responsible for all acts and omissions of his Subcontractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that **CONTRACTOR** is responsible for the acts and omissions of persons directly employed by **CONTRACTOR**. Nothing in the Contract Documents shall create any contractual relationship between **OWNER** or **ENGINEER** and any Subcontractor or other person or organization having a direct contract with **CONTRACTOR**, nor shall it create any obligation on the part of **OWNER** or **ENGINEER** to pay or to see to the payment of any moneys due any Subcontractor or other person or organization, except as may otherwise be required by law. **OWNER** or **ENGINEER** may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to **CONTRACTOR** on account of specific work done.
- C. The Divisions and Sections of the Specifications and the identifications of any Drawings shall not control **CONTRACTOR** in dividing the Work among Subcontractors or delineating the Work to be performed by any specific trade.
- D. All Work performed for **CONTRACTOR** by a Subcontractor will be pursuant to an appropriate agreement between **CONTRACTOR** and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of **OWNER** and the **ENGINEER** and contains waiver provisions as required by Paragraph 5.6. **CONTRACTOR** shall pay each Subcontractor a just share of any insurance moneys received by **CONTRACTOR** on account of losses under policies issued pursuant to Paragraph 5.5.

- 6.5 Patent Fees and Royalties: **CONTRACTOR** shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of **OWNER** or **ENGINEER** its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by **OWNER** in the Contract Documents. **CONTRACTOR** shall indemnify and hold harmless **OWNER** and **ENGINEER** and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorneys' fees) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.
- 6.6 Permits: Unless otherwise indicated in the Supplementary Conditions, **CONTRACTOR** shall obtain and pay for all construction permits and licenses. **OWNER** shall assist **CONTRACTOR**, when necessary, in obtaining such permits and licenses. **CONTRACTOR** shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bid. **CONTRACTOR** shall also pay all charges of utility service companies for connections to the Work, and **OWNER** shall pay all charges of such companies for capital cost related thereto.
- 6.7 Laws and Regulations: **CONTRACTOR** shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If **CONTRACTOR** observes that the Specifications or Drawings are at variance therewith, **CONTRACTOR** shall give **ENGINEER** prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate modification. If **CONTRACTOR** performs any Work knowing or having reason to know that it is contrary to such laws, ordinances, rules and regulations, and without such notice to **ENGINEER**, **CONTRACTOR** shall bear all costs arising therefrom; however, it shall not be **CONTRACTOR'S** primary responsibility to make certain that the Specifications and Drawings are in accordance with such laws, ordinances, rules and regulations.
- 6.8 Taxes: Contractor shall pay all sales, consumer, use and other similar taxes required to be paid by him in accordance with the law of the place of the Project.
- 6.9 Use of Premises:
- A. Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workmen to areas permitted by law, ordinances, permits, or the requirements of the Contract Documents, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.
 - B. During progress of the Work, **CONTRACTOR** shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by Owner. Contractor shall restore to their original condition those portions of the site not designated for alternation by the Contract Documents.
 - C. Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.10 Record Documents: Contractor shall keep one record copy of all Specifications, Drawings, Addenda, Modifications, Shop Drawings, and Samples at the site in good order, and annotated to show all changes made during the construction process. These shall be available to Engineer for examination and shall be delivered to Engineer for Owner upon completion of the Work.

6.11 Safety and Protection:

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

1. All employees on the work site and other persons who may be affected thereby;
2. All the work and all materials or equipment to be incorporated therein, whether in storage on or off the site; and
3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities not designated for removal, relocation or replacement in the course of construction, and livestock.

B. Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders or any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. **CONTRACTOR** shall notify owners of adjacent property and utilities when prosecution of the Work may affect them. **CONTRACTOR** shall cooperate with the utility owner in the protection, removal, relocation, or replacement of such utility property. All damage, injury or loss to any property referred to in Paragraph 6.11.A.2 or 6.11.A.3 caused, directly or indirectly, in whole or in part, by **CONTRACTOR**, any Subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by **CONTRACTOR** (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of **OWNER** or **ENGINEER** or anyone employed by the either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of **CONTRACTOR**). **CONTRACTOR'S** duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and **ENGINEER** has issued a notice to **OWNER** and **CONTRACTOR** in accordance with Paragraph 14.9 that the Work is acceptable.

C. **CONTRACTOR** shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be **CONTRACTOR'S** superintendent unless otherwise designated in writing by **CONTRACTOR** to **OWNER**.

6.12 Emergencies: In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, **CONTRACTOR**, without Special instruction or authorization from **ENGINEER** or **OWNER**, is obligated to act to prevent threatened damage, injury or loss. **CONTRACTOR** shall give **ENGINEER** prompt written notice to any significant changes in the Work or deviations from the Contract Documents caused thereby.

6.13 Shop Drawings and Samples:

A. After checking and verifying all field measurements, **CONTRACTOR** shall Submit to **ENGINEER** for review and approval, in accordance with the accepted schedule of Shop Drawing submissions and the procedures specified in the General Requirements, copies

of all Shop Drawings, which shall have been checked by and stamped with the approval of **CONTRACTOR** and identified as **ENGINEER** may require. The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, materials of construction and the like to enable **ENGINEER** to review the information as required.

- B. **CONTRACTOR** shall also submit to **ENGINEER** for review and approval with such promptness as to cause no delay in Work, all Samples required by the Contract Documents. All Samples will have been checked by and stamped with the approval of **CONTRACTOR**, identified clearly as to material, manufacturer, and pertinent catalog numbers and the use for which intended.
 - C. At the time of each submission, **CONTRACTOR** shall in writing call **ENGINEER'S** attention to all deviations that the Shop Drawings or Samples may have from the requirements of the Contract Documents.
 - D. **ENGINEER** will review and approve with reasonable promptness Shop Drawings and Samples, but **ENGINEER'S** review and approval shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, sequences, techniques or procedures of construction or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. **CONTRACTOR** shall make any corrections required by **ENGINEER** and shall return the required number of corrected copies of Shop Drawings and resubmit new Samples for review and approval. **CONTRACTOR** shall direct specific attention in writing to revisions other than the corrections called for by **ENGINEER** on previous submittals. **CONTRACTOR'S** stamp of approval on any Shop Drawing or Sample shall constitute a representation to **OWNER** and **ENGINEER** that **CONTRACTOR** has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data or assumes full responsibility for doing so and that **CONTRACTOR** has reviewed or coordinated each Shop Drawing or Sample with the requirements of the Work and the Contract Documents.
 - E. Where a Shop Drawing or Sample is required by the Specifications, no related Work shall be commenced until the submittal has been reviewed and approved by **ENGINEER**.
 - F. **ENGINEER'S** review and approval of Shop Drawings or Samples shall not relieve **CONTRACTOR** from responsibility for any deviations from the Contract Documents unless **CONTRACTOR** has in writing called **ENGINEER'S** attention to such deviation at the time of submission and **ENGINEER** has given written concurrence and approval to the specific deviation, nor shall any concurrence and approval by **ENGINEER** relieve **CONTRACTOR** from responsibility for errors or omissions in the Shop Drawings or Samples.
- 6.14 Continuing The Work: **CONTRACTOR** shall carry on the Work and maintain the progress schedule during the disputes or disagreements with **OWNER**. No work shall be delayed or postponed pending resolution of any disputes or disagreements, except as **CONTRACTOR** and **OWNER** may otherwise agree in writing.
- 6.15 Indemnification:
- A. To the fullest extent permitted by law, **CONTRACTOR** shall indemnify and hold harmless **OWNER** and **ENGINEER** and their agents, employees and consultants from and against all claims, damages, losses and expenses including, but not limited to attorneys' 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 to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (2) is caused in whole or part by either

- (a) any negligent act or omission of **CONTRACTOR**, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable regardless of whether or not it is caused in part by a party indemnified hereunder, or
 - (b) arises out of operation of law as a consequence of any act or omission of **CONTRACTOR**, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, regardless of whether any of them has been negligent.
- B. In any and all claims against **OWNER** or **ENGINEER** or any of their agents, employees or consultants by any employee of **CONTRACTOR**, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.15.A shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for **CONTRACTOR** or any Subcontractor under workers' or workmen's compensation acts, disability acts or other employee benefit acts.
- C. The obligations of **CONTRACTOR** under Paragraph 6.15.A shall not extend to the liability of **ENGINEER**, his agents, employees or consultants arising out of the **ENGINEER'S** preparation or approval of maps, Drawings, opinions, reports, surveys, Change Orders, designs or Specifications.

ARTICLE 7 – WORK BY OTHERS

- 7.1 **OWNER** may perform additional work related to the Project by himself, or have additional work performed by utility service companies, or let other direct contracts therefor which shall contain General Conditions similar to these. **CONTRACTOR** shall afford the utility service companies and the other contractors who are parties to such direct contracts (or **OWNER**, if **OWNER** is performing the additional work with **OWNER'S** employees) reasonable opportunity for the introduction and storage of materials and equipment and the execution of work, and shall properly connect and coordinate his Work with theirs.
- 7.2 If any part of **CONTRACTOR'S** Work depends for proper execution or results upon the work of any such other contractor or utility service company (or **OWNER**), **CONTRACTOR** shall inspect and promptly report to **ENGINEER** in writing any patent or apparent defects or deficiencies in such work that render it unsuitable for such proper execution and results. **CONTRACTOR'S** failure to so report shall constitute an acceptance of the other work as fit and proper for integration with **CONTRACTOR'S** Work except for latent defects and deficiencies in the other work.
- 7.3 **CONTRACTOR** shall do all cutting, fitting and patching of his Work that may be required to make its several parts come together properly and integrate with such other work. **CONTRACTOR** shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of **ENGINEER** and the others whose work will be affected.
- 7.4 If the performance of additional work by other contractors or utility service companies or **OWNER** was not noted in the Contract Documents, written notice thereof shall be given to **CONTRACTOR** prior to starting any such additional work. If **CONTRACTOR** believes that the performance of such additional work by **OWNER** or others involves additional expense or requires an extension of the Contract Time, **CONTRACTOR** may make a claim therefor as provided in Articles 11 and 12 provided that the **CONTRACTOR** will make no claim which is barred by the provisions of Paragraph 12.3.

ARTICLE 8 – OWNER’S RESPONSIBILITIES

- 8.1 **OWNER** shall issue all communications to **CONTRACTOR** through **ENGINEER**.
- 8.2 In case of termination of the employment of **ENGINEER**, **OWNER** shall appoint an engineer whose status under the Contract Documents shall be that of the former **ENGINEER**.
- 8.3 **OWNER** shall furnish the data required of **OWNER** under the Contract Documents promptly and shall make payments to **CONTRACTOR** promptly after they are due as provided in Paragraphs 14.4.A and 14.9.A.
- 8.4 **OWNER’S** duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.1 and 4.4. Paragraph 4.2 refers to **OWNER’S** identifying and making available to **CONTRACTOR** copies of reports of investigations and tests of subsurface and latent physical conditions at the site or those reports that otherwise may affect performance of the Work which have been utilized by **ENGINEER** in preparing the Drawings and Specifications.
- 8.5 **OWNER’S** responsibilities in respect of purchasing and maintaining insurance are set forth in Article 5.
- 8.6 In connection with **OWNER’S** rights to request changes in the Work in accordance with Article 10, **OWNER** (especially in certain instances as provided in Paragraph 10.14) is obligated to execute Change Orders.
- 8.7 **OWNER’S** responsibility in respect of certain inspections, test and approvals is set forth in Paragraph 13.3.
- 8.8 In connection with **OWNER’S** right to stop Work or suspend Work, see Paragraphs 13.5 and 15.1. Paragraph 15.2.A deals with **OWNER’S** right to terminate services of **CONTRACTOR** under some circumstances.

ARTICLE 9 – ENGINEER’S STATUS DURING CONSTRUCTION

- 9.1 Owner’s Representative: **ENGINEER** will be **OWNER’S** representative during the construction period. The duties and responsibilities and the limitations of authority of **ENGINEER** as **OWNER’S** representative during construction are set forth in the Contract Documents and shall not be extended without written consent of **OWNER** and **ENGINEER**.
- 9.2 Visits to Site: **ENGINEER** will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. **ENGINEER** shall make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. On the basis of such visits and on-site observations, **ENGINEER** will inform **OWNER** of the progress of the Work and will endeavor to guard **OWNER** against defects and deficiencies in the Work.
- 9.3 Clarifications and Interpretations: **ENGINEER** will issue with reasonable promptness such written clarifications or interpretations of the Contract Documents (in the form of Drawings or otherwise) as **ENGINEER** may determine necessary, which shall be consistent with or reasonably inferable from the overall Intent of the Contract Documents. If **CONTRACTOR** believes that a written clarification or interpretation justifies an increase in the Contract Price of Contract Time, **CONTRACTOR** may make a claim therefor as provided in articles 11 and 12.

- 9.4 Rejecting Defective Work: **ENGINEER** will have authority to disapprove or reject Work which **ENGINEER** believes to be defective, and will also have authority to require special inspection or testing of the Work as provided in Article 13, whether or not the Work is fabricated, installed or completed.
- 9.5 Project Representation: If **OWNER** and **ENGINEER** agree, **ENGINEER** will designate a Resident Project Representative to assist **ENGINEER** in observing the performance of the Work. The duties, responsibilities and limitations of authority of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions. If **OWNER** designates another agent to represent him at the site who is not **ENGINEER'S** agent or employee, the duties, responsibilities and limitations of authority of such other person will be as set forth in the Supplementary Conditions.
- 9.6 Decisions on Disagreements:
- A. **ENGINEER** will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder: Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the execution and progress of the Work shall be referred initially to **ENGINEER** in writing with a request for a formal decision in accordance with this Paragraph, which **ENGINEER** will render in writing within a reasonable time. Written notice of each such claim, dispute and other matter shall be delivered by the claimant to **ENGINEER** and the other party to the Agreement within fifteen days of the occurrence of the event giving rise thereto and written supporting data will be submitted to **ENGINEER** and the other party within forty-five days of such occurrence unless **ENGINEER** allows an additional period of time to ascertain more accurate data. In this capacity as interpreter and judge, **ENGINEER** will not show partiality to **OWNER** or **CONTRACTOR** and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.
 - B. The rendering of a decision by **ENGINEER** pursuant to Paragraph 9.6.A with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment as provided in Paragraph 14.9) will be a condition precedent to any exercise by **OWNER** or **CONTRACTOR** of such rights or remedies as either may otherwise have under the Contract Documents or at law in respect of any such claim, dispute or other matter.
- 9.7 Limitations on Engineer's Responsibilities:
- A. Neither **ENGINEER'S** authority to act under this Article 9 or elsewhere in the Contract Documents nor any decision made by **ENGINEER** in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of **ENGINEER** to **CONTRACTOR**, any Subcontractor, any manufacturer, fabricator, supplier or distributor or any of their agents or employees or any other person performing any of the Work.
 - B. Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review or judgement of **ENGINEER** as to the Work, it is intended, that such requirement, direction, review or judgement will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective never indicates that **ENGINEER** shall have authority to supervise or direct performance of the Work or authority to undertake responsibility contrary to the provisions of Paragraph 9.7.C and 9.7.D.
 - C. **ENGINEER** will not be responsible for **CONTRACTOR'S** means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs

incident thereto, and **ENGINEER** will not be responsible for **CONTRACTOR'S** failure to perform the Work in accordance with the Contract Documents.

- D. **ENGINEER** will not be responsible for the acts or omissions of **CONTRACTOR** or of any Subcontractors, or of the agents or employees of any **CONTRACTOR** or Subcontractor, or of any other person at the site or otherwise performing any of the Work.

ARTICLE 10 – CHANGES IN THE WORK

- 10.1 Without invalidating the Agreement, **OWNER** may, at any time or from time to time, order additions, deletions or revisions in the work; these will be authorized by written Change Orders only; duly signed in advance by the parties and set forth in the public minutes of the **OWNER**. Upon receipt of a Change Order, **CONTRACTOR** shall proceed with the Work involved. All such work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made as provided in Article 11 or Article 12 on the basis on a claim made by either party.
- 10.2 **ENGINEER** may authorize minor changes in the Work not involving an adjustment in the Contract Price or the Contract Time which are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order and shall be binding on **OWNER**, and also on **CONTRACTOR** who shall perform the change promptly. If **CONTRACTOR** believes that a Field Order Justifies an increase in the Contract Price or Contract Time, **CONTRACTOR** may make a claim therefor as provided in Article 11 or Article 12.
- 10.3 Additional Work performed without authorization of a Change Order will not entitle **CONTRACTOR** to an increase in the Contract Price or an extension of the Contract Time, except as in the case of an emergency as provided in Paragraph 6.12.
- 10.4 **OWNER** shall execute appropriate written Change Order prepared by **ENGINEER** covering changes in the Work which are required by **OWNER**, or required because of unforeseen physical conditions or emergencies, or because of uncovering work found not to be defective, or as provided in Paragraphs 11.6 and 15.1.
- 10.5 If notice of any changes affecting the general scope of the Work or change in the Contract Price is required by the provisions of any Bond to be given to the surety, it will be **CONTRACTOR'S** responsibility to so notify the Surety, and the amount of each applicable Bond shall be adjusted accordingly. **CONTRACTOR** shall furnish proof of such adjustment to **OWNER**.

ARTICLE 11 – CHANGE OF CONTRACT PRICE

- 11.1 The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to **CONTRACTOR** for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by **CONTRACTOR** shall be at his expense without change in the Contract Price.
- 11.2 The Contract Price may only be changed by a written Change Order duly signed in advance by the parties and set forth in the public minutes of the **OWNER**. Any claim for an increase in the Contract Price shall be based on written notice delivered to **OWNER** and **ENGINEER** within fifteen days of the occurrence of the event giving rise to the claim. Notice of the amount of the claim with supporting data shall be delivered within forty-five days of such occurrence unless **ENGINEER** allows an additional period of time to ascertain accurate cost data. All claims for adjustment in the Contract Price shall be determined by **ENGINEER** if **OWNER** and **CONTRACTOR** cannot otherwise agree on the amount involved. Any change in the Contract Price resulting from any such claim shall be incorporated in a written Change Order.

11.3 The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the ways listed herein:

- A. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved.
- B. By mutual acceptance of a lump sum.
- C. On the basis of the Cost of the Work (determined as provided in Paragraph 11.4) plus a Contractor's Fee for overhead and profit (determined as provided in Paragraph 11.5).
- D. Whenever the cost of any Work is to be determined pursuant to Paragraphs 11.4.A and 11.4.B, **CONTRACTOR** will submit in form acceptable to **ENGINEER**, an itemized cost breakdown together with supporting data.

11.4 Cost of the Work

- A. The term Cost of the Work means the sum of all costs necessarily incurred and paid by **CONTRACTOR** in the proper performance of the Work. Except as otherwise may be agreed to in writing in advance by **OWNER**, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in Paragraph 11.4.B.
 - 1. Payroll costs for employees in the direct employ of **CONTRACTOR** in the performance of the Work under schedules of job classifications agreed upon by **OWNER** and **CONTRACTOR**. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays shall be included in the above to the extent authorized by **OWNER**.
 - 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and manufacturers' field services required in connection therewith. All cash discounts shall accrue to **CONTRACTOR** unless **OWNER** deposits funds with **CONTRACTOR** with which to make payments, in which case the cash discounts shall accrue to **OWNER**. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment shall accrue to **OWNER**, and **CONTRACTOR** shall make provisions so that they may be obtained.
 - 3. Payments made by **CONTRACTOR** to the Subcontractors for work performed by Subcontractors. If required by **OWNER**, **CONTRACTOR** shall obtain competitive bids from Subcontractors acceptable to **CONTRACTOR** and shall deliver such bids to **OWNER** who will then determine, with the advice of **ENGINEER**, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as **CONTRACTOR'S** Cost of the Work. All subcontractors shall be subject to the other provisions of the Contract Documents in so far as applicable.

4. Supplemental cost including the following:
 - a. Rentals of the all construction equipment and machinery and the parts thereof whether rented from **CONTRACTOR** or others in accordance with rental agreements approved by **OWNER** with the advice of **ENGINEER**, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof--all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.
 - b. Cost of premiums for additional Bonds and insurance required because of changes in the Work.
- B. The Term Cost of the Work shall not include any of the following:
 1. Payroll costs and other compensation of **CONTRACTOR'S** officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by **CONTRACTOR** whether at the site or in his principal or a branch office for general administration of the work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.4.A.1 C all of which are to be considered administrative costs covered by the **CONTRACTOR'S** Fee.
 2. Expenses of **CONTRACTOR'S** principal and branch offices other than **CONTRACTOR'S** office at the site.
 3. Any part of **CONTRACTOR'S** capital expenses, including interest on **CONTRACTOR'S** capital employed for the Work and charges against **CONTRACTOR** for delinquent payments.
 4. Cost of premiums for all Bonds and for all insurance whether or not **CONTRACTOR** is required by the Contract Documents to purchase and maintain the same (except for additional Bonds and insurance required because of changes in the Work).
 5. Costs due to the negligence of **CONTRACTOR**, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.
 6. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 11.4.A.

11.5 Contractor's Fee:

- A. The Contractor's Fee allowed to **CONTRACTOR** for overhead and profit shall be determined as follows:
 1. A mutually acceptable fixed fee; or if none can be agreed upon,
 2. A fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 11.4.A.1 and 11.4.A.2, the Contractor's Fee shall not exceed a total of twenty percent for overhead and profit.
 - b. For costs incurred under Paragraph 11.4.A.3, the Contractor's Fee shall not exceed a total of five percent; and if a subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to the Subcontractor as a fee for overhead and profit shall not exceed a total of twenty percent.
 - c. No fee shall be payable on the basis of costs itemized under Paragraphs 11.4.A.4, and 11.4.B.

- B. The amount of credit to be allowed by **CONTRACTOR** to **OWNER** for any such change which results in a net decrease in cost, will be the net decrease in Cost of the Work plus ten percent of the net decrease in the Cost of the Work. When both additions and credits are involved in any one change, the combined overhead and profit shall be figured on the basis of the net increase, if any.
- 11.6 Cash Allowances: It is understood that **CONTRACTOR** has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors, manufacturers, fabricators, suppliers or distributors and for such sums within the limit of the allowances as may be acceptable to **ENGINEER**. Upon final payment, the Contract Price shall be adjusted as required and an appropriate Change Order issued. **CONTRACTOR** agrees that the original Contract Price includes such sums as **CONTRACTOR** deems proper for costs and profit on account of cash allowances. No demand for additional cost or profit in connection therewith will be allowed.

ARTICLE 12 – CHANGE OF THE CONTRACT TIME

- 12.1 The Contract Time may only be changed by a written Change Order approved in advance by the parties and set forth in **OWNER'S** public minutes. Any claim for an extension in the Contract Time shall be based on written notice delivered to **OWNER** and **ENGINEER** within fifteen days of the occurrence of the event giving rise to the claim. Notice of the extent of the claim with supporting data shall be delivered within forty-five days of such occurrence unless **ENGINEER** allows an additional period of time to ascertain more accurate data. All claims for adjustment in the Contract Time shall be determined by **OWNER** if **ENGINEER** and **CONTRACTOR** cannot otherwise agree. Any change in the Contract Time resulting from any such claim shall be incorporated in a written Change Order as set forth above.
- 12.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of **CONTRACTOR** if a claim is made therefor as provided in Paragraph 12.1. Such delays shall include, but not be limited to, acts or neglect by **OWNER** or others performing additional work as contemplated by Article 7, or to fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God. No extension of the Contract Time will be granted where the delay is attributable to a Subcontractor, manufacturer, fabricator, supplier or distributor or any other party performing services or furnishing material or equipment on behalf of the **CONTRACTOR** unless such party's delay is attributable to one of the above enumerated causes.
- 12.3 The time limits concerning Substantial Completion and final completion as stated in the Contract Documents are of the essence. The provisions of this Article 12 shall not exclude recovery for damages (including compensation for additional professional services) for delay by either party, provided, however that **CONTRACTOR** shall not be entitled to damages for any delay occurring as a consequence of a delay in additional work being performed by others pursuant to Paragraph 7.1 hereof if the performance of said additional work was noted in the Contract Documents and the delay (by others) was not directly caused by the fault of **OWNER**.

ARTICLE 13 – WARRANTY AND GUARANTEE; TESTS AND INSPECTION; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

- 13.1 Warranty and Guarantee: **CONTRACTOR** warrants and guarantees to **OWNER** and **ENGINEER** that all work will be in strict accordance with the Contract Documents and will not be defective. Prompt notice after discovery of all defects shall be given to **CONTRACTOR**. All defective Work, whether or not in place, may be rejected or corrected as provided in this Article 13.
- 13.2 Access to Work: **ENGINEER** and **ENGINEER'S** representatives, other representatives of **OWNER**, testing agencies and governmental agencies with Jurisdictional Interests will have access to the Work at reasonable times for their observation, inspection and testing. **CONTRACTOR** shall provide proper and safe conditions for such access.

13.3 Tests and Inspections:

- A. **CONTRACTOR** shall give **ENGINEER** timely notice of readiness of the Work for all required inspections, tests or approvals.
- B. If any law, ordinance, rule, regulation, code, or orders of any public body having jurisdiction requires any Work (or part thereof) to specifically be inspected, tested or approved, **CONTRACTOR** (unless another party is specified in the General Requirements) shall assume full responsibility therefor, pay all costs in connection therewith and furnish **ENGINEER** the required certificates of inspection, testing or approval. **CONTRACTOR** shall also be responsible for and shall pay all costs in connection with any inspection or testing required by the Specifications in connection with **OWNER'S** or **ENGINEER'S** acceptance of a manufacturer, fabricator, supplier or distributor of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval prior to **CONTRACTOR'S** purchase thereof for incorporation in the Work. The cost of all other inspections, tests and approvals required by the Contract Documents shall be paid by **OWNER** (unless otherwise specified).
- C. All inspections, tests or approvals other than those required by law ordinance, rule, regulation, code or order of any public body having Jurisdiction shall be performed by organizations acceptable to **OWNER** (or by **ENGINEER** if so specified).
- D. If any Work that is to be inspected, tested or approved is covered without written concurrence of **ENGINEER**, it must, if requested by **ENGINEER**, be uncovered for observation. Such uncovering shall be at **CONTRACTOR'S** expense unless **CONTRACTOR** has given **ENGINEER** timely notice of **CONTRACTOR'S** intention to cover such Work and **ENGINEER** has not acted with reasonable promptness in response to such notice.
- E. Neither observations by **ENGINEER** nor inspections, tests or approvals by others shall relieve **CONTRACTOR** from his obligations to perform the Work in accordance with the Contract Documents.

13.4 Uncovering Work:

- A. If any Work is covered contrary to the written request of **ENGINEER**, it must, if requested by **ENGINEER**, be uncovered for **ENGINEER'S** observation and replaced at **CONTRACTOR'S** expense.
- B. If **ENGINEER** considers it necessary or advisable that covered Work be observed by **ENGINEER** or inspected or tested by others, **CONTRACTOR**, at **ENGINEER'S** request, shall uncover, expose or otherwise make available for observation, inspection or testing as **ENGINEER** may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is not found that such Work is defective, **CONTRACTOR** shall bear all expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services, and an appropriate deductive Change Order shall be issued. If, however, such Work is not found to be defective, **CONTRACTOR** shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing or reconstruction if he makes a claim therefor as provided in Articles 11 and 12.

- 13.5 Owner May Stop the Work: If the Work is defective, or **CONTRACTOR** fails to supply sufficient skilled Workmen or suitable materials or equipment, **OWNER** may order **CONTRACTOR** to stop the Work, or any portion thereof, until the cause for such order has been eliminated. However, this right of **OWNER** to stop the Work shall not give rise to any duty on the part of **OWNER** to exercise this right for the benefit of **CONTRACTOR** or any other party.

- 13.6 Correction or Removal of Defective Work: If required by **ENGINEER**, **CONTRACTOR** shall promptly, without cost to **OWNER** and as specified by **ENGINEER**, either correct any defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by **ENGINEER**, remove it from the site and replace it with nondefective Work.
- 13.7 One Year Correction Period: If, within one year after the date of Substantial Completion or 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, or by any specific provision of the Contract Documents, any Work is found to be defective, **CONTRACTOR** shall promptly, without cost to **OWNER** and in accordance with **OWNER'S** written instructions, either correct such defective Work, or, if it has been rejected by **OWNER**, remove it from the site and replace it with nondefective Work. If **CONTRACTOR** does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, **OWNER** may have the defective Work corrected or the rejected Work removed and replaced, and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by **CONTRACTOR**.
- 13.8 Acceptance of Defective Work:
- A. If, instead of requiring correction or removal and replacement of defective Work, **OWNER** (and, prior to **ENGINEER'S** recommendation of final payment, also **ENGINEER**) prefers to accept it, **OWNER** may do so. In such case, if acceptance occurs prior to **ENGINEER'S** recommendation of final payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Prices or, if the acceptance occurs after such recommendation, an appropriate amount shall be paid by **CONTRACTOR** to **OWNER**.
 - B. **OWNER** may require **CONTRACTOR** to furnish, at **CONTRACTOR'S** expense, performance guarantees and additional Bonds prior to acceptance of defective Work.
- 13.9 Owner May Correct Defective Work: If **CONTRACTOR** fails within a reasonable time after written notice of **ENGINEER** to proceed to correct and to correct defective work or to remove and replace rejected Work as required by **ENGINEER** in accordance with Paragraph 13.6, or if **CONTRACTOR** fails to perform the work in accordance with the Contract Documents (including any requirements of the progress schedule), **OWNER** may, after seven days' written notice to **CONTRACTOR**, correct and remedy any such deficiency. In exercising his rights under this Paragraph, **OWNER** shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, **OWNER** may exclude **CONTRACTOR** from all or part of the site, take possession of all or part of the Work, and suspend **CONTRACTOR'S** services related thereto, take possession of **CONTRACTOR'S** tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which **OWNER** has paid **CONTRACTOR** but which are stored elsewhere. **CONTRACTOR** shall allow **OWNER**, **OWNER'S** representatives, agents and employees such access to the site as may be necessary to enable **OWNER** to exercise his rights under this Paragraph. All direct and indirect costs of **OWNER** in exercising such rights shall be charged against **CONTRACTOR** in an amount verified by **ENGINEER**, and a Change Order shall be issued incorporating the necessary revisions in the Contract Documents and a reduction in the Contract Price. Such direct and indirect costs shall include, in particular but without limitation, compensation for additional professional services required and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of **CONTRACTOR'S** defective Work. **CONTRACTOR** shall not be allowed an extension of the Contract Time because of any delay in his performance of the Work attributable to the exercise by **OWNER** of **OWNER'S** rights hereunder.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

- 14.1 Schedules: At least twenty days prior to submitting the first application for a progress payment, **CONTRACTOR** shall (except as otherwise specified in the General Requirements) submit to

ENGINEER a progress schedule, final schedule of Shop Drawings submission and where applicable, a schedule of values of the Work. These schedules shall be satisfactory in form and substance to **ENGINEER**. The schedule of values shall include, quantities and unit prices aggregating the Contract Price, and shall subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Upon acceptance of the schedule of values by **ENGINEER**, it shall be incorporated into a form of Application for Payment acceptable to **ENGINEER**.

14.2 Application for Progress Payment: At least ten days before each application for a progress payment falls due (but not more often than once a month), **CONTRACTOR** shall submit to **ENGINEER** for review an Application for Payment filled out and signed by **CONTRACTOR** covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents and also as **ENGINEER** may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by such data, satisfactory to **OWNER**, as will establish **OWNER'S** title to the material and equipment and protect **OWNER'S** interest therein, including applicable insurance. Each subsequent Application for Payment shall include an affidavit of **CONTRACTOR** stating that all previous progress payments received on account of the Work have been applied to discharge in full all of **CONTRACTOR'S** obligations reflected in prior Applications for Payment. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

14.3 Contractor's Warranty of Title: **CONTRACTOR** warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to **OWNER** at the time of payment free and clear of all liens, claims, security interests and encumbrances (hereafter in these General Conditions referred to as "Liens").

14.4 Review of Applications for Progress Payments:

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

B. **ENGINEER'S** recommendation of any payment requested in an Application for Payment will constitute a representation by **ENGINEER** to **OWNER**, based on **ENGINEER'S** on-site observations of the Work in progress as an experienced and qualified design professional and on **ENGINEER'S** review of the Application for Payment and the accompanying data and schedules that the Work has progressed to the point indicated that, to the best of **ENGINEER'S** knowledge, information and belief, the quality of the work is in accordance with the Contract Documents (subject to an evaluation of the work as a functioning Project upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and any qualifications stated in the recommendation) and that **CONTRACTOR** is entitled to payment of the amount recommended. However, by recommending any such payment **ENGINEER** will not thereby be deemed to have represented that exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the Work, or that the means, methods, techniques, sequences, and procedures of construction have been reviewed, or that any examination has been made to ascertain how or for what purpose **CONTRACTOR** has used the moneys paid or to be paid to **CONTRACTOR** on account of the Contract Price, or that title to any Work, materials or equipment has passed to **OWNER** free and clear of any Liens.

C. **ENGINEER'S** recommendation of final payment will constitute an additional representation by **ENGINEER** to **OWNER** that the conditions precedent to

CONTRACTOR'S being entitled to final payment as set forth in Paragraph 14.9 have been fulfilled.

- D. **ENGINEER** may refuse to recommend the whole or any part of any payment if, in **ENGINEER'S** opinion, it would be incorrect to make such representations to **OWNER**. **ENGINEER** may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify and such payment previously recommended, to such extent as may be necessary in **ENGINEER'S** opinion to protect **OWNER** from loss because:
1. The Work is defective, or completed Work has been damaged requiring correction or replacement,
 2. Written claims have been made against **OWNER** or Liens have been filed in connection with the Work,
 3. The Contract Price has been reduced because of Modifications,
 4. **OWNER** has been required to correct defective Work or complete the Work in accordance with Paragraph 13.9,
 5. Of **CONTRACTOR'S** unsatisfactory prosecution of the Work in accordance with the Contract Documents, or
 6. Of **CONTRACTOR'S** failure to make payment to Subcontractors for labor, materials or equipment.

14.6 Partial Utilization: Use by **OWNER** of completed portions of the Work may be accomplished prior to Substantial Completion of all the Work subject to the following:

- A. **OWNER** at any time may request **CONTRACTOR** in writing to permit **OWNER** to use any part of the Work which **OWNER** believes to be substantially complete and which may be used without significant interference with construction of the other parts of the Work. If **CONTRACTOR** agrees, **CONTRACTOR** will certify to **OWNER** and **ENGINEER** that said part of the Work is substantially complete and request **ENGINEER** to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time thereafter **OWNER**, **CONTRACTOR** and **ENGINEER** shall make an inspection of that part of the Work to be substantially complete, **ENGINEER** will notify **OWNER** and **CONTRACTOR** in writing giving his reason therefor. If **ENGINEER** considers that part of the Work to be substantially complete, **ENGINEER** will execute and deliver to **OWNER** and **CONTRACTOR** a certificate to that effect, fixing the date of Substantial Completion as to that part of the Work, attaching thereto a tentative list of items to be completed or corrected before final payment. Prior to issuing a certificate of Substantial Completion as to part of the Work, **ENGINEER** will deliver to **OWNER** and **CONTRACTOR** a written recommendation as to the division of responsibilities pending final payment between **OWNER** and **CONTRACTOR**, with respect to security, operation, safety, maintenance, utilities and insurance for that part of the Work which shall become binding upon **OWNER** and **CONTRACTOR** at the time of issuing the definitive certificate of Substantial Completion as to that part of the Work, unless **OWNER** and **CONTRACTOR** shall have otherwise agreed in writing and so informed **ENGINEER**. **OWNER** shall have the right to exclude **CONTRACTOR** from any part of the Work which **ENGINEER** has so certified to be substantially complete, but **OWNER** shall allow **CONTRACTOR** reasonable access to complete or correct items on the tentative list.
- B. In lieu of the issuance of a Certificate of Substantial Completion as to part of the Work, **OWNER** may take over operation of a facility constituting part of the Work whether or not it is substantially complete if such facility is functionally and separately useable provided that prior to any such take over, **OWNER** and **CONTRACTOR** have agreed as to the division of responsibilities between **OWNER** and **CONTRACTOR** for security, operation, safety, maintenance, correction period, heat, utilities and insurance with respect to such facility.

- C. No occupancy of part of the Work or taking over of operations of a facility will be accomplished prior to compliance with the requirements of Paragraph 5.8, in respect of property insurance.
- 14.7 Final Inspection: Upon written notice from **CONTRACTOR** that the Work is complete, **ENGINEER** will make a final inspection with **OWNER** and **CONTRACTOR** and will notify **CONTRACTOR** in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. **CONTRACTOR** shall immediately take such measures as are necessary to remedy such deficiencies.
- 14.8 Final Application for Payment: After **CONTRACTOR** has completed all such corrections to the satisfaction of **ENGINEER** and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked up record documents, and other documents all as required by the Contract Documents, and after **ENGINEER** has indicated that the Work is acceptable (subject to the provisions of Paragraph 14.10) **CONTRACTOR** may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents and such other data and schedules as **ENGINEER** may reasonably require, together with complete and legally effective releases or waivers (satisfactory to **OWNER**) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by **OWNER**, **CONTRACTOR** may furnish receipts or releases in full as an affidavit of **CONTRACTOR** that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which **OWNER** or his property might in any way be responsible, have been paid or otherwise satisfied and consent of the Surety, if any, to final payment. If any Subcontractor, manufacturer, fabricator, supplier or distributor fails to furnish a release or receipt in full, **CONTRACTOR** may furnish a Bond or other collateral satisfactory to **OWNER** to indemnify **OWNER** against any Lien.
- 14.9 Final Payment and Acceptance:
- A. If, on the basis of **ENGINEER'S** observation of the Work during construction and final inspection and **ENGINEER'S** review of the final Application for Payment and accompanying documentation, all as required by the Contract Documents, **ENGINEER** is satisfied that the Work has been completed and **CONTRACTOR** has fulfilled all of his obligations under the Contract Documents, **ENGINEER** will, within ten days after receipt of the final Application for Payment, indicate in writing his recommendation of payment and present the Application to **OWNER** for payment. Thereupon **ENGINEER** will give written notice to **OWNER** and **CONTRACTOR** that the Work is acceptable subject to the provisions of Paragraph 14.11. Otherwise, **ENGINEER** will return the Application to **CONTRACTOR** indicating in writing the reasons for refusing to recommend final payment in which case **CONTRACTOR** shall make the necessary corrections and resubmit the Application. If the Application and accompanying documentation are appropriate as to form and substance, **OWNER** shall, within thirty days after receipt thereof, pay **CONTRACTOR** the amount recommended by **ENGINEER**.
- B. If, through no fault of **CONTRACTOR**, final completion is materially delayed and if **ENGINEER** so confirms, **OWNER** shall, upon receipt of **CONTRACTOR'S** final Application for Payment and recommendations of **ENGINEER**, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by **OWNER** for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in Paragraph 5.1, the written consent of the Surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by **CONTRACTOR** to **ENGINEER** with his Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.
- 14.10 Contractor's Continuing Obligation: **CONTRACTOR'S** obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither

recommendation of any progress or final payment by **ENGINEER**, nor the issuance of a certificate of Substantial Completion, nor any payment by **OWNER** to **CONTRACTOR** under the Contract Documents, nor any use or occupancy of the Work or any part thereof by **OWNER**, nor any act of acceptance by **OWNER** nor any failure to do so, nor the issuance of a notice of acceptability by **ENGINEER** pursuant to Paragraph 14.9, nor any correction of defective Work by **OWNER** shall constitute an acceptance of Work not in accordance with the Contract Documents or a release of **CONTRACTOR'S** obligation to perform the Work in accordance with the Contract Documents.

14.11 Waiver of Claims: The making and acceptance of final payment shall constitute:

- A. A waiver of all claims by **OWNER** against **CONTRACTOR**, except claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.7 or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein: however it shall not constitute a waiver by the **OWNER** of any rights in respect of **CONTRACTOR'S** continuing obligations under the Contract Documents; and
- B. A waiver of all claims by **CONTRACTOR** against **OWNER** other than those previously made in writing and still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.1 Owner May Suspend Work: **OWNER** may, at any time and without cause, 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 shall fix the date on which Work shall be resumed. **CONTRACTOR** shall resume the Work on the date so fixed. **CONTRACTOR** will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if he makes a claim therefor as provided in Articles 11 and 12.

15.2 Owner May Terminate:

- A. Upon the occurrence of any one or more of the following events:
 - 1. If **CONTRACTOR** is adjudged as bankrupt or insolvent,
 - 2. If **CONTRACTOR** makes a general assignment for the benefit of creditors,
 - 3. If a trustee or receiver is appointed for **CONTRACTOR** or for any of **CONTRACTOR'S** property,
 - 4. If **CONTRACTOR** files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws,
 - 5. If **CONTRACTOR** repeatedly fails to supply sufficient skilled Workmen or suitable materials or equipment,
 - 6. If **CONTRACTOR** repeatedly fails to make prompt payments to Subcontractors or for labor, materials or equipment,
 - 7. If **CONTRACTOR** disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction,
 - 8. If **CONTRACTOR** disregards the authority of **ENGINEER**, or
 - 9. If **CONTRACTOR** otherwise violates in any substantial way any provisions of the Contract Documents,

OWNER may, after giving **CONTRACTOR** and his Surety seven days' written notice, terminate the services of **CONTRACTOR**, exclude **CONTRACTOR** from the site and take possession of the Work and of all **CONTRACTOR'S** tools, appliances, construction equipment and machinery at the site and use the same to 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 the direct and indirect costs of completing the Work, including compensation for additional professional services, such excess shall be paid to **CONTRACTOR**. If such costs exceed such unpaid balance, **CONTRACTOR** shall pay the difference to **OWNER**. Such costs incurred by **OWNER** shall be verified by **ENGINEER** and incorporated in a Change Order, but in finishing the work **OWNER** shall not be required to obtain the lowest figure for the Work performed.

- B. Where **CONTRACTOR'S** services have been so terminated by **OWNER**, the termination shall not affect any rights 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.
- C. Upon seven days' written notice to **CONTRACTOR** and **ENGINEER**, **OWNER** may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, **CONTRACTOR** shall be paid for all Work executed and any expense sustained plus reasonable termination expenses.

15.3 Contractor May Stop Work or Terminate: If, through no act or fault of **CONTRACTOR**, the Work is suspended for a period of more than ninety days by **OWNER** or under an order of court or other public authority, or **ENGINEER** fails to acts on any Application for Payment within thirty days after it is submitted, or **OWNER** fails to pay **CONTRACTOR** any sum finally determined to be due, then **CONTRACTOR** may, upon seven days' written notice to **OWNER** and **ENGINEER**, terminate the Agreement and recover from **OWNER** payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if **ENGINEER** has failed to act on an Application for Payment or **OWNER** has failed to make any payment as aforesaid, **CONTRACTOR** may upon seven days' written notice to **OWNER** and **ENGINEER** stop the Work until payment of all amounts then due. The provision of this paragraph shall not relieve **CONTRACTOR** of his obligations under Paragraph 6.14 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with **OWNER**.

ARTICLE 16 – DISPUTE RESOLUTION

- 16.1 Unless otherwise provided in the Supplementary Conditions, all claims, disputes and other matters in question between **OWNER** and **CONTRACTOR** arising out of, or relating to the Contract Documents or the breach thereof, except for claims which have been waived by the making or acceptance of final payment as provided by Paragraph 14.11, shall be decided by the courts of the jurisdiction in which the Project is located.
- 16.2 In the case of any dispute that is required to be referred to **ENGINEER** initially for decision in accordance with Paragraph 9.6, no legal proceeding shall be instituted prior to the earlier of (a) the date on which **ENGINEER** had rendered a decision, or (b) the tenth day after the parties have presented their evidence to **ENGINEER**; and no proceeding with respect to such dispute shall be made later than thirty days after the date on which **ENGINEER** has rendered a written decision in respect thereof.

ARTICLE 17 – MISCELLANEOUS

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

- 17.2 Computation of Time: When any period of time is referred to in the Contract Documents by days, it shall be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day shall be omitted from the computation.
- 17.3 General:
- A. Should **OWNER** suffer injury or damage to his person or property because of any error, omission or act of the **CONTRACTOR** or of any of the **CONTRACTOR'S** employees or agents or others for whose acts the **CONTRACTOR** is legally liable, claim shall be made in writing to the **CONTRACTOR** within a reasonable time of the first observance of such injury or damage.
 - B. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon **CONTRACTOR**, by Paragraphs 6.15, 13.1, 13.6, 13.9, 14.3 and 15.2 and all of the rights and remedies available to **OWNER** and **ENGINEER** thereunder, shall be in addition to, and shall not be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by law or contract, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this Paragraph shall be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents shall survive final payment and termination or completion of this Agreement.
- 17.4 Headings: The Article and Paragraph headings are inserted for convenience only and do not constitute part of these General Conditions.

END OF SECTION

SECTION 007300
SUPPLEMENTARY CONDITIONS

CITY OVERLAY PROJECT
CITY OF BYRAM, MISSISSIPPI

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SUPPLEMENTAL CONDITIONS

1. Definitions

The definition of "Technical Specifications" shall be the same as the definition for Specifications stated in Article 1 of the General Conditions.

The definition of "Contract Documents" included in Article 1 of the General Conditions shall be expanded to include the Advertisement for Bids, "Notice of Award, and Notice to Proceed."

2. Before Starting Construction

In addition to the requirements of Paragraph 2.5.B of the General Conditions, "**CONTRACTOR** shall submit to **ENGINEER** for review and acceptance, an estimated work payment schedule in dollars versus contract time. The payment schedule shall be submitted together with the progress schedule and schedule of Shop Drawings within ten (10) days after the Effective date of the Agreement."

In addition to the requirements of Paragraph 2.5 of the General Conditions, "**CONTRACTOR** shall deliver to the **OWNER**, with his signed Contract, all bonds and insurance which he is required to purchase and maintain in accordance with Article 5 of the General Conditions. A copy shall also be submitted to the **ENGINEER**. The **OWNER** shall deliver to the **CONTRACTOR** a copy of all policies of insurance which the **OWNER** is required to purchase and maintain in accordance with Article 5 of the General Conditions."

3. Preconstruction Conference

The time period for holding the preconstruction conference as stated in Paragraph 2.6 of the General Conditions shall be changed from within 20 days to within 30 days after the Effective date of the Agreement, but before the **CONTRACTOR** starts the Work at the site.

4. Insurance Requirements

In addition to the requirements of Article 5 of the General Conditions, insurance coverage specified herein constitutes the minimum requirements and said requirements shall in no way lessen or limit the liability of the **CONTRACTOR** under the terms of the Contract. The **CONTRACTOR** shall procure and maintain at his own expense any additional kinds and amounts of insurance that, in his own judgement, may be necessary for his proper protection in the prosecution of the Work.

The **CONTRACTOR** shall carry insurance as prescribed herein and all policies shall be with companies satisfactory to the City of Byram, Mississippi.

If a part of this Contract is sublet, the **CONTRACTOR** shall require each Subcontractor to carry insurance of the same kinds and in like amounts as carried by the **CONTRACTOR**.

Certificates of insurance shall state that 10 days written notice will be given to the **OWNER** before the policy is cancelled or changed. No **CONTRACTOR** or Subcontractor will be allowed to start any construction work on this Contract until certificates of all insurance required herein are filed and approved by the **OWNER**. The certificates shall show the type, amount, class of operations covered, effective dates and the dates of the expiration of policies.

The **CONTRACTOR** shall secure and maintain in effect for the period of the Contract and pay all premiums for the following kinds and amounts of insurance.

a. Worker's Compensation and Employer's Liability Insurance

This insurance shall protect the **CONTRACTOR** against all claims under the applicable State Worker's Compensation Laws. The **CONTRACTOR** shall also be protected and shall cause each Subcontractor to be protected against claims for injury, disease, or death of employees which, for any reason, may not fall within the provisions of a Worker's Compensation Law. The liability limits shall not be less than the required statutory limits for Worker's Compensation and Employer's Liability in the amount of ONE HUNDRED THOUSAND DOLLARS (\$100,000.00) for each person. This policy shall include an all states endorsement.

b. **CONTRACTOR'S** Comprehensive Public Liability and Property Damage Insurance, covering all operations in connection with the performance of this Contract in amounts not less than the following:

Bodily injury liability in the amount of ONE MILLION DOLLARS (\$1,000,000) for each person and ONE MILLION DOLLARS (\$1,000,000) for each accident and property damage liability in the amount of ONE MILLION DOLLARS (\$1,000,000) for all damages arising out of the injury or destruction of property in any one accident and subject to that limit per accident a total for aggregate limit of ONE MILLION DOLLARS (\$1,000,000) for all damages arising out of injury to or destruction of property during the policy period.

The Comprehensive Public Liability and Property Damage policies carried by both the **CONTRACTOR** and the Subcontractors shall contain an endorsement to include the coverage of the following hazards:

- i. Explosion, collapse, and underground property damage to include any damage or destruction of property below the surface of the ground, such as wires, conduits, pipes, mains, sewers, etc., caused by the **CONTRACTOR'S** operations.
- ii. The collapse of an structural injury to any building, structure or property on or adjacent to the **OWNER'S** premises or right-of-way caused by the **CONTRACTOR'S** operations in the removal of other buildings, structures, or supports, or by excavation below the surface of the ground.
- iii. Contractual Liability Coverage for the Hold Harmless segments of the Contract Documents.

c. **CONTRACTOR'S** Contingent or Protective Liability and Property Damage:

In case part of this Contract is sublet, the **CONTRACTOR** shall secure contingent or protective liability and property damage insurance to protect him from any and all claims arising from the operation of his Subcontractors in the execution of Work included in the Contract. In no case shall the amount of such protection be less than the limits of \$1,000,000 for Public Liability Insurance and \$1,000,000 for Property Damage Insurance. The coverage in each case shall be acceptable to the **OWNER**.

d. Automotive Public Liability and Property Damage

The **CONTRACTOR** shall maintain automobile public liability insurance in the amount of not less than ONE MILLION DOLLARS (\$1,000,000) for injury to one person and ONE MILLION DOLLARS (\$1,000,000) for one accident; and automobile property damage insurance in the amount of not less than ONE MILLION DOLLARS (\$1,000,000) for one accident to protect him from any and all claims arising from the use of the following:

- i. **CONTRACTOR'S** own automobiles and trucks.
- ii. Hired automobiles and trucks.
- iii. Automobiles and trucks owned by Subcontractors.

The aforementioned is to cover use of automobiles and trucks on and off the site of the Project.

e. **OWNER'S Protective Liability Policy**

The **CONTRACTOR** shall maintain **OWNER'S** Protective Liability Insurance with the Town of Bentonina as the named insured, and the **ENGINEER**, and their servants, agents, and employees as additional insureds in amounts not less than the following:

- i. Bodily Injury in the amount of ONE MILLION DOLLARS (\$1,000,000) for each person and ONE MILLION DOLLARS (\$1,000,000) for each accident and property damage liability in the amount of ONE MILLION DOLLARS (\$1,000,000) for all damages arising out of an injury or destruction of property in any one accident and subject to that limit per accident a total (or aggregate) limit of ONE MILLION DOLLARS (\$1,000,000) for all damages arising out of injury to or destruction of property during the policy period.

f. **Builder's Risk Insurance Fire and Extended Coverage**

Until the Project is completed and is accepted by the **OWNER**, the **CONTRACTOR** is required to maintain Builder's Risk Insurance (fire and extended coverage) adequate to fully cover the insurable portion of the Project for the benefit of the **OWNER**, the **CONTRACTOR** and Subcontractors as their interests may appear.

5. Concerning Subcontractors: Not Used.

6. Record Documents

In addition to the requirements of Paragraph 6.10 of the General Conditions, **CONTRACTOR** shall provide accurate 'mark-ups' acceptable to the **ENGINEER** on or before the date of Substantial Completion of the Project for use by the **ENGINEER** in preparation of 'record' drawings. Final payment will not be made to the **CONTRACTOR** prior to the **ENGINEER** receiving these mark-ups from the **CONTRACTOR**.

7. Limitations on **ENGINEER'S** Responsibilities

In addition to the requirements of Paragraph 9.7C, when it comes to his attention, the **ENGINEER** will immediately notify the **OWNER** in the event that the **CONTRACTOR** is not complying with the Contract Documents or is conducting the Work in such a manner that could be considered grounds for termination of the Contract. The **CONTRACTOR** shall retain responsibility for performing all Work in compliance with the Contract Documents.

8. Change of Contract Price:

In addition to the requirements of Article 11 of the General Conditions, the following is added:

If the Contractor is delayed, hindered or impeded at any time in the progress of the Work for any reason or by any alleged act or neglect of the Owner or the Engineer, or by any employee of either or by a separate Contractor employed by the Owner, or by changes ordered in the scope of the Work, or by other causes beyond the Contractor's control, then the Contract Time may be extended by Change Order for such reasonable time as is agreed to by the Owner. However, to the fullest extent permitted by law, and notwithstanding any other provisions in the Contract Documents, the Owner and its agents and employees shall not be liable for any damages for

delay whether for direct or indirect costs, extended home office overhead, idle or inefficient labor or equipment, cost escalations, or monetary claims of any nature arising from or attributable to delay by any cause whatsoever. The Contractor's sole and exclusive right and remedy for delay by any cause is an extension of the Contract Time but no increase in the Contract Price.

9. Change of the Contract Time

In addition to the requirements of Paragraph 12.2 of the General Conditions, the following conditions must be satisfied in order for the Owner and Engineer to award a time extension for unusually severe weather:

- a. The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.
- b. The unusually severe weather must actually cause a delay in the completion of the project. The delay must be beyond the control without the fault of negligence of the **CONTRACTOR**.
- c. The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the baseline for monthly weather time evaluations. The **CONTRACTORS'S** activity durations for inclusion in the progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

Month	Days	Month	Days
January	6	July	5
February	6	August	6
March	5	September	5
April	6	October	4
May	5	November	4
June	7	December	5

10. Payments to CONTRACTOR

Paragraph 14.2, Application for Progress Payment, is deleted in its entirety and the following substituted therefore:

- a. Monthly Estimates and Partial Payments: The **CONTRACTOR'S** partial payment period shall end on the last day of each month. The **CONTRACTOR** shall submit acceptable Application for Payment to the **ENGINEER** by the 5th of each month provided that the amount due on completed work is at least \$500.00. The partial payment request shall be filled out and signed by the **CONTRACTOR** covering the work completed as of the date of the request and accompanied by such supporting documentation as its required by the Contract Documents and also as the **ENGINEER** may reasonable require. At the discretion of the **OWNER**, the **ENGINEER** may be authorized to include in any monthly estimate advances covering approximately 95 percent of the value of unused materials delivered and stored on the site of the work. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site, the Application for Payment shall also be accompanied by such data, satisfactory to **OWNER**, as will establish **OWNER'S** title to the material and equipment and protect **OWNER'S** title to the material and equipment and protect **OWNER'S** interest

therein, including applicable insurance. Each subsequent Application for Payment shall include an affidavit of **CONTRACTOR** stating that all previous progress payments received on account of the Work have been applied to discharge in full all of **CONTRACTOR'S** obligations reflected in prior Applications for Payment.

- b. After each monthly estimate has been approved, the **OWNER** shall pay to the **CONTRACTOR** 95 percent of the amount of said estimate. From the total value of each estimate there will be deducted an amount equivalent to 5 percent of the whole as a retainage to be held by the **OWNER**. The monthly estimates will be approximate only and subject to correction in any subsequent estimate rendered following discovery of the error. At the discretion of the **OWNER**, the **ENGINEER** may be authorized to include any monthly advances covering approximately 95 percent of the value of unused materials delivered and stored on the site of the work.
- c. Subsequent to discovery of any defective or questionable work, an amount equal to the estimated value of such work will be deducted from the next current estimate. The sum will not be included in a subsequent estimate until the defects have been remedied to the **ENGINEER'S** satisfaction.
- d. The **OWNER** reserves the right to withhold payment of any monthly estimate that becomes due if, in the opinion of the **OWNER'S** Attorney, such action is warranted because of any breach of the Contract Provisions or malfeasance on the part of the **CONTRACTOR** or because the progress or the quality of the work is unsatisfactory and does not comply with the Plans and Specifications.
- e. The **CONTRACTOR** may, at his option, withdraw the 10 percent retainage, or a part thereof, after 50 percent of the work has been completed, provided the **CONTRACTOR** has placed negotiable securities with the **OWNER** in compliance with Section 31-5-15 of the Mississippi Code of 1972.

The last sentence in Paragraph 14.9A of the General Conditions is modified to read, "If the Application and accompanying documentation are appropriate as to form and substance, **OWNER** shall, within 60 days after receipt thereof, pay **CONTRACTOR** the amount recommended by **ENGINEER**."

- 11. Subsurface Investigation Reports
Not Applicable.
- 12. List of Contract Drawings – See Section 000115
- 13. Commencement of Contract Time: Notice to Proceed

The commencement of Contract Time, as stated in Item 2.3 of the General Conditions is changed to read The Contract Time will commence to run within the sixtieth day after the Effective Date of the Agreement, or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed; but in no event shall the Contract Time commence to run later than the sixtieth day after the Effective Date of the Agreement.

Notice to Proceed may be given at any time within sixty days after the Effective Date of the Agreement. Refer to Item 21 of the Instructions to Bidders on page 2-5 regarding execution of the Contract.

- 14. Maintenance of Traffic

Public Safety: Barricades, Signs, and Lights: Prior to any work, the **CONTRACTOR** shall have available barricades, signs, and lights in sufficient quantity to properly mark each street or any part thereof that is under construction in a manner in which the general public will readily know that the street is under construction and caution is necessary. These barricades, signs and lights shall be located to serve as warning, directive and instructive signs. Within the limits of the plans

and specifications, the decision of the **ENGINEER** shall be final as to the type, number, and location of all barricades, signs, and lights.

In all cases, the type, number, and location of all barricades, signs, and lights shall conform to the standards set forth in the "Manual on Uniform Traffic Control Devices for Streets and Highways."

At all points along the work, where the nature of the construction operations in progress and the equipment and machinery in use are of such a character as to endanger passing traffic, the **CONTRACTOR** shall, regardless of the time of day, provide such barricades, signs, and lights. Watchmen will be stationed where necessary to insure against accidents and avoid damage or injury to passing traffic.

The **CONTRACTOR** shall, for 24 hours per day during the total time of the contract (Sundays and holidays included), maintain an emergency telephone number and have available at this telephone, a person to take emergency calls. This person shall have the authority to direct personnel and materials to the point of emergency for necessary corrective measures.

Immediately upon the receipt of the construction work order and prior to the beginning of work, the **CONTRACTOR** shall notify the **ENGINEER** in writing of the aforementioned emergency telephone number giving the names of the persons assigned the respective shifts.

Barricades and signs shall meet the construction requirements set forth in the Manual on Uniform Traffic Control Devices for Streets and Highways. Lights shall also comply with requirements outlined in the Manual on Uniform Traffic Control Devices for Streets and Highways.

All barricades, signs and lights shall be maintained in first-class condition. Barricades and signs shall be repaired, cleaned or repainted as the case necessitates to maintain a neat, presentable and secure barricade. Lights shall be repaired, cleaned, adjusted and refilled or batteries recharged to insure a minimum of 12 hours continuous burning. The **CONTRACTOR** shall, at any time that he is so directed by the **ENGINEER**, repair, remove or replace any sign, barricade or light if, in the opinion of the **ENGINEER**, the said sign, barricade or light is not performing its function as set forth in these Specifications.

15. Liquidated and Special Damages

Liquidated Damages: The **CONTRACTOR** will be subject to liquidated damages in the amount of \$500.00 each consecutive calendar day after the time stipulated for Final Completion of the work.

The liquidated damages provided for herein were not calculated in contemplation or anticipation that the **CONTRACTOR** would default or otherwise abandon the project. In the event the **CONTRACTOR** does default or otherwise abandon the project, the **OWNER** reserves the right to collect from the **CONTRACTOR** or its surety, in addition to the liquidated damages, the actual damages including, but not limited to, additional engineering costs, incurred by the **OWNER** as a result of the default or abandonment.

END OF SECTION

SECTION 011100
SUMMARY OF WORK

PART 1 GENERAL

1.01 LOCATION OF WORK

All of the work of this Contract is located in rights-of-way, easements, or on property owned or permitted by the Owner.

1.02 WORK TO BE DONE

- A. The Contractor shall furnish all labor, materials, equipment, tools, services and incidentals to complete all work required by these Specifications and as shown on the Drawings.
- B. The Contractor shall perform the work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, cleanup, replacements and restoration, including restoration of vegetative cover required as a result of damages caused during this construction.
- C. All materials, equipment, skills, tools and labor which are reasonably and properly inferable and necessary for the proper completion of the work in a substantial manner and in compliance with the requirements stated or implied by these Specifications or Drawings shall be furnished and installed by the Contractor without additional compensation, whether specifically indicated in the Contract Documents or not.
- D. The Contractor shall comply with all county, city, state, federal, and other codes which are applicable to the proposed constructions work.

1.03 GENERAL DESCRIPTION OF WORK TO BE PERFORMED

This Project consist of Cold Milling of Asphalt, Base Repairs, Asphalt Overlay, and Striping.

1.04 WORK SEQUENCE

- A. All work to be done under the Contract shall be done with minimum inconvenience to the people living in this area. The contractor shall coordinate his work with the Engineer such that existing service is maintained to all property owners at all times.
- B. Construction shall be performed in stages in a manner as to provide the least inconvenience to the public or adjacent property owners.
- C. Construct the Work in stages to provide for public convenience. Do not close off Public use of facilities until completion of one stage of construction will provide alternative usage.

1.05 CONSTRUCTION AREAS

- A. Contractor shall limit his use of the construction areas for Work only. Storage areas for material, equipment and employee vehicles will be designated by City of Byram, Mississippi.
- B. Coordinate use of work site under direction of Engineer.
- C. Assume full responsibility for the protection and safekeeping of products under this Contract, stored on the site.
- D. Move any stored products, under Contractor's control which interfere with operations of the Owner or person living in this area.
- E. Obtain and pay for the use of additional storage or work areas needed for operations.

1.06 OWNER OCCUPANCY

- A. Owner will have full access to their property during the entire period of construction for the conduct of his normal operations. Cooperate with Engineer in all construction operations to minimize conflict and to facilitate Owner usage.
- B. Contractor shall at all times conduct his operations as to insure the least inconvenience to the general public. In this regard, the Contractor's attention is directed to the following requirements:
 - 1. Cleaning – See Section 017400.
 - 2. Earthwork – See Section 312000.
 - 3. Cold Milling of Asphalt Pavement – See Section 320116.
 - 4. Asphalt Paving – See Section 321216.

1.07 PARTIAL OWNER OCCUPANCY (NOT USED)

1.08 SPECIFICATIONS AND DRAWINGS

- A. Specifications

The Technical Specifications consist of three parts: General, Products and Execution. The General section contains general requirements which govern the work. The Products and Execution sections modify and supplement those by detailed requirements of the work and shall always govern whenever there appears to be a conflict.
- B. Intent

All work called for in the Specifications applicable to the contract but not shown on the Drawings in their present form or vice versa shall be of like effect as if shown or mentioned in both. Work not specified in either the Drawings or in the Specifications but involved in carrying out their intent or in the complete and proper execution of the work is required and shall be performed by the Contractor as though it were specifically delineated or described.

The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specifications shall be made upon that basis.

C. Conflict between Drawings and Specifications.

Where an obvious conflict exists between the Drawings and Specifications, the Engineer shall decide which governs and the Contractor shall comply with the decision. Such decision shall not be grounds for additional payment to the Contractor, i.e., the Contractor shall include the price of the most expensive alternative in his bid.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 011105

MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.01 DESCRIPTION

- A. CONTRACTOR shall furnish all labor, materials, tools, equipment, appurtenances, and all services necessary to perform all Work required, at the lump sum or unit prices for the items listed herein.
- B. The items listed below beginning with Article 1.04, refer to and are the same pay items listed in the Prices Bid Table. These items constitute all of the pay items for the completion of the Contract. No direct or separate payment will be made for providing miscellaneous, temporary, or accessory works, plant, services, CONTRACTOR'S or ENGINEER'S field offices, layout surveys, job signs, sanitary requirements, testing, safety devices, approval and record drawings, water supplies, power, removal of waste, watchmen, bonds, insurance, taxes, and all other requirements of the Contract Documents. Compensation for all such services, things and materials shall be included in the prices stipulated for the lump sum and unit pay items listed herein.

1.02 ENGINEER'S ESTIMATE OF QUANTITIES

The ENGINEER'S estimated quantities for unit bid prices, as listed in the Prices Bid Table, are approximate only and are included solely for the purpose of comparison of Bids. The OWNER does not expressly or by implication agree that the nature of the materials encountered below the surface of the ground or the actual quantities of material encountered or required will correspond therewith and reserves the right to increase or decrease any quantity or to eliminate any quantity as OWNER may deem necessary.

1.03 RELATED PROVISIONS SPECIFIED ELSEWHERE

- A. Payments to CONTRACTOR: Refer to General Conditions Article 14.
- B. Changes in Contract Price: General Conditions, Article 11 and Contract Forms.

1.04 PAY ITEMS

A. Item No. 1 – Mobilization

Measurement & Payment – Payment for Mobilization shall be made at the lump sum contract price and shall include full compensation for furnishing all materials, labor, supervision, equipment, and incidentals necessary to complete the specified work. This item also includes demobilization by the contractor from the site.

B. Item No. 2 – Excess Excavation (F.M.)

Measurement & Payment - Payment for Excess Excavation shall be made at the contract unit price per cubic yard, which shall be full compensation for the excavation and removal from the project material not suitable to remain. The final quantity shall be measured in the hauling vehicle at the point of loading.

C. Item No. 3 – Hot Mix Asphalt, SC-1, Type 8

Measurement & Payment – Payment for Hot Mix Asphalt, SC-1, Type 8 shall be made at the contract unit price per ton, which shall be full compensation for completing the work specified.

D. Item No. 4 – Hot Mix Asphalt, Base Repair, BB-1, Type 6

Measurement & Payment – Payment for Hot Mix Asphalt, Base Repair, BB-1, Type 6 shall be made at the contract unit price per ton, which shall be full compensation for completing the work specified.

E. Item No. 5 - Hot Mix Asphalt, Leveling, SC-1, Type 8

Measurement & Payment – Payment for Hot Mix Asphalt, Leveling, SC-1, Type 8 shall be made at the contract unit price per ton, which shall be full compensation for completing the work specified.

F. Item No. 6 – Cold Milling of Bituminous Pavement, All Depths

Measurement & Payment – Payment for Cold Milling of Bituminous Pavements shall be made at the contract unit price per square yard, at all depths, which shall be full compensation for completing the work specified.

G. Item No. 7 – Maintenance of Traffic

Measurement & Payment – Payment for Maintenance of Traffic shall be made at the lump sum contract price and shall include all materials and labor for the construction and maintenance of all traffic control related items for completing the work specified.

H. Item No. 8 – Additional Construction Signs

Measurement & Payment – Payment for Additional Construction Signs shall be made at the fixed contract unit price per square foot, which shall be full compensation for completing the work specified.

I. Item No. 9 – Legend (White) Traffic Striping

Measurement & Payment – Payment for Legend (White) Traffic Striping shall be made at the contract unit price per linear foot, which shall be full compensation for completing the work specified.

SECTION 011110
SPECIAL PROJECT PROCEDURES

PART 1 – GENERAL

1.01 WORKMANSHIP, MATERIAL AND EQUIPMENT

- A. When a particular product is specified or called for, it is intended and shall be understood that the Contractor include those products in his bid. Should the Contractor desire to substitute products which he purports to be equal to those specified, the Contractor shall furnish information as described in Section 007200, General Conditions. The alternative products(s) submitted by the Contractor shall meet the requirements of the specifications and shall, in all respects, be equal to the products specified by name herein.
- B. All apparatus, mechanism, equipment, machinery, and manufactured articles for incorporation into the Work shall be new and unused and the standard products of recognized reputable manufacturers.

1.02 CONSTRUCTION SEQUENCING PLAN

The Contractor shall develop a plan for sequencing the work to maintain access to adjacent properties, control traffic, and protect completed portions of the work. The Contractor shall submit the Sequencing Plan to the Engineer for review and approval not less than five calendar days after Notice of Award. The Sequencing Plan shall include drawings, supporting schedules, and other documents that clearly depict the sequence in which the Contractor plans to begin and complete each section of the project and the traffic control measures he plans to use.

The work shall be planned and sequenced such that:

- 1) At least one lane of traffic maintained on all roads at all times.
- 2) No excavation is ever left open overnight.
- 3) No vertical change in elevation of the surface greater than 2" is left unprotected when the Contractor is not actively working in the area where the change in elevation exists.
- 4) Traffic is never allowed on uncovered soil subgrades.
- 5) Traffic is not placed on temporary aggregate surfaces for more than 14 calendar days.
- 9) Sections of roads are not left in one lane conditions unless they are attended and controlled by two trained flagmen.
- 10) All traffic control plan & devices shall meet the Manual of Uniform Traffic Control Devices (MUTCD).

1.03 PROVISIONS FOR CONTROL OF EROSION AND POLLUTANTS

Sufficient precautions shall be taken during construction to minimize the runoff of polluting substances such as silt, clay, fuels, oils, bitumens, calcium chloride, or other materials harmful to humans, fish, or other life, into the ground and surface waters of the state. Contractor will give all work, without exception. The Contractor shall strictly adhere to all provisions of the approved Storm Water Pollution Prevention Plan and the regulations of the MS Dept. of Environmental Quality Small Construction General Permit.

1.04 ON-SITE STORAGE

The Contractor's attention is invited to special storage requirements and possible charges for noncompliance of on-site storage requirements for materials and equipment as specified in the documents.

1.05 INCLEMENT WEATHER

In the event of inclement weather, or whenever Engineer shall direct, Contractor and Subcontractors will protect carefully the work and materials against damage or injury from the weather, including sudden rises in flows due to storms outside the immediate construction zone. Damaged Work and materials shall be removed and replaced. If, in the opinion of Engineer, any portion of Work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or Subcontractors to so protect the Work, the Contractor shall remove and replace the damaged work at no additional cost to the Owner in time or money.

1.06 WARRANTIES

- A. All work supplied under the Contract shall be warranted for a period of one (1) year or such longer period of time as may be prescribed by any special guarantee required by Change Orders or issued by Subcontractor, suppliers, or manufacturers, from the date of acceptance for operations (Substantial Completion) by the Owner as specified in Section 017850, Warranties.
- B. The work shall be warranted to be free from defects in workmanship, design and materials. If any part of the work should fail during warranty period, it shall be replaced or restored to the Owner's satisfaction at no expense to the Owner.

1.07 CONSTRUCTION CONDITIONS

The work under this contract consists of emergency watershed protection for significant erosion problems threatening existing roadways.

The Contractor shall strictly adhere to the specific requirements of the governmental units of agencies having jurisdiction over the work. Wherever there is a difference between the requirements of a jurisdictional body and these Specifications, the more stringent requirement shall apply.

1.08 PUBLIC NUISANCE

The Contractor shall not create a public nuisance by any activity, including, but not limited to, encroachment on adjacent lands, flooding of adjacent lands, creating excessive airborne dust, placing of dirt, mud or debris on roadways or creating excessive noise.

1.09 SUSPENSION OF WORK DUE TO WEATHER

During inclement weather, all work which might be damaged or rendered inferior by such weather conditions shall be suspended. The orders and decisions of the Engineer as to suspensions shall be final and binding. The authority of the Engineer to issue such an order shall not be interpreted as a requirement to do so. During suspension of the work from any cause, the work shall be suitably covered and protected so as to preserve it from injury by the weather. Notwithstanding this provision, it is understood and agreed that the General Conditions shall control.

1.10 RELOCATIONS

The Contractor shall be responsible for the relocation of structures, including, but not limited to, light poles, signs, sign poles, fences, piping, conduits, mail boxes, and drains that interfere with the positioning of the work as set out on the Drawings. The cost of all such relocations shall be included in the bid. (No separate pay item.)

1.11 SALVAGE

Any existing equipment or materials, including, but not limited to, valves, pipes, fittings, couplings, etc., which are removed or replaced as a result of construction under this project may be designated as salvage by the Engineer and, if so, shall be removed and delivered to the Owner at a location directed by the Engineer.

1.12 PERMITS

Upon notice of award, the Contractor shall immediately apply for all applicable permits not previously obtained by the Owner from the appropriate governmental agency or agencies. No work shall commence until all applicable permits have been obtained and copies have been delivered to the Engineer. The costs for obtaining all permits shall be borne by the Contractor and shall be an absorbed cost.

1.13 HAZARDOUS LOCATION

N/A

1.14 NOTIFICATION OF WORK ON EXISTING FACILITIES

Before commencing work on any of the existing structures, the Contractor shall notify the Engineer, in writing, at least ten (10) calendar days in advance of the date he proposes to commence such work.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 011115
UTILITIES COORDINATION

PART 1 – GENERAL

1.01 UTILITIES

Utilities for the purpose of these specifications shall be considered as including, but not limited to: pipelines, conduits, cables, transmission lines and appurtenances of Public Utilities and those of Special Utility Districts, Cities or Towns, businesses or individuals solely for their own use or for use of their tenants; and storm drains, sanitary sewers, street lighting, traffic signal and fire alarm systems.

1.02 UNDERGROUND INSTALLATIONS

Existing underground pipelines and utilities are indicated on the Drawings only to the extent such information was made available to or discovered by Engineer in preparing drawings. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness thereof is expressly disclaimed by the Owner and the Engineer.

1.03 UTILITIES LOCATED IN CITY RIGHT-OF-WAY

Unless otherwise provided or accepted herein, the removal, adjusting, relocation, or replacement of utility structures or facilities within the right-of-way which may be necessary for construction of the work in accordance with these Contract Documents, shall be at the expense of the Contractor. It shall be the Contractor's responsibility to protect and maintain those utilities which, in the opinion of the Engineer, do not need to be disturbed in order to accomplish the work required by the contract.

1.04 RELOCATIONS OF EXISTING GAS LINES, TELEPHONE LINES, ELECTRIC LINES, CABLE TV LINES AND WATER LINES

The Contractor shall notify the proper authority of the utility involved when relocation of these lines is required. The Contractor shall coordinate all work by the utility so that the progress of construction will not be hampered.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 GENERAL

The Contractor, when the Notice to Proceed is received, shall notify the owners of utilities affected by the work, the approximate date upon which he will begin work, and shall submit a progress schedule of the proposed work. This shall be deemed sufficient notice if the project progresses according to the progress schedule submitted with the notification. If changes in the schedule of the work occur, the Contractor shall apprise both the owner of the utility affected and the Engineer so that adjustments in the work schedule of utility can be made. The Contractor shall be responsible for damages to the utility facility and construction delays resulting from failure to notify the utility and the Engineer of changes in procedure or location.

3.02 PROTECTION OF EXISTING UTILITIES

- A. The attention of the Contractor is drawn to the fact that during excavation, the possibility exists of the Contractor encountering various water, gas, telephone, electrical, or other utility lines not shown on the Drawings. The Contractor shall exercise extreme care before and during excavation to locate and flag these lines so as to avoid damage to the existing lines. Should damage occur to an existing line, the Contractor shall, be responsible for repairs to the line at no cost to the Owner.
- B. The Contractor shall assume full responsibility for the protection of all utilities, public and private, including poles, services to buildings, gas pipes, water pipes, hydrants, sewers, drains, and electric and telephone cables, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such utilities from injury of any kind. Any damage resulting from the Contractor's operations shall be repaired by the Contractor at his expense.

The protection and preservation of utility facilities which are located within the right-of-way, but outside the normal limits of construction, as determined by the Engineer, shall be the responsibility of the Contractor. The Contractor shall be responsible for all damage to utilities which are due to his negligence.

- C. The Contractor shall bear full responsibility for obtaining locations of all underground structures and utilities (including existing water services, drain lines, and sewer). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by the Contractor.
- D. If, in the opinion of the Engineer, permanent relocation of a utility owned by the City / County is required, he may direct the Contractor, in writing, to perform the work. Work so ordered will be paid for at the Contract unit prices, if applicable, or as extra work under Article 10 of the General Conditions. If relocation of a privately owned utility is required, the Contractor will notify the Utility to perform the work as expeditiously as possible. The Contractor shall fully cooperate with the Utility and shall have no claim for delay due to such relocation.
- E. The Contractor shall notify public and private utility companies in writing at least two, but not more than five full days (excluding Saturdays, Sundays, and legal holidays) before excavating near their utilities.

3.03 UTILITIES TO BE ADJUSTED

The owners of utility facilities which require relocation, removal, adjustment or replacement shall, if possible and feasible, perform this work prior to the commencement of the Contractor's work. Where utility work must be done in conjunction with the Contractor's work on the project or in conjunction with the work of other utilities, arrangements for when, how and where the operation is to proceed shall be worked out among the parties concerned. If disputes arise, the Engineer shall decide the course of action to be taken.

3.04 UTILITIES CONFLICTING WITH OPERATIONS

Those utility facilities which do not conflict with the improvements, but which are obstructions to the operations required for installation due to their close proximity to the area of the operations, shall be located with certainty by the owners of the utility prior to the arrival of the Contractor's operation which would be hindered by the utility facility. The Contractor is required to preserve the

utility facility in place without damage and shall be responsible for damages sustained, if the utility owner has located the facility by exposing it to the view of the Contractor or has otherwise made the Contractor aware, with certainty, of the location of the facility. Any other arrangements that the Contractor may make with a utility owner as a substitute for the requirements of this Section shall require the approval of the Engineer, in writing.

3.05 MISLOCATED UTILITIES

The owner of a utility shall be wholly responsible for the proper location of his facilities which are affected by construction work performed according to these specifications. Improperly located or mislocated facilities which are damaged during construction shall be the responsibility of the utility, providing proper notification has been given.

END OF SECTION

SECTION 011120
PROJECT COORDINATION

PART 1 – GENERAL

1.01 WORK PROGRESS

The Contractor shall furnish personnel and equipment which will be efficient, appropriated and large enough to secure a satisfactory quality of work and a rate of progress which will insure the completion of the work within the time stipulated on the Contract. If at any time such personnel appear to the Engineer to be inefficient, inappropriate, or insufficient for performing the quality of work required or for producing the rate of progress aforesaid, he may order the Contractor to increase the efficiency, change the character or increase the personnel and equipment, and the Contractor shall conform to such order. Failure of the Engineer to give such order shall in no way relieve the Contractor of his obligations to perform the work at the specified quality and rate of progress.

1.02 PRIVATE LAND

- A. The Contractor shall not enter or occupy private land outside of the Owner's land, rights-of-way, or easements except by written permission of both the Owner and the Owner of the private land. Such permission shall be obtained by and at the expense of the Contractor and at no additional cost to the Owner.
- B. Owners of adjacent private land shall be inconvenienced as little as possible by the construction work. Where possible, the Contractor shall maintain access across or over the work to adjacent property. At locations where an adjacent property has more than one access point for vehicular traffic, such as paved or aggregated surfaced driveways, grassed ramps, gaps, etc., the Contractor shall schedule his work so that at least one access point is usable by the property owner, his associates, or his clientele in the case where the adjacent property is a business establishment.

1.03 WORK LOCATIONS

Work shall be located substantially as indicated on the Drawings, but the Engineer reserves the right to make such modifications in locations as may be found desirable to avoid interference with existing structures or for other reasons.

1.04 OPEN EXCAVATIONS

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights, and other means to prevent accidents to persons and damage to property. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by the public, Owner's and Engineer's personnel, and workmen. Bridges provided for access to private property during construction shall be removed when no longer required. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the Engineer may require special construction procedures such as limiting the length of open trench, and prohibiting stacking excavated materials in the street.

- B. The Contractor shall take precautions to prevent injury to the public due to open trenches. When construction is not in progress, all trenches shall be backfilled and deemed safe for travel.

1.05 MAINTENANCE OF TRAFFIC

- A. Open pits, trenches, unpaved streets, debris, or other obstructions due to construction that will prevent the normal flow of traffic during an extended construction stoppage, for any reason, shall be minimized. Contractor shall provide for normal traffic flow during extended construction stoppage, regardless of the cause.
- B. All excavated material shall be placed so that vehicular and pedestrian traffic may be maintained at all times. If the Contractor's operations cause traffic safety hazards, he shall repair the road surface, provide temporary roadways, erect wheel guards or fences, or take other measures for safety satisfactory to the Engineer. All excavations shall be covered, backfilled, or protected as directed by the Engineer, fully delineated at night when the Work is not in progress.
- C. Detours around construction areas will be subject to the approval of the Owner and the Engineer. Where detours are permitted, the Contractor shall provide all necessary barricades and signs as required to divert the flow of traffic. While traffic is detoured, the Contractor shall expedite construction operations. The periods when traffic may be detoured will be strictly controlled by the Owner. Traffic control devices shall conform to the requirements of the Manual of Uniform Traffic Control Devices.

1.06 WATER FOR CONSTRUCTION PURPOSES

- A. In locations where public or private water supply is available, the Contractor may purchase water for all construction purposes.
- B. The Contractor shall make his own arrangements and pay all costs for connections to public or private water systems and for water used.

1.07 CARE AND PROTECTION OF PROPERTY

- A. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or an account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in another manner acceptable to the Engineer.
- B. All sidewalks which are disturbed by the Contractor's operations shall be restored to their original or better condition by the use of similar or comparable materials. All curbing shall be restored in a condition equal to the original construction and in accordance with the best modern practice.
- C. Along the location of this Work, all fences, walks, brushes, trees, shrubbery, and other physical features shall be protected and restored in a thoroughly workmanlike manner. Fences and other features removed by the Contractor shall be replaced in the locations indicated by the Engineer as soon as conditions permit. All grass areas beyond the limits of construction which have been damaged by the Contractor shall be regraded and sodded with the same type that was damaged, at the Contractor's expense.

- D. Trees close to the Work shall be boxed or otherwise protected against injury. The contractor shall trim all branches that are liable to damage because of his operations, but in no case shall any tree be cut or removed without prior notification of the Engineer. All injuries to bark, trunk, limbs and roots of trees shall be repaired by dressing, cutting, and painting according to approved methods, using only approved tools and materials.
- E. The protection, removal, and replacement of existing physical features along the line of work shall be a part of the work under the Contract, and all costs in connection therewith shall be included in the lump sum price established in the Proposal.
- F. Where fences must be removed for construction purposes or access, they shall immediately be reconstructed or replaced. The Contractor shall provide adequate temporary fence and gates as necessary to contain or restrict domestic and farm animals within their proper areas during the life of this contract and shall provide reasonable safe and convenient means of access where and when required.

1.08 MAINTENANCE OF FLOW

The Contractor shall maintain the flow of drains and water courses interrupted during the progress of the Work. The Contractor shall immediately remove all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the Engineer well in advance of the interruption of any flow. All temporary works installed for flow maintenance shall be removed when the permanent work is finished and the areas cleaned and restored to good condition. Pavement removal and replacement which, in the opinion of the Contractor, is necessitated by placement of temporary flow control facilities, shall be considered as an item for convenience to the Contractor. Such costs for pavement removal and replacement shall, therefore, be born by the Contractor at his own cost required for other flow control measures. The intent of the Specification is that pavement removal be limited to the least amount possible and the Contractor shall investigate alternative methods for flow control which require the least amount of pavement removal.

1.09 PROTECTION OF CONSTRUCTION AND EQUIPMENT

- A. All newly constructed work shall be carefully protected from injury in anyway. No wheeling or walking or placing of heavy loads on the work shall be allowed. All portions injured shall be reconstructed by the Contractor at his own expense.
- B. All structures shall be protected in a manner approved by the Engineer. Should any of the floors or other parts of the structures become heaved, cracked or otherwise damaged, all such damaged portions of the work shall be completely repaired and made good by the Contractor at no additional cost to the Owner and to the satisfaction of the Engineer. Special attention is directed to substructure bracing requirements. If, in the final inspection of the work, any defects faults, or omissions are found, the Contractor shall cause the same to be repaired or removed and replaced by proper materials and workmanship without extra compensation for the materials and labor required. Further, the Contractor shall be fully responsible for the satisfactory maintenance and repair of the construction and other work undertaken herein for at least the guarantee period described in the Contract.
- C. The Contractor shall take all necessary precautions to prevent damage to any structure due to water pressure during and after construction and until such structure is accepted and taken over by the Owner.

1.10 CLEANUP

During the course of the Work, the Contractor shall keep the site of his operations in as clean and neat a condition as possible. He shall dispose of all residue resulting from the construction work and, at the conclusion of the work he shall remove and haul away any surplus excavation, broken pavement, lumber, equipment, temporary structures, and any other refuse remaining from the construction operations, and shall leave the entire site of the Work in a neat and orderly condition.

1.11 COOPERATION WITHIN THIS CONTRACT

- A. All firms or persons authorized to perform any work under this Contract shall cooperate with the General Contractor and his or her subcontractors or trades, and shall assist in incorporating the work of other trades where necessary or required.
- B. Cutting and patching, drilling, and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the Engineer.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 012300

ALTERNATES

PART 1 GENERAL

1.1 DESCRIPTION

- A. Scope: This section describes the changes to be made under each alternate.

1.2 DESCRIPTION OF ALTERNATES

- A. Additive Alternate No.1 – Base repair and asphalt paving operations on Owens Cove. See plans for location and quantities.
- B. Additive Alternate No.2 – Base repair and asphalt paving operations on Chevron Cove. See plans for location and quantities.

1.3 SELECTION OF ALTERNATES

- A. The project will be awarded (If approved by Mayor and Board) based on the lowest total summation of the Base bid plus any selected Additive Alternates.

END OF SECTION

SECTION 012900

APPLICATIONS FOR PAYMENT

PART 1 – GENERAL

1.1 REQUIREMENTS INCLUDED

Submit Applications for Payment to the ENGINEER in accordance with the Contract and Proposal and in the form required by the OWNER.

1.2 FORMAT AND DATA REQUIRED

- A. Submit applications typed with items from Prices Bid Table typed on 8-1/2 inch x11 or 14-inch paper.
- B. Provide detailed substantiating data on additional sheets, including paid invoices where applicable.

1.3 PREPARATION OF APPLICATION FOR PROGRESS PAYMENTS

- A. Progress Payment Summary Sheet:
 - 1. Fill in required information, including that for Change Orders executed prior to date of submittal application, Analysis of Adjusted Contract Amount to Date, Analysis of work performed to date, Certification of Contractor, and Recommendation of Engineer.
 - 2. Execute certification with signature of a responsible employee of the CONTRACTOR.
- B. Progress Payment Quantity Used Sheets:
 - 1. Fill in item from Prices Bid Table with item number, description, original contract quantity, unit cost, original contract total cost, quantity completed to date, total cost-to-date, and percent completion of item.
 - 2. To receive payment for materials stored on site, submit copies of the original paid invoices with the application for payment.
- C. Progress Payment Stored Materials Sheets:
 - 1. Create table with the following columns:
 - a. Description of stored material
 - b. Received previous
 - c. Received current
 - d. Total received
 - e. Total used
 - f. Total stored
 - g. Unit price
 - h. Total cost
 - 2. Attach table to Application for Payment
 - 3. Stored materials shall be inventoried jointly prior to each application for payment.

1.4 ADDITIONAL REQUIREMENTS FOR APPLICATION OF PROGRESS PAYMENT

- A. The CONTRACTOR is to maintain an updated set of record drawings in accordance with Section 017840. As a prerequisite for monthly progress payments, the CONTRACTOR is to exhibit the updated record drawings for review by the ENGINEER.
- B. Provide updated construction schedule showing work completed and work projected by month to the completion of the project if requested by ENGINEER.

1.5 PREPARATION OF APPLICATION FOR FINAL PAYMENT

- A. Fill in application form as specified for progress payments.
- B. Label progress payments "final."

1.6 SUBMITTAL PROCEDURE

- A. Submit monthly pay applications to the Engineer at the times agreed upon by the OWNER and CONTRACTOR.
- B. A draft application shall be informally submitted to the ENGINEER who shall review the draft with the CONTRACTOR and make adjustments as appropriate. The CONTRACTOR shall then prepare a formal typed application using the informally approved amounts and submit six complete sets to the ENGINEER.
- C. When the ENGINEER finds the application properly completed and correct, as informally approved, he will transmit four copies to the OWNER for payment with a copy to the CONTRACTOR.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 012905

CONSTRUCTION CHANGE REQUEST (CCR)

PART 1 – GENERAL

1.1 REQUIREMENT INCLUDED

- A. Promptly implement Construction Change Request (CCR) procedures:
 - 1. Provide full written data required to evaluate changes.
 - 2. Maintain detailed records of work done on a time and material/Extra Work account basis.
 - 3. Provide full documentation to Owner on request.
- B. Designate in writing the member of Contractor's organization:
 - 1. Who is authorized to accept changes in the work.
 - 2. Who is responsible for informing others in the Contractor's employ of the authorization of changes in the work.
- C. Owner will designate in writing the person who is authorized to execute CCRs.

1.2 DEFINITIONS:

- A. Construction Change Request (CCR): An approved written order covering changes in the plans or quantities or both, within the scope of the contract, and establishing the basis of payment and time adjustments for the work affected by the changes.
- B. Supplemental Agreement : A written agreement by the parties of the contract covering alterations or Extra Work necessary for the completion of the contract.
- C. Contractor may initiate a change by submitting a written notice to the Owner containing:
 - 1. Description of the proposed change.
 - 2. Statement of the reason for making the change.
 - 3. Statement of the effect on the Contract Price and the Contract Time.
 - 4. Statement of the effect on the work of other contractors.
 - 5. Documentation supporting any change in Contract Price or Contract Time as appropriate and adequate for proper review by the Owner.

1.3 CONSTRUCTION CHANGE AUTHORIZATION

- A. CCR's will describe changes in the Work, both additions and deletions, with attachment of revised Contract Documents to define details of the change and will designate the method of determining any change in the Contract Sum and any change in Contract Time.
- B. Owner will sign and date the CCR's as authorization for the Contractor to proceed with the change.

1.4 DOCUMENTATION OF PROPOSALS AND CLAIMS

- A. Contractor shall support proposed lump sum proposal pricing and each unit price which has not previously been establishment with sufficient substantiating data to allow the Owner to evaluate the pricing.
- B. Contractor shall provide the following data to support proposed time and pricing of both lump sum proposals, unit pricing, and time and material proposals:
 - 1. Labor required.
 - 2. Equipment required.
 - 3. Products required.
 - a. Recommended source of purchase and unit cost.

- b. Quantities required.
- 4. Taxes, insurance, and bonds.
- 5. Credit for work deleted from Contract, similarly documented.
- 6. Overhead and profit. (See 11.5 for limits)
- 7. Justification for any change in Contract Time.
- C. In addition, Contractor shall support each claim for work done on a time-and material/Extra Work basis with the following additional information:
 - 1. Dates and times work was performed and by whom.
 - 2. Time record, summary of hours worked, and hourly rates paid.
 - 3. Receipts and invoices for:
 - a. Equipment used, listing dates and times of use.
 - b. Products used, listing quantities purchased.
 - c. Subcontractors used, showing the same data as above.

1.5 PREPARATION OF CCR

- A. Owner will prepare each CCR.
- B. Form: As supplied by the Owner.
- C. CCR will describe changes in the work, both additions and deletions, with attachments of revised Contract Documents to define details of the change.
- D. CCR will provide an accounting of the adjustment in the Contract Price and in the Contract Time.
- E. Should the execution a CCR require a Supplemental Agreement, due to alterations or Extra Work needed for completion of the contract, the Owner will prepare said agreement to be signed and executed by the Contractor, the Contractor's surety, the Engineer, the Architect, and the Owner.

1.6 LUMP SUM/FIXED PRICE CCR

- A. Owner initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by Contractor.
- B. Once Owner has completed and signed the form; all copies will be sent to Contractor for execution. The Contractor shall execute the CCR and return it to the Owner within seven days. Owner will make distribution of executed copies.

1.7 UNIT PRICE CCR

- A. Content of CCR's will be based on either:
 - 1. Owner's definition of the scope of the required changes.
 - 2. Contractor's Proposal for a change.
 - 3. Survey of complete work.
- B. The amounts of the unit prices to be:
 - 1. Those stated in the Contract Bid Form.
 - 2. Those mutually agreed upon between Owner and Contractor in the Supplemental Agreement.

1.8 CORRELATION WITH CONTRACTOR'S SUBMITTAL

- A. Contractor shall revise monthly the Schedule of Values and Application for Payment forms to record each CCR as separate item of work and to record the adjusted Contract Price.

- B. Contractor shall revise monthly the Construction Schedule to reflect each change in Contract Time, to include sub schedules to show changes for other items of work affected by the changes.
- C. Upon completion of work under a CCR, the Contractor shall enter pertinent changes in Record Documentations.

1.9 PROCEDURES WHEN CONTRACTOR DOES NOT EXECUTE THE CCRS

It is anticipated that at the time of submittal to the Contractor, negotiations will have been completed with all parties agreeing to the change(s) in the work, change in Contract Price, and change in Contract Time. In the event that no agreement can be reached and the Contractor fails to execute the CCR within the specified time limit, the Owner may issue a CCR without signature of the Contractor establishing change to Contract Price or Contract Time. The Contractor will then be paid or assessed time on the basis of the CCR for the change in work with the Contractor not relinquishing his rights to submit a claim.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 012910

SUBMITTALS

PART 1- GENERAL

1.1 SECTION INCLUDES

- A. Procedure
- B. Product Data
- C. Shop Drawings
- D. Samples
- E. Manufacturer's Certificates
- F. Manufacturer's Instruction
- G. Manufacturer's Literature
- H. Manufacturer's Installation Specifications
- I. Manufacturer's Operation Manual
- J. Manufacturer's Maintenance Instructions

1.2 PROCEDURES

- A. Transmit each submittal on a form acceptable to the Engineer. This form should be sent to the attention of the Engineer.
- B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify project, Contractor, subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate.
- D. The Contractor shall stamp and sign or initial shop drawings and documents, certifying that all materials used comply with all pertinent provisions and have been reviewed and approved by the Contractor.
Also, verify that products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of Contract Documents.
- E. Send or deliver all submittals and shop drawing to:

**McMaster & Associates, Inc.
212 Waterford Square, Ste. 300
Madison, MS 39110**

- F. For each submittal review, allow 5 to 10 days excluding delivery time to and from the Contractor, unless otherwise noted in individual specification sections.
- G. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed work.

- H. Provide space for Contractor's and Engineer review stamps.
- I. When revised for resubmission, identify all changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

1.3 PRODUCT DATA

- A. Submit the number of copies that the owner or owner's representative requires, plus at least (1) or more copies which will be retained by the Engineer.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this project.
- C. After review, distribute in accordance with the Submittal Procedures articles above.

1.4 SHOP DRAWINGS

- A. Shop drawings in a clear and accurate manner. Drawings should be to a scale large enough to show all pertinent aspects, including connection and attachment methods. Reproduction of a part or all of the Engineer's drawings for submission as shop drawings will not be accepted and will be returned unchecked.
- B. Shop drawings sent by way of facsimile will be accepted only in extreme circumstances.
- C. Title each drawing with the project name, location and the Engineer's project number.
- D. Fabricating products or starting work before shop drawings are approved by the Engineer and returned shall be at the contractor's risk.
- E. Each drawing or sheet shall be signed by the Contractor certifying that he has reviewed them and that compliance with the contract documents has been met.

1.5 SAMPLES

- A. Include proper identification on each sample, providing full project information and a complete description of its intended use.
- B. Submit the number of samples specified in individual specification sections; one (1) of which will be retained by Engineer.
- C. Reviewed samples that may be used in the Work are indicated in individual specification sections. After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article above.
- D. Samples will not be used for testing purposes unless specifically stated in the specification section.

1.6 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification sections, submit certification by the manufacturer, installation/application subcontractor, or the Contractor to the Engineer, in quantities specified for Product Data.
- B. Indicate material or Product meets or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

- C. Certificates may be recent or previous test result on material or product, but must be acceptable to Engineer.

1.7 MANUFACTURER'S INSTRUCTIONS

When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Engineer for delivery to Owner in quantities specified for product data.

PART 2-PRODUCTS (NOT USED)

PART 3-EXECUTION (NOT USED)

END OF SECTION

SECTION 013210
CONSTRUCTION SCHEDULES

PART1-GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Contractor shall comply with the General Conditions.
- B. Submit revised progress schedules periodically

1.2 FORM OF SCHEDULES

- A. Prepare schedules in the form of a horizontal chart.
 - 1. Provide separate horizontal bar for each trade or operation.
 - 2. Horizontal time scale; identify the first work day of each week.
 - 3. Scale and spacing: to allow for notations and future revisions.
 - 4. Minimum sheet size: 8-1/2 inches by 11 inches.
- B. Format of listings: The table of contents of the Contract Documents
- C. Identification of Listings: Items of work.

1.3 CONTENT OF SCHEDULE

- A. Construction Progress Schedule:
 - 1. Show the complete sequence of construction by activity.
 - 2. Show the dates for the beginning, and completion of, each major element of construction.
 - 3. Show projected percentage of completion for each item, as of the first day of each month.
 - 4. Show an anticipated monthly payment schedule.
- B. Submittal schedule for Shop Drawings, Product Data and Samples. Show:
 - 1. The dates for Contractor's submittal.
 - 2. The dates approved submittal will be required from the Engineer.

1.4 PROGRESS REVISIONS

- A. Indicate progress of each activity to date of submission.
- B. Show changes occurring since previous submission of schedule:
 - 1. Major changes in scope.
 - 2. Activities modified since previous submission.
 - 3. Revised projections of progress and completion.
 - 4. Other identifiable changes.
- C. Provide a narrative report as needed to define:
 - 1. Problem areas, anticipated delays, and the impact on the schedule.
 - 2. Corrective action recommended, and its effect.

1.5 SUBMISSIONS

- A. Submit initial schedules in accordance with the General Conditions.
 - 1. Engineer will review schedules and return review copy within ten (10) calendar days after receipt.
 - 2. If required, Contractor shall resubmit within (7) calendar days after return of review copy.

PART 2-PRODUCTS (NOT USED)

PART 3- EXECUTION (NOT USED)

END OF SECTION

SECTION 014510

TESTING LABORATORY SERVICES

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

Owner will employ and pay for the services of an Independent Testing Laboratory to perform testing specifically indicated on the Contract Documents or specified in the Specifications and may at any other time elect to have materials and equipment tested for conformity with the Contract Documents.

- A. Employment of the laboratory shall in no way relieve Contractor's obligations to perform the Work of the Contract.

1.2 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

Laboratory is not authorized to:

- A. Release, revoke, alter or enlarge on requirements of Contract Documents.
- B. Approve or accept any portion of the Work.
- C. Perform any duties of the Contractor.

1.3 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel, provide access to Work, and comply with Manufacturer's operations.
- B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the preliminary mix proposed to be used for concrete, asphalt, and other materials mixes which require control by the testing laboratory.
- D. Materials and equipment used in the performance of work under this Contract are subject to inspection and testing at the point of manufacturer or fabrication. Standard specifications for quality and workmanship are indicated in the Contract Documents. The Owner may require the Contractor to provide statements or certificates from the manufacturers and fabricators that the materials and equipment provided by them are manufactured or fabricated in full accordance with the standard specifications for quality and workmanship indicated in the Contract Documents. All costs of this testing and providing statements and certificates shall be a subsidiary obligation of the Contractor, and no extra charge to the Owner shall be allowed on account of such testing and certification.
- E. Furnish incidental labor and facilities:
 - 1. To provide access for work to be tested.
 - 2. To obtain and handle samples at the Project site or at the source of the product to be tested.
 - 3. To facilitate inspections and tests.
 - 4. For some storage and curing of test samples.

- F. Notify laboratory at least 24 hours in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
- G. Employ and pay for the services of the same or a separate, equally qualified independent testing laboratory to perform additional inspections, sampling and testing required for the Contractor's convenience and as approved by the Owner.

PART 2-PRODUCTS (NOT USED)

PART 3- EXECUTION (NOT USED)

END OF SECTION

SECTION 017113

MOBILIZATION

PART 1 - GENERAL

- A. Mobilization and Demobilization shall consist of all moving in, including preparatory work and operations and moving out, including all dismantling and clean-up work operations performed by the CONTRACTOR.
- B. Mobilization shall include the movement of all labor, equipment, supplies and incidentals to the project site; establishment of facilities necessary for work on the project; and other work and operations which must be performed or costs not directly attributable to other pay items, exclusive of bidding costs, which must be incurred by the CONTRACTOR before beginning and during the early stages of production work on the project site.
- B. Demobilization shall include the movement of all labor, equipment, supplies and incidentals from the project site; dismantling and removal of temporary facilities; clean-up of the project site and all work areas; and other work and operations which must be performed or costs not directly attributable to other pay items which must be incurred by the CONTRACTOR after completion of certain items or work and all other work on the Contract has been completed.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

PART 4 - COMPENSATION

4.01 MEASUREMENT

- A. The percentage of the lump sum amount for this section will be measured in accordance with the Mobilization schedule submitted by the CONTRACTOR and approved by the ENGINEER within the following limitations:

<u>% of Total Contract Earned*</u>	<u>% of Maximum Lump Sum This Item Allowed</u>
10%	40%
25%	60%
80%	90%

- B. When all work under this contract is completed by the CONTRACTOR and accepted by the ENGINEER, one hundred percent (100%) of the Lump Sum Amount will be allowed.
- C. Total earned will be equal to certified estimates approved by the ENGINEER exclusive of the Mobilization Lump Sum and Materials Stored Amounts.

END OF SECTION

SECTION 017123

FIELD ENGINEERING

PART 1 – GENERAL

1.1 REQUIREMENTS INCLUDED

- A. The Contractor shall provide and pay for field engineering services for:
 - 1. Survey work required in execution of work.
 - 2. Civil, structural, or other professional engineering services specified or required to execute the Contractor's construction method.
- B. The method of field staking for the construction of the work shall be at the option of the Contractor. The Owner shall provide the engineering surveys to establish reference points which in his judgment are necessary to enable the Contractor to proceed with his work.
- C. The accuracy of any method of staking shall be the responsibility of the Contractor. All engineering for vertical and horizontal control shall be the responsibility of the Contractor.
- D. The Contractor shall be held responsible for the preservation of all stakes and marks. If any stakes or marks are carelessly or willfully disturbed by the Contractor, the Contractor shall not proceed with any work until he has reestablished such points, marks, lines and elevations as may be necessary for the prosecution of the work.
- E. The Contractor shall retain the services of a competent surveyor, registered in the State of Mississippi, to layout the work and maintain a survey during construction. The Contractor shall be solely responsible for proper location of the work.

1.2 SURVEY REFERENCE POINTS

Locate and protect control points prior to starting site work, and preserve all permanent reference points during construction.

- 1. Make no changes or relocations without prior written notice to the Engineer.
- 2. Report to the Engineer when any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations.

1.3 PROJECT SURVEY REQUIREMENTS

- A. Establish temporary bench marks as needed, referenced to data established by survey control points. Record locations, with horizontal and vertical data, on Record Drawings.
- B. Establish lines and levels, and locate and layout, by instrumentation and similar appropriate means:
 - 1. Site improvements, including utility slopes and invert elevations.
 - 2. Batter boards for structures
- C. From time to time, verify layouts by same methods.
- D. Establish all lines and grades prior to construction of site improvements.

1.4 RECORDS

- A. Maintain a complete, accurate log of all control and survey work as it progresses.

1.5 SUBMITTALS

- A. On request of the Engineer, submit documentation of verified accuracy of field engineering work.
- B. Submit Drawings showing locations and elevations of all pipes and structures constructed. This Drawing shall be included with the Record Drawings.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 017400

CLEANING

PART 1-GENERAL

1.1 REQUIREMENTS INCLUDED

Cleaning shall include daily "policing" of the work and surrounding areas to clear general debris waste paper, wood scraps, broken concrete, loose riprap, and other objectionable material along with the final cleanup of the site required for project acceptance.

1.2 DISPOSAL REQUIREMENTS

Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2- PRODUCTS (NOT USED)

PART 3-EXECUTION

3.1 DURING CONSTRUCTION

- A. Execute daily cleaning to keep the Work, the site and adjacent properties, free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.
- B. Provide onsite containers for the collection of waste materials, debris and rubbish. All waste materials including containers, food debris and other miscellaneous materials must be disposed of daily in onsite containers.
- C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

3.2 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove all loose asphalt milling, asphalt spoils, excavation spoils, etc. from project limits.
- C. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- D. Clean debris from storm drainage pipes and inlets.
- E. Prior to final completion or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces and all work areas to verify that the entire Work is clean.

END OF SECTION

SECTION 017700

CONTRACT CLOSEOUT

PART 1-GENERAL

1.1 REQUIREMENTS INCLUDED

The Contractor shall comply with the requirements stated in the specifications for administrative procedures in closing out the Work.

1.2 SUBSTANTIAL COMPLETION

- A. When the Contractor considers the Work is substantially complete, he shall submit to the Engineer:
 - 1. A written notice that the Work or designated portion thereof is substantially complete.
 - 2. A list of items to be completed or corrected.
- B. Within seven (7) calendar days after receipt of such notice, the Engineer will make an inspection to determine the status of completion. The Engineer's opinion as to the status of completion shall be based on completion of the following as applicable:
 - 1. Should the Engineer determine that the Work is not substantially complete:
 - a. The Engineer will promptly notify the Contractor in writing, giving the reasons therefore in accordance with the General and Supplemental Conditions.
 - b. Contractor shall remedy the deficiencies in the Work, and send a second written notice of substantial completion to the Engineer.
 - c. The Engineer shall reinspect the Work.
 - 2. When the Engineer finds that the Work is substantially complete, Engineer will:
 - a. Prepare and deliver to Owner a tentative Certificate of Substantial Completion with a tentative list of items to be completed or corrected before final payment.
 - b. After consideration of any objections made by the Owner as provided in the General and Supplemental Conditions of the Contract, and when the Engineer considers the Work substantially complete, Engineer will execute and deliver to the Contractor a definite Certificate of Substantial Completion with a revised tentative list of items to be completed or corrected.

1.3 FINAL INSPECTION

- A. When Contractor considers the Work is complete, he shall submit written certification that:
 - 1. Contract documents have been reviewed.
 - 2. Work has been inspected for compliance with Contract Documents.
 - 3. Work has been completed in accordance with Contract Documents.
 - 4. Equipment and systems have been tested in the presence of the Engineer and Owner's representative and are operational.
 - 5. Work is completed and ready for final inspection.
- B. The Engineer will make an inspection to verify the status of completion with seven calendar days after receipt of such certification.
- C. Should the Engineer consider that the Work is incomplete or defective:
 - 1. The Engineer will promptly notify the Contractor in writing, listing the incomplete or defective work.
 - 2. Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to the Engineer that the Work is complete.
 - 3. The Engineer will reinspect the Work.

- D. When the Engineer finds that the Work is acceptable under the Contract Documents, he shall request the Contractor to make closeout submittal.

1.4 RE-INSPECTION FEES

Should the Engineer perform re-inspection due to failure of the Work to comply with the claims of status of completion made by the Contractor:

- A. Engineer will be compensated for such additional services.
- B. Engineer will deduct the amount of such compensation from the final payment to the Contractor.

1.5 CONTRACTORS CLOSEOUT SUBMITTAL TO ENGINEER

- A. Warranties and Bonds: Requirements of Section 017850, Warranties.
- B. Certificate of Insurance for Products and Completed Operations.

1.6 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to the Engineer.
- B. Statement shall reflect all adjustments to the contract Sum:
 - 1. The original Contract Sum.
 - 2. Additions and deductions resulting from:
 - a. Previous CCR.
 - b. Deductions for uncorrected Work.
 - c. Penalties and Bonuses.
 - d. Deductions for liquidated damages.
 - e. Deductions for reinspection payments.
 - f. Other adjustments.
 - 3. Total Contract Sum, as adjusted.
 - 4. Previous payments.
 - 5. Sum remaining due.
- C. Engineer will prepare a final CCR reflecting approved adjustment to the Contract Sum which was not previously made by CCR.

1.7 APPLICATION FOR PAYMENT

Upon receipt of approval of the final CCR, the Contractor shall submit an Application for Payment in Accordance with procedures and requirements stated in the Specifications.

1.8 CONTRACT CLEAR LIEN CERTIFICATE AND PAYMENT OF RETAINAGE

- A. Upon receipt of the Engineer's acceptance of the work, the Contractor shall submit an affidavit that the project is clear of all materials and labor liens.
- B. Upon receipt of the affidavit of clean liens, the Contractor shall submit as Application for Payment to the Engineer requesting the release of the Project retainage with the certificate attached for the Owner to pay retainage.
- C. The Engineer shall review the Application for Payment of the Project retainage and if in order shall submit an Application for Payment requesting the release of the project retainage with the certificate attached for the Owner to pay the retainage.

- D. The Owner shall release the Project retainage and make payment to the Contractor the legal sum of the retainage for which the Contractor is entitled.

PART 2-PRODUCTS (NOT USED)

PART 3-EXECUTION (NOT USED)

END OF SECTION

SECTION 017840

PROJECT RECORD DOCUMENTS

PART 1-GENERAL

1.1 REQUIREMENTS INCLUDED

Maintain at the site for the Owner one record copy of:

- A. Conformed Drawings
- B. Conformed Specifications
- C. CCR's and other Modifications to the Contract
- D. Engineer's Field Orders or written Instructions
- E. Approved Shop Drawings, Working Drawings and Samples
- F. Field Test records
- G. Construction photographs
- H. Latest, Approved Progress Schedule

1.2 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in a manner and location to prevent damage.
 - 1. Provide files and racks for storage documents.
 - 2. Provide secure storage space for storage of samples.
- B. File documents and samples in an orderly manner.
- C. Maintain documents in clean, dry, legible, condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by the Owner.
- E. As a prerequisite for monthly progress payments, the Contractor is to exhibit the currently updated "record documents" for review by the Owner.

1.3 MARKING DEVICES

Provide felt tip marking pens for recording information in the color code designated by the Owner.

1.4 RECORDING

- A. Label each document "PROJECT RECORD" with rubber stamp.
- B. Record information concurrently with construction progress and do not conceal any work until required information is recorded.
- C. Legibly mark drawings to record actual construction:
 - 1. The Contractor shall use the following color code in marking Contract Drawings:
 - a. Yellow for no change.
 - b. Red to indicate additions, deletions and changes.

2. Elevations of various structure elements in relation to elevation datum.
 - a. Elevations referenced to control points established by the Owner's agent.
 - b. Specifically, elevations of storm sewer inverts, ditch grades, top of roadway and driveway curbs, bridges, manholes, outlet structures, etc.
 3. Location of internal utilities and appurtenances concealed in the construction by referencing to visible and accessible features of the structure.
 4. Field changes of dimension and detail.
 5. Changes made by Field Directive or by CCR.
 6. Details not original contract drawings.
- D. Specifications and Addenda; legibly mark each section to record:
1. Manufacturer, trade name, catalog number, and Supplier of each Product and item of Equipment actually installed.
 2. Changes made by Field Directive or by CCR.
- E. Shop drawings (after final review).

1.5 SUBMITTAL

- A. At contract close-out, deliver Record Documents to the Owner.
- B. Accompany submittal with transmittal letter in duplicate, containing:
1. Date
 2. Project title and number
 3. Contractor's name and address
 4. Title and number of each Record Document
 5. Signature of Contractor or his authorized representative.

PART 2-PRODUCTS

PART 3-EXECUTION

END OF SECTION

SECTION 017850

WARRANTIES

PART 1-GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Compile specified warranties and bonds, as directed in the Specifications
- B. Co-execute submittals when so specified
- C. Review submittals to verify compliance with Contract Documents
- D. Submit to the Owner for review

1.2 SUBMITTAL REQUIREMENTS

- A. Assemble and include warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, couplers and subcontractors including effective dates.
- B. Number of original signed copies required. Two (2) each
- C. Table of Contents. Neatly typed in orderly sequence. Provide complete information for each item.
 - 1. Product or work item
 - 2. Firm, with name of principal, address and telephone number
 - 3. Scope
 - 4. Date of beginning warranty, and bond
 - 5. Duration of warranty
 - 6. Provide information for Owner's personnel:
 - a. Proper procedure in case of failure
 - b. Instances which might affect the validity of warranty or bond
 - 7. Contractor, name of responsible principal, address and telephone number.

1.3 FORM OF SUBMITTALS

- A. Prepare in duplicate packets
- B. Format:
 - 1. Size 8-1/2 inches x 11 inches, punch sheets for standard 3-post binder
 - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS" List:
 - a. Title of Project
 - b. Name of Contractor
- C. Binders: Commercial quality, three-post binder, with durable and cleanable plastic covers and maximum post width of 2-inches, "D" ring

1.4 WARRANTY SUBMITTAL REQUIREMENTS

- A. For all components of the work, unless stated otherwise in the specification for each individual item of equipment, submit a written warranty from the manufacturer to replace promptly any component thereof which, in the sole opinion of the Engineer, has defects in design, workmanship, materials, or performance within a one (1) year period following the date of acceptance for operation (Substantial Completion) by the Owner. The manufacturer's warranty period shall be concurrent with the Contractor's for one (1) year, unless otherwise specified, commencing at the time of acceptance for operation (Substantial Completion) by

the Owner and shall be read in conjunction with the Contractor's warranty which shall operate together to provide for replacement of defective components and restoration of proper operation. The Contractor shall be solely responsible for both warranties.

PART 2-PRODUCTS

PART 3-EXECUTION

END OF SECTION

SECTION 024100

SELECTIVE SITE DEMOLITION

PART 1 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

1-01 SCOPE

- A. Remove all trees, stumps, debris, and vegetation deemed necessary in areas to be graded and stabilized to complete the work specified in plans. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes and pits.

PART 2 CONSTRUCTION REQUIREMENTS

2-01 GENERAL

- A. The Contractor shall remove and dispose of all obstructions within the construction limits. All designated salvageable material shall remain the property of the Owner and shall be removed, without unnecessary damage, in sections or pieces which may be readily transported and shall be stacked at specified storage areas by the Contractor within the project's limits or hauled to a designated maintenance storage yard and stacked. All materials designated not to be salvaged shall be destroyed or disposed of off the project. Basements or cavities left by structure removal shall be filled to the level of the surrounding ground and, if within the prism of construction, shall be compacted to the density of the surrounding ground.

All materials specified for salvage shall be removed, without unnecessary damage, in sections or pieces which may be readily transported and shall be stacked or stored by the Contractor at such places as may be designated within the project's limits, unless other locations are specified in the Contract.

2-02 REMOVAL OF PIPE

- A. All culvert pipe designated to be salvaged or relaid shall be carefully removed and every reasonable precaution taken to avoid breaking or damaging. Pipes designated to be relaid shall be removed, handled, and stored when necessary so that there will be no loss or damage before relaying. The Contractor shall replace without extra compensation all sections lost from storage or damaged by negligence or improper methods to the extent its reuse is deemed by the Engineer to be unsatisfactory. Pipes not designated to be salvaged or relaid shall be disposed of by the Contractor offsite.

2-03 REMOVAL OF PAVEMENT, SIDEWALK, CURBS, ETC.

- A. When required on the plans or in the proposal, concrete pavement, sidewalks, curbs, gutter, etc. shall be disposed of by the Contractor without regard to size of pieces, offsite.

2-04 MAINTENANCE OF TRAFFIC

- A. The Contractor shall maintain local access to all properties fronting along the project for the duration of the work.

END OF SECTION

SECTION 312000

EARTHWORK

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This work shall consist of general grading, excavating, filling, spreading, and compacting areas to be filled in accordance with these specifications and in conformity with the lines, grades, slopes, and typical cross sections depicted by the Construction Plans.
- B. This item shall also consist of satisfactory disposing of all unsuitable materials within the construction limits of the project site. The work includes grading and subgrade construction on new roadways, drainage ditches and site work.

1.02 EXAMINATION OF SITE

- A. The CONTRACTOR shall fully familiarize himself of the surrounding area and the conditions of access under which the project is to be completed.
- B. The CONTRACTOR shall visit the site and inform himself fully as to the amount of excavation, filling and grading required under the Contract.

1.03 CLASSIFICATION OF EXCAVATION

- A. All authorized excavation shall be classified as Unclassified Excavation or Excess Excavation regardless of the nature or manner of removal, encountered in the work except for those classes of excavation for which separate pay items or designations are provided.
- B. Borrow Excavation will consist of approved material required for the construction of embankments or other portions of the work and shall be obtained from approved sources outside the project right of way. Unless otherwise provided in the contract, the CONTRACTOR shall furnish the required Borrow Excavation, make arrangements for obtaining borrow, and pay all costs involved.

PART 2 – PRODUCTS

2.01 EQUIPMENT

The CONTRACTOR may use any type of earth moving, compaction and watering equipment that he may desire or has at his disposal, provided the equipment is in satisfactory condition and is of such capacity that the construction schedule can be maintained as planned by the CONTRACTOR and approved the ENGINEER in accordance with the contract time contained in the agreement. The CONTRACTOR shall furnish, operate and maintain such equipment as is necessary to control uniform density, layers of fill and cross sections.

2.02 MATERIALS

- A. Material for fills shall consist of material obtained from the excavation of on-site banks; borrow pits or other approved sources. The material used shall be free from

vegetable matter and other deleterious substances and shall not contain large rocks or lumps. All suitable on-site materials shall be installed in the fills or embankments behind the curb and all unsuitable material shall be disposed of as directed by the ENGINEER.

B. Off-site material shall be classified as follows:

1. Borrow Material (CONTRACTOR Furnished) Material used for roadway embankment fills and backfill shall be compacted to a density of at least 98% of maximum laboratory density at moisture contents within 3 percentage points of optimum moisture contents, as determined by ASTM D-698. Imported earth fill material should consist of select, nonorganic and debris-free silty clays (CL) and sandy clays (CL) having a plasticity index (PI) within the range of 10 to 24, a liquid limit less than 45, and not less than 50 percent fines passing the No. 200 sieve.

PART 3 – EXECUTION

3.01 GENERAL REQUIREMENTS

- A. All suitable materials excavated in project site construction shall be used prior of placing off-site material in the formation of fills, subgrades and shoulders as shown on the Plans.
- B. Sequence of Operations: No site construction shall be started until sufficient clearing, grubbing and stripping within construction limits has been completed and accepted to allow earthwork to proceed without interruption.
- C. Foundation Preparation:
1. When clearing and grubbing has been completed, all stump holes remaining in areas to receive fill shall be filled with suitable material and compacted to a density at least that of the surrounding ground.
 2. Prior to placing material on any areas to receive fill, the natural ground shall be proof-rolled in the presence of the Engineer.
- D. Excavation: Excavation shall be performed at all locations indicated on the Plans, to lines, grades and cross sections shown, and shall be made in such a manner that fills can be formed in accordance with the requirements herein. All suitable material encountered within the limits indicated shall be used in the formation of fills. All material not approved for use in fill shall be disposed of offsite at a site to be furnished by the contractor. During the process of excavation, the grade shall be maintained in such condition that the grade will be well drained at all times.
1. Undercutting: When soft or other objectionable or wet material remains after clearing, grubbing and stripping operations, the CONTRACTOR will be required to undercut such material to such depth and extent as directed and backfill with suitable material. Fill material shall be placed in uniform layers and compacted as specified for fills. Undercut objectionable materials will be disposed of offsite at a site to be furnished by the contractor. Undercut depth will be as determined by the ENGINEER and

shall be measured from the natural ground or finished subgrade, whichever is lower.

2. Tolerances: Excavation and grading shall be completed such that the surface of the site shall conform to the lines and grades shown on the plans. The surface shall conform to the specified grades within 0.05 feet. Any deviation shall be corrected by further grading, filling, reshaping and compacting.
3. Backfill in undercut areas shall be tested as specified in Section 3.03 of this specification. All costs associated with testing backfill for undercut areas shall be absorbed by the CONTRACTOR.

E. Formation of Fill:

1. Fills for project site shall be constructed to lines, grades, cross sections and dimensions shown on the Plans.
2. Earthfills shall be formed by distributing the materials in successive uniform horizontal layers not to exceed nine (9) inches in thickness, loose depth, for full width of the cross sections. Each layer of fill shall be compacted to a density of at least 98% of maximum laboratory density, as determined by ASTM D-698, within building limits at moisture contents within 3 percentage points of optimum and 98% of maximum laboratory density for roadways & parking areas as determined by ASTM D-698.
3. The upper surface of the fill shall be shaped so as to provide complete drainage of surface water at all times. The forming of ruts will not be permitted.
4. Each layer of earthfill shall be compacted as required with appropriate equipment and in such a manner as to avoid laminating of individual lifts. Fill material which does not contain sufficient moisture shall be watered as needed before being rolled. The furnishing and application of water for construction of fills will not be paid for separately; such operations shall be considered as incidental in formation of fills.
5. Construction operations shall be performed in such manner that the simultaneous rolling and placing of material in the same lane or section will not occur. To avoid uneven compaction, the hauling equipment shall traverse, as much as possible, the full width of the cross section. Each layer shall be compacted as required before material for the next layer is deposited. Load and speed restrictions shall comply with Section S-105.13 of MHSD State Aid Standard Specifications, latest edition.
6. Fills constructed with on-site material will be considered as Unclassified Excavation, and shall not be measured separately for payment unless otherwise noted in the construction plans.

- F. Subgrades: All subgrades shall be graded to lines, grades and cross sections indicated. In cut sections where the earth is consolidated, the surface of the roadways shall be scarified to a depth of 9 inches before beginning compaction operations. All fill areas within building limits

shall be compacted to a density at least 98% of maximum density as determined by ASTM D-698 (98% of maximum density for fill areas outside of building limits). In the area to be under paving, the top of the subgrade shall be of such smoothness that when tested with a 16 foot straightedge applied parallel and at the right angles to the centerline, the surface shall not be more than 0.04 feet from true grade. Any deviation in excess of these amounts shall be corrected by loosening, adding or removing materials, reshaping and recompacting by sprinkling and rolling.

1. Subgrades shall not be compacted until all utility lines within the roadways are in place. When utility lines are completed, the subgrades shall be regarded and compacted at no additional cost.
 2. At all times, the top of the subgrade shall be maintained in such condition that the surface will drain readily. In no case will vehicles be allowed to travel in a single track. If ruts are formed, the subgrade shall be reshaped and rolled.
- G. Ditch Excavation and Grading: Ditch excavation shall be performed in proper sequence with other construction. All satisfactory materials shall be placed in fills as needed. Unsatisfactory material shall be wasted in disposal areas. Ditches shall be graded to drain and shall not contain low spots which would hold water. Ditches and slopes shall be dressed to a tolerance of plus or minus 0.1 feet from indicated grade.
- H. Fine grading, shaping, and finishing: This work shall consist of grading and finishing areas of the site and roadway where, in general, the elevation of the existing ground surface or roadbed is practically parallel with the proposed grade line. This work shall include backfilling, grading, shaping and finishing areas behind the curb and gutter to conform to the lines subgrades shown on the plans.

3.02 SEASONAL AND WEATHER LIMITS

No fill material shall be placed, spread or rolled while the ground or fill is frozen or thawing or during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until the moisture content and density of the fill are as previously specified.

3.03 TESTING

- A. CONTRACTOR shall be responsible for determining that any material utilized in fills meets project requirements and shall provide Standard Proctor density tests for on site and off-site materials utilized in fills, foundations or bases. Proctors shall be run frequently as necessary to assure consistency of material and wherever changes in material are encountered.
- B. Density tests shall be performed at the following intervals:
1. Subgrade Fills: For areas beneath future building locations, a minimum of one test per lift for each 2500 square feet of surface area shall be required. For areas not beneath future not beneath future building locations, a minimum of one test per lift for each 5000 square feet of surface area shall be required.

2. All phases of testing shall be performed by a certified testing laboratory, which shall submit all test results to the ENGINEER for review. These phases of testing include, but are not limited to, sampling, transporting, and testing of materials. Testing shall be performed according to Section S-105-Control of Work and Section S-106-Control of Materials of the Mississippi Standard Specifications for State Aid Road and Bridge Construction, Latest Edition. Test reports must be submitted to the ENGINEER for review prior to approval of pay request. There will be no separate pay item for testing; all associated costs will be absorbed by the CONTRACTOR.

END OF SECTION

SECTION 320116

COLD MILLING OF ASPHALT PAVEMENT

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This work consists of removal of pavement materials on the roadway and shoulders by cold milling to the designated depth and, loading, hauling, and disposal of the milled materials by the Contractor in accordance with the plans and specifications, or as directed by the Engineer. The milled surface shall provide a desirable surface free from gouges, continuous grooves, ridges, oil film, and other imperfections of workmanship and shall have a uniform appearance.

PART 2 – EQUIPMENT

2.1 DESCRIPTION

- A. The equipment to be used for this work shall be a self-propelled milling machine capable of removing a minimum width of four feet. The equipment shall have sufficient power, traction, and stability to remove material and maintain an accurate grade and cross slope. The equipment shall be capable of accurately and automatically establishing profile grades along each edge of the machine by referencing from the existing pavement with means of an approved profile averaging device with extreme contact points with surface at least 30 feet apart, or from an independent grade line and shall have an automatic system for controlling cross slope. The machine shall be equipped with an integral loading and reclaiming means to immediately remove material being cut from the surface and discharge the cuttings into a truck or windrow, all in one operation.
- B. Adequate back-up equipment, such as mechanical sweepers, loaders, water trucks, etc. and personnel shall be provided to ensure that all cuttings are removed immediately behind the milling machine.

PART 3 – EXECUTION

3.1 CONSTRUCTION METHODS

- A. On the roadway, when hot mix asphalt will be required on the milled area, milling operations shall not begin until the Contractor has an approved job-mix formula and is prepared to begin paving operations. The milled roadway area opened to public traffic shall be covered by placing the first required course within 30 calendar days after milling. During the period from November 1 to March 1, the uncovered milled area shall not exceed one mile of full roadway width.
- B. The pavement and shoulder materials shall be removed to the depth, width, grade, and cross section shown on the plans, or as directed by the Engineer. The number of passes necessary to accomplish the work required herein and, on the plans, shall be determined by the Contractor.
- C. The surface of the pavement and shoulders, after milling, shall be reasonably smooth and true to the established line, grade, and cross section. Areas damaged by the Contractor's operations shall be corrected and/or repaired as directed by the Engineer at no additional costs to the project. The Contractor shall take necessary action to prevent or minimize the ponding of water on the milled roadway and shoulder.

- D. When traffic is required to be maintained adjacent to the milled area, no more than a 2 ¼ - inch differential in grade between the milled area and the adjacent surface will be allowed, unless a positive separation in accordance with the plans and specifications is established between the traffic and the milled area.
- E. A longitudinal pavement edge that traffic is expected to move across should have an elevation difference of not more than 2 ¼ inches. If the pavement edge is more than 1 ½ inches and less than or equal to 2 ¼ inches, uneven pavement signs will be required as shown in the plans, or contract documents. If the pavement edge is less than or equal to 1 ½ inches, no uneven pavement signs will be required. Transverse pavement joints shall be sufficiently tapered to allow for the safe movement of traffic.
- F. When traffic is required to be maintained adjacent to milled shoulders, traffic control devices shall be placed in accordance with the requirements of the Traffic Control Plan, or as directed by the Engineer.
- G. It is understood that the milled shoulder shall be covered with the next required course as soon as possible but in no case later than 30 calendar days after milling.

END OF SECTION

SECTION 321216

ASPHALT PAVING

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This item shall include furnishing of all labor, materials, equipment and incidentals required for paving of roads and parking areas in accordance with the Contract Drawings and these Specifications.
- B. Paving shall be performed with machinery equipped with a 40 foot ski attachment for grade control.
- C. Any required adjustments of existing utilities will be performed by Owner.
- D. Dimensions shall be as indicated on the Drawings.

PART 2 – PRODUCTS

2.01 GENERAL

- A. All materials for asphalt paving and related work shall comply with Mississippi Standard Specifications for State Aid Road and Bridge Construction, 1989 Edition as follows:
 - 1. Plant mix pavements General Section 401
 - 2. Base course Section 301
 - 3. Tack coat Section 407
 - 4. Binder course Section 403
 - 5. Surface course Section 403
- B. As used in this specification, the following abbreviations shall apply:
 - 1. BB- Black Base
 - 2. TC- Tack Coat
 - 3. BC- Binder Course
 - 4. SC- Surface Course
- A. The term “course” used in this Section shall be understood to mean a layer of specified thickness shown on the plans and for which quantities are estimated on the plans and in the proposal as the basis for bidding. A course may, in some cases consist of a single layer, and, in other cases, may consist of two or more layers depending on the finished thickness specified.

PART 3 – EXECUTION

3.01 BASE COURSE (BLACK BASE): Number BB-1

- A. General: Where indicated on the Drawings this work shall consist of the construction of a base course in one or more courses composed of mineral aggregates mixed in a central mixing plant with bituminous materials in the proportions specified and placed hot. The base course shall be constructed on a prepared subgrade foundation in accordance with these specifications and in close conformity with the thickness, lines, grades and sections as shown on the plans.
- B. The base course shall comply with Section 301, Plant Mix Bituminous Base Course, of the Mississippi Standard Specifications for State Aid Road and Bridge Construction, 1989 Edition. Bituminous black base shall be BB-1, Type 6.
- C. The Contractor will have the testing lab furnish to the Engineer, for approval, prior to placing any base material, a job mix formula for the project.
- D. The job mix formula shall be set within the master range as indicated below. The job mix formula shall be maintained within the job mix tolerance and shall not exceed the limits of the ranges.
 - 1. The job mix temperatures shall be between 250 degrees Fahrenheit minimum and 350 degrees Fahrenheit maximum unless otherwise specified.
 - 2. The job mix formula as approved shall be considered as tentative until a sufficient amount of the mixture has been processed through the plant, spread and compacted.
 - 3. Extractions shall be made on samples of each mixture, produced by a plant, before any mixture is placed on the project.
 - 4. After the job mix formula is approved, the mixture furnished to the project shall remain unchanged, within the tolerances specified for the mixture, throughout the duration of the job. No change in properties or proportions of any ingredient of the mix shall be made without written permission of the Engineer.
- E. The gradation of the mixture shall meet the following Design Master range requirements:

Sieve Size	Percentage Passing Sieve (by Weight)	Tolerances for job Mix Formula
1-1/2 inch	100	±6%
1 inch	83-100	±6%
¾ inch	-----	-----
½ inch	56-95	±6%
3/8 inch	-----	-----
No. 4	29-70	±5%
No. 8	19-54	±5%
No. 30	8-30	±4%
No. 50	4-20	±4%
No. 200	2-10	±1.5%
Min. % A.C. by wt of Mix	4	±0.4%

- F. Bituminous Materials shall be petroleum asphalt cement grade AC-30, unless otherwise specified.
- G. Mineral Filler shall meet requirements of Section 703.16 of the Mississippi State Aid Specifications. Mineral filler may be used as necessary to obtain desired properties; however, excessive use shall not be permitted in the mix.

- H. Weather Limitations: Base course shall be placed on a dry unfrozen surface and only when the air temperature meets the limitation requirements of 401.03 of the Mississippi State Aid Specifications.
- I. Density: The average lot density of all bituminous base courses shall not be less than 92.0 percent nor more than 95.0 percent of the maximum density based on AASHTO T-209. When borderline results are obtained on density tests, it shall be the Contractor's responsibility to furnish and use the appropriate number, type, and size of rollers as necessary to consistently obtain the required density. When the furnished compactive effort does not produce the required density, the Contractor shall make such approved adjustments as necessary to obtain the required density. Pavement samples obtained for determining density and/or correlation of the nuclear density gauge which have a thickness less than eight inches greater than the maximum size aggregate permitted by the job-mix formula will not be used as a representative sample.
- J. Lower layers of base course shall not exceed four inches in compacted thickness (plus the allowable tolerance). The top layer shall have a maximum compacted thickness of three inches (plus the allowable tolerance).
- K. Surface tolerance shall conform to the designated grade and cross section within the tolerances set forth in Section 301.03.2 of Mississippi State Aid Specifications.

3.02 TACK COAT (Required Full Width)

- A. General: This work shall consist of preparing and treating an existing bituminous or concrete surface with bituminous material in accordance with these specifications and in close conformity with the lines shown on the plans or established by the Engineer. A tack coat shall be applied, for full width of the course to be superimposed on a previously prepared, bonded, and bituminized road surface or base or concrete surface or base. The tack coat may be omitted from a previously primed road when deemed by the Engineer to be unnecessary.
- B. Tack coat is to be applied between each lift or course of asphalt pavement unless otherwise specified by the Engineer.
- C. A tack coat shall be applied over the base course and shall consist of 0.05 to 0.10 gallons per square yard of bituminous material of the same A.C. grade as specified for the base course mix designs specified in Section 407 of Mississippi Standard Specifications for State Aid Road and Bridge Construction, 1989 Edition.
- D. Tack coat shall not be applied during wet or cold weather, after sunset or to a wet surface and only on as much pavement as can be covered with additional courses in the same day. The surface to receive tack coat shall be prepared in accordance with Section 401.03.0 of Mississippi State Aid Specifications.
- E. Separate Payment for tack coat shall not be made. The tack coat shall be an absorbed item.

3.03 BINDER COURSE, NUMBER BC-1

- A. This work shall consist of the construction of a binder course, thickness indicated on the drawings, in accordance with Contract Drawings, and Mississippi Standard Specifications for State Aid Road and Bridge Construction, 1989 Edition, Section 403, Hot Bituminous Pavement.
- B. A job mix formula shall be submitted to the Engineer, for approval, prior to placing any binder course. See paragraph C of this Section.

- C. The gradation of the aggregates for the mixture shall meet the following Design MasterRange requirements.
- D. At least 20% of the total combined aggregate by weight shall be limestone or slag.
- E. The gradation of the mixture shall meet the following Design Master range requirements.

Sieve Size	Percentage Passing Sieve (by Weight)	Tolerances For Job Mix Formula
¾ inch	100	±6%
½ inch	82-100	±6%
3/8 inch	71-91	±6%
4 inch	40-73	±5%
No. 8	26-58	±5%
No. 30	9-30	±4%
No. 50	6-20	±4%
No. 200	2-10	±1.5%
Min. % A.C. by wt of Mix	4.0	±0.4%

- F. Bituminous materials shall be petroleum asphalt cement grade AC- 30, unless otherwise specified.
- G. Density: The average lot density of all bituminous base courses shall not be less than 92.0 percent nor more than 95.0 percent of the maximum density based on AASHTO T-209. When borderline results are obtained on density tests, it shall be the Contractor's responsibility to furnish and use the appropriate number, type, and size of rollers as necessary to consistency obtain the required density. When the furnished compactive effort does not produce the required density, the Contractor shall make such approved adjustments as necessary to obtain the required density. Pavement samples obtained for determining density and/or correlation of the nuclear density gauge which have a thickness less than three-eighths inch greater than the maximum size aggregate permitted by the job-mix formula will not be used as a representative sample.
- H. Mineral filler shall meet requirements of Section 703.16 of Mississippi State Aid Specifications. Mineral filler may be used as necessary to obtain desired properties; however, excessive use shall not be permitted in the mix.
- I. Tests for stability determination, if required, will be made in accordance with Section 401.02.2.1, Mississippi State Aid Specifications.
- J. Weather Limitations: Binder course shall be placed on a dry unfrozen surface and only when the air temperature meets the limitation requirements of 401.03 of the Mississippi State Aid Specifications.
- K. Surface Tolerances: Surface tolerances shall conform to the designated grades and cross-section, within the tolerances set forth in Section 403.03.2. Surface Tolerances of Mississippi State Aid Specifications.

3.04 SURFACE COURSE, NUMBER SC-1

- A. This work shall consist of the construction of a surface course, thickness

indicated on the drawings, in accordance with Contract Drawings, Mississippi Standard Specifications for Aid Road and bridge Construction, 1989 Edition, Section S-403, Hot Bituminous Pavement. Hot Bituminous surface course shall be SC-1, Type 8.

- B. A job formula shall be submitted to the Engineer, for approval, prior to placing any surface course. See Paragraph C of this Section
- C. The gradation of the aggregates for the mixture shall meet the following Design Master range requirements.
- D. 20 to 30% of the total combined aggregate by weight shall be limestone or slag of which 30 to 65% shall pass the No. 8 sieve.
- E. The gradation of the mixture shall meet the following Design Master range requirements.

Sieve Size 1	Percentage Passing Sieve (by Weight)	Tolerances For Job Mix Formula
½ inch	100	±6%
3/8 inch	87-100	±6%
No. 4	54-80	±5%
No. 8	32-63	±5%
No. 30	12-23	±4%
No. 50	6-20	±4%
No. 200	2-10	±1.5%
Min. % A.C. by wt of Mix	4.0	±0.4%

- F. Bituminous materials shall be petroleum asphalt cement grade AC-30, unless otherwise specified.
- G. Density: The average lot density of all bituminous base course shall not be less than 92.0 percent nor more than 95.0 percent of the maximum density based on AASHTO T-209. When borderline results are obtained on density tests, it shall be the Contractor's responsibility to furnish and use the appropriate number, type, and size of rollers as necessary to consistently obtain the required density. When the furnished compactive effort does not product the required density, the Contractor shall make such approved adjustments as necessary to obtain the required density. Pavement samples obtained for determining density and/or correlation of the nuclear density gauge which have a thickness less than three-eighths inch greater than the maximum size aggregate permitted by the job-mix formula will not be used as a representative sample.
- H. Mineral filler shall meet requirements for Section 703.16 of Mississippi State Specifications. Mineral filler may be used as necessary to obtain desired properties; however, no more than 3% of mineral filler by wt. of the total aggregate blend shall be permitted in the mix.
- I. Tests for stability determination, if required, will be made in accordance with Section 401.02.2.1, Mississippi State Aid Specifications.
- J. Weather Limitations: Surface course shall be placed on a dry unfrozen surface and only when the air temperature meets the limitation requirements of 401.03 of the Mississippi State Aid Specifications.

- K. Surface Tolerances: Surface tolerances shall conform to the designated grades and cross-section, within the tolerances set forth in Section 403.03.2, Surface Tolerances of Mississippi State Aid Specifications.

3.05 PRE-ROLLING

- A. Prior to application of base course, the sub-base shall be pre-rolled as may be required to determine possible presence of underlying soil failures.

3.06 TESTING

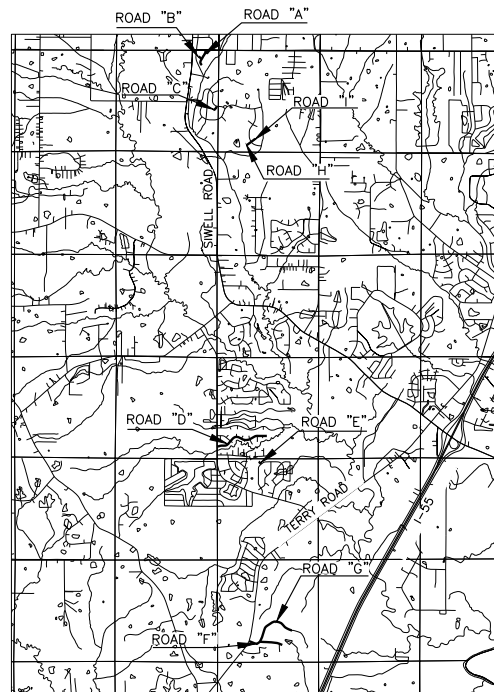
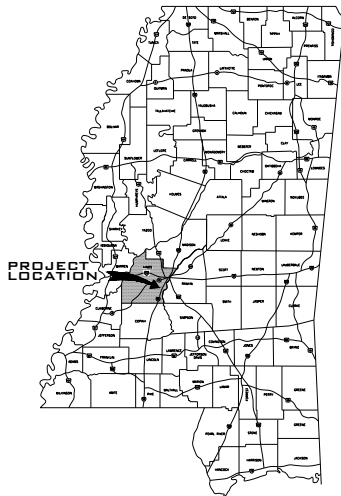
- A. The Contractor shall have the certified testing laboratory furnish test reports for applicable properties of each required asphalt mix. The asphalt mixture quality tests shall include an asphalt extraction to determine asphalt content and aggregate gradation, determination of maximum theoretical specific gravity (Rice Method), calculation of laboratory air voids, and determination of Marshall stability and flow properties. One set of asphalt mixture quality tests shall be conducted for each half-day of production. A minimum of five (5) field density tests (cores or nuclear gauge) shall be conducted for each day's production. The test results shall be submitted to the ENGINEER prior to approval of any pay request.
- B. Results of all testing shall be submitted to the Engineer in triplicate.
- C. Any prior use testing or certification costs shall be borne by the Contractor. Testing of the plant mix in the laboratory shall be paid for by the Contractor.

END OF SECTION

CONSTRUCTION PLANS FOR CITY OVERLAY PROJECT CITY OF BYRAM, MISSISSIPPI

BOARD OF ALDERMAN / ALDERWOMAN

RICHARD WHITE - MAYOR
ROSHELLE GIBSON
RUSHUNDA HARRIS-ALLEN
DIANDRA HOSEY
CHARLIE CAMPBELL
TERESA MACK
ERMA JOHNSON
DAVID MOORE



VICINITY MAP
N.T.S.

CAUTION
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

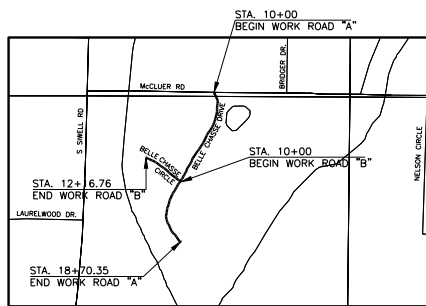


M'MASTER & ASSOCIATES, INC.
CIVIL ENGINEERS & LAND SURVEYORS

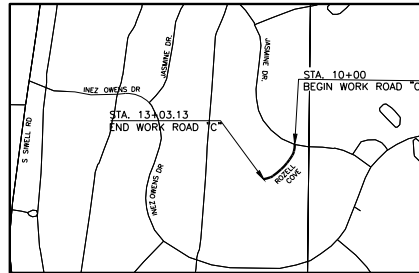
212 WATERFORD SQUARE
SUITE 300
MADISON, MS 39110
601.605.1090

ROAD "A"
 LENGTH OF ROADWAY 870.35 FT. (0.165 MI.)
 ROAD "B"
 LENGTH OF ROADWAY 216.76 FT. (0.041 MI.)
 ROAD "C"
 LENGTH OF ROADWAY 303.13 FT. (0.057 MI.)
 ROAD "D"
 LENGTH OF ROADWAY 2,928.57 FT. (0.555 MI.)
 ROAD "E"
 LENGTH OF ROADWAY 221.59 FT. (0.042 MI.)
 ROAD "F"
 LENGTH OF ROADWAY 2,074.40 FT. (0.393 MI.)
 ROAD "G"
 LENGTH OF ROADWAY 2,333.26 FT. (0.442 MI.)

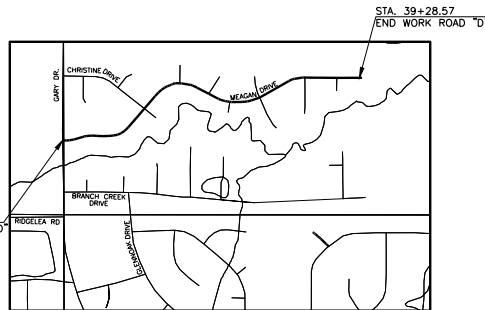
ADDITIVE ALTERNATE 1 - ROAD "H"
 LENGTH OF ROADWAY 312.13 FT. (0.059 MI.)
 ADDITIVE ALTERNATE 2 - ROAD "I"
 LENGTH OF ROADWAY 509.82 FT. (0.097 MI.)



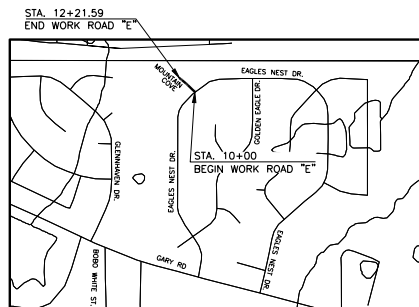
ROAD "A" - BELLE CHASSE DRIVE
 ROAD "B" - BELLE CHASSE CIRCLE
 SCALE: 1" = 300'



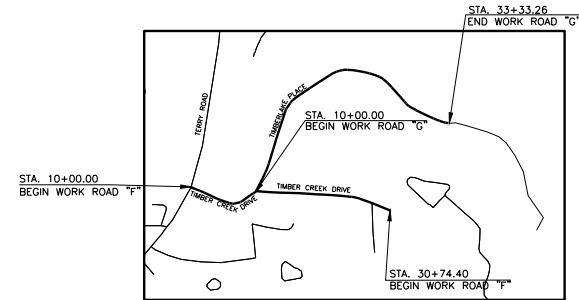
ROAD "C" - ROZELL COVE
 SCALE: 1" = 300'



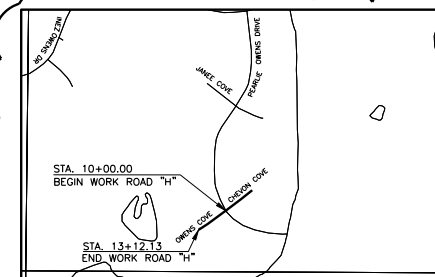
ROAD "D" - MEAGAN DRIVE
 SCALE: 1" = 500'



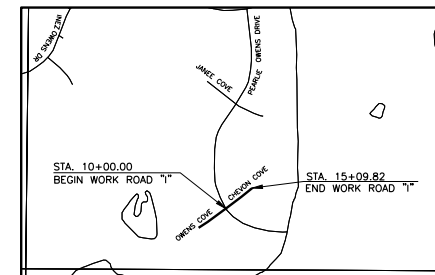
ROAD "E" - MOUNTAIN COVE
 SCALE: 1" = 500'



ROAD "F" - TIMBER CREEK DRIVE
 ROAD "G" - TIMBERLAKE PLACE
 SCALE: 1" = 500'



ROAD "H" - OWENS COVE
 SCALE: 1" = 500'



ROAD "I" - CHEVON COVE
 SCALE: 1" = 500'

Revisions				
#	Date	Revised	By	App'd
1	08-31-21	Adoption No. 1	C.L.	R.C.M.

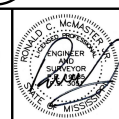
Project No.	M-2873	Designed By	R.C.M.
Date	08-13-21	Drawn By	C.L.
Scale	SEE ABOVE	Checked By	R.C.M.

CITY OVERLAY PROJECT CITY OF BYRAM, MISSISSIPPI



MCMASSTER & ASSOCIATES, INC.
 CIVIL ENGINEERS & LAND SURVEYORS

212 WATERFORD SQUARE
 SUITE 300
 MADISON, MS 39110
 601.605.1090



LAYOUT SHEET

1-A

SUMMARY OF QUANTITIES				
PAY ITEM NO.	PAY ITEM	TOTAL QUANTITY		UNIT
		PLAN	FINAL	
BASE BID - ROAD "A" THRU "G"				
1	MOBILIZATION	LUMP SUM		LUMP SUM
2	EXCESS EXCAVATION (F.M.)	541.0		CU. YD.
3	HOT MIX ASPHALT, SC-1, TYPE 8	2,783.0		TON
4	HOT MIX ASPHALT, BASE REPAIR, BB-1, TYPE 6	907.0		TON
5	HOT MIX ASPHALT, LEVELING, SC-1, TYPE 8	13.0		TON
6	COLD MILLING OF BITUMINOUS PAVEMENT, ALL DEPTHS	6,561.0		SQ. YD.
7	MAINTENANCE OF TRAFFIC	LUMP SUM		LUMP SUM
8	ADDITIONAL CONSTRUCTION SIGNS	0.0		SQ. FT.
9	LEGEND (WHITE) TRAFFIC STRIPING	288.0		LIN. FT.
ADDITIVE ALTERNATIVE 1 - OWENS COVE - ROAD "H"				
2	EXCESS EXCAVATION (F.M.)	44.0		CU. YD.
3	HOT MIX ASPHALT, SC-1, TYPE 8	132.0		TON
4	HOT MIX ASPHALT, BASE REPAIR, BB-1, TYPE 6	87.0		TON
7	MAINTENANCE OF TRAFFIC	LUMP SUM		LUMP SUM
8	ADDITIONAL CONSTRUCTION SIGNS	0.0		SQ. FT.
9	LEGEND (WHITE) TRAFFIC STRIPING	15		LIN. FT.
ADDITIVE ALTERNATIVE 2 - CHEVON COVE - ROAD "I"				
2	EXCESS EXCAVATION (F.M.)	27.0		CU. YD.
3	HOT MIX ASPHALT, SC-1, TYPE 8	173.0		TON
4	HOT MIX ASPHALT, BASE REPAIR, BB-1, TYPE 6	52.0		TON
7	MAINTENANCE OF TRAFFIC	LUMP SUM		LUMP SUM
8	ADDITIONAL CONSTRUCTION SIGNS	0.0		SQ. FT.
9	LEGEND (WHITE) TRAFFIC STRIPING	18.0		LIN. FT.

① REQUIRED FOR BASE REPAIR EXCAVATION.

SHEET INDEX	
SHEET NO.	TITLE
1	COVER SHEET
1-A	LAYOUT SHEET
2	QUANTITY AND INDEX SHEET
2-A	TYPICAL SECTION SHEET
2-B	ESTIMATED QUANTITY SHEET
2-C	BASE REPAIR & LEVELING SCHEDULE
2-D	TRAFFIC CONTROL PLAN
SA-PSM-1	PAVEMENT STRIPING AND MARKING DETAILS
SA-TSP-1	TRAFFIC SIGN PLACEMENT
635B	HIGHWAY SIGN AND BARRICADE DETAILS FOR CONSTRUCTION PROJECTS

Revisions				
#	Date	Revised	By	App'd
1	8-31-21	Added	C.L.	R.C.M.
		Attention No. 1		

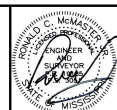
Project No.	M-2873	Designed By	R.C.M.
Date	08-13-21	Drawn By	C.L.
Scale	SEE ABOVE	Checked By	R.C.M.

CITY OVERLAY PROJECT
CITY OF BYRAM, MISSISSIPPI



McMASTER & ASSOCIATES, INC.
CIVIL ENGINEERS & LAND SURVEYORS

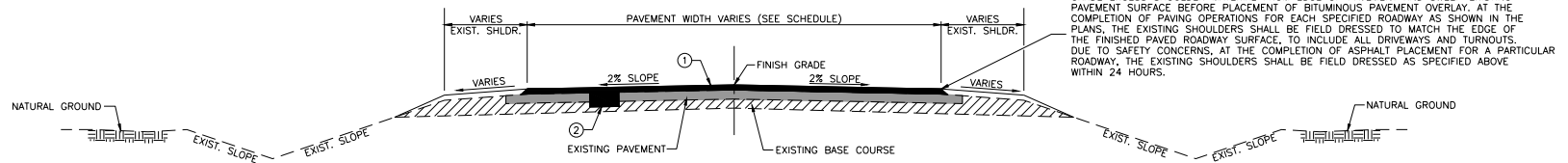
212 WATERFORD SQUARE
SUITE 300
MADISON, MS 39110
601.695.1090



QUANTITY AND INDEX
SHEET

2

RATES OF APPLICATION USED FOR ESTIMATING QUANTITIES	
ITEM	RATE
HOT MIX ASPHALT	110 LBS./SQ. YD./IN.

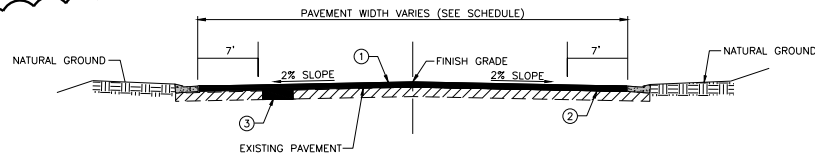


TYPICAL OVERLAY SECTION-OPEN DITCH
N.T.S.

ROADS "C, F, G, H, I"

- ① 2" HOT MIX ASPHALT, SC-1, TYPE 8
- ② FAILED AREAS DESIGNATED BY THE ENGINEER SHALL BE UNDERCUT TO A 12" MINIMUM DEPTH AND REPAIRED WITH HOT MIX ASPHALT, BB-1, TYPE 6 (SEE BASE REPAIR SCHEDULE)



ROAD	PAVEMENT WIDTH
A	23'
B	23'
C	24'
D	29'
E	23'
F	16'
G	17'
ALT. 1	
H	22'
ALT. 2	
I	22'



TYPICAL OVERLAY SECTION-CURB AND GUTTER
N.T.S.

ROADS "A, B, D, E"

- ① 2" HOT MIX ASPHALT, SC-1, TYPE 8
- ② COLD MILLING (2" DEPTH AND VARIES-7' WIDE)
- ③ FAILED AREAS DESIGNATED BY THE ENGINEER SHALL BE UNDERCUT TO A 12" MINIMUM DEPTH AND REPAIRED WITH HOT MIX ASPHALT, BB-1, TYPE 6 (SEE BASE REPAIR SCHEDULE)

Revisions					Project No.	Designed By	CITY OVERLAY PROJECT CITY OF BYRAM, MISSISSIPPI				 <div>M'MASTER & ASSOCIATES, INC. CIVIL ENGINEERS & LAND SURVEYORS</div>	212 WATERFORD SQUARE SUITE 300 MADISON, MS 39110 601.605.1090		TYPICAL SECTION SHEET				
#	Date	Revised	By	App'd	M-2873	R.C.M.								08-13-21	C.L.	SEE ABOVE	R.C.M.	2-A
1	8-31-21	Added Item No. 1	C.L.	R.C.M.														

2-A

ESTIMATED QUANTITIES FOR OVERLAY

ROAD	WIDTH	ROADWAY LENGTH	SURFACING AREA	*EXTRA AREA	TOTAL AREA	**COLD MILLING	HOT MIX ASPHALT, SC-1, TYPE 8 (OVERLAY)	HOT MIX ASPHALT, BB-1, TYPE 6 (BASE REPAIR)	EXCESS EXCAVATION (F.M.)	HOT MIX ASPHALT, SC-1, TYPE 8 (LEVELING)
	FT.	FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	TON	TON	CU. YD.	TON
							BASE BID			
A	23'	561.95	1,436.09	1,336.00	2,772.09	1,403.33	304.93	188.83	95.37	0
B	23'	131.29	335.52	554.00	889.52	397.79	97.85	0	0	0
C	24'	213.51	569.36	550.00	1,119.36	0	123.13	13.35	6.74	12.22
D	29'	2,928.57	9,436.50	728.00	10,164.50	4,568.22	1,118.10	58.74	29.67	0
E	23'	124.83	319.01	636.00	955.01	191.15	105.05	469.66	320.19	0
F	16'	1,971.83	3,505.48	674.00	4,179.48	0	459.74	68.49	34.59	0
G	17'	2,333.26	4,407.27	810.00	5,217.27	0	573.90	107.43	54.26	0
BASE BID TOTAL						6,560.49	2,782.70	906.50	540.82	12.22
ADDITIVE ALTERNATE 1 - OWENS COVE										
H	22'	210.73	515.12	676.00	1,191.12	0	131.02	86.24	43.56	0
ADDITIVE ALTERNATE 2 - CHEVON COVE										
I	22'	414.97	1,014.37	554.00	1,568.37	0	172.52	51.77	26.15	0

*INCLUDES EXTRA AREA IN CURVES, PAVED APRONS, TURNOUTS, AND INTERSECTIONS.

ESTIMATED QUANTITIES FOR PAVEMENT MARKING

ROAD	LEGEND WHITE (18" STOP BARS)
	LIN. FT.
BASE BID	
BELLE CHASSE DRIVE (ROAD "A")	16.00
BELLE CHASSE CIRCLE (ROAD "B")	14.00
ROZELL COVE (ROAD "C")	14.00
MEAGAN DRIVE (ROAD "D")	190.00
MOUNTAIN COVE (ROAD "E")	15.00
TIMBER CREEK DRIVE (ROAD "F")	19.00
TIMBERLAKE PLACE (ROAD "G")	20.00
BASE BID TOTAL	288.00
ADDITIVE ALTERNATE 1	
OWENS COVE (ROAD "H")	15.00
ADDITIVE ALTERNATE 2	
CHEVON COVE (ROAD "I")	18.00

Revisions

#	Date	Revised	By	App'd
1	8-31-21	Addressed No. 1	C.L.	R.C.M.

Project No.

M-2873

Designed By

R.C.M.

Date

08-13-21

Drawn By

C.L.

Scale

SEE ABOVE

Checked By

R.C.M.

CITY OVERLAY PROJECT
CITY OF BYRAM, MISSISSIPPI
McMASTER & ASSOCIATES, INC.
 CIVIL ENGINEERS & LAND SURVEYORS

 212 WATERFORD SQUARE
 SUITE 300
 MADISON, MS 39110
 601.605.1090


ESTIMATED QUANTITY SHEET

2-B

BASE REPAIR SCHEDULE							
STA-STA	SIDE	LENGTH (FT.)	WIDTH (FT.)	AREA (SQ. YD.)	DEPTH (IN.)	EXCESS EXC. (CU. YD.)	ASPHALT, BB-1, TYPE 6
ROAD "A" (BELLE CHASSE DRIVE)							
10+63 - 10+72	RT	10	8	8.89	12	2.96	5.87
11+27 - 11+62	RT	35	12	46.67	12	15.56	30.80
14+65 - 14+69	RT	4	6	2.67	12	0.89	1.76
15+22 - 15+60	LT-RT	38	23	97.11	12	32.37	64.09
16+74 - 17+16	LT	42	9	42.00	12	14.00	27.72
17+62 - 17+84	CL-RT	22	13	31.78	12	10.59	20.97
18+30 - 18+57	CL-RT	27	19	57.00	12	19.00	37.62
TOTAL ROAD "A"						95.37	188.83
ROAD "B" (BELLE CHASSE CIRCLE) - NONE							
ROAD "C" (ROZELL COVE)							
10+50 - 10+76	RT	26	7	20.22	12	6.74	13.35
TOTAL ROAD "C"						6.74	13.35
ROAD "D" (MEAGAN DRIVE)							
15+08 - 15+15	LT	5	4	2.22	12	0.74	1.47
17+17 - 17+21	CL	4	3	1.33	12	0.44	0.88
20+04 - 20+08	LT	4	3	1.33	12	0.44	0.88
20+11 - 20+21	CL	10	12	13.33	12	4.44	8.80
20+52 - 20+89	LT	37	9	37.00	12	12.33	24.42
21+59 - 21+64	LT	5	5	2.78	12	0.93	1.83
21+61 - 21+70	RT	9	7	7.00	12	2.33	4.62
23+07 - 23+30	LT	23	6	15.33	12	5.11	10.12
23+55 - 23+63	LT	8	4	3.56	12	1.19	2.35
25+20 - 25+25	CL	5	4	2.22	12	0.74	1.47
39+09 - 39+13	CL	4	2	0.89	12	0.30	0.59
33+08 - 33+11	CL	3	3	1.00	12	0.33	0.66
36+12 - 36+15	CL	3	3	1.00	12	0.33	0.66
TOTAL ROAD "D"						29.67	58.74
ROAD "E" (MOUNTAIN COVE)							
10+66 - 11+25	LT-CL	59	15	98.33	12	32.78	64.90
11+25 - 12+22	Entire Culdesac	97	80	613.28	12	287.41	404.76
TOTAL ROAD "E"						320.19	469.66
ROAD "F" (TIMBER CREEK DRIVE)							
12+34 - 12+38	LT	4	3	1.33	12	0.44	0.88
13+51 - 13+55	CL	4	3	1.33	12	0.44	0.88
13+57 - 13+64	RT	7	4	3.11	12	1.04	2.05
13+65 - 13+68	CL	3	3	1.00	12	0.33	0.66
13+70 - 13+83	LT-CL	13	18	26.00	12	8.67	17.16
13+83 - 13+96	CL-CL	13	13	18.78	12	6.26	12.39
14+01 - 14+07	LT	6	3	2.00	12	0.67	1.32
15+07 - 15+21	RT	14	4	6.22	12	2.07	4.11
15+53 - 15+69	LT	16	4	7.11	12	2.37	4.69
16+68 - 16+84	RT	16	4	7.11	12	2.37	4.69

BASE REPAIR SCHEDULE							
STA-STA	SIDE	LENGTH (FT.)	WIDTH (FT.)	AREA (SQ. YD.)	DEPTH (IN.)	EXCESS EXC. (CU. YD.)	ASPHALT, BB-1, TYPE 6
ROAD "F" (TIMBER CREEK DRIVE)-CONT.							
17+02 - 17+06	RT	4	3	1.33	12	0.44	0.88
17+94 - 17+98	LT	4	3	1.33	12	0.44	0.88
19+47 - 19+53	RT	6	3	2.00	12	0.67	1.32
19+61 - 19+75	RT	14	3	4.67	12	1.56	3.08
20+78 - 20+83	RT	5	4	2.22	12	0.74	1.47
25+81 - 26+07	LT	26	2	5.78	12	1.93	3.81
30+28 - 30+36	LT	8	5	4.44	12	1.48	2.93
30+61 - 30+70	CL	9	8	8.00	12	2.67	5.28
TOTAL ROAD "F"						34.59	68.49
ROAD "G" (TIMBERLAKE PLACE)							
10+29 - 10+50	RT	4	21	9.33	12	3.11	6.16
10+64 - 10+76	RT	12	4	5.33	12	1.78	3.52
11+13 - 11+18	LT	5	3	1.67	12	0.56	1.10
11+48 - 11+73	LT	25	3	8.33	12	2.78	5.50
13+14 - 13+18	RT	4	3	1.33	12	0.44	0.88
13+36 - 13+39	RT	3	3	1.00	12	0.33	0.66
13+91 - 14+29	LT	38	6	25.33	12	8.44	16.72
18+93 - 19+97	LT	4	3	1.33	12	0.44	0.88
19+29 - 19+33	RT	4	3	1.33	12	0.44	0.88
23+97 - 24+09	CL	12	5	6.67	12	2.22	4.40
24+25 - 24+31	CL	6	5	3.33	12	1.11	2.20
25+11 - 25+15	LT	4	3	1.33	12	0.44	0.88
25+43 - 25+58	RT	15	4	6.67	12	2.22	4.40
26+53 - 26+83	RT	30	4	13.33	12	4.44	8.80
26+69 - 26+75	LT	6	3	2.00	12	0.67	1.32
27+05 - 27+11	RT	6	4	2.67	12	0.89	1.76
27+63 - 27+70	LT	7	4	3.11	12	1.04	2.05
27+85 - 27+91	LT	6	4	2.67	12	0.89	1.76
29+82 - 29+86	RT	4	4	1.78	12	0.59	1.17
30+45 - 30+54	LT	9	5	5.00	12	1.67	3.30
31+38 - 31+53	RT	15	3	5.00	12	1.67	3.30
31+87 - 32+00	RT	13	5	7.22	12	2.41	4.77
33+14 - 33+33	RT	19	8	16.89	12	5.63	11.15
* Repair 1	RT	13	3	4.33	12	1.44	2.86
* Repair 2	RT	14	5	7.78	12	2.59	5.13
* Repair 3	RT	9	6	6.00	12	2.00	3.96
* Repair 4	RT	8	10	8.89	12	2.96	5.87
* Repair 5	RT	4	4	1.78	12	0.59	1.17
* Repair 6	RT	4	3	1.33	12	0.44	0.88
TOTAL ROAD "G"						54.36	107.43
ADDITIVE ALTERNATE 1 - ROAD "H" (OWENS COVE)							
10+00 - 10+04	LT	4	9	4.00	12	1.33	2.64
10+10 - 10+15	CL	5	8	4.44	12	1.48	2.93
10+18 - 10+24	LT	6	5	3.33	12	1.11	2.20
10+87 - 11+06	LT	19	8	16.89	12	5.63	11.15
11+39 - 11+87	LT-RT	42	21	98.00	12	32.67	64.68
12+50 - 12+55	RT	5	3	1.67	12	0.56	1.10
12+55 - 12+62	LT	7	3	2.33	12	0.78	1.54
TOTAL ADDITIVE ALTERNATE 1 - ROAD "H"						43.56	86.24
ADDITIVE ALTERNATE 2 - ROAD "I" (CHEVON COVE)							
10+97 - 11+75	RT	78	6	52.00	12	17.33	34.32
14+71 - 14+88	CL	17	14	26.44	12	8.81	17.45
TOTAL ADDITIVE ALTERNATE 2 - ROAD "I"						26.15	51.77

BASE REPAIR SCHEDULE		
	EXCESS EXC. (CU. YD.)	ASPHALT, BB-1, TYPE 6
BASE BID TOTAL	540.82	906.50
ADDITIVE ALTERNATE 1	43.56	86.24
ADDITIVE ALTERNATE 2	26.15	51.77
* DENOTES BASE REPAIR IS IN EXTRA AREA (LOOP)		

LEVELING SCHEDULE						
STA-STA	SIDE	LENGTH (FT.)	WIDTH (FT.)	AREA (SQ. YD.)	THICKNESS (IN.)	ASPHALT, BB-1, TYPE 6 (TON)
ROAD "C" (ROZELL COVE)						
10+40 - 12+40	RT	200	10	222.22	1	12.22
				TOTAL ROAD "C"		12.22
				PROJECT TOTAL		12.22

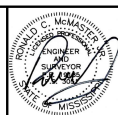
Revisions					Project No.	Designed By
#	Date	Revised	By	App'd	M-2873	R.C.M.
1	8-31-21	Added Station 1	C.L.	R.C.M.		
					08-13-21	C.L.
					SEE ABOVE	R.C.M.

CITY OVERLAY PROJECT CITY OF BYRAM, MISSISSIPPI



McMASTER & ASSOCIATES, INC.
CIVIL ENGINEERS & LAND SURVEYORS

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MADISON, MS 39110
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BASE REPAIR & LEVELING SCHEDULE

2-C

