CMW Inc.

ARCHITECTURE CIVIL ENGINEERING SURVEYING SITE PLANNING

CASE NO: 2008-00182

RECEIVED
MAY 22 2008
PUBLIC SERVICE COMMISSION

CONTRACT #2 (Revised)

500,000 GALLON ELEVATED WATER STORAGE TANK

FOR

MADISON COUNTY UTILITIES DISTRICT

MADISON COUNTY, KENTUCKY

FEBRUARY, 2008

PROJECT MANUAL

Set No.

STATE OF KENTUCKY
KERRY S. ODLE
12,497
LICENSED PROFESSIONAL ENGINEER

5/20/08

138 N. Keeneland Dr., Suite E, Richmond, KY 40475 Tel 859.623.2966 Fax 859.623.0886

PROJECT MANUAL

FOR

CONTRACT #2 (Revised)

500,000 GALLON ELEVATED WATER STORAGE TANK

FOR

MADISON COUNTY UTILITIES DISTRICT

OWNER:

MADISON COUNTY UTILITIES DISTRICT

FEBRUARY, 2008

CMW, INC
138 NORTH KEENELAND DRIVE, SUITE E
RICHMOND, KENTUCKY 40475

DWSRF NO. A0729
CMW PROJECT NO. 06524.02

TABLE OF CONTENTS

DIVISION 2 - TECHNICAL SPECIFICATIONS

END OF TABLE OF CONTENTS

ADDENDUM NUMBER ONE

Contract #2 (REBID)
500,000 Gallon Elevated Water Storage Tank

For

Madison County Utilities District

March 20, 2008

CMW, Inc.
138 North Keeneland Drive
Suite E
Richmond, KY

TO: ALL PRIME BIDDERS OF RECORD

This Addendum forms a part of the contract documents dated February, 2008, as noted below. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject bidder to disqualification.

I. Specifications

A. Section 02520 – Elevated Water Storage Tank

Add attached "Report of Geotechnical Exploration" to the end of this section.

END ADDENDUM NUMBER ONE.

REPORT OF GEOTECHNICAL EXPLORATION

PROPOSED 500,000 GALLON ELEVATED WATER TANK
RICHMOND, MADISON COUNTY, KENTUCKY

- Prepared For -

MADISON COUNTY UTILITIES DISTRICT
MADISON COUNTY, KENTUCKY

- Prepared By -

MACTEC ENGINEERING AND CONSULTING, INC.
LEXINGTON, KENTUCKY

MACTEC Project Number 3112-08-0459

March 19, 2008

MACTEC

MACTEC

engineering and constructing a better tomorrow

March 19, 2008

Madison County Utilities District
c/o: CMW, Inc.
Attn: Mr. Kerry Odle
Email: kodle@cmwaec.com
Phone: (859) 623-2966

Subject: **Report of Geotechnical Exploration**
Proposed 500,000 Gallon Elevated Water Tank
Richmond, Madison County, Kentucky
MACTEC Project Number: 3112-08-0459

Dear Mr. Odle:

MACTEC Engineering and Consulting, Inc. (MACTEC) has completed a geotechnical exploration for the referenced project. Our services were provided in accordance with MACTEC Proposal Number Prop08Lexi-030 dated February 7, 2008 and signed by Mr. John C. Clark, with the Madison County Utilities District, on February 8, 2008.

We completed a geotechnical exploration for the original planned location of the tank (Project No. 3112-07-0403). We understand that due to problems obtaining property rights, the planned location of the tank has moved.

The attached report provides a review of project information provided to us, a description of site and subsurface conditions, and geotechnical recommendations for use in design and construction of the proposed water tank. Appendices to the report include site and boring location plans, and results of field and laboratory testing.

We appreciate this opportunity to provide our services and look forward to serving as your geotechnical consultant throughout this and on future projects. Please contact us if you have any questions regarding the information presented.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.

Vandana Muddu
Vandana Muddu
Staff II Geotechnical Engineer

Joseph S. Cooke, P.E.
Principal Engineer
Licensed KY 21244

STATE OF KENTUCKY
JOSEPH S. COOKE
21244
LICENSED PROFESSIONAL ENGINEER

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 PURPOSE OF EXPLORATION

MACTEC Engineering and Consulting, Inc. (MACTEC) has completed a geotechnical engineering exploration for the proposed 500,000 gallon elevated water tank in Madison County, Kentucky. The purpose of this exploration has been to characterize subsurface conditions affecting the property and to prepare geotechnical recommendations for use in design and construction. Our services were performed in accordance with in our Proposal Number Prop08Lexi-030, dated February 7, 2008.

1.2 PROJECT INFORMATION

Project information was provided in a Request for Proposal documentation sent to our office dated January 28, 2008, and in telephone correspondence between your office and Mr. Joe Cooke, PE, of MACTEC. We understand the project will consist of a new 500,000 gallon elevated water tank. We completed a geotechnical exploration for the original planned location of the tank (Project No. 3112-07-0403). We understand that due to problems obtaining property rights, the planned location of the tank has moved. The new tank site is located just north of Continental Drive, on the west side of Highway 25 and the south side of Richmond, Madison County, Kentucky. The tank will have 6 legs set on a circular pattern with a 70 feet diameter.

We were provided with an auto-cad drawing "The Okonite Company, Inc.", dated December 10, 2007, by CMW, Inc., showing site topographic plan, the proposed site layout and existing nearby structures. The project site was previously wooded and the trees were cut recently.

Final grading information has not been provided. We have assumed that less than 2 feet of cut and/or fill will be required based on the provided site topographic plans. Foundation or structural loading conditions were not available at this time. We have assumed individual leg and column loads of at least 500 to 750 kips.

2.0 EXPLORATION FINDINGS

2.1 SITE SURFACE CONDITIONS

Site reconnaissance was performed on March 7, 2008 to observe and document surface conditions and direct drilling operations. Information gathered during the reconnaissance was used to aid in interpretation of subsurface data and to identify conditions which could affect our recommendations.

The project site is located approximately 1200 feet west of the intersection of US Route 25 and Continental drive, and just south of Richmond, in Madison County, Kentucky. Industrial developments adjoin the site to the north and south and vacant land lies to the east and west.

We were informed that the site was recently graded after clearing the woods and topsoil stripped. The surface cover was generally bare, with tree debris in some areas. Surface conditions were wet during our site visit. The site was relatively level with a topographic relief of about 2 feet.

2.2 SITE GEOLOGY

Review of the published *USGS Geological Map of the Richmond South Quadrangle, Madison County, Kentucky, dated 1966* indicates the project site is underlain by Ordovician aged rock deposits associated with the Drakes Formation and the Reba and the Terrill members of the Ashlock Formation.

The Drakes Formation is associated with dolomite, shale and limestone. Dolomite is described as silty and argillaceous, greenish, brownish and light olive gray commonly streaked and mottled, micrograined to medium grained, unevenly bedded, weathers into irregular blocks. Shale is described as dolomitic, light olive to greenish gray, in even beds of less than ½ inch thick. Limestone is described as medium dark to medium light gray, fine grained.

The Reba member of the Ashlock Formation is associated with limestone. Limestone is described as silty and dolomitic, brownish and medium to light olive gray, mottled with grayish blue-green, micrograined to fine grained.

The Terrill member of the Ashlock Formation is associated with dolomite. Dolomite is described as silty, greenish gray to light olive gray, weathers light olive gray to pale olive, micrograined, even bedded.

USGS map topographic elevations in the area are between 950 and 1050 feet. Surface runoff at the site appears to drain in multiple directions but ultimately to the north into the pond. Geologic data in the immediate area does not reveal fault zones that would negatively affect the project. However, the Tate Creek Fault was mapped about 2 miles north of the site. The fault is mapped to be running from north to east with the downthrown side to the northeast and upthrown side to the southwest. The map also indicates the presence of two more fault lines about 5 miles south of the project site. Karst is associated with the geology, which includes sinkholes. Several sinkholes were mapped within 5 miles radius of the site.

2.3 SUBSURFACE CONDITIONS

The subsurface conditions were explored with four soil test borings (B-1, B-2, B-3 and B-4) drilled according to procedures presented in the Attachment. Boring locations and depths were selected by MACTEC engineers and located in the field using a hand tape measuring from the staked centre point of the tank. Ground surface elevations at each boring were determined by level and rod by MACTEC and referenced to the existing bench mark at the site. The boring locations and elevations shown in the attached Boring location plan should be considered accurate only to the degree implied by the measurement methods used.

Subsurface conditions encountered in the borings appear on the Test Boring Records in Attachments. These records represent our interpretation of subsurface conditions based on field logs, visual examination of recovered soil samples, and laboratory testing of selected samples. Contacts between various strata on the Test Boring Records represent approximate contact location. The transition between strata may be gradual.

For details of subsurface conditions encountered at particular boring locations, please refer to the attached boring logs. Subsurface conditions are described below:

Lean Clay - Our borings encountered lean clay from the ground surface extending to depths of 3.5 to 5 feet. Where sampled, the soil is described as moist to very moist, light brown to orangish brown, lean clay, with organics (top 2 to 3 feet samples) and limestone fragments.

Standard Penetration Test (SPT) "N"-values in the fill material range from 6 to 18 blows per foot (bpf) indicating FIRM to VERY STIFF consistencies. Higher "N" values are believed to be associated with the presence of wood chips (in the top 1 foot) and rock fragments throughout. Average "N"-values for this material range from 8 to 13 bpf.

Laboratory index testing of one representative samples indicate the material has a Liquid Limit of 32 percent and a Plasticity Index (PI) of 20. Moisture contents in this material range from 20 to 30 percent. The ASTM classification of this material is CL, lean clay.

Fat Clay - Our borings encountered fat clay from the below the lean clay layer extending to auger refusal depths of 12.6 to 18.6 feet. Where sampled, the soil is described as slightly moist to moist, grayish brown to orangish brown and tan, fat clay, with some sand and limestone. Isolated tree roots were observed at about 4 to 5 feet deep.

Standard Penetration Test (SPT) "N"-values in the fill material range from 9 to 28 blows per foot (bpf) indicating STIFF to VERY STIFF consistencies. Higher "N" values are believed to be associated with the presence of rock fragments. Average "N"-values for this material range from 16 to 23 bpf.

Laboratory index testing of one representative samples indicate the material has a Liquid Limit of 63 percent and a Plasticity Index (PI) of 24. Moisture contents in this material range from 20 to 28 percent. The percent finer than #200 sieve test performed on one representative sample indicate the material has about 55% fines. The ASTM classification of this material is CH, fat clay.

Refusal Materials - Auger refusal was encountered in four of our borings at depths ranging from about 12.6 to 18.6 feet. We have interpreted auger refusal to be the top of the weathered rock surface. Rock coring was not performed in our borings due to site access restrictions for the water truck due to wet subgrade (loaded water truck could not get near the site). Our borings were terminated at auger refusal depths. The auger refusal depths, surface elevations, and auger refusal elevations for each boring are tabulated below.

Boring No.	Surface Elevation (ft)	Auger Refusal Depth (ft)	Auger Refusal Elevation (ft)
B-1	998.5	17.0	981.5
B-2	999.7	18.3	981.4
B-3	998.3	18.6	979.7
B-4	999.8	12.6	987.2

Prepared by *VM*
Checked by *JSC*

Note: Surface elevations are rounded to the nearest decimal and are approximate.

For details of subsurface conditions encountered at a particular boring location please refer to the attached boring logs.

2.4 GROUND WATER CONDITIONS

Ground water was not detected in our borings at the time of drilling. Typically, water conditions affecting construction projects in central Kentucky are related to trapped or perched water which occurs in irregular, discontinuous locations within the soil overburden, or at the soil/rock contact. When water bearing strata are exposed in excavations, such as cut slopes, utility, or footing trenches, they can produce widely varying seepage durations and rates depending on recent rainfall activity and other hydro-geologic characteristics of the area. In karst areas, water conditions can vary rapidly during wet weather. Perched water sources are often not linked to the more continuous, relatively stable ground water table that may occur at great depths.

2.5 SEISMIC SITE CLASSIFICATION

The 2002 edition of the Kentucky Building Code (KBC), as updated, was reviewed to determine the Site Seismic Classification. Based on our review of geologic data, our experience, and subsurface conditions encountered, we recommend a Seismic SITE CLASS "D" for the site soil conditions. Our

site classification is based on the following assumptions and considers Boring B-1 to be the critical profile for seismic response:

- LEAN CLAY below the ground surface to a depth of approximately 3.5 feet with an average N-value of approximately 13 bpf;
- FAT CLAY below the lean clay layer to a depth of approximately 17 feet with an average N-value of approximately 14 bpf;
- Bedrock (Drakes Formation) below the soil overburden to a depth of at least 100 feet with an assumed average shear wave velocity of 1500 fps based on our experience with similar formations.

Note: If deep foundations are utilized as recommended for the foundations system of the tank (refer to Geotechnical Recommendations Section 4.0), a Seismic SITE CLASS "C" may be used.

2.6 LABORATORY TESTING

Laboratory testing was performed on disturbed SPT samples recovered from our borings. The objective of the laboratory testing was to obtain correlative data for estimating soil shear strengths and compressibility. Specifically, we performed the following tests:

- 15 Natural Moisture Content Tests
- 2 Atterberg Limit Tests
- 1 Percent Fines Test (#200 wash)

Detailed descriptions of these tests and the results of our testing are included in Appendix B.

3.0 GEOTECHNICAL ANALYSIS

Based on our experience with similar projects and information gathered from the subsurface exploration, we believe the site is suitable for the proposed development. The primary geotechnical concerns are the presence of 1) Plastic Soils, and 2) Karst Subsurface Conditions. These concerns can be addressed using suitable procedures during construction. We briefly summarize this concern below:

3.1 PLASTIC SOILS

Soils visually and laboratory classified as "CH" type clays (clays of moderate plasticity), according to the USCS, were encountered in our borings. These plastic clays are susceptible to volume change with variations in moisture content. Should these volume changes occur within the building areas, the resulting deformations can cause undesirable cracking in the structure. These materials are suitable for use as fill provided the soil moisture contents are stringently controlled in the field.

3.2 KARST SUBSURFACE CONDITIONS

Evidence of karst geologic conditions is present in the Lexington area in the form of closed depressions or "sinkholes" appearing on topographic and geological maps. This is a regional concern. One sinkhole was mapped immediately northwest of the site in the existing horse track. However, we observed no evidence of sinkhole development at the project site. Sinkholes may be associated with crevasses in the rock surface, open cavities, caves below the surface, or in combination with these conditions. Though no evidence of karst conditions was observed at the site, the potential for such conditions to be encountered during the proposed construction should be considered a possibility.

4.0 GEOTECHNICAL RECOMMENDATIONS

The foundation of the proposed tank should be supported using drilled piers bearing into the underlying competent bedrock. Specific recommendations are presented in the following sections.

4.1 DRILLED PIER FOUNDATIONS

For the drilled pier foundations of the proposed tank we recommend the piers to extend to the underlying competent limestone bedrock for support. This is based on the type of structure proposed, anticipated structural loads, the subsurface conditions encountered, and our experience with similar conditions. The following sections provide design and construction recommendations for deep foundations.

4.1.1 Design Considerations

The drilled piers should be sized for an allowable end-bearing pressure of 40 kips per square foot (ksf) for bearing on the underlying rock formation. This allowable bearing pressure is based on the assumption that the bearing material for each drilled shaft will be observed and approved by the geotechnical engineer. We recommend a rock socket of at least 1 foot for the drilled piers. Total and differential settlements of foundations should be minimal.

4.1.2 Construction Considerations

The following construction considerations are recommended for drilled shaft construction:

- Clean the foundation bearing area so it is nearly level or suitably benched and is free of ponded water or loose material.

- Provide a minimum drilled shaft diameter of 30 inches to reasonably enter the drilled shaft excavation for cleaning, bottom preparation and inspection.

- Make provisions for ground water removal (if encountered) from the drilled shaft excavation. If water is flowing into the drilled shaft at less than 20 gallons per minute, pumps may be used to maintain less than 2 inches of water in the drilled shaft during cleaning and inspection. After approval of the bearing surface, the pumps should be pulled and concreting commenced immediately. If more than 20 gallons per minute are flowing into the drilled hole, the water level should be allowed to stabilize before attempting to place the concrete. For this condition, concrete placement should be accomplished using a tremie pipe or concrete pumping equipment.

- Specify concrete slumps ranging from 4 to 7 inches for the drilled shaft construction. These slumps are recommended to fill irregularities along the sides and bottom of the drilled hole, displace water as it is placed, and permit placement of reinforcing cages into the fluid concrete.

- Retain the geotechnical engineer to observe foundation excavations after the bottom of the hole is leveled, cleaned of any mud or extraneous material, and dewatered.

- Install a temporary protective steel casing to prevent sidewall collapse, prevent excessive mud and water intrusion, and to allow workers to safely enter, clean and inspect the drilled shaft.

- Inspect the drilled shaft excavation after the bottom of the hole is leveled, cleaned of any mud or extraneous material, and dewatered.

- The protective steel casing may be extracted as the concrete is placed provided a sufficient head of concrete is maintained inside the steel casing to prevent soil or water intrusion into the newly placed concrete.

- Direct the concrete placement into the drilled hole through a centering chute to reduce side flow or segregation.

4.1.3 Quality Control Requirements

We recommend the drilled pier construction be observed by a representative of the geotechnical engineer. The observation should address the following items:

- Top location within tolerances
- Correct plan dimensions
- Plumbness within tolerances
- Materials excavated agree with borings
- Statement of bottom cleanliness
- Construction procedure

Drilled shafts with diameters of 30 inches or greater are large enough to allow a down-hole inspection of the bearing conditions. At least one, 1½- to 2-inch diameter probe hole must be drilled at least 5 feet into the rock-bearing material for all drilled shafts. These probe holes are usually drilled with a pneumatic percussion drill. The inspector should check the probe hole using a hooked-end steel feeler rod to assess the rock continuity. If this check indicates a discontinuous or compressible seam in the rock, the drilled hole should be excavated deeper. The frequency of these probe holes may be reduced by the geotechnical engineer if the results of the checks indicate consistent subsurface conditions. However, additional probe holes may be required by the geotechnical engineer to check foundations supported on marginal material. Significant deviations from the specified or anticipated conditions should be reported to the owner's representative and to the foundation designer.

4.2 EARTHWORK

We recommend the following procedures be performed as part of the earthwork and site grading for the proposed project.

4.2.1 Site Preparation

- Strip all topsoil and organic materials from the construction area. These materials should be wasted from the site or used as topsoil in landscape areas;

- Proofroll exposed subgrade to detect unstable conditions prior to placing fill or after the site has been cut to grade;

- Perform the proofrolling after a suitable period of dry weather to avoid degrading the subgrade;

- Use proofrolling equipment consisting of a heavily loaded dump truck or similar equipment judged acceptable by the geotechnical engineer;

- Make several passes with the proofrolling equipment over each section;

- Remove any soft or organic soil which pump, rut, or wave during proofrolling and replace it with properly compacted fill;

- Remove any unsuitable material encountered during proofrolling and replace it with properly compacted fill;

- Retain MACTEC to observe the proofrolling operations and make recommendations for any unstable or unsuitable conditions encountered;

We recommend that site grading be started in the period from about late April to about November in order to prevent additional undercutting due to wet conditions. Additionally, subgrade soils and fill materials may be scarified and dried during this period should these soils become excessively wet due to rainy weather. Drying of the site soils during other portions of the year is typically difficult.

4.2.2 Compacted Fill

Prior to beginning fill construction, collect representative samples of the proposed fill materials and test them to determine the compaction moisture-density relationship, plasticity, and natural moisture content. These tests are needed to determine if the proposed fill material is acceptable and for quality control during compaction.

The following criteria are recommended for structural fill construction:

- In the upper 4 feet of subgrade areas, materials with a Plasticity Index of less than 35 and a maximum dry density (ASTM D698) greater than 95 pcf may be used;

- Construct compacted fill by spreading suitable soil in maximum 8-inch thick loose lifts;

- Compact the fill lift to at 98 percent of the soil's maximum dry density (ASTM D698);

- In general, the moisture content of compacted fill should be maintained at plus 2 percent and minus 2 percent of optimum moisture;

- Perform one in-place density test in every 10,000 square feet for each 8-inch thick fill lift;

- Retain a representative of MACTEC to observe and document fill placement and compaction operations.

4.2.3 General

- Maintain positive surface drainage during all earthwork operations to prevent water from ponding on the surface;

- Roll the surface with a rubber-tired or steel-drummed roller to improve surface runoff if precipitation is expected;

- Contact MACTEC if the subgrade soils become excessively wet, dry, or frozen.

4.3 GROUND WATER CONTROL

Typically, ground water encroaching upon construction excavations can be removed by placing a sump near the source of seepage and then pumping from the sump. Should heavy seepage occur, or should there be evidence of soil particle migration such as silting of the sump, then the geotechnical engineer should be contacted. It should be noted that groundwater levels may fluctuate depending on climatic conditions.

5.0 BASIS FOR RECOMMENDATIONS

The assessment of site environmental conditions or the presence of contaminants in the soil, rock, surface water or groundwater of the site was beyond the scope of this exploration.

The recommendations provided are based in part on project information provided to us and they only apply to the specific project and site addressed in this report. If the project information section in this report contains incorrect information or if additional information is available, you should convey

the correct or additional information to us and retain us to review our recommendations. We can then modify our recommendations if they are inappropriate for the proposed project.

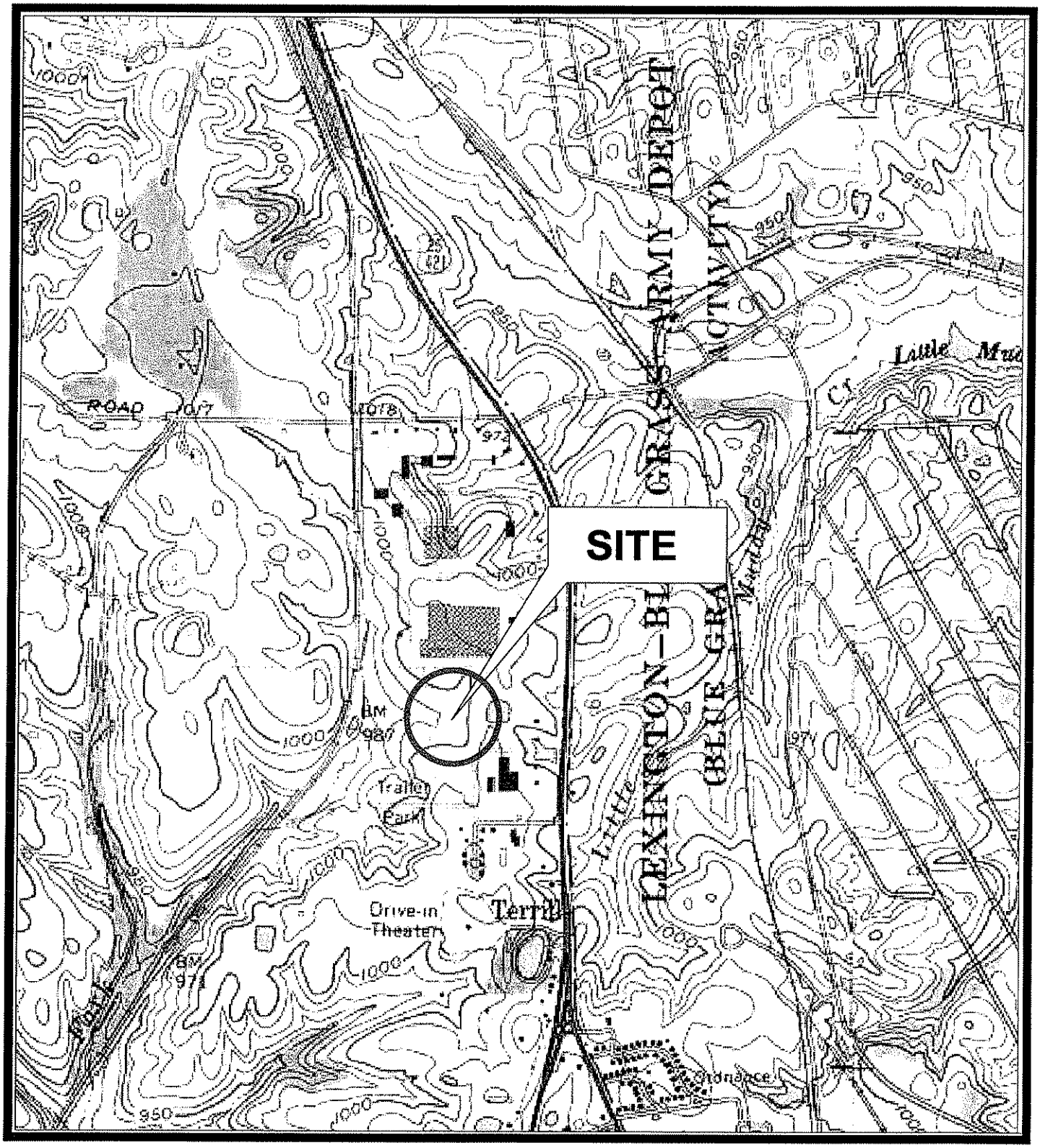
Regardless of the thoroughness of a geotechnical exploration, there is always a possibility that conditions between borings will be different from those at specific boring locations and that conditions will not be as anticipated by the designers or contractors. In addition, the construction process may itself alter soil conditions. Therefore, experienced geotechnical personnel should observe and document the construction procedures used and the conditions encountered. Unanticipated conditions and inadequate procedures should be reported to the design team along with timely recommendations to solve the problems created. We recommend that the owner retain MACTEC to provide this service based upon our familiarity with the project, the subsurface conditions and the intent of the recommendations.

We recommend that this complete report be provided to the various design team members, the contractors and the project owner. Potential contractors should be informed of this report in the "instructions to bidders" section of the bid documents. The report should not be included or referenced in the actual contract documents.

We wish to remind you that our exploration services include storing the samples collected and making them available for inspection for 30 days. The samples are then discarded unless you request otherwise.

ATTACHMENTS

Site Vicinity/Topographic Map
Boring Location Plan
Field Testing Procedures
Key to Symbols and Descriptions
Test Boring Records
Laboratory Testing Procedures
Summary of Laboratory Tests
Atterberg Limit Test



SOURCE: NATIONAL GEOGRAPHIC TOPO! 2002
RICHMOND QUADRANGLE

MACTEC

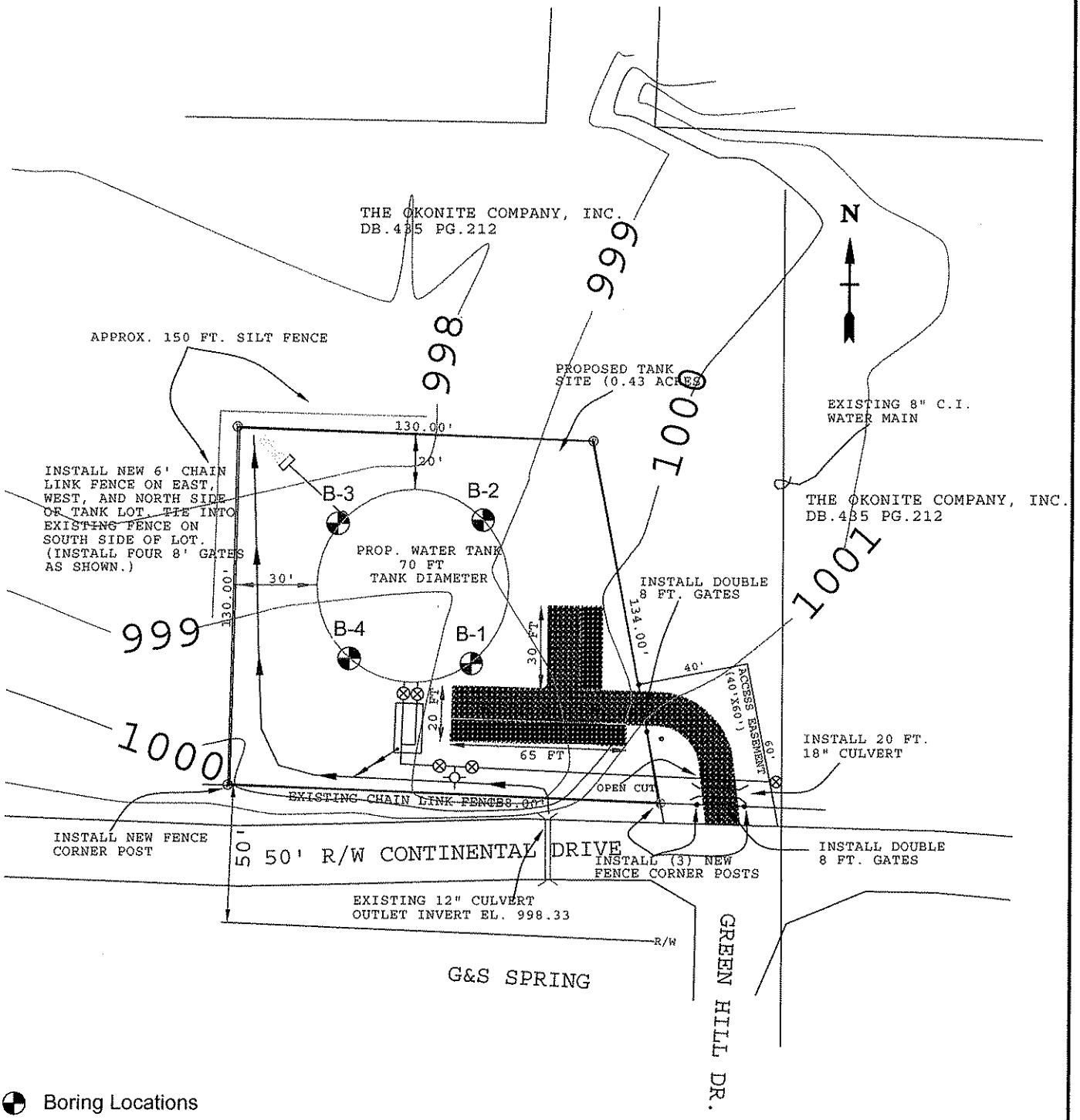
PROJECT NUMBER
3112-08-0459

SITE VICINITY / TOPOGRAPHIC MAP

PROPOSED 500,000 GALLON ELEVATED WATER TANK
RICHMOND, MADISON COUNTY, KENTUCKY

SCALE	NTS
DATE	3/11/2008
DRAWN BY	VM
APPROVED BY	JSC

FIG. 1



Boring Locations

NOTE: Drawing provided by CMW, Inc., titled "The Okonite Company, Inc.", dated December 10, 2007 and adapted from site observations by MACTEC personnel.

Drawing not to scale

BORING LOCATION PLAN

Project: 500,000 Gallon Elevated Water Tank

Project No: 3112-08-0459

Checked By: VM

Figure 2

MACTEC

BORING LOCATION PLAN - PORTRAIT 3112080459 RICHMOND WATER TANK.GPJ MACTEC DATABASE TEMPLATE 01.GDT 3/19/08

FIELD TESTING PROCEDURES

Field Operations: The general field procedures employed by MACTEC Engineering and Consulting of Georgia, Inc. are summarized in ASTM D 420 which is entitled "Investigating and Sampling Soils and Rocks for Engineering Purposes." This recommended practice lists recognized methods for determining soil and rock distribution and ground water conditions. These methods include geophysical and in situ methods as well as borings.

Borings are drilled to obtain subsurface samples using one of several alternate techniques depending upon the subsurface conditions. These techniques are:

a. Continuous 2-1/2 or 3-1/4 inch I.D. hollow stem augers;
b. Wash borings using roller cone or drag bits (mud or water);
c. Continuous flight augers (ASTM D 1425).

These drilling methods are not capable of penetrating through material designated as "refusal materials." Refusal, thus indicated, may result from hard cemented soil, soft weathered rock, coarse gravel or boulders, thin rock seams, or the upper surface of sound continuous rock. Core drilling procedures are required to determine the character and continuity of refusal materials.

The subsurface conditions encountered during drilling are reported on a field test boring record by the chief driller. The record contains information concerning the boring method, samples attempted and recovered, indications of the presence of various materials such as coarse gravel, cobbles, etc., and observations between samples. Therefore, these boring records contain both factual and interpretive information. The field boring records are on file in our office.

The soil and rock samples plus the field boring records are reviewed by a geotechnical engineer. The engineer classifies the soils in general accordance with the procedures outlined in ASTM D 2488 and prepares the final boring records which are the basis for all evaluations and recommendations.

The final boring records represent our interpretation of the contents of the field records based on the results of the engineering examinations and tests of the field samples. These records depict subsurface conditions at the specific locations and at the particular time when drilled. Soil conditions at other locations may differ from conditions occurring at these boring locations. Also, the passage of time may result in a change in the subsurface soil and ground water conditions at these boring locations. The lines designating the interface between soil or refusal materials on the records and on profiles represent approximate boundaries. The transition between materials may be gradual. The final boring records are included with this report.

The detailed data collection methods using during this study are discussed on the following pages.

Soil Test Borings: Soil test borings were made at the site at locations shown on the attached Boring Plan. Soil sampling and penetration testing were performed in accordance with ASTM D 1586.

The borings were made by mechanically twisting a hollow stem steel auger into the soil. At regular intervals, the drilling tools were removed and soil samples obtained with a standard 1.4 inch I.D., 2 inch O.D., split tube sampler. The sampler was first seated 6 inches to penetrate any loose cuttings, then driven an additional foot with blows of a 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler the final foot was recorded and is designated the "penetration resistance". The penetration resistance, when properly evaluated, is an index to the soil strength and foundation supporting capability.

Representative portions of the soil samples, thus obtained, were placed in glass jars and transported to the laboratory. In the laboratory, the samples were examined to verify the driller's field classifications. Test Boring Records are attached which graphically show the soil descriptions and penetration resistances.

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of material is LARGER than No. 200 sieve size)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size)	CLEAN GRAVELS (Little or no fines)	GW	Well graded gravels, gravel - sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel - sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amount of fines)	GM	Silty gravels, gravel - sand - silt mixtures.
			GC	Clayey gravels, gravel - sand - clay mixtures.
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 Sieve Size)	CLEAN SANDS (Little or no fines)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amount of fines)	SM	Silty sands, sand - silt mixtures
			SC	Clayey sands, sand - clay mixtures.
FINE GRAINED SOILS (More than 50% of material is SMALLER than No. 200 sieve size)	SILTS AND CLAYS (Liquid limit LESS than 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts and with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS (Liquid limit GREATER than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			PT	Peat and other highly organic soils.

BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.

SILT OR CLAY	SAND			GRAVEL		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

No.200 No.40 No.10 No.4 3/4" 3" 12"

U.S. STANDARD SIEVE SIZE

Reference: The Unified Soil Classification System, Corps of Engineers, U.S. Army Technical Memorandum No. 3-357, Vol. 1, March, 1953 (Revised April, 1960)

Undisturbed Sample (UD)	Auger Cuttings
Split Spoon Sample (SS)	Bulk Sample
Rock Core (RC)	Crandall Sampler
Dilatometer	Pressure Meter
Packer	No Recovery
Water Table at time of drilling	Water Table after 24 hours
WOH - Weight of Hammer	

Correlation of Penetration Resistance (N) with Relative Density and Consistency

SAND & GRAVEL		SILT & CLAY	
No. of Blows	Relative Density	No. of Blows	Consistency
0 - 4	Very Loose	0 - 1	Very Soft
5 - 10	Loose	2 - 4	Soft
11 - 20	Firm	5 - 8	Firm
21 - 30	Very Firm	9 - 15	Stiff
31 - 50	Dense	16 - 30	Very Stiff
Over 50	Very Dense	Over 31	Hard

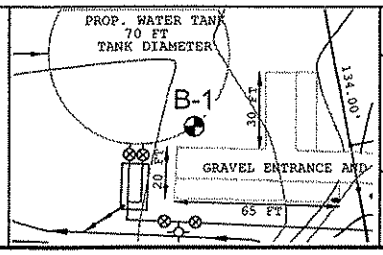
Rock Quality Designation	
RQD	Rock Quality Classification
< 25%	Very Poor
25 - 50%	Poor
50 - 75%	Fair
75 - 90%	Good
90 - 100%	Very Good

KEY TO SYMBOLS AND DESCRIPTIONS

MACTEC

DEPTH (ft)	DESCRIPTION SEE KEY SYMBOL SHEET FOR EXPLANATION OF SYMBOLS AND ABBREVIATIONS BELOW.	LEGEND	ELEV (ft)	Sample Number	Sample Type	RECOV (in.)	N-COUNT 1st 6" 2nd 6" 3rd 6" / RQD % REC	Moisture Content (%)	Liquid Limit (LL)	Plastic Limit (PL)	Unconfined Compression (psf-soil; psi-rock)	Percent Passing #200 Sieve	REMARKS
0	FIRM to VERY STIFF, brown and orange, LEAN CLAY (CL), with organics and gravel, moist		998.5	SS-1		8	3-3-5 (N = 8)						SURFACE COVER : BARE SOIL WITH TREE DEBRIS
				SS-2		8	3-5-13 (N = 18)	29.8	32	20			NO GRASS COVER
5	VERY STIFF to STIFF, orangish brown and tan, FAT CLAY (CH), with sand, moist		993.5	SS-3		18	7-13-13 (N = 26)	19.0				55.3	
				SS-4		12	3-4-5 (N = 9)	23.5	63	24			
10			988.5	SS-5		16	3-4-7 (N = 11)	25.3					
15			983.5	SS-6		14	3-4-5 (N = 9)	27.4					
	BORING TERMINATED AT 17.0 FEET AUGER REFUSAL AT 17.0 FEET												BORING DRY UPON COMPLETION OF DRILLING
20			978.5										
25			973.5										
30			968.5										
35			963.5										
40			958.5										
45			953.5										

START DATE: 3/6/2008
CONTRACTOR: Geo-Drill, Inc.
DRILLER: Troy Simpson
EQUIPMENT: Mobile B-34
METHOD: HSA
HOLE DIA.: 3.25"
HAMMER:
REMARKS:



TEST BORING RECORD

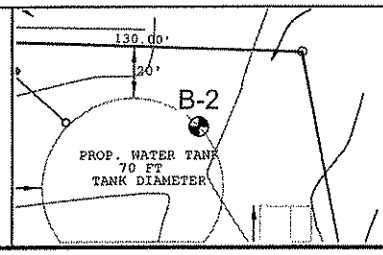
Project: 500,000 Gallon Elevated Water Tank
Project No: 3112-08-0459
Checked By: VM
Boring No.: B-1

MACTEC
2456 Fortune Drive, Suite 100
Lexington, KY 40509

MACTEC SOIL-ROCK (SITE MAP) 3112080459 RICHMOND WATER TANK.GPJ MACTEC DATABASE TEMPLATE 01.GDT 3/19/08

DEPTH (ft)	DESCRIPTION SEE KEY SYMBOL SHEET FOR EXPLANATION OF SYMBOLS AND ABBREVIATIONS BELOW.	LEGEND	ELEV (ft)	SAMPLES: Sample Number	Sample Type	RECOVERY (in.)	N-COUNT 1st 6" 2nd 6" 3rd 6" / RQD % REC	Moisture Content (%)	Liquid Limit (LL)	Plastic Limit (PL)	Unconfined Compression (psf-soil; psi-rock)	Percent Passing #200 Sieve	REMARKS
0	FIRM to VERY STIFF, light brown and orangish brown, LEAN CLAY (CL), with organics and gravel, moist to very moist		999.7	SS-1		10	1-2-4 (N = 6)						SURFACE COVER : BARE SOIL WITH TREE DEBRIS
				SS-2		10	4-4-9 (N = 13)	25.6					NO GRASS COVER
5	VERY STIFF to STIFF, orangish brown and tan, FAT CLAY (CH), moist		994.7	SS-3		14	7-11-11 (N = 22)	20.8					
				SS-4		12	6-7-8 (N = 15)						
10	STIFF to VERY STIFF, tan and brown, silty FAT CLAY (CH), with sand and gravel, moist		989.7	SS-5		18	2-3-8 (N = 11)	21.4					
15			984.7	SS-6		15	5-7-9 (N = 16)	25.5					
	BORING TERMINATED AT 18.3 FEET AUGER REFUSAL AT 18.3 FEET												BORING DRY UPON COMPLETION OF DRILLING
20			979.7										
25			974.7										
30			969.7										
35			964.7										
40			959.7										
45			954.7										

START DATE: 3/6/2008
CONTRACTOR: Geo-Drill, Inc.
DRILLER: Troy Simpson
EQUIPMENT: Mobile B-34
METHOD: HSA
HOLE DIA.: 3.25"
HAMMER:
REMARKS:



TEST BORING RECORD

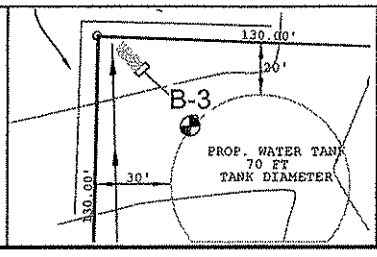
Project: 500,000 Gallon Elevated Water Tank
Project No: 3112-08-0459
Checked By: VM
Boring No.: B-2

MACTEC
2456 Fortune Drive, Suite 100
Lexington, KY 40509

MACTEC SOIL-ROCK (SITE MAP) 3112080459 RICHMOND WATER TANK.GPJ MACTEC DATABASE TEMPLATE 01.GDT 3/19/08

DEPTH (ft)	DESCRIPTION SEE KEY SYMBOL SHEET FOR EXPLANATION OF SYMBOLS AND ABBREVIATIONS BELOW.	LEGEND	ELEV (ft)	SAMPLES: Sample Number	Sample Type	RECOV (in.)	N-COUNT 1st 6" 2nd 6" 3rd 6" / RQD % REC	Moisture Content (%)	Liquid Limit (LL)	Plastic Limit (PL)	Unconfined Compression (psf-soil; psi-rock)	Percent Passing #200 Sieve	REMARKS
0	FIRM to STIFF, brown and grayish brown, LEAN CLAY (CL), with organics and gravel, very moist to moist		998.3	SS-1		8	2-2-4 (N = 6)	23.1					SURFACE COVER : BARE SOIL WITH TREE DEBRIS
				SS-2		7	5-7-9 (N = 16)						NO GRASS COVER
5	STIFF to VERY STIFF, tan and grayish brown, silty FAT CLAY (CH), withsand and gravel, moist		993.3	SS-3		10	3-4-6 (N = 10)	18.6					
				SS-4		14	3-5-8 (N = 13)						
10			988.3	SS-5		8	3-5-8 (N = 13)	20.2					
15			983.3	SS-6		14	5-12-16 (N = 28)						
20	BORING TERMINATED AT 18.6 FEET AUGER REFUSAL AT 18.6 FEET		978.3										BORING DRY UPON COMPLETION OF DRILLING
25			973.3										
30			968.3										
35			963.3										
40			958.3										
45			953.3										

START DATE: 3/6/2008
CONTRACTOR: Geo-Drill, Inc.
DRILLER: Troy Simpson
EQUIPMENT: Mobile B-34
METHOD: HSA
HOLE DIA.: 3.25"
HAMMER:
REMARKS:



TEST BORING RECORD

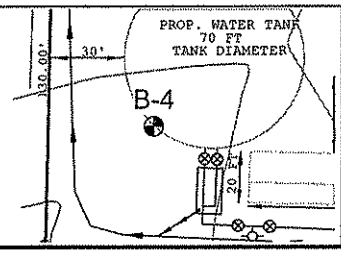
Project: 500,000 Gallon Elevated Water Tank
Project No: 3112-08-0459
Checked By: VM **Boring No.: B-3**

MACTEC
2456 Fortune Drive, Suite 100
Lexington, KY 40509

MACTEC SOIL-ROCK (SITE MAP) 3112080459 RICHMOND WATER TANK.GPJ MACTEC DATABASE TEMPLATE 01.GDT 3/19/08

DEPTH (ft)	DESCRIPTION SEE KEY SYMBOL SHEET FOR EXPLANATION OF SYMBOLS AND ABBREVIATIONS BELOW.	LEGEND	ELEV (ft)	SAMPLES Sample Number	Sample Type	RECOV (in.)	N-COUNT 1st 6" 2nd 6" 3rd 6" RQD % REC	Moisture Content (%)	Liquid Limit (LL)	Plastic Limit (PL)	Unconfined Compression (psf-soil; psi-rock)	Percent Passing #200 Sieve	REMARKS
0	FIRM to VERY STIFF, brown and tanish orange, LEAN CLAY (CL), with organics, very moist to moist		999.8	SS-1		18	3-3-4 (N = 7)						SURFACE COVER : BARE SOIL WITH TREE DEBRIS
				SS-2		6	3-4-5 (N = 9)	20.1					NO GRASS COVER
5	VERY STIFF, tan, silty FAT CLAY (CH), with sand, slightly moist		994.8	SS-3		5	3-4-5 (N = 9)						
				SS-4		16	7-10-12 (N = 22)	17.5					
10			989.8	SS-5		15	8-12-15 (N = 27)	22.8					
	BORING TERMINATED AT 12.6 FEET AUGER REFUSAL AT 12.6 FEET												BORING DRY UPON COMPLETION OF DRILLING
15			984.8										
20			979.8										
25			974.8										
30			969.8										
35			964.8										
40			959.8										
45			954.8										

START DATE: 3/6/2008
CONTRACTOR: Geo-Drill, Inc.
DRILLER: Troy Simpson
EQUIPMENT: Mobile B-34
METHOD: HSA
HOLE DIA.: 3.25"
HAMMER:
REMARKS:



TEST BORING RECORD

Project: 500,000 Gallon Elevated Water Tank
Project No: 3112-08-0459
Checked By: VM
Boring No.: B-4

MACTEC
2456 Fortune Drive, Suite 100
Lexington, KY 40509

MACTEC SOIL-ROCK (SITE MAP) 3112080459 RICHMOND WATER TANK.GPJ MACTEC DATABASE TEMPLATE 01.GDT 3/19/08

LABORATORY TESTING PROCEDURES

Soil Classification: Soil classifications provide a general guide to the engineering properties of various soil types and enable the engineer to apply past experience to current problems. In our investigations, samples obtained during drilling operations are examined in our laboratory and visually classified by an engineer. The soils are classified according to consistency (based on number of blows from standard penetration tests), color and texture. These classification descriptions are included on our "Test Boring Records."

The classification system discussed above is primarily qualitative and for detailed soil classification two laboratory tests are necessary: grain size tests and plasticity tests. Using these test results the soil can be classified according to the AASHTO or Unified Classification Systems (ASTM D 2487). Each of these classification systems and the in-place physical soil properties provides an index for estimating the soil's behavior. The soil classification and physical properties obtained are presented in this report.

Atterberg Limits: Portions of the samples are taken for Atterberg Limits testing to determine the plasticity characteristics of the soil. The plasticity index (PI) is the range of moisture content over which the soil deforms as a plastic material. It is bracketed by the liquid limit (LL) and the plastic limit (PL). The liquid limit is the moisture content at which the soil becomes sufficiently "wet" to flow as a heavy viscous fluid. The plastic limit is the lowest moisture content at which the soil is sufficiently plastic to be manually rolled into tiny threads. The liquid limit and plastic limit are determined in accordance with ASTM D 4318.

Moisture Content: The Moisture Content is determined according to ASTM D 2216.

Percent Finer Than 200 Sieve: Selected samples of soils are washed through a number 200 sieve to determine the percentage of material less than 0.074 mm in diameter.

Borehole	Depth	Sample Type	Atterberg Limits			USCS Class-ification	Natural Moisture Content (%)	Unconfined Compress. Strength (Soil-psf)	% Finer than #200 Sieve	Unit Weight (pcf)		Maximum Dry Density (pcf)	Optimum Moisture Content (%)	CBR	Swell (%)	Rock Core		Unconfined Compress. Strength (Rock-psi)
			Liquid Limit	Plastic Limit	Plasticity Index					Dry Density	Wet Density					RQD	Percent Recovery	
B-3	0.0	SS					23.1											
B-1	1.5	SS	32	20	12	CL	29.8											
B-2	1.5	SS					25.6											
B-4	1.5	SS					20.1											
B-1	4.0	SS					19.0		55.3									
B-2	4.0	SS					20.8											
B-3	4.0	SS					18.6											
B-1	6.5	SS	63	24	39	CH	23.5											
B-4	6.5	SS					17.5											
B-1	9.0	SS					25.3											
B-2	9.0	SS					21.4											
B-3	9.0	SS					20.2											
B-4	9.0	SS					22.8											
B-1	14.0	SS					27.4											
B-2	14.0	SS					25.5											

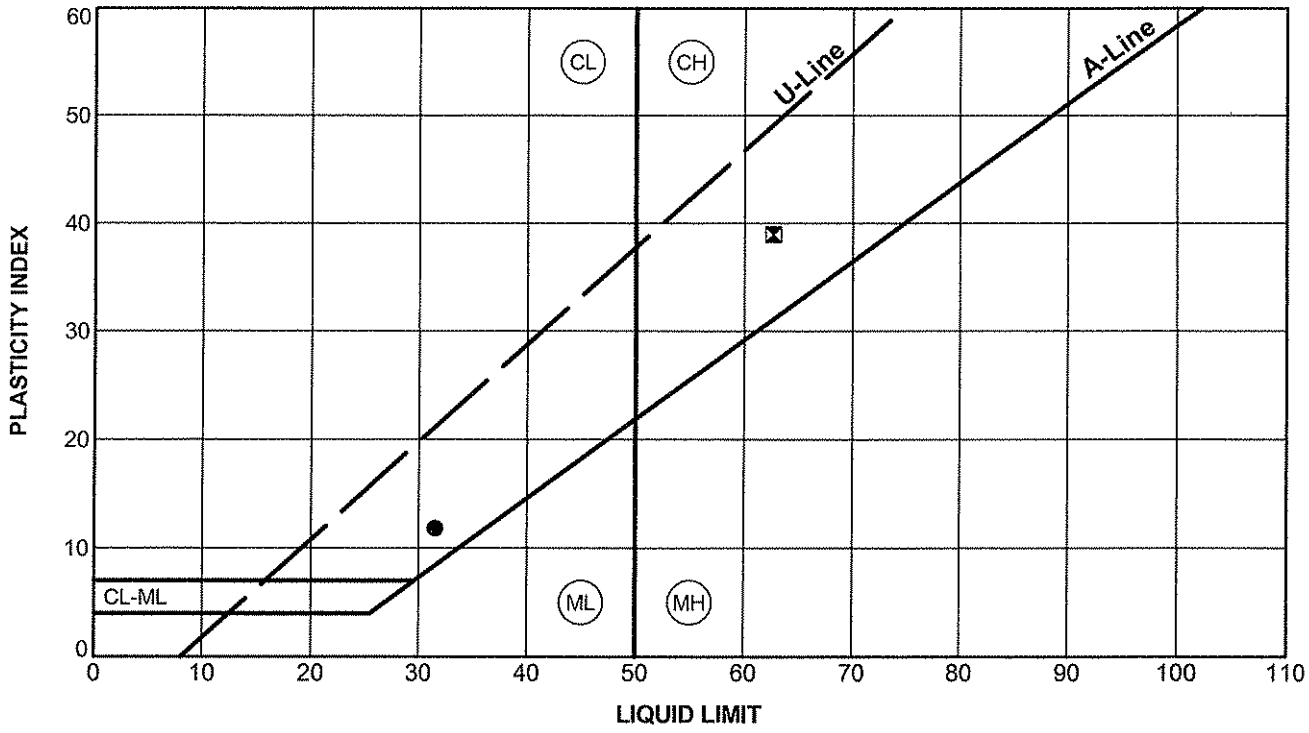
Remarks:

* SPT/SS = Split-spoon BG = Bulk / bag sample
UD/SH = Undisturbed sample RC = Rock core

Summary of Laboratory Results

Project: 500,000 Gallon Elevated Water Tank
Project No: 3112-08-0459
Checked By: VM

MACTEC



Symbol	Location	Depth, feet	LL	PL	PI	Natural Moisture Content, %	LI	USCS	Soil Classification
●	B-1	1.5	32	20	12	29.8	0.9	CL	orange brown lean clay
⊠	B-1	6.5	63	24	39	23.5	0.0	CH	orange brown fat clay

Remarks:

Test Method - ASTM D4318

LL=Liquid Limit; PL= Plastic Limit; PI=Plasticity Index; LI=Liquidity Index

ATTERBERG LIMITS RESULTS

Project: 500,000 Gallon Elevated Water Tank

Project No: 3112-08-0459

Checked By: VM

MACTEC

ADDENDUM NUMBER TWO

Contract #2 (Revised)
500,000 Gallon Elevated Water Storage Tank

For

Madison County Utilities District

March 27, 2008

CMW, Inc.
138 North Keeneland Drive
Suite E
Richmond, KY

TO: ALL PRIME BIDDERS OF RECORD

This Addendum forms a part of the contract documents dated February, 2008, as noted below. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject bidder to disqualification.

I. Specifications

A. Section 02520 Elevated Water Storage Tank

5A (2) – Change 154 to 163.

II. Plans

A. Sheet 1.2 Water Tank Details

(1) On Site Overview Detail, change tank diameter to 56 feet instead of 70 feet.

(2) On Typical Medium Capacity Steel Elevated Water Storage Tank

a. Change bowl diameter to 56 feet instead of 70 feet.

b. Change overflow elevation to 1,163 instead of 1,170.

c. Change total height to 163 feet instead of 170 feet.

d. Change bottom of bowl elevation of 1,133 instead of 1,140.

(3) On Tank Lot Overview Detail change water tank diameter to 56 feet instead of 70 feet.

END ADDENDUM NUMBER TWO.

ADVERTISEMENT FOR BIDS

Madison County Utilities District
(Revised)

Separate sealed BIDS for Contract #2 - Elevated Water Storage Tank, will be received by the Owner at the office of Madison County Utilities District, 297 Michelle Drive, Richmond, Kentucky, until 3:00 p.m. on Thursday, April 3, 2008, and then publicly opened and read aloud.

Construction for Contract #2 shall consist of a 500,000 gallon water storage tank including roadway, fencing, piping, valves, hydrant, seeding and all other necessary appurtenances.

The CONTRACT DOCUMENTS may be examined at the following locations:

CMW, Inc., 138 N Keeneland Drive, Suite E, Richmond, KY
Madison County Utilities District, 297 Michelle Drive, Richmond, KY
AGC/McCraw Hill Construction/Dodge Plan Room, 950 Contract Street, Suite 100A, Lexington, Kentucky
Reed Construction Data/ABC Plan Room, 2020 Liberty Road, Suite 110, Lexington, Kentucky
Reed Construction Data/ABC Plan Room, 1810 Taylor Avenue, Louisville, Kentucky
Reed Construction Data/ABC Plan Room, 7265 Kenwood Drive, Cincinnati, Ohio
Allied Construction, 3 Kovach Drive, Cincinnati, Ohio
Builders Exchange, 225 Walton Avenue, Suite 100, Lexington, Kentucky
Builders Exchange, 2300 Meadow Drive, Louisville, Kentucky

Copies of the CONTRACT DOCUMENTS may be obtained from Lynn Imaging, 328 Old East Vine Street, Lexington, KY 40507, phone 859\255-1021 upon the following non-refundable payment of $40.00 for each set of Contract #2. Make checks payable to CMW, Inc.

If bidding documents are requested to be sent by mail, include an additional $14.00 for each set to cover cost of handling and postage. This check shall be made payable to Lynn Imaging.

The Owner reserves the right to waive any informalities or to reject any or all bids. Each bidder must deposit with his bid, security in the amount, form and subject to the conditions provided in the Information for Bidders.

No bidder may withdraw his bid within 90 days after the actual date of the opening thereof.

Award will be made to the lowest responsive, responsible Bidder unless all bids are rejected.

Each bidder agrees to abide with Tittle VI of the Civil Rights Act of 1964, the Anti-Kickback Act,

and the Contract Work Hours Standard Act.

Each bidder must comply with the President's Executive Order No. 11246 as amended which prohibits discrimination in employment regarding race, creed, color, sex or national origin and must certify compliance of any previous work under President's Executive Order No. 11246 as amended. The contractor/subcontractor will comply with 41 CFR 60-4 in regard to affirmative action, to insure equal opportunity to females and minorities and will apply the timetable and goal set forth in 41 CRF 60-4.

Each bidder will make positive efforts to use small, minority, woman owned and disadvantaged businesses.

This contract is being funded in part with the Kentucky Infrastructure Authority Federally Assisted Drinking Water Revolving Fund Loan.

March 20, 2008
Date

MADISON COUNTY UTILITIES DISTRICT
RICHMOND, KENTUCKY

CMW, INC.
138 NORTH KEENELAND DRIVE
SUITE E
RICHMOND, KENTUCKY

SECTION 00100 - INFORMATION FOR BIDDERS

BIDS will be received by the Madison County Utilities District (herein called the "OWNER") at the office of Madison County Utilities District, 297 Michelle Drive, Richmond, Kentucky, until 3:00 p.m. on Thursday, April 3, 2008, and then publicly opened and read aloud.

Each BID must be submitted in a sealed envelope, addressed to Madison County Utilities District, 297 Michelle Drive, Richmond, Kentucky . Each sealed envelope containing a BID must be plainly marked on the outside as BID for Contract #2 (Revised) – 500,000 Gallon Elevated Water Storage Tank and the envelope should bear on the outside the name of the BIDDER, his address, his license number, if applicable, and the name of the project for which the BID is submitted. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the OWNER at P. O. Box 670, Richmond, KY 40476-0670.

All BIDS must be made on the required BID form. All blank spaces for BID prices must be filled in, in ink or typewritten, and the BID form must be fully completed and executed when submitted. Only one copy of the BID form is required.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID within 90 days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID Schedule by examination of the site and a review of the drawings and specifications including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The OWNER shall provide to BIDDERS prior to BIDDING, all information which is pertinent to, and delineates and describes, the land owned and rights-of-way acquired or to be acquired.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve the contractor from fulfilling any of the conditions of the contract.

Each BID must be accompanied by a BID bond payable to the OWNER for five percent of the total amount of the BID. As soon as the BID prices have been compared, the OWNER will return the BONDS of all except the three lowest responsible BIDDERS. When the Agreement is executed the bonds of the two remaining unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the payment BOND and performance BOND have been executed and approved, after which it will be returned. A certified check may be used in lieu of a BID BOND.

A performance BOND and a payment BOND each in the amount of 100 percent of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Attorneys-in-fact who sign BID BONDS or payment BONDS and performance BONDS must file with each BOND a certified and effective dated copy of their power of attorney.

The party to whom the contract is awarded will be required to execute the Agreement and obtain the performance BOND and payment BOND within ten (10) calendar days from the date when NOTICE OF AWARD is delivered to the BIDDER. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may consider the BIDDER in default, in which case the BID BOND accompanying the proposal shall become the Property of the OWNER.

The OWNER within ten (10) days of receipt of acceptable performance BOND, payment BOND and Agreement signed by the party to whom the Agreement was awarded shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may by WRITTEN NOTICE withdraw his signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The NOTICE TO PROCEED shall be issued within ten (10) days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER AND CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER may make such investigations as deemed necessary to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated therein.

A conditional or qualified BID will not be accepted.

Award will be made to the lowest responsive BIDDER unless all bids are rejected. Determination of responsive bid will be based on bid being delivered before 3:00 p.m. on the day of the bid opening, all items completed on bid form, all addendums (if any) acknowledged on bid form, bid bonds included with bid and "Authentification of Bid and Affidavit of Non-Collusion and Non-Conflict of Interest" included with bid. The responsibleness of BIDDER will be determined after evaluation of bid and review of Contractor's qualifications.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to his BID.

The low BIDDER shall supply the names and addresses of major material SUPPLIERS and SUBCONTRACTORS when required to do so by the OWNER.

The ENGINEER IS CMW, Inc. The ENGINEER'S address is P. O. Box 831, 138 N Keeneland Drive, Suite E, Richmond, KY 40475.

The BIDDER agrees to abide with Title VI of the Civil Rights Act of 1964, the Anti-Kickback Act, and the Contract Work Hours Standard Act.

The BIDDER must comply with the President's Executive Order No. 11246 as amended which prohibits discrimination in employment regarding race, creed, color, sex or national origin and must certify compliance of any previous work under President's Executive Order No. 11246 as amended. The contractor/subcontractor will comply with 41 CFR 60-4 in regard to affirmative action, to insure equal opportunity to females and minorities and will apply the timetable and goal set forth in 41 CRF 60-4.

The bidder will make positive efforts to use small, minority, woman owned and disadvantaged businesses.

END SECTION

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____

_____ as Principal, and

_____ as Surety, are hereby

held and firmly bound unto _____ as OWNER

in the penal sum of _____

for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this _____ day of _____, 19_____.

The Condition of the above obligation is such that whereas the Principal has submitted to _____ a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the

_____

_____

_____

NOW, THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID,

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does herby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____ (L.S.)
Principal

_____
Surety

By: _____

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.

BID (Revised)

500,000 Gallon Elevated Water Storage Tank

Proposal of _____ (hereinafter called "BIDDER"), a corporation organized and existing under the laws of the State of _____ doing business as _____*.

To the Madison County Utilities District (hereinafter called "OWNER").

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all WORK for the construction of Contract #2 (Revised) – 500,000 Gallon Elevated Water Storage Tank in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

By submission of this BID, the BIDDER certifies, and in the case of a joint BID each party thereto certifies as to its own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the project within 300 consecutive calendar days. BIDDER further agrees to pay as liquidated damages, the sum of $300 for each consecutive calendar day thereafter as hereinafter provided in Section 15 of the General Conditions.

* Insert "a corporation", "a partnership", or "an individual" as applicable.

BIDDER acknowledges receipt of the following ADDENDUM:

No. _____ Dated _____ No. _____ Dated _____
No. _____ Dated _____ No. _____ Dated _____

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices:

NOTE: (1) BIDS shall include sales tax and all other applicable taxes and fees.

(2) Breakdown of work is for general information. Any work shown on Drawings and/or specified but not listed below shall be included in total base bid. Cost of items of work not specifically described below may be added to related bid item(s) at bidder's discretion.

BID SCHEDULE

Part I. Base Bid

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
1.	Site Grading Including Road	1	LS	$	$
2.	Silt Fencing	150	LF	$	$
3.	18" Corrugated Plastic Pipe	20	LF	$	$
4.	#57 Crushed Stone (Roadway)	100	TON	$	$
5.	Piping, Valves, Altitude Valves, Fire Hydrants, Meter, Wet Tap, Encasement and Related Appurtenances	1	LS	$	$
6.	500,000 Gallon Elevated Water Storage Tank	1	LS	$	$

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
7.	Fencing	1	LS	$	$
8.	Seeding	1	LS	$	$

Total Part I: Base Bid: $_____

(USEFIGURES)

_____

(USE WORDS)

TOTAL AMOUNTS SHALL BE SHOWN IN BOTH WORDS AND FIGURES. IN CASE OF DISCREPANCIES, THE AMOUNT AS WRITTEN IN WORDS SHALL GOVERN.

The above price shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for. Changes shall be processed in accordance with the General Conditions.

Award of the Contract will be based on the lowest and best Total Bid for Part I: Base Bid.

The Bidder agrees that the Owner reserves the right to delete the whole or any part of the project from the Contract.

The Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of one hundred twenty (90) calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal contract attached within ten (10) days and deliver a surety bond or bonds as required by Article 22 of the General Conditions.

Respectfully submitted:

_____
(Name of Contracting Firm)

BY:_____

TITLE:_____

ADDRESS:_____

_____

DATE:_____

_____
License No. (if applicable)

Seal (If Bid by Corporation)

Attest:_____

END BID FORM

AUTHENICATION OF BID AND AFFIDAVIT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST

I hereby swear (or affirm) under the penalty for false swearing as provided by KRS 432.170:

1. That I am the bidder (if the bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the bidder is a corporation);

2. That the attached bid has been arrived at by the bidder independently and has been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other contractor, vendor of materials, supplies, equipment, or services described in the Invitation to Bid, designed to limit independent bidding or competition;

3. That the contents of the bid has not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid and will not be communicated to any such person prior to the official opening of the bid;

4. That the bidder is legally entitled to enter into the contracts with the Madison County Utilities District and is not in violation of any prohibited conflicts of interest;

5. (Applicable to corporations only) That as a foreign corporation we are registered with the Secretary of State, Commonwealth of Kentucky, and authorized to do business in the State of _____ or, that as a domestic corporation we are in good standing with the Secretary of State, Commonwealth of Kentucky _____. (Check the statement applicable.)

6. That this offer is for 90 calendar days from the date this bid is opened. In submitting the above, it is expressly agreed that, upon proper acceptance by the Madison County Utilities District of any or all items bid above, a contract shall thereby be created with respect to the items accepted.

7. That I have fully informed myself regarding the accuracy of the statements made in this Affidavit.

READ CAREFULLY - SIGN IN SPACE BELOW - FAILURE TO SIGN INVALIDATES

Signed by _____
Title _____
Firm _____ Telephone No. _____
Address _____ Area Code _____
_____ Date _____
City _____ State _____ Zip _____
END SECTION

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 2008, by and between Madison County Utilities District hereinafter called "OWNER" and _____ doing business as (a corporation), hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of Contract #2 (Revised) – 500,000 Gallon Elevated Water Storage Tank.

2. The CONTRACTOR will furnish all of the materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the PROJECT described herein.

3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within 10 calendar days after the date of the NOTICE TO PROCEED and will complete the project within 300 calendar days unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.

4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of $_____ or as shown in the BID schedule.

5. The term "CONTRACT DOCUMENTS" means and includes the following:

A. Advertisement

B. Information to Bidders

C. Bid

D. Bid Bond

E. Agreement

F. General Conditions

H. Payment Bond

I. General Conditions

J. Supplemental General Conditions

K. Notice to Proceed

L. Change Order

M. Drawings prepared by CMW, Inc. numbered 1.1 through 1.2 dated January, 2008.

N. SPECIFICATIONS prepared or issued by CMW, Inc. and dated February, 2008.

O. ADDENDA:

No. _____, dated_____, 20_____.

_____, dated_____, 20_____.

_____, dated_____, 20_____.

_____, dated_____, 20_____.

6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed or caused to be executed by their duly authorized official, this Agreement in 6 copies each of which shall be deemed an original on the date first above written.

(SEAL)

ATTEST:

_____

NAME_____
(Please Type)

TITLE_____

OWNER:
MADISON COUNTY UTILITIES DISTRICT

BY_____

NAME_____
(Please Type)

TITLE_____

(SEAL)

ATTEST:

_____

NAME_____
(Please Type)

TITLE_____

CONTRACTOR:

_____

BY_____

NAME_____
(Please Type)

ADDRESS_____

_____

EMPLOYER IDENTIFICATION NUMBER:

_____

END SECTION

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

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

and _____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

_____
(Name of Owner)

_____
(Address of Owner)

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

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 _____ 19_____, a copy of which is hereto attached and made a part hereof for the construction of:

_____

_____

_____

_____

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, 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 _____ (number) counterparts, each one of which shall be deemed an original, this the _____ day of _____ 19 _____.

ATTEST:

_____
Principal

_____
(Principal) Secretary

(SEAL)

By _____ (s)

_____
(Address)

_____

_____
Witness as to Principal

_____
(Address)

_____

_____
Surety

ATTEST:

By _____
Attorney-in-Fact

_____
Witness as to Surety

_____
(Address)

_____
(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.

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 _____

_____
(Name of owner)

_____
(Address of Owner)

hereinafter called OWNER, in the penal sum of _____

_____ Dollars, $(_____)

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 _____, 19____, a copy of which is hereto attached and made a part hereof for the construction of:

_____

_____

_____

_____

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, 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.

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 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 _____ (Number) counterparts, each one of which shall be deemed an original, this the _____ day of _____ 19_____.

ATTEST:

_____
(Principal) Secretary

_____
Principal

By _____ (s)

(SEAL)

_____
(Witness as to Principal)

_____
(Address)

_____
(Address)

_____
(Address)

_____
Surety

ATTEST:

_____
(Surety) Secretary

(SEAL)

_____
Witness as to Surety

_____
(Address)

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.

GENERAL CONDITIONS

1. DEFINITIONS

1.1 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

1.2 ADDENDA -- Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications or corrections.

1.3 BID -- The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.

1.4 BIDDER -- Any person, firm or corporation submitting a BID for the WORK.

1.5 BONDS -- Bid, Performance, and Payment Bonds and other instruments of security, furnished by the CONTRACTOR and his surety in accordance with the CONTRACT DOCUMENTS.

1.6 CHANGE ORDER -- A written order to the CONTRACTOR authorizing an addition, deletion or revision in the WORK within the general scope of the CONTRACT DOCUMENTS, or authorizing an adjustment in the CONTRACT PRICE or CONTRACT TIME.

1.7 CONTRACT DOCUMENTS -- The contract, including Advertisement For Bids, Information for Bidders, BID, Bid Bond, Agreement, Payment Bond, Performance Bond, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS, and ADDENDA.

1.8 CONTRACT PRICE -- The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.

1.9 CONTRACT TIME -- The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.

1.10 CONTRACTOR -- The person, firm or corporation with whom the OWNER has executed the Agreement.

1.11 DRAWINGS -- The part of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.

1.12 ENGINEER -- The person, firm or corporation named as such in the CONTRACT DOCUMENTS.

1.13 FIELD ORDER -- A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.

1.14 NOTICE OF AWARD -- The written notice of the acceptance of the BID from the OWNER to the successful BIDDER.

1.15 NOTICE TO PROCEED -- Written communication issued by the OWNER to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date of commencement of the WORK.

1.16 OWNER -- A public or quasi-public body or authority, corporation, association, partnership, or individual for whom the WORK is to be performed.

1.17 PROJECT -- The undertaking to be performed as provided in the CONTRACT DOCUMENTS.

1.18 RESIDENT PROJECT REPRESENTATIVE -- The authorized representative of the OWNER who is assigned to the PROJECT site or any part thereof.

1.19 SHOP DRAWINGS -- All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.

1.20 SPECIFICATIONS -- A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

1.21 SUBCONTRACTOR -- An individual, firm or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the work at the site.

1.22 SUBSTANTIAL COMPLETION -- That date as certified by the ENGINEER when the construction of the PROJECT or a specified part thereof is sufficiently completed, in accordance with the CONTRACT DOCUMENTS, so that the PROJECT or specified part can be utilized for the purposes for which it is intended.

1.23 SUPPLEMENTAL GENERAL CONDITIONS -- Modifications to General Conditions required by a Federal agency for participation in the PROJECT and approved by the agency in writing prior to inclusion in the CONTRACT DOCUMENTS, or such requirements that may be imposed by applicable state laws.

1.24 SUPPLIER -- Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.

1.25 WORK -- All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.

1.26 WRITTEN NOTICE--Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the WORK.

2. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

2.1 The CONTRACTOR may be furnished additional instructions and detail drawings, by the ENGINEER, as necessary to carry out the WORK required by the CONTRACT DOCUMENTS.

2.2 The additional drawings and instruction thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instructions.

3. SCHEDULES, REPORTS AND RECORDS

3.1 The CONTRACTOR shall submit to the OWNER such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required by the CONTRACT DOCUMENTS for the WORK to be performed.

3.2 Prior to the first partial payment estimate the CONTRACTOR shall submit construction progress schedules showing the order in which he proposes to carry on the WORK, including dates at which he will start the various parts of the WORK, estimated date of completion of each part and, as applicable:

3.2.1 The dates at which special detail drawings will be required; and

3.2.2 Respective dates for submission of SHOP DRAWINGS, the beginning of manufacture, the testing and the installation of materials, supplies and equipment.

3.3 The CONTRACTOR shall also submit a schedule of payments that he anticipates he will earn during the course of the WORK.

4. DRAWINGS AND SPECIFICATIONS

4.1 The intent of the DRAWINGS and SPECIFICATIONS is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy or operation by the OWNER.

4.2 In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over scale dimensions, and detailed DRAWINGS shall govern over general DRAWINGS.

4.3 Any discrepancies found between the DRAWINGS and SPECIFICATIONS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the CONTRACTOR'S risk.

5. SHOP DRAWINGS

5.1 The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER'S approval of any SHOP DRAWING shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS. The approval of any SHOP DRAWING which substantially deviates from the requirement of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.

5.2 When submitted for the ENGINEER'S review, SHOP DRAWINGS shall bear the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.

5.3 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission has been approved by the ENGINEER. A copy of each approved SHOP DRAWING and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

6. MATERIALS, SERVICES AND FACILITIES

6.1 It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.

6.2 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the WORK. Stored materials and equipment to be

incorporated in the WORK shall be located so as to facilitate prompt inspection.

6.3 Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

6.4 Materials, supplies and equipment shall be in accordance with samples submitted by the CONTRACTOR and approved by the ENGINEER.

6.5 Materials, supplies or equipment to be incorporated into the WORK shall not be purchased by the CONTRACTOR or the SUBCONTRACTOR subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

7. INSPECTION AND TESTING

7.1 All materials and equipment used in the construction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the CONTRACT DOCUMENTS.

7.2 The OWNER shall provide all inspection and testing services not required by the CONTRACT DOCUMENTS.

7.3 The CONTRACTOR shall provide at his expense the testing and inspection services required by the CONTRACT DOCUMENTS.

7.4 If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any WORK to specifically be inspected, tested, or approved by someone other than the CONTRACTOR, the CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.

7.5 Inspections, tests or approvals by the engineer or others shall not relieve the CONTRACTOR from his obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.

7.6 The ENGINEER and his representatives will at all times have access to the WORK. In addition, authorized representatives and agents of any participating Federal or state agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The CONTRACTOR will provide proper facilities for such access and observation of the WORK and also for any inspection, or testing thereof.

7.7 If any WORK is covered contrary to the written instructions of the ENGINEER it must, if requested by the ENGINEER, be uncovered for his observation and replaced at the CONTRACTOR'S expense.

7.8 If the ENGINEER considers it necessary or advisable that covered WORK be inspected or tested by others, the CONTRACTOR, at the ENGINEER'S request, will uncover, expose or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such WORK is defective, the CONTRACTOR will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such WORK is not found to be defective, the CONTRACTOR will 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 and reconstruction and an appropriate CHANGE ORDER shall be issued.

8. SUBSTITUTIONS

8.1 Whenever a material, article or piece of equipment is identified on the DRAWINGS or SPECIFICATIONS by reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and the CONTRACT DOCUMENTS shall be appropriately modified by CHANGE ORDER. The CONTRACTOR warrants that if substitutes are approved, no major changes in the function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the CONTRACT PRICE or CONTRACT TIME.

9. PATENTS

9.1 The CONTRACTOR shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the OWNER harmless from loss on account thereof, except that the OWNER shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified, however if the CONTRACTOR has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the ENGINEER.

10. SURVEYS, PERMITS, REGULATIONS

10.1 The OWNER shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the WORK together with a suitable number of bench marks adjacent to the WORK as shown in the CONTRACT DOCUMENTS. From the information provided by the OWNER, unless otherwise specified in the CONTRACT DOCUMENTS, the CONTRACTOR shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pile locations and other working points, lines, elevations and cut sheets.

10.2 The CONTRACTOR shall carefully preserve bench marks, reference points and stakes and, in case of

willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

10.3 Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR unless otherwise stated in the SUPPLEMENTAL GENERAL CONDITIONS. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the OWNER, unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the WORK as drawn and specified. If the CONTRACTOR observes that the CONTRACT DOCUMENTS are at variance therewith, he shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted as provided in Section 13, CHANGES IN THE WORK.

11. PROTECTION OF WORK, PROPERTY AND PERSONS

11.1 The CONTRACTOR will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the WORK and other persons who may be affected thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

11.2 The CONTRACTOR will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the WORK may affect them. The CONTRACTOR will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the OWNER or the ENGINEER or anyone employed by 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 the CONTRACTOR.

11.3 In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, shall act to prevent threatened damage, injury or loss. He will give the ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be issued covering the changes and deviations involved.

12. SUPERVISION BY CONTRACTOR

12.1 The CONTRACTOR will supervise and direct the WORK. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR will employ and maintain on the WORK a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the WORK.

13. CHANGES IN THE WORK

13.1 The OWNER may at any time, as the need arises, order changes within the scope of the WORK without invalidating the Agreement. If such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or in the time required for performance of the WORK, an equitable adjustment shall be authorized by CHANGE ORDER.

13.2 The ENGINEER, also, may at any time, by issuing a FIELD ORDER, make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the CONTRACTOR believes that such FIELD ORDER entities him to a change in CONTRACT PRICE or TIME, or both, in which event he shall give the ENGINEER WRITTEN NOTICE thereof within seven (7) days after the receipt of the ordered change. Thereafter the CONTRACTOR shall document the basis for the change in CONTRACT PRICE or TIME within thirty (30) days. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instruction from the OWNER.

14. CHANGES IN CONTRACT PRICE

14.1 The CONTRACT PRICE may be changed only by a CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:

(a) Unit prices previously approved.
(b) An agreed lump sum.
(c) The actual cost for labor, direct overhead, materials, supplies, equipment, and other services necessary to complete the work. In addition there shall be added an amount to be agreed upon but not to exceed fifteen (15) percent of the actual cost of the WORK to cover the cost of general overhead and profit.

15. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

15.1 The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.

15.2 The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the CONTRACT TIME. It is

expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.

15.3 If the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, or extension of time granted by the OWNER, then the CONTRACTOR will pay to the OWNER the amount for liquidated damages as specified in the BID for each calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS.

15.4 The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following, and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the OWNER or ENGINEER.

15.4.1 To any preference, priority or allocation order duly issued by the OWNER.

15.4.2 To unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to, acts of God, or of the public enemy, acts of the OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather: and

15.4.3 To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs 15.4.1 and 15.4.2 of this article.

16. CORRECTION OF WORK

16.1 The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the OWNER and shall bear the expense of making good all WORK of other CONTRACTORS destroyed or damaged by such removal or replacement.

16.2 All removal and replacement WORK shall be done at the CONTRACTOR'S expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) days after receipt of WRITTEN NOTICE, the OWNER may remove such WORK and store the materials at the expense of the CONTRACTOR.

17. SUBSURFACE CONDITIONS

17.1 The CONTRACTOR shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the OWNER by WRITTEN NOTICE of:

17.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the CONTRACT DOCUMENTS: or

17.1.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in WORK of the character provided for in the CONTRACT DOCUMENTS.

17.2 The OWNER shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the WORK, an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER. Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless he has given the required WRITTEN NOTICE; provided that the OWNER may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

18. SUSPENSION OF WORK, TERMINATION AND DELAY

18.1 The OWNER may suspend the WORK or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the CONTRACTOR by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER which notice shall fix the date on which WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any suspension.

18.2 If the CONTRACTOR is adjudged as bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK or if he disregards the authority of the ENGINEER, or if he otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate the services of the CONTRACTOR and take possession of the PROJECT and of all materials, equipment, tools, construction equipment and machinery, thereon owned by the CONTRACTOR, and finish the WORK by whatever method he may deem expedient. In such case the 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 PROJECT, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a CHANGE ORDER.

18.3 Where the CONTRACTOR'S services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the

CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.

18.4 After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the Contract. In such case, the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.

18.5 If, through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted or the OWNER fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded by arbitrators within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER, terminate the CONTRACT and recover from the OWNER payment for all WORK executed and all expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may upon ten (10) days written notice to the OWNER and the ENGINEER stop the WORK until he has been paid all amounts then due, in which event and upon resumption of the WORK, CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME or both to compensate for the costs and delays attributable to the stoppage of the WORK.

18.6 If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of a failure of the OWNER or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if no time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the CONTRACTOR for the costs and delays necessarily caused by the failure of the OWNER or ENGINEER.

19. PAYMENTS TO CONTRACTOR

19.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the 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 or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER's title to the material and equipment and protect his interest therein, including applicable insurance. The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing his reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within ten (10) days of presentation to him of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate. The OWNER shall retain ten (10) percent of the amount of each payment until final completion and acceptance of all work covered by the CONTRACT DOCUMENTS. The OWNER at any time, however, after fifty (50) percent of the WORK has been completed, if he finds that satisfactory progress is being made, shall reduce retainage to five (5%) percent on the current and remaining estimates. When the WORK is substantially complete (operational or beneficial occupancy), the retained amount may be further reduced below five (5) percent to only that amount necessary to assure completion. On completion and acceptance of a part of the WORK on which the price is stated separately in the CONTRACT DOCUMENTS, payment may be made in full, including retained percentages, less authorized deductions.

19.2 The request for payment may also include an allowance for the cost of such major materials and equipment which are suitably, stored either at or near the site.

19.3 Prior to SUBSTANTIAL COMPLETION, the OWNER, with the approval of the ENGINEER and with the concurrence of the CONTRACTOR, may use any completed or substantially completed portions of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.

19.4 The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK, or the restoration of any damaged WORK except such as may be caused by agents or employees of the OWNER.

19.5 Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate attached lo the final payment request that the WORK has been accepted by him under the conditions of the CONTRACT DOCUMENTS. The entire balance found to be due the CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK.

19.6 The CONTRACTOR will indemnify and save the OWNER or the OWNER'S agents harmless from all claims growing out of the lawful demands of SUBCONTRACTORS, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the WORK. The CONTRACTOR shall, at the OWNER'S request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR'S unpaid compensation a sum

of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the CONTRACTOR shall be resumed, in accordance, with the terms of the CONTRACT DOCUMENTS, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, his Surety, or any third party. In paying any unpaid bills of the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment made under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

19.7 If the OWNER fails to make payment thirty (30) days after approval by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such payment interest at the maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the CONTRACTOR.

20. ACCEPTANCE OF FINAL PAYMENT AS RELEASE

20.1 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the CONTRACT DOCUMENTS or the Performance BOND and Payment BONDS.

21. INSURANCE

21.1 The CONTRACTOR shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the CONTRACTOR'S execution of the WORK, whether such execution be by himself or by any SUBCONTRACTOR or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

21.1.1 Claims under workmen's compensation, disability benefit and other similar employee benefit acts;

21.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;

21.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;

21.1.4 Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (2) by any other person; and

21.1.5 Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

21.2 Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. These Certificates shall contain a provision that coverages afforded under the policies will not be canceled unless at least fifteen (15) days prior WRITTEN NOTICE has been given to the OWNER.

21.3 The CONTRACTOR shall procure and maintain, at his own expense, during the CONTRACT TIME, liability insurance as hereinafter specified;

21.3.1 CONTRACTOR'S General Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting him from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by himself or by any SUBCONTRACTOR under him, or anyone directly or indirectly employed by the CONTRACTOR or by a SUBCONTRACTOR under him. Insurance shall be written with a limit of liability of not less than, $500,000 for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident; and a limit of liability of not less than $500,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than $200,000 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than $200,000 aggregate for any such damage sustained by two or more persons in any one accident.

21.3.2 The CONTRACTOR shall acquire and maintain, if applicable, Fire and Extended Coverage insurance upon the PROJECT to the full insurable value thereof for the benefit of the OWNER, the CONTRACTOR, and SUBCONTRACTORS as their interest may appear. This provision shall in no way release the CONTRACTOR or CONTRACTOR'S surety from obligations under the CONTRACT DOCUMENTS to fully complete the PROJECT.

21.4 The CONTRACTOR shall procure and maintain, at his own expense, during the CONTRACT TIME, in accordance with the provisions of the laws of the state in which the work is performed, Workmen's Compensation Insurance, including occupational disease provisions, for all of his employees at the site of the PROJECT and in case any work is sublet, the CONTRACTOR shall require such SUBCONTRACTOR similarly to provide Workmen's Compensation Insurance, including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the CONTRACTOR. In case any class of employees engaged in hazardous work under this contract at the site of the PROJECT is not protected under Workmen's Compensation statute, the CONTRACTOR shall provide, and shall cause each SUBCONTRACTOR to provide, adequate and suitable insurance for the protection of his employees not otherwise protected.

21.5 The CONTRACTOR shall secure, if applicable, "All Risk" type Builder's Risk Insurance for WORK to

be performed. Unless specifically authorized by the OWNER, the amount of such insurance shall not be less than the CONTRACT PRICE totaled in the BID. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke during the CONTRACT TIME, and until the WORK is accepted by the OWNER. The policy shall name as the insured the CONTRACTOR, the ENGINEER, and the OWNER.

22. CONTRACT SECURITY

22.1 The CONTRACTOR shall within ten (10) days after the receipt of the NOTICE OF AWARD furnish the OWNER with a Performance Bond and a Payment Bond in penal sums equal to the amount of the CONTRACT PRICE, conditioned upon the performance by the CONTRACTOR of all undertakings, covenants, terms, conditions and agreements of the CONTRACT DOCUMENTS, and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS. Such BONDS shall be executed by the CONTRACTOR and a corporate bonding company licensed to transact such business in the state in which the WORK is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these BONDS shall be borne by the CONTRACTOR. If at any time a surety on any such BOND is declared a bankrupt or loses its right to do business in the state in which the WORK is to be performed or is removed from the list of Surety Companies accepted on Federal BONDS, CONTRACTOR shall within ten (10) days after notice from the OWNER to do so, substitute an acceptable BOND (or BONDS) in such form and sum and signed by such other surety or sureties as may be satisfactory to the OWNER. The premiums on such BOND shall be paid by the CONTRACTOR. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable BOND to the OWNER.

23. ASSIGNMENTS

23.1 Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign or otherwise dispose of the Contract or any portion thereof or of his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

24. INDEMNIFICATION

24.1 The CONTRACTOR will indemnify and hold harmless the OWNER and the ENGINEER and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the WORK, provided that any such claims, damage, loss or expense is attributable to bodily injury sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR, and SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

24.2 In any and all claims against the OWNER or the ENGINEER, or any of their agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under workmen's compensation acts, disability benefit acts or other employee benefits acts.

24.3 The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, his agents or employees arising out of the preparation or approval of maps, DRAWINGS, opinions, reports, surveys, CHANGE ORDERS, designs or SPECIFICATIONS.

25. SEPARATE CONTRACTS

25.1 The OWNER reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other CONTRACTORS reasonable opportunity for the introduction and storage of their materials and the execution of their WORK, and shall properly connect and coordinate his WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends upon the WORK of any other CONTRACTOR, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such WORK that render it unsuitable for such proper execution and results.

25.2 The OWNER may perform additional WORK related to the PROJECT by himself, or he may let other contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are parties to such Contracts (or the OWNER, if he is performing the additional WORK himself), 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.

25.3 If the performance of additional WORK by other CONTRACTORS or the OWNER is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional WORK. If the CONTRACTOR believes that the performance of such additional WORK by the OWNER or others involves him in additional expense or entitles him to an extension of the CONTRACT TIME, he may make a claim therefor as provided in Sections 14 and 15.

26. SUBCONTRACTING

26.1 The CONTRACTOR may utilize the services of specialty SUBCONTRACTORS on those parts of the WORK which, under normal contracting practices, are performed by specialty SUBCONTRACTORS.

26.2 The CONTRACTOR shall not award WORK to SUBCONTRACTOR(s), in excess of fifty (50%) percent of the CONTRACT PRICE, without prior written approval of the OWNER.

26.3 The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of his SUBCONTRACTORS, and of persons either directly or

indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

26.4 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the WORK to bind SUBCONTRACTORS to the CONTRACTOR by the terms of the CONTRACT DOCUMENTS insofar as applicable to the WORK of SUBCONTRACTORS and to give the CONTRACTOR the same power as regards terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provision of the CONTRACT DOCUMENTS.

26.5 Nothing contained in this CONTRACT shall create any contractual relation between any SUBCONTRACTOR and the OWNER.

27. ENGINEER'S AUTHORITY

27.1 The ENGINEER shall act as the OWNER'S representative during the construction period. He shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed. He shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. The ENGINEER will make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS.

27.2 The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship and execution of the WORK. Inspections may be made at the factory or fabrication plant of the source of material supply.

27.3 The ENGINEER will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

27.4 The ENGINEER shall promptly make decisions relative to interpretation of the CONTRACT DOCUMENTS.

28. LAND AND RIGHTS-OF-WAY

28.1 Prior to issuance of NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS. unless otherwise mutually agreed.

28.2 The OWNER shall provide to the CONTRACTOR information which delineates and describes the lands owned and rights-of-way acquired.

28.3 The CONTRACTOR shall provide at his own expense and without liability to the OWNER any additional land and access thereto that the CONTRACTOR may desire for temporary construction facilities, or for storage of materials.

29. GUARANTY

29.1 The CONTRACTOR shall guarantee all materials and equipment furnished and WORK performed for a period of one (1) year from the date of SUBSTANTIAL, COMPLETION. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the system that the completed system is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The OWNER will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs, adjustments, or other WORK that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred. The Performance BOND shall remain in full force and effect through the guarantee period.

30. ARBITRATION

30.1 All claims, disputes and other matters in question arising out of, or relating to, the CONTRACT DOCUMENTS or the breach thereof, except for claims which have been waived by the making and acceptance of final payment as provided by Section 20, shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association. This agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof.

30.2 Notice of the demand for arbitration shall be filed in writing with the other party to the CONTRACT DOCUMENTS and with the American Arbitration Association, and a copy shall be filed with the ENGINEER. Demand for arbitration shall in no event be made an any claim, dispute or other matter in question which would be barred by the applicable statute of limitations.

30.3 The CONTRACTOR will carry on the WORK and maintain the progress schedule during any arbitration proceedings, unless otherwise mutually agreed in writing.

31. TAXES

31.1 The CONTRACTOR will pay all sales, consumer, use and other similar taxes required by the law of the place where the WORK is performed.

SUPPLEMENTAL GENERAL CONDITIONS

FOR

CLEAN WATER STATE REVOLVING FUND

DRINKING WATER STATE REVOLVING FUND

EPA SPECIAL APPROPRIATION GRANTS
(Drinking Water and Wastewater)

Project Name: Contract #2 - 500,000 Gallon Elevated Water/Storage Tank

Project Number: A0727

The attached instructions and regulations as listed below shall be incorporated into the Specifications and comprise Special Conditions.

	Attachment No.
EPA/SRF Special Provisions	1
Requirements for Sub-agreements Awarded by Prime Contractors	2
40 CFR 31.36 (Procurement) – grants only	3A
KRS Chapter 45A-Kentucky Model Procurement Code – loans only	3B
Equal Employment Opportunity (EEO) Documents:	
Notice of Requirement for Affirmative Action	4
Contract Specifications (Executive Order 11246)	5
EEO Goals for Region 4 Economic Areas	6
Special Notice #1 – Check List of EEO Documentation	7
Employer Information Report EEO-1 (SF 100)	8
Labor Standards Provisions for Federally Assisted Construction, EPA Form 5720-4	9
Certifications:	
Debarment, Suspension and Other Responsibility Matters	10
Anti-lobbying	11
Utilization of Small, Minority and Women's Businesses	12
Region 4 Disadvantaged Business Enterprise (DBE) Negotiated Rates	13
Bonds and Insurance	14
Outlay Management Schedule	15
Storm Water General Permit	16
Wage Rates	17

These special conditions shall supersede any conflicting provisions of this contract.

EPA SPECIAL PROVISIONS

a) The construction of the project shall conform to the applicable requirements for state, territorial and local laws and ordinances to the extent that such requirements do not conflict with Federal laws.

b) The EPA shall have access to the site and the project.

c) Any contract(s) awarded under this invitation for Bids are expected to be funded in part by a grant from the U.S. Environmental Protection Agency. Neither the United States nor any of its departments, agencies or employees are or will be a part to this Invitation for Bids or any resulting contract.

d) The Method of Award is to the lowest responsible responsive bidder.

e) A statement that the bidder must make positive efforts to use small and minority owned business and women business enterprises.

SRF SPECIAL PROVISIONS

(a) Sewer line crossing of all roads and streets shall be done in accordance with the Kentucky Transportation Cabinet requirements as may be set forth in the Special Conditions.

(b) Construction is to be carried out so as to prevent by-passing of flows during construction unless a schedule has been approved by the State or EPA, whichever is applicable.

(c) Siltation and soil erosion must be minimized during construction. All construction projects with surface disturbance of more than 5 acres during the period of construction must have a KPDES Storm Water General Permit. To apply, the contractor must submit the "Notice of Intent" form at least 48 hours prior to start of construction. See Attachment 16 for the "Notice of Intent" form.

(d) Restore disturbed areas to original or better condition.

(e) Use of Chemicals: All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in conformance with instructions on the manufacturer's label.

(f) The construction of the project, including the letting of contracts in connection therewith, shall conform to the applicable requirements of state, territorial, and local laws and ordinances to the extent that such requirements do not conflict with Federal laws and this subchapter.

(g) The owner shall provide and maintain competent and adequate supervision and inspection.

(h) The Kentucky Infrastructure Authority and Kentucky Division of Water shall have access to the site and the project work at all times.

(i) In the event Archaeological materials (arrowheads, stone tools, stone axes, prehistoric and historic pottery, bottles, foundations, Civil War artifacts, and other types of artifacts) are uncovered during the construction of this project, work is to immediately cease at the location and the Kentucky Heritage Council shall be contacted. The telephone number is (502) 564-7005. Construction shall commence at this location until a written release is received from the Kentucky Heritage Council. Failure to report a find could result in legal action.

GRANT REQUIREMENTS FOR SUB-AGREEMENTS AWARDED BY A PRIME CONTRACTOR

A contractor must comply with the following provisions in its award of sub-agreements. (This section does not apply to a supplier's procurement of materials to produce equipment, materials and catalog, off-the-shelf, or manufactured items.)

(a) 40 CFR Part 32 (Debarment and Suspension Under EPA Assistance Programs);

(b) The limitations and sub-agreement award in 40 CFR 31.35, and 31.36(i) (3,4,6,10,12);

(c) The requirement for small, small rural, minority, women's and labor surplus area business in 40 CFR 31.36(e);

(d) The specifications requirements of 40 CFR 31.36(c) (1);

(e) The Federal cost principles in 40 CFR 31.22 and 31.36(f)(3);

(f) The prohibited types of sub-agreements in 40 CFR 31.36(f)(4);

(g) 40 CFR Part 34 (Anti-Lobbying under EPA Assistance Programs).

TITLE 40--PROTECTION OF ENVIRONMENT
CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY

PART 31--UNIFORM ADMINISTRATIVE REQUIREMENTS FOR GRANTS AND COOPERATIVE AGREEMENTS TO STATE AND LOCAL GOVERNMENTS

Subpart C--Post-Award Requirements

Sec. 31.36 Procurement.

(a) States. When procuring property and services under a grant, a State will follow the same policies and procedures it uses for procurements from its non-Federal funds. The State will ensure that every purchase order or other contract includes any clauses required by Federal statutes and executive orders and their implementing regulations. Other grantees and sub-grantees will follow paragraphs (b) through (i) in this section.
(b) Procurement standards. (1) Grantees and sub-grantees will use their own procurement procedures which reflect applicable State and local laws and regulations, provided that the procurements conform to applicable federal law, the standards identified in this section, and if applicable, Sec. 31.38.
(2) Grantees and sub-grantees will maintain a contract administration system which ensures that contractors perform in accordance with the terms, conditions, and specifications of their contracts or purchase orders.
(3) Grantees and sub-grantees will maintain a written code of standards of conduct governing the performance of their employees engaged in the award and administration of contracts. No employee, officer or agent of the grantee or sub-grantee shall participate in selection, or in the award or administration of a contract supported by Federal funds if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when:
(i) The employee, officer or agent,
(ii) Any member o f his immediate family,
(iii) His or her partner, or
(iv) An organization which employs, or is about to employ, any of the above, has a financial or other interest in the firm selected for award. The grantee's or sub-grantee's officers, employees or agents will neither solicit nor accept gratuities, favors or anything of monetary value from contractors, potential contractors, or parties to sub-agreements. Grantee and sub-grantees may set minimum rules where the financial interest is not substantial or the gift is an unsolicited item of nominal intrinsic value. To the extent permitted by State or local law or regulations, such standards or conduct will provide for penalties, sanctions, or other disciplinary actions for violations of such standards by the grantee's and sub-grantee's officers, employees, or agents, or by contractors or their agents. The awarding agency may in regulation provide additional prohibitions relative to real, apparent, or potential conflicts of interest.
(4) Grantee and sub-grantee procedures will provide for a review of proposed procurements to avoid purchase of unnecessary or duplicative items. Consideration should be given to consolidating or breaking out procurements to obtain a more economical purchase. Where appropriate, an analysis will be made of lease versus purchase alternatives, and any other appropriate analysis to determine the most economical approach.
(5) To foster greater economy and efficiency, grantees and sub-grantees are encouraged to enter into State and local intergovernmental agreements for procurement or use of common goods and services.
(6) Grantees and sub-grantees are encouraged to use Federal excess and surplus property in lieu of purchasing new equipment and property whenever such use is feasible and reduces project costs.

(7) Grantees and sub-grantees are encouraged to use value engineering clauses in contracts for construction projects of sufficient size to offer reasonable opportunities for cost reductions. Value engineering is a systematic and creative analysis of each contract item or task to ensure that its essential function is provided at the overall lower cost.
(8) Grantees and sub-grantees will make awards only to responsible contractors possessing the ability to perform successfully under the terms and conditions of a proposed procurement.
Consideration will be given to such matters as contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.
(9) Grantees and sub-grantees will maintain records sufficient to detail the significant history of a procurement. These records will include, but are not necessarily limited to the following: rationale for the method of procurement, selection of contract type, contractor selection or rejection, and the basis for the contract price.
(10) Grantees and sub-grantees will use time and material type contracts only--
(i) After a determination that no other contract is suitable, and
(ii) If the contract includes a ceiling price that the contractor exceeds at its own risk.
(11) Grantees and sub-grantees alone will be responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements. These issues include, but are not limited to source evaluation, protests, disputes, and claims. These standards do not relieve the grantee or sub-grantee of any contractual responsibilities under its contracts. Federal agencies will not substitute their judgment for that of the grantee or sub-grantee unless the matter is primarily a Federal concern. Violations of law will be referred to the local, State, or Federal authority having proper jurisdiction.
(12) Grantees and sub-grantees will have protest procedures to handle and resolve disputes relating to their procurements and shall in all instances disclose information regarding the protest to the awarding agency. A protestor must exhaust all administrative remedies with the grantee and sub-grantee before pursuing a protest with the Federal agency. Reviews of protests by the Federal agency will be limited to:
(i) Violations of Federal law or regulations and the standards of this section (violations of State or local law will be under the jurisdiction of State or local authorities) and
(ii) Violations of the grantee's or sub-grantee's protest procedures for failure to review a complaint or protest. Protests received by the Federal agency other than those specified above will be referred to the grantee or sub-grantee.
(c) Competition. (1) All procurement transactions will be conducted in a manner providing full and open competition consistent with the standards of Sec. 31.36. Some of the situations considered to be restrictive of competition include but are not limited to:
(i) Placing unreasonable requirements on firms in order for them to qualify to do business,
(ii) Requiring unnecessary experience and excessive bonding,
(iii) Noncompetitive pricing practices between firms or between affiliated companies,
(iv) Noncompetitive awards to consultants that are on retainer contracts,
(v) Organizational conflicts of interest,
(vi) Specifying only a ``brand name'' product instead of allowing ``an equal'' product to be offered and describing the performance of other relevant requirements of the procurement, and
(vii) Any arbitrary action in the procurement process.
(2) Grantees and sub-grantees will conduct procurements in a manner that prohibits the use of statutorily or administratively imposed in-State or local geographical preferences in the evaluation of bids or proposals, except in those cases where applicable Federal statutes expressly mandate or encourage geographic preference. Nothing in this section preempts State licensing laws. When contracting for architectural and engineering (A/E) services, geographic location may be a selection criteria provided its application leaves an appropriate number of qualified firms, given the nature and size of the project, to compete for the contract.
(3) Grantees will have written selection procedures for procurement transactions. These procedures will ensure that all solicitations:

(i) Incorporate a clear and accurate description of the technical requirements for the material, product, or service to be procured. Such description shall not, in competitive procurements, contain features, which unduly restrict competition. The description may include a statement of the qualitative nature of the material, product or service to be procured, and when necessary, shall set forth those minimum essential characteristics and standards to which it must conform if it is to satisfy its intended use. Detailed product specifications should be avoided if at all possible. When it is impractical or uneconomical to make a clear and accurate description of the technical requirements, a ``brand name or equal" description may be used as a means to define the performance or other salient requirements of a procurement. The specific features of the named brand which must be met by offerers shall be clearly stated; and
(ii) Identify all requirements which the offerers must fulfill and all other factors to be used in evaluating bids or proposals.
(4) Grantees and sub-grantees will ensure that all pre-qualified lists of persons, firms, or products which are used in acquiring goods and services are current and include enough qualified sources to ensure maximum open and free competition. Also, grantees and sub-grantees will not preclude potential bidders from qualifying during the solicitation period.
(5) Construction grants awarded under Title II of the Clean Water Act are subject to the following "Buy American" requirements in paragraphs (c)(5) (i)-(iii) of this section. Section 215 of the Clean Water Act requires that contractors give preference to the use of domestic material in the construction of EPA-funded treatment works.
(i) Contractors must use domestic construction materials in preference to nondomestic material if it is priced no more than 6 percent higher than the bid or offered price of the nondomestic material, including all costs of delivery to the construction site and any applicable duty, whether or not assessed. The grantee will normally base the computations on prices and costs in effect on the date of opening bids or proposals.
(ii) The award official may waive the Buy American provision based on factors the award official considers relevant, including:
(A) Such use is not in the public interest;
(B) The cost is unreasonable;
(C) The Agency's available resources are not sufficient to implement the provision, subject to the Deputy Administrator's concurrence;
(D) The articles, materials or supplies of the class or kind to be used or the articles, materials or supplies from which they are manufactured are not mined, produced or manufactured in the United States in sufficient and reasonably available commercial quantities or satisfactory quality for the particular project; or
(E) Application of this provision is contrary to multilateral government procurement agreements, subject to the Deputy Administrator's concurrence.
(iii) All bidding documents, sub-agreements, and, if appropriate, requests for proposals must contain the following "Buy American" provision: In accordance with section 215 of the Clean Water Act (33 U.S.C. 1251 et seq.) and implementing EPA regulations, the contractor agrees that preference will be given to domestic construction materials by the contractor, subcontractors, materialmen and suppliers in the performance of this sub-agreement.
(d) Methods of procurement to be followed--(1) Procurement by small purchase procedures. Small purchase procedures are those relatively simple and informal procurement methods for securing services, supplies, or other properties that do not cost more than the simplified acquisition threshold fixed at 41 U.S.C. 403(11) (currently set at $100,000). If small purchase procedures are used, price or rate quotations shall be obtained from an adequate number of qualified sources.
(2) Procurement by sealed bids (formal advertising). Bids are publicly solicited and a firm-fixed-price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price. The sealed bid method is the preferred method for procuring construction, if the conditions in 31.36(d)(2)(i) apply.
(i) In order for sealed bidding to be feasible, the following conditions should be present:
(A) A complete, adequate, and realistic specification or purchase description is available;

(B) Two or more responsible bidders are willing and able to compete effectively and for the business; and
(C) The procurement lends itself to a firm fixed price contract and the selection of the successful bidder can be made principally on the basis of price.
(ii) If sealed bids are used, the following requirements apply:
(A) The invitation for bids will be publicly advertised and bids shall be solicited from an adequate number of known suppliers, providing them sufficient time prior to the date set for opening the bids;
(B) The invitation for bids, which will include any specifications and pertinent attachments, shall define the items or services in order for the bidder to properly respond;
(C) All bids will be publicly opened at the time and place prescribed in the invitation for bids;
(D) A firm fixed-price contract award will be made in writing to the lowest responsive and responsible bidder. Where specified in bidding documents, factors such as discounts, transportation cost, and life cycle costs shall be considered in determining which bid is lowest. Payment discounts will only be used to determine the low bid when prior experience indicates that such discounts are usually taken advantage of; and
(E) Any or all bids may be rejected if there is a sound documented reason.
(3) Procurement by competitive proposals. The technique of competitive proposals is normally conducted with more than one source submitting an offer, and either a fixed-price or cost-reimbursement type contract is awarded. It is generally used when conditions are not appropriate for the use of sealed bids. If this method is used, the following requirements apply:
(i) Requests for proposals will be publicized and identify all evaluation factors and their relative importance. Any response to publicized requests for proposals shall be honored to the maximum extent practical;
(ii) Proposals will be solicited from an adequate number of qualified sources;
(iii) Grantees and sub-grantees will have a method for conducting technical evaluations of the proposals received and for selecting awardees;
(iv) Awards will be made to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered; and
(v) Grantees and sub-grantees may use competitive proposal procedures for qualifications-based procurement of architectural/engineering (A/E) professional services whereby competitors' qualifications are evaluated and the most qualified competitor is selected, subject to negotiation of fair and reasonable compensation. The method, where price is not used as a selection factor, can only be used in procurement of A/E professional services. It cannot be used to purchase other types of services though A/E firms are a potential source to perform the proposed effort.
(4) Procurement by noncompetitive proposals is procurement through solicitation of a proposal from only one source, or after solicitation of a number of sources, competition is determined inadequate.
(i) Procurement by noncompetitive proposals may be used only when the award of a contract is infeasible under small purchase procedures, sealed bids or competitive proposals and one of the following circumstances applies:
(A) The item is available only from a single source;
(B) The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation;
(C) The awarding agency authorizes noncompetitive proposals; or
(D) After solicitation of a number of sources, competition is determined inadequate.
(ii) Cost analysis, i.e., verifying the proposed cost data, the projections of the data, and the evaluation of the specific elements of costs and profits, is required.
(iii) Grantees and sub-grantees may be required to submit the proposed procurement to the awarding agency for pre-award review in accordance with paragraph (g) of this section.
(e) Contracting with small and minority firms, women's business enterprise and labor surplus area firms.
(1) The grantee and sub-grantee will take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.
(2) Affirmative steps shall include:

(i) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
(ii) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
(iii) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises;
(iv) Establishing delivery schedule s, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises;
(v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and
(vi) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (e)(2) (i) through (v) of this section.
(f) Contract cost and price.
(1) Grantees and sub-grantees must perform a cost or price analysis in connection with every procurement action including contract modifications. The method and degree of analysis is dependent on the facts surrounding the particular procurement situation, but as a starting point, grantees must make independent estimates before receiving bids or proposals. A cost analysis must be performed when the offerer is required to submit the elements of his estimated cost, e.g., under professional, consulting, and architectural engineering services contracts. A cost analysis will be necessary when adequate price competition is lacking, and for sole source procurements, including contract modifications or change orders, unless price reasonableness can be established on the basis of a catalog or market price of a commercial product sold in substantial quantities to the general public or based on prices set by law or regulation. A price analysis will be used in all other instances to determine the reasonableness of the proposed contract price.
(2) Grantees and sub-grantees will negotiate profit as a separate element of the price for each contract in which there is no price competition and in all cases where cost analysis is performed. To establish a fair and reasonable profit, consideration will be given to the complexity of the work to be performed, the risk borne by the contractor, the contractor's investment, the amount of subcontracting, the quality of its record of past performance, and industry profit rates in the surrounding geographical area for similar work.
(3) Costs or prices based on estimated costs for contracts under grants will be allowable only to the extent that costs incurred or cost estimates included in negotiated prices are consistent with Federal cost principles (see Sec. 31.22). Grantees may reference their own cost principles that comply with the applicable Federal cost principles.
(4) The cost plus a percentage of cost and percentage of construction cost methods of contracting shall not be used.
(g) Awarding agency review.
(1) Grantees and sub-grantees must make available, upon request of the awarding agency, technical specifications on proposed procurements where the awarding agency believes such review is needed to ensure that the item and/or service specified is the one being proposed for purchase. This review generally will take place prior to the time the specification is incorporated into a solicitation document. However, if the grantee or sub-grantee desires to have the review accomplished after a solicitation has been developed, the awarding agency may still review the specifications, with such review usually limited to the technical aspects of the proposed purchase.
(2) Grantees and sub-grantees must on request make available for awarding agency pre-award review procurement documents, such as requests for proposals or invitations for bids, independent cost estimates, etc. when:
(i) A grantee's or sub-grantee's procurement procedures or operation fails to comply with the procurement standards in this section; or
(ii) The procurement is expected to exceed the simplified acquisition threshold and is to be awarded without competition or only one bid or offer is received in response to a solicitation; or

(iii) The procurement, which is expected to exceed the simplified acquisition threshold, specifies a "brand name" product; or
(iv) The proposed award is more than the simplified acquisition threshold and is to be awarded to other than the apparent low bidder under a sealed bid procurement; or
(v) A proposed contract modification changes the scope of a contract or increases the contract amount by more than the simplified acquisition threshold.
(3) A grantee or sub-grantee will be exempt from the pre-award review in paragraph (g)(2) of this section if the awarding agency determines that its procurement systems comply with the standards of this section.
(i) A grantee or sub-grantee may request that its procurement system be reviewed by the awarding agency to determine whether its system meets these standards in order for its system to be certified. Generally, these reviews shall occur where there is a continuous high-dollar funding, and third-party contracts are awarded on a regular basis.
(ii) A grantee or sub-grantee may self-certify its procurement system. Such self-certification shall not limit the awarding agency's right to survey the system. Under a self-certification procedure, awarding agencies may wish to rely on written assurances from the grantee or sub-grantee that it is complying with these standards. A grantee or sub-grantee will cite specific procedures, regulations, standards, etc., as being in compliance with these requirements and have its system available for review.
(h) Bonding requirements. For construction or facility improvement contracts or subcontracts exceeding the simplified acquisition threshold, the awarding agency may accept the bonding policy and requirements of the grantee or sub-grantee provided the awarding agency has made a determination that the awarding agency's interest is adequately protected. If such a determination has not been made, the minimum requirements shall be as follows:
(1) A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.
(2) A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.
(3) A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.
(i) Contract provisions. A grantee's and sub-grantee's contracts must contain provisions in paragraph (i) of this section. Federal agencies are permitted to require changes, remedies, changed conditions, access and records retention, suspension of work, and other clauses approved by the Office of Federal Procurement Policy.
(1) Administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate. (Contracts more than the simplified acquisition threshold)
(2) Termination for cause and for convenience by the grantee or sub-grantee including the manner by which it will be effected and the basis for settlement. (All contracts in excess of $10,000)
(3) Compliance with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60). (All construction contracts awarded in excess of $10,000 by grantees and their contractors or sub-grantees)
(4) Compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR part 3). (All contracts and sub-grants for construction or repair)
(5) Compliance with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor regulations (29 CFR part 5). (Construction contracts in excess of $2000 awarded by grantees and sub-grantees when required by Federal grant program legislation)

(6) Compliance with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR part 5). (Construction contracts awarded by grantees and sub-grantees in excess of $2000, and in excess of $2500 for other contracts which involve the employment of mechanics or laborers)
(7) Notice of awarding agency requirements and regulations pertaining to reporting.
(8) Notice of awarding agency requirements and regulations pertaining to patent rights with respect to any discovery or invention which arises or is developed in the course of or under such contract.
(9) Awarding agency requirements and regulations pertaining to copyrights and rights in data.
(10) Access by the grantee, the sub-grantee, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions.
(11) Retention of all required records for three years after grantees or sub-grantees make final payments and all other pending matters are closed.
(12) Compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15). (Contracts, subcontracts, and sub-grants of amounts in excess of $100,000)
(13) Mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).
(j) Payment to consultants.
(1) EPA will limit its participation in the salary rate (excluding overhead) paid to individual consultants retained by grantees or by a grantee's contractors or subcontractors to the maximum daily rate for a GS-18. (Grantees may, however, pay consultants more than this amount). This limitation applies to consultation services of designated individuals with specialized skills who are paid at a daily or hourly rate. This rate does not include transportation and subsistence costs for travel performed; grantees will pay these in accordance with their normal travel reimbursement practices. (Pub. L. 99-591).
(2) Sub-agreements with firms for services which are awarded using the procurement requirements in this part are not affected by this limitation.
(k) Use of the same architect or engineer during construction.
(1) If the grantee is satisfied with the qualifications and performance of the architect or engineer who provided any or all of the facilities planning or design services for a waste-water treatment works project and wishes to retain that firm or individual during construction of the project, it may do so without further public notice and evaluation of qualifications, provided:
(i) The grantee received a facilities planning (Step 1) or design grant (Step 2), and selected the architect or engineer in accordance with EPA's procurement regulations in effect when EPA awarded the grant; or
(ii) The award official approves noncompetitive procurement under Sec. 31.36(d)(4) for reasons other than simply using the same individual or firm that provided facilities planning or design services for the project; or
(iii) The grantee attests that:
(A) The initial request for proposals clearly stated the possibility that the firm or individual selected could be awarded a sub-agreement for services during construction; and
(B) The firm or individual was selected for facilities planning or design services in accordance with procedures specified in this section.
(C) No employee, officer or agent of the grantee, any member of their immediate families, or their partners have financial or other interest in the firm selected for award; and
(D) None of the grantee's officers, employees or agents solicited or accepted gratuities, favors or anything of monetary value from contractors or other parties to sub-agreements.

(2) However, if the grantee uses the procedures in paragraph (k)(1) of this section to retain an architect or engineer, any Step 3 sub-agreements between the architect or engineer and the grantee must meet all of the other procurement provisions in Sec. 31.36.

[53 FR 8068 and 8087, Mar. 11, 1988, and amended at 53 FR 8075, Mar. 11, 1988; 60 FR 19639, 19644, Apr. 19, 1995; 66 FR 3794, Jan. 16, 2001]

KRS Chapter 45A
Kentucky Model Procurement Code

45A.075 Methods of awarding state contracts.
Except as otherwise authorized by law, all state contracts shall be awarded by:
(1) Competitive sealed bidding, pursuant to KRS 45A.080; or
(2) Competitive negotiation, pursuant to KRS 45A.085 and 45A.090 or 45A.180; or
(3) Noncompetitive negotiation, pursuant to KRS 45A.095; or
(4) Small purchase procedures, pursuant to KRS 45A.100.
Effective: June 24, 2003
History: Amended 2003 Ky. Acts ch. 98, sec. 4, effective June 24, 2003. – Created 1978 Ky. Acts ch. 110, sec. 16, effective January 1, 1979.

45A.080 Competitive sealed bidding.
(1) Contracts exceeding the amount provided by KRS 45A.100 shall be awarded by competitive sealed bidding unless it is determined in writing that this method is not practicable. Factors to be considered in determining whether competitive sealed bidding is not practicable shall include:
(a) Whether specifications can be prepared that permit award on the basis of best value; and
(b) The available sources, the time and place of performance, and other relevant circumstances as are appropriate for the use of competitive sealed bidding.
(2) The invitation for bids shall state that awards shall be made on the basis of best value. In any contract which is awarded under an invitation to bid which requires delivery by a specified date and imposes a penalty for late delivery, if the delivery is late, the contractor shall be given the opportunity to present evidence that the cause of the delay was beyond his control. If it is the opinion of the purchasing officer that there is sufficient justification for delayed delivery, the purchasing officer may adjust or waive any penalty that is provided for in the contract.
(3) Adequate public notice of the invitation for bids shall be given a sufficient time prior to the date set forth for the opening of bids. The notice may include posting on the Internet or publication in a newspaper or newspapers of general circulation in the state as determined by the secretary of the Finance and Administration Cabinet not less than seven (7) days before the date set for the opening of the bids. The provisions of this subsection shall also apply to price contracts and purchase contracts of state institutions of higher education.
(4) Bids shall be opened publicly at the time and place designated in the invitation for bids. At the time the bids are opened, the purchasing agency shall announce the agency's engineer's estimate, if applicable, and make it a part of the agency records pertaining to the letting of any contract for which bids were received. Each bid, together with the name of the bidder and the agency's engineer's estimate, shall be recorded and be open to public inspection. Electronic bid opening and posting of the required information for public viewing shall satisfy the requirements of this subsection.
(5) The contract shall be awarded by written notice to the responsive and responsible bidder whose bid offers the best value.
(6) Correction or withdrawal of bids shall be allowed only to the extent permitted by regulations issued by the secretary.
Effective: July 14, 2000
History: Amended 2000 Ky. Acts ch. 509, sec. 1, effective July 14, 2000. – Amended 1998 Ky. Acts ch. 120, sec. 10, effective July 15, 1998. -- Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 4, sec. 27, effective May 30, 1997.. -- Amended 1996 Ky.Acts ch. 60, sec. 2, effective July 15, 1996. -- Amended 1994 Ky. Acts ch. 278, sec. 1, effective July 15, 1994. -- Amended 1982 Ky. Acts ch. 282, sec. 1, effective July 15, 1982. -- Amended 1979 (1st Extra.

Sess.) Ky. Acts ch. 9, sec. 1, effective February 10, 1979. -- Created 1978 Ky. Acts ch. 110, sec. 17, effective January 1, 1979.

45A.085 Competitive negotiation.
(1) When, under administrative regulations promulgated by the secretary or under KRS 45A.180, the purchasing officer determines in writing that the use of competitive sealed bidding is not practicable, and except as provided in KRS 45A.095 and 45A.100, a contract may be awarded by competitive negotiation.
(2) Adequate public notice of the request for proposals shall be given in the same manner and circumstances as provided in KRS 45A.080(3).
(3) Contracts other than contracts for projects utilizing an alternative project delivery method under KRS 45A.180 may be competitively negotiated when it is determined in writing by the purchasing officer that the bids received by competitive sealed bidding either are unreasonable as to all or part of the requirements, or were not independently reached in open competition, and for which each competitive bidder has been notified of the intention to negotiate and is given reasonable opportunity to negotiate.
(4) Contracts for projects utilizing an alternative project delivery method shall be processed in accordance with KRS 45A.180.
(5) The request for proposals shall indicate the relative importance of price and other evaluation factors.
(6) Award shall be made to the responsible offerer whose proposal is determined in writing to be the most advantageous to the Commonwealth, taking into consideration price and the evaluation factors set forth in the request for proposals.
(7) Written or oral discussions shall be conducted with all responsible offerers who submit proposals determined in writing to be reasonably susceptible of being selected for award. Discussions shall not disclose any information derived from proposals submitted by competing offerers. Discussions need not be conducted:
(a) With respect to prices, where the prices are fixed by law or administrative regulation, except that consideration shall be given to competitive terms and conditions;
(b) Where time of delivery or performance will not permit discussions; or
(c) Where it can be clearly demonstrated and documented from the existence of adequate competition or prior experience with the particular supply, service, or construction item, that acceptance of an initial offer without discussion would result in fair and reasonable best value procurement, and the request for proposals notifies all offerers of the possibility that award may be made on the basis of the initial offers.
Effective: June 24, 2003
History: Amended 2003 Ky. Acts ch. 98, sec. 5, effective June 24, 2003. – Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 4, sec. 28, effective May 30, 1997. – Amended 1979 (1st Extra. Sess.) Ky. Acts ch. 9, sec. 2, effective February 10, 1979. -- Created 1978 Ky. Acts ch. 110, sec. 18, effective January 1, 1979.

45A.090 Negotiation after competitive sealed bidding when all bids exceed available funds.
(1) In the event that all bids submitted pursuant to competitive sealed bidding under KRS 45A.080 result in bid prices in excess of the funds available for the purchase, and the chief purchasing officer determines in writing:
(a) That there are no additional funds available from any source so as to permit an award to the responsive and responsible bidder whose bid offers the best value; and
(b) The best interest of the state will not permit the delay attendant to a resolicitation under revised specifications, or for revised quantities, under competitive sealed bidding as provided in KRS 45A.080, then a negotiated award may be made as set forth in subsections (2) or (3) of this section.
(2) Where there is more than one (1) bidder, competitive negotiations pursuant to KRS 45A.085(3) shall be conducted with the three (3) (two (2) if there are only two (2)) bidders determined in writing to be the most responsive and responsible bidders, based on criteria contained in the bid invitation. Such competitive negotiations shall be conducted under the following restrictions:
(a) If discussions pertaining to the revision of the specifications or quantities are held with any potential offerer, all other potential offerers shall be afforded an opportunity to take part in such discussions; and

(b) A request for proposals, based upon revised specifications or quantities, shall be issued as promptly as possible, shall provide for an expeditious response to the revised requirements, and shall be awarded upon the basis of best value.
(3) Where, after competitive sealed bidding, it is determined in writing that there is only one (1) responsive and responsible bidder, a noncompetitive negotiated award may be made with such bidder in accordance with KRS 45A.095.
Effective: June 24, 2003
History: Amended 2003 Ky. Acts ch. 98, sec. 6, effective June 24, 2003. – Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 4, sec. 29, effective May 30, 1997. – Created 1978 Ky. Acts ch. 110, sec. 19, effective January 1, 1979.

45A.095 Noncompetitive negotiation.
(1) A contract may be made by noncompetitive negotiation only for sole source purchases, or when competition is not feasible, as determined by the purchasing officer in writing prior to award, under administrative regulations promulgated by the secretary of the Finance and Administration Cabinet or the governing boards of universities operating under KRS Chapter 164A, or when emergency conditions exist. Sole source is a situation in which there is only one (1) known capable supplier of a commodity or service, occasioned by the unique nature of the requirement, the supplier, or market conditions. Insofar as it is practical, no less than three (3) suppliers shall be solicited to submit written or oral quotations whenever it is determined that competitive sealed bidding is not feasible. Award shall be made to the supplier offering the best value. The names of the suppliers submitting quotations and the date and amount of each quotation shall be placed in the procurement file and maintained as a public record. Competitive bids may not be required:
(a) For contractual services where no competition exists, such as telephone service, electrical energy, and other public utility services;
(b) Where rates are fixed by law or ordinance;
(c) For library books;
(d) For commercial items that are purchased for resale;
(e) For interests in real property;
(f) For visiting speakers, professors, expert witnesses, and performing artists;
(g) For personal service contracts executed pursuant to KRS 45A.690 to 45A.725; and
(h) For agricultural products in accordance with KRS 45A.645.
(2) The chief procurement officer, the head of a using agency, or a person authorized in writing as the designee of either officer may make or authorize others to make emergency procurements when an emergency condition exists.
(3) An emergency condition is a situation which creates a threat or impending threat to public health, welfare, or safety such as may arise by reason of fires, floods, tornadoes, other natural or man-caused disasters, epidemics, riots, enemy attack, sabotage, explosion, power failure, energy shortages, transportation emergencies, equipment failures, state or federal legislative mandates, or similar events. The existence of the emergency condition creates an immediate and serious need for services, construction, or items of tangible personal property that cannot be met through normal procurement methods and the lack of which would seriously threaten the functioning of government, the preservation or protection of property, or the health or safety of any person.
(4) The Finance and Administration Cabinet may negotiate directly for the purchase of contractual services, supplies, materials, or equipment in bona fide emergencies regardless of estimated costs. The existence of the emergency shall be fully explained, in writing, by the head of the agency for which the purchase is to be made. The explanation shall be approved by the secretary of the Finance and Administration Cabinet and shall include the name of the vendor receiving the contract along with any other price quotations and a written determination for selection of the vendor receiving the contract. This information shall be filed with the record of all such purchases and made available to the public. Where practical, standard specifications shall be followed in making emergency purchases. In any event, every effort should be made to effect a competitively established price for purchases made by the state.

Effective: July 15, 2002
History: Amended 2002 Ky. Acts ch. 344, sec. 9, effective July 15, 2002. – Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 4, sec. 30, effective May 30, 1997. – Amended 1990 Ky. Acts ch. 496, sec. 4, effective July 13, 1990. -- Created 1978 Ky. Acts ch. 110, sec. 20, effective January 1, 1979.

45A.100 Small purchases.
(1) Procurements may be made in accordance with small purchase administrative regulations promulgated by the secretary of the Finance and Administration Cabinet, pursuant to KRS Chapter 13A, as follows:
(a) Up to ten thousand dollars ($10,000) per project for construction and one thousand dollars ($1,000) for purchases by any state governmental body, except for those state administrative bodies specified in paragraph (b) of this subsection; and
(b) Up to forty thousand dollars ($40,000) per project for construction or purchases by the Finance and Administration Cabinet, state institutions of higher education, and the legislative branch of government.
(2) Procurement requirements shall not be artificially divided so as to constitute a small purchase under this section. At least every two (2) years, the secretary shall review the prevailing costs of labor and materials and may make recommendations to the next regular session of the General Assembly for the revision of the then current maximum small purchase amount as justified by intervening changes in the cost of labor and materials.
(3) The secretary of the Finance and Administration Cabinet may grant to any state agency with a justifiable need a delegation of small purchasing authority, which exceeds the agency's small purchase limit, provided in subsection (1) of this section. Delegations of small purchasing authority shall be granted or revoked by the secretary of the Finance and Administration Cabinet, in accordance with administrative regulations promulgated by the cabinet pursuant to KRS Chapter 13A. These administrative regulations shall establish, at a minimum, the criteria for granting and revoking delegations of small purchasing authority, including the requesting agency's past compliance with purchasing regulations, the level of training of the agency's purchasing staff, and the extent to which the agency utilizes the Kentucky Automated Purchasing System. The administrative regulations may permit the secretary of the Finance and Administration Cabinet to delegate small purchase procurements up to the maximum amount specified in subsection (1)(b) of this section.
Effective: July 15, 2002
History: Amended 2002 Ky. Acts ch. 320, sec. 2, effective July 15, 2002. – Amended 2000 Ky. Acts ch. 225, sec. 1, effective July 14, 2000. -- Amended 1996 Ky. Acts ch. 60, sec. 1, effective July 15, 1996. -- Amended 1994 Ky. Acts ch. 323, sec. 1, effective July 15, 1994. -- Amended 1990 Ky. Acts ch. 496, sec. 5, effective July 13, 1990. -- Amended 1986 Ky. Acts ch. 384, sec. 1, effective July 15, 1986. -- Amended 1984 Ky. Acts ch. 384, sec. 1, effective July 13, 1984. -- Amended 1982 Ky. Acts ch. 282, sec. 2, effective July 15, 1982. -- Amended 1980 Ky. Acts ch. 242, sec. 1, effective July 15, 1980; and ch. 250, sec. 19, effective April 9, 1980.-- Created 1978 Ky. Acts ch. 110, sec. 21, effective January 1, 1979.

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

The following excerpts are from 45 FR 65984 (October 3, 1980):
The minority and female goals apply to Federal and federally assisted construction contractors and subcontractors which have covered contracts. The goals are expressed as a percentage of the total hours worked by such a covered or subcontractor's entire onsite construction workforce, which is working on any construction site within a relevant area. The goal applies to each construction craft and trade in the contractor's entire workforce in the relevant area including those employees working on private non-federally involved projects.

Until further notice, the following goals for minority utilization in each construction craft and trade shall be included in all Federal or federally assisted construction contracts and subcontracts in excess of $10,000 to be performed in the respective geographic area. The goals are applicable to each nonexempt contractor's total onsite construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, federally assisted or non-federally related project, contract or subcontract.

Construction contractors which are participating in an approved Hometown Plan (see 41 CFR 60-4.5) are required to comply with the goals of the Hometown Plan with regard to construction work they perform in the area covered by the Hometown Plan. With regard to all their other covered construction work, such contractors are required to comply as follows:

Goals for female participation in each trade.....6.9%
Goals for minority participation in each trade.....Insert goals for each year (see Attachment Number 6)

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area.

The following excerpts are from 45 FR 65977 (October 3, 1980):
The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the covered area is (insert description of the geographical areas where the contract is to be performed giving the state, country, and city, if any).

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

EEO Specifications

Following is the standard language, which must be incorporated into all solicitations for offers and bids on all Federal and Federally assisted construction contracts or subcontracts in excess of $10,000 to be performed in designated geographical areas:

1. As used in these specifications:
   (a) Covered Area means the geographical area described in the solicitation from which this contract resulted.
   (b) Director means Director, Office of Federal Contract Compliance Program, United States Department of Labor, or any person to whom the Director delegates authority;
   (c) Employer identification number means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
   (d) Minority includes:
      (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
      (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
      (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
      (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan.

   Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees.. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered

Contractor's or Subcontractor's failure to take a good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7-a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative actions steps at least as extensively as the following:

   a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations responses.

   c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the contractor may have taken.

   d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligation.

   e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs

funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7-b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, lay-off, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative actions obligations (7 a through p). The efforts of a contractor association, joint contractor-union, contractor-community, of other similar group of which the contractor is a member and participant may be asserted as fulfilling any one or more of its obligations under 7 a through p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example; even though the Contractor has achieved its goal for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables for affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation, if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

EEO Goals for Economic Areas in Region 4
Source: Appendix B-80 in 45 FR 65984 (October 3, 1980)

Alabama:	
047 Mobile, AL	
SMSA Counties:	
5160 Mobile, AL	26.9
AL Baldwin; AL Mobile.	
6026 Pascagoula - Moss, Point MS	16.9
MS Jackson.	
Non-SMSA Counties	26.4
AL Choctaw; AL Clarke; AL Conecuh; AL Escambia; AL Monroe; AL Washington; AL Wilcox; MS George; MS Greene.	
048 Montgomery, AL:	
SMSA Counties	
5240 Montgomery, AL	29.9
AL Autauga; AL El more; AL Montgomery.	
Non-SMSA Counties	29.9
AL Barbour; AL Bullock; AL Butler; AL Coffee; AL Coosa; AL Covington; AL Crenshaw; AL Dale; AL Dallas; AL Geneva; AL Henry; AL Houston.; AL Lowndes; AL Macon; AL Perry; AL Pike; AL Tallapoosa.	
049 Birmingham, AL:	
SMSA Counties:	
0450 Anniston, AL	14.3
AL Calhoun	
1000 Birmingham, AL	24.9
AL Jefferson, AL St- Clair; AL Shelby; AL Walker; AL Etowah	
8600 Tuscaloosa, AL	20.6
AL Tuscaloosa.	
Non-SMSA Counties	20.7
AL Bibb; AL Blount AL Cherokee; AL Chilton; AL Clay; AL Cleburne; AL Cullman; AL Fayette; AL Greene; AL Hale; AL Lamar; AL Marion; AL Pickens; AL Randolph; AL Sumter: AL Talladega; AL Winston.	
050 Huntsville - Florence, AL:	
SMSA Counties:	
2650 Florence, AL	11.9
AL Colbert; AL Lauderdale.	
3440 Huntsville, AL	12.0
AL Limestone; AL Madison; AL Marshall.	
Non-SMSA Counties	11.2
AL Franklin; AL Lawrence AL Morgan; TN Lincoln.	
Georgia:	
035 Augusta, GA:	
SMSA Counties:	
0600 Augusta, GA – SC	27.2
GA Columbia; GA Richmond; SC Aiken	
Non-SMSA Counties	32.8
GA Burke; GA Emanuel; GA Glascock; GA Jefferson; GA Jenkins; GA Lincoln; GA McDuffie; GA Taliaferro; GA Warren; GA Wilkes; SC Allendale, SC Bamberg; SC Barnwell; SC Edgefield; SC McCormick	
036 Atlanta, GA	
SMSA Counties	
0520 Atlanta	21.2

GA Butts; GA Cherokee; GA Clayton; GA Cobb; GA Dekalb; GA Douglas; GA Fayette; GA Forsyth; GA Fulton; GA Gwinnett; GA Henry, GA Newton; GA Paulding; GA Rockdale; GA Walton

Non-SMSA Counties 19.5
GA Banks; GA Barrow; GA Bartow; GA Carroll; GA Clarke; GA Coweta; GA Dawson; GA Elbert; GA Fannin; GA Floyd; GA Franklin; GA Gilmer; GA Gordon; GA Greene; GA Habersham; GA Hall; GA Haralson; GA Hart; GA Heard; GA Jackson; GA Jasper; GA Lamar, GA Lumpkin; GA Madison, GA Morgan; GA Oconee, GA Oglethorpe; GA Pickens; GA Pike; GA Polk; GA Rabun, GA Spalding; GA Stephens; GA Towns; GA Union; GA Upson; GA White.

037 Columbus, GA:
SMSA Counties
1800 Columbus 29.6
AL Russell; GA Chattahoochee; GA Columbus.
Non-SMSA Counties 31.6
AL Chambers; AL Lee; GA Harris; GA Marion; GA Meriwether; GA Quitman; GA Schley; GA Stewart; GA Sumter; GA Talbot; GA Troup; GA Webster.

038 Macon, GA:
SMSA Counties
4660 Macon, GA 27.5
GA Bibb; GA Houston; GA Jones; GA Twiggs.
Non-SMSA Counties 31.7
GA Baldwin; GA Bleckley; GA Crawford; GA Crisp; GA Dodge; GA Dooly; GA Hancock; GA Johnson; GA Laurens; GA Macon; GA Monroe; GA Peach; GA Pulaski; GA Putnam. GA Taylor; GA Telfair; GA Treutlen; GA Washington; GA Wheeler; GA Wilcox; GA Wilkinson.

039 Savannah, GA:
SMSA Counties:
7520 Savannah, GA 30.6
GA Bryan; GA Chatham; GA Effingham
Non-SMSA Counties 29.8
GA Appling; GA Atkinson; GA Bacon; GA Bullock; GA Candler; GA Coffee; GA Evans; GA Jeff Davis; GA Liberty; GA Lon g; GA McIntosh; GA Montgomery; GA Screven; GA Tattinall; GA Toombs; GA Wayne; SC Beaufort; SC Hampton; SC Jasper.

040 Albany, GA
SMSA Counties
0120 Albany, GA 32.1
GA Dougherty; GA Lee.
Non-SMSA Counties 31.1
GA Baker; GA Ben Hill; GA Berrien; GA Brooks; GA Calhoun; GA Clay; GA Clinch; GA Colquitt; GA Cook; GA Decatur; GA Early; GA Echols; GA Grady; GA Irwin; GA Lanier, GA Lowndes; GA Miller; GA Mitchell; GA Randolph; GA Seminole, GA Terrell; GA Thomas; GA Tift; GA Turner; GA Worth

Florida:

041 Jacksonville, FL:
SMSA Counties
2900 Gainesville, FL 20.6
FL Alachua
3600 Jacksonville, FL 21.8
FL Baker; FIL Clay; FL Duval; FL Nassau; FL St. Johns.
Non-SMSA Counties 22.2
FL Bradford; FL Columbia; FL Dade; FL Gilchrist; FIL Hamilton; FL LaFayetle; FL Levy; FL Marion; FL Putnam; FL Suwannee; FL Union; GA Brantley; GA Camden;

GA Charlton; GA Glynn; GA Pierce; GA Ware.
042 Orlando - Melbourne - Daytona Beach, FL.
SMSA Counties:
2020 Daytona Beach, FL 15.7
FL Volusia.
4900 Melbourne - Titusville - Cocoa, FL 10.7
FL Brevard.
5960 Orlando, FL 15.5
FL Orange; FL Osceola; FL Seminole.

Non-SMSA Counties 14.9
FL Flagler; FL Lake; FL Sumter.
043 Miami - Fort Lauderdale, FL:
SMSA Counties:
2680 Fort Lauderdale - Hollywood, FL 15.5
FL. Broward.
5000 Miami, FL 39.5
FL Dade.
8960 West Palm Beach - Boca Raton, FL 22.4
FL Palm Beach.
Non-SMSA Counties 30.4
FL Glades; FL Hendry; FL Indian River, FL Martin; FL Monroe:
FL Okeechobee; FL St. Lucie.
044 Tampa - St Petersburg, FL
SMSA Counties:
1140 Bradenton, FL 15.9
FL Manatee.
2700 Fort Myers, FL
15.3
FL Lee.
3980 Lakeland - Winter Haven, FL 18.0
FL Polk
7510 Sarasota, FL 10.5
FL Sarasota.
8280 Tampa - St. Petersburg, FL 17.9
FL Hillsborough, FL Pasco; FL Pinellas
Non-SMSA Counties 17.1
FL Charlotte; FL Citrus; FL Collier, FL Desoto; FL Hardee; FL Hernando; FL Highlands.
045 Tallahassee. FL:
SMSA Counties:
8240 Tallahassee, FL 24.3
FL Leon; FL Wakulla.
Non-SMSA Counties: 29.5
FL Calhoun; FL Franklin; FL Gadsden; FIL Jack son; FL Jefferson: FL Liberty;
FIL Madison; FL Taylor.
046 Pensacola - Panama City, FL
SMSA Counties:
8615 Panama City, FL 14.1
FIL Bay.
6080 Pensacola, FL 18.3
FL Escambia; FL Santa Rosa.
Non-SMSA Counties 15.4
FL Gulf, FIL Holmes; FIL Okaloosa; FL Walton; FL Washington.
Kentucky:
056 Paducah, KY:
Non-SMSA Counties 5.2

IL Hardin; IL Massac; IL Pope; KY Ballard; KY Caldwell; KY Calloway. KY Carlisle; KY Crittenden; KY Fulton; KY Graves; KY Hickman; KY Livingston; KY Lyon. KY McCracken; KY Marshall.
057 Louisville, KY:
SMSA Counties:
4520 Louisville, KY-IN 11.2
IN Clark; IN Floyd; KY Bullitt; KY Jefferson; KY Oldham.
Non-SMSA Counties 9.6
IN Crawford; IN Harrison; IN Jefferson; IN Orange; IN Scott; IN Washington; KY Breckinridge; KY Grayson; KY Hardin; KY Hart; KY Henry; KY Larue; KY Marion; KY Meade; KY Nelson; KY Shelby; KY Spencer; KY Trimble; KY Washington.
058 Lexington, KY
SMSA Counties
4280 Lexington-Fayette, KY 10.8
KY Bourbon; KY Clark; KY Fayette; KY Jessamine; KY Scott; KY Woodford.
Non-SMSA Counties
7.0
KY Adair KY Anderson; KY Bath; KY Boyle; KY Breathitt; KY Casey; KY Clay; KY Estill; KY Franklin- KY Garrard; KY Green; KY Harrison- KY Jackson; KY Knott; KY Lee; KY Leslie; KY Letcher; KY Lincoln; KY Madison; KY Magoffin; KY Menifee; KY Mercer; KY Montgomery; KY Morgan. KY Nicholas; KY Owsley; KY Perry; KY Powell; KY Pulaski; KY Rockcastle; KY Russell; KY Taylor; KY Wolfe.

Mississippi:
112 Jackson, MS:
SMSA Counties;
3560 Jackson, MS
30.3
MS Hinds; MS Rankin.
Non-SMSA Counties
32.0
MS Attala; MS Choctaw; MS Choctaw; MS Clarke; MS Copiah; MS Covington; MS Franklin; MS Holmes: MS Humphreys; MS Issaquena; MS Jasper; MS Jefferson; MS Jefferson Davis; MS Jones; MS Kemper; MS Lauderdale; MS Lawrence; MS Leake; MS Lincoln; MS Lowndes; MS Madison; MS Neshoba; MS Newton; MS Noxubee,- MS Oktibbeha; MS Scott; MS Sharkey; MS Simpson; MS Smith; MS Warren; MS Wayne; MS Winston; MS Yazoo.

North Carolina:
024 Rocky Mount - Wilson - Greenville NC:
Non-SMSA Counties
31.7
NC Beaufort; NC Carteret; NC Craven,- NC Dare; NC Edgecombe; NC Greene; NC Halifax; NC Hyde; NC Jones; NC Lenoir', NC Martin; NC Nash; NC Northampton; NC Pamlico; NC Pitt; NC Tyrrell; NC Washington; NC Wayne; NC Wilson
025 Wilmington, NC:
SMSA Counties:
9200 Wilmington, NC
20.7
NC Brunswick; NC New Hanover.
Non-SMSA counties
3.5
NC Columbus; NC Duplin; NC Onslow; NC Pender.
026 Fayetteville, NC:
SMSA Counties:

2560 Fayetteville, NC
26.2
NC Cumberland.
Non-SMSA Counties
33.5
NC Bladen; NC Hoke; NC Richmond; NC Robeson; NC Sampson; NC Scotland.
027 Raleigh - Durham, NC.
SMSA Counties:
6640 Raleigh – Durham
22.8
NG Durham; NC Orange; NC Wake.
Non-SMSA Counties
24.7
NC Chatham; NC Franklin; NC Granville; NC Harnett; NC Johnston; NC Lee; NC Person; NC Vance; NC Warren.
028 Greensboro - Winston Sale m - High Point, NC:
SMSA Counties:
1300 Burlington, NC
16.2
NC Alamance.
3120 Greensboro - Winston Salem - High Point NC
16.4
NC Davidson; NC Forsyth; NC Guilford,- NC Randolf; NC Stokes; NC Yadkin.
Non-SMSA Counties
15.5
NC Alleghany; NG Ashe; NC Caswell; NC Davie; NC Montgomery; NC Moore; NC Rockingham; NC Surry; NC Watauga; NC Wilkes.
029 Charlotte, NC:
SMSA Counties:
1520 Charlotte - Gastonia, NC
18.5
NC Gaston; NC Mecklenburg; NC Union.
Non-SMSA Counties
15.7
NC Alexander; NC Anson; NC Burke; NG Cabarrus; NC Caldwell; NC Catawba; NC Cleveland; NC Ire dell; NC Lincoln; NC Rowan; NC Rutherford; NC Stanley; SC Chester; SC Lancaster SC York.
030 Asheville, NC
Non-SMSA Counties:
0480 Asheville, NC 8.5
NC Buncombe; NC Madison.
Non-SMSA Counties 6.3
NC Avery,- NC Cherokee; NC Clay; NC Graham; HC Heywood, NC Henderson; NC Jackson; NC McDowell; NC Macon; NC Mitchell; NC Swain; NC Transylvania; NC Yancey.

South Carolina:
031 Greenville -Spartanburg, SC:
SMSA Counties:
316bGreenville -Spartanburg, SC 16.0
SC Greenville; SC Pickens; SC Spartanburg.
Non-SMSA Counties 17.8
SC Polk; SC Abbeville; SC Anderson; SC Cherokee', SC Greenwood; SC Laurens; SC Oconee; SC Union.
032 Columbia, SC
SMSA Counties:

1760 Columbia, SC 23.4
SC Lexington; SC Richland.
Non-SMSA Counties 32.0
SC Calhoun SC Clarendon; SC Fairfield; SC Kershaw; SC Lee; SC Newberry;
SC Orangeburg; SC Saluda; SC Sumter
033 Florence, SC
Non-SMSA Counties 33.0
SC Chesterfield; SC Darlington; SC Dillon; SC Florence; SC Georgetown; SC Horry;
SC Marion; SC Marlboro; SC Williamsburg.
034 Charleston - North Charleston, SC
SMSA Counties 30.0
1440 Charleston - North Charleston, SC
SC Berkeley; SC Charleston; SC Dorchester.
Non-SMSA Counties 30.7
SC Collection

Tennessee:
051 Chattanooga, TN:
SMSA Counties
1560 Chattanooga, TN - GA 12.6
GA Catoosa; GA Dade; GA Walker; TN Hamilton; TN Marion; TN Sequatchie.
Non-SMSA Counties 8.6
AL De Kalb; AL Jackson; GA Chattooga; GA Murray; GA Whitfield;
TN Bledsoe; TN Bradley; TN Grundy; TN McMinn; TN Meigs; TN Monroe;
TN Polk; TN Rhea.
052 Johnson City - Kingsport - Bristol, TN-VA:
SMSA Counties'.
3660 Johnson City - Kingsport - Bristol. TN – VA 2.6
TN Carter; TN Hawkins- TN Sullivan; TN Unicoi; TN Washington; VA Scott;
VA Washington; VA Bristol.
Non-SMSA Counties 3.2
TN Greene; TN Hancock; TN Johnson; VA Buchanan; VA Dickenson; VA Lee;
VA Russell; VA Smyth; VA Tazewell; VA Wise; VA Norton; WV McDowell, WV Mercer.
053 Knoxville, TN
SMSA Counties:
3840 Knoxville, TN 6.6
TN Anderson; TN Blount; TN Knox; TN Union.
Non-SMSA Counties 4.5
KY Bell; KY Harlan; KY Knox; KY Laurel; KY McCreary; KY Wayne; KY Whitley; TN
Campbell; TN Claiborne; TN Cooke; TN Cumberland; TN Fentress; TN Grainger,
TN Hamblen; TN Jefferson; TN Loudon; TN Morgan; TN Roane; TN Scott;
TN Sevier.
054 Nashville, TN:
SMSA Counties:
1660 Clarksville - Hopkinsville, TN - KY 18.2
KY Christian; TN Montgomery.
5360 Nashville - Davidson, TN 15.8
TN Cheatham, TN Davidson; TN Dickson; TN Robertson; TN Rutherford; TN Sumner;
TN Williamson; TN Wilson.
Non-SMSA Counties 12.0
KY Allen; KY Barren; KY Butler; KY Clinton; KY Cumberland; KY Edmonson;
KY Logan; KY Metcalfe; KY Monroe; KY Simpson; KY Todd; KY Trigg; KY Warren;
TN Bedford; TN Cannon; TN Clay; TN Coffee; TN DeKalb; TN Franklin; TN Giles;
TN Hickman; TN Houston; TN Humphreys; TN Jackson; TN Lawrence; TN Lewis;
TN Macon; TN Marshall; TN Maury; TN Moore; TN Overton; TN Perry; TN Pickett;
TN Putnam; TN Smith,, TN Stewart; TN Trouslale; TN Van Buren; TN Warren;

TN Wayne; TN White.
055 Memphis, TN:
SMSA Counties:
4920 Memphis, TN-AR-MS 32.3
AR Critteriden; MS Do Soto; TN Shelby; TN Tipton.
Non-SMSA Counties 26.5
AR Clay; AR Craighead; AR Cross; AR Greene; AR Lawrence; AR Lee;
AR Mississippi; AR Phillips- AR. Poinsett; AR Randolph; AR St. Francis; MS Alcorn,
MS Benton; MS Bolivar; MS Calhoun; MS Carroll; MS Chickasaw, MS Clay;
MS Coahoma; MS Grenada; MS Itawamba; MS Lafayette; MS Lee; MS Leflore;
MS Marshall; MS Monroe; MS Montgomery; MS Panola; MS Pontotoc; MS Prentiss;
MS Quitman; MS Sunflower; MS Tallahatchie; MS Tate; MS Tippah; MS Tishomingo;
MS Union; MS Washington; MS Webster. MS Yalobusha; MO Dunklin;
MO New Madrid; MO Perniscot; TN Benton; TN Carroll; TN Chester; TN Crockett;
TN Decatur; TN Dyer; TN Fayette; TN Gibson; TN Hardeman; TN Hardin;
TN Haywood; TN Henderson- TN Henry; TN Lake; TN Lauderdale; TN McNairy;
TN Madison; TN Obion; TN Weakley.

CHECK LIST OF EEO DOCUMENTATION FOR BIDDERS ON GRANT/LOAN CONSTRUCTION (Required by Executive Order 11246 as amended)

The low, responsive responsible bidder must forward the following items, in duplicate, to the owner no later than ten (10) days after bid opening. The owner shall have one (1) copy available for inspection by the Office of Federal Contracts Compliance within 14 days after the bid opening. The web site for the OFCC is http://www.dol.gov/esa/ofcp_org.htm.

1. Project Number. Project Location. Type of Construction.
2. Proof of registration with the Joint Reporting Commission. (See Attachment Number 8.)
3. Copy of Affirmative Action Plan of contractor. Indicate company official responsible for EEO.
4. List of current construction contracts, with dollar amount. List contracting Federal Agency, if applicable.
5. Statistics concerning company percent workforce, permanent and temporary, by sex, race, trade, handicapped, and age. 40 CFR Part 7.
6. List of employment sources for project in question. If union sources are utilized, indicate percentage of minority membership within the union crafts.
7. Anticipated employment needs for this project, by sex, race and trade, with estimate of minority participation in specific trades.
8. List of subcontractors (name, address and telephone) with dollar amount and duration of subcontract. Subcontractor contracts over $10,000 must submit items 1- 8.
9. List of any subcontract work yet to be committed with estimate of dollar amount and duration of contract.
10. Contract Price. Duration of prime contract.
11. DBE Documents – See special instructions regarding use of Minority, and Women Owned, and Small Businesses.

Employer Information Report EEO-1

Under the direction of the US Equal Employment Opportunity Commission, the Joint Reporting Committee is responsible for the full-length, multi-phase processing of employment statistics collected on the Employer Information Report EEO-1. This report, also termed Standard Form 100, details the sex and race/ ethnic composition of an employer's work force by job category.

The Employer Information EEO-1 survey is conducted annually under the authority of Public Law 88-352, Title VII of the Civil Rights Act of 1964, as amended by the Equal Employment Opportunity Act of 1972. All employers with 15 or more employees are covered by Public Law 88-352 and are required to keep employment records as specified by Commission regulations. Based on the number of employees and federal contract activities, certain large employers are required to file an EEO-1 Report on an annual basis.

The EEO-1 Report must be filed by:

(A) All private employers who are: (1) subject to Title VII of the Civil Rights Act of 1964 (as amended by the Equal Employment Opportunity Act of 1972) with 100 or more employees EXCLUDING State and local governments, primary and secondary school systems, institutions of higher education, Indian tribes and tax-exempt private memberships clubs other than labor organizations; OR (2)subject to Title VII who have fewer than 100 employees if the company is owned or affiliated with another company, or there is centralized ownership, control or management (such as central control of personnel policies and labor relations) so that the group legally constitutes a single enterprise and the entire enterprise employs a total of 100 or more employees.

(B) All federal contractors (private employers), who:(1) are not exempt as provided for by 41 CFR 60-1.5, (2) have 50 or more employees, and (a) are prime contractors or first-tier subcontractors, and have a contract, subcontract, or purchase order amounting to $50,000 or more; or (b) serve as depository of Government funds in any amount, or (c) is a financial institution which is an issuing an paying agent for U.S. Savings Bonds and Notes.

Only those establishments located in the District of Columbia and the 50 states are required to submit the EEO-1 Report. No Reports should be filed for establishments in Puerto Rico, the Virgin Islands or other American Protectorates.

When filing for the EEO-1 Rep ort for the first time, go to the web site at: http://www.mimdms.com/jrc.html and select "Filing for the first time" from the box labeled INFORMATION. Fill out the electronic questionnaire to enter your company into Joint Reporting Committee (JRC) system. One you have completed the registration process, you will be contacted on how to proceed with the EEO-1 Report. If you have previously registered with the JRC, follow their instructions to update your information.

EPA Form 5720-4

Labor Standards Provisions For Federally Assisted Construction

Labor standards provisions applicable to contracts covering federally financed and assisted construction (29 CFR 5.5, Contract Provisions and Related Matters) that apply to EPA Special Appropriations Projects grants are:

(a)(4)(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

(a)(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

(a)(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5 (a) (1) through (10) and such other clauses as the U.S. Environmental Protection Agency may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

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

(b) Contractor Work Hours and Safety Standards Act. The Administrator, EPA shall cause or require the contracting officer to insert the following clauses set forth in paragraph (b)(1),(2),(3), and (4) of this section in full in any contract subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by *Section 5.5(a) of this title. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

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

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for unliquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The U.S. Environmental Protection Agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b) (2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in section 5.1, the Administrator of EPA shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly worked, deductions made, and actual wages paid. Further, the Administrator of EPA shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the U.S. Environmental Protection Agency and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job. (Approved by the Office of Management and Budget under OMB control numbers 1215-0140 and 1215-0017.)

CERTIFICATIONS

Debarred Firms

All prime Construction Contractors shall certify that Subcontractors have not and will not be awarded to any firm that is currently on the EPA Master List of Debarred, Suspended and Voluntarily Excluded Persons in accordance with the provisions of 40 CFR 32.500(c). Debarment action is taken against a firm for noncompliance with Federal Law.

All bidders shall complete the attached certification (Attachment Number 10) and submit to the owner with the bid proposal.

Anti-lobbying Certification

All prime Construction Contractors must certify (Attachment Number 11) that no appropriated funds were or will be expended for the purpose of lobbying the Executive or Legislative Branches of the Federal Government or Federal Agency concerning this contract (contract in excess of $100,000). If the Contractor has made or agreed to make payment to influence any member of Congress in regard to award of this contract, a Disclosure Form must be completed and submitted to the owner with the bid proposal.

All prime Contractors must require all Subcontractors to submit the certification, which must also be submitted to the owner.

EPA Form 5700-49

CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

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

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal. State, or Local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

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

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

_____

Typed Name & Title of Authorized Representative

_____ _____

Signature of Authorized Representative Date

_____ I am unable to certify to the above statements. My explanation is attached.

CERTIFICATION REGARDING LOBBYING
Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

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

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

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

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

_____
Typed Name & Title of Authorized Representative

_____ _____
Signature of Authorized Representative Date

_____ I am unable to certify to the above statements. My explanation is attached.

UTILIZATION OF SMALL, MINORITY AND WOMEN'S BUSINESSES

The provisions of PL 102-389 and EPA's implementing regulation 40 CFR 31.36(e) require recipients of Federal assistance to award a fair share of sub-agreements to small, small rural, minority and women's businesses on contracts and sub-agreement performed under EPA Assistance Agreements.

The following procedures are to be followed for procurement under EPA Assistance Agreements.

The successful bidder must submit to the grantee within 10 days after bid opening; evidence of the positive steps taken to utilize small, minority and women's businesses. Information should include the following:

EPA Project Number. Project Location. Type of Construction.

List of current construction contracts, with dollar amount. List contracting Federal Agency, if applicable.

List of subcontractors (name, address and telephone) with dollar amount and duration of subcontract.

List of any subcontract work yet to be committed with estimate of dollar amount and duration of contract.

Contract Price. Duration of prime contract.

Such positive efforts shall include:

(1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

(3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises;

(4) Establishing delivery schedules, where the requirement perm its, which encourage participation by small and minority business, and women's business enterprises;

(5) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and

(6) Requiring each party to a sub-agreement to take the affirmative steps listed in paragraphs 1 through 5 of this section.

For purposes of clarification:

This requirement applies to any EPA Financially assisted procurement.

This requirement mandates three responsibilities. Separate solicitations must be made of small, small rural, minority and women's businesses enterprises.

A minority business is a business, at least 51 percent of which is owned and controlled by minority group members (Black; Hispanic; Asian American; American Indian; and any other designations approved by

the Office of Management and Budget that are U.S. citizens. Any specific clarification concerning the ownership and/or control issues will be provided by the EPA Regional Office.

A women's business is a business, at least 51 percent of which is owned and controlled by one or more women who are U.S. citizens.

The control determination will revolve around the minority or women owner's involvement in the day-to-day management of the business enterprise.

Solicitation should allow adequate time for price analysis; EPA recommends that contact be made no later than 15 days before bid opening.

Efforts taken to comply with this requirement must be documented in detail; maintain records of firms contacted, including any negotiation efforts to reach competitive price levels, and awards to the designated firms.

Any proposed changes from the approved Minority/Women/Small business participation after EEO/MBE approval shall be reported to EPA prior to initiation of the action, with the reason for the proposed deviation.

The EPA recommends that the grantee as well as the prime contractor utilize the services of the following agencies to find information on certified Minority/Women/Small business. Use of these services does not absolve the prime contractors from pursuing additional efforts to comply with this requirement.

Minority Business Development Service Centers. These Centers are funded by the U.S. Department of Commerce to provide technical, financial and contracting assistance to minority, women's and small rural business enterprises. The locations of the Centers are available by selecting the appropriate Minority Business Development Agency regional office from: http://www.mbda.gov/.

U.S. Small Business Administration Central Contractor Registration (procurement marketing and access network) at http://www.ccr.gov/.

U.S. Small Business Administration (SBA) Online Women's Business Center. For the Women's Business Center nearest you, go to: http://www.onlinewbc.gov/ and select Women's Business Centers.

For additional information on listings of certified MBE/WBE contractors and subcontractors in the States of Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee, contact Rafael Santamaria in EPA Region 4 at 404 562-8312.

MINORITY AND WOMEN'S BUSINESS ENTERPRISE PARTICIPATION POLICY

MBE/WBE DATA SHEET I

PROJECT NAME: _____ **BID DATE:** _____

1. Name, address and telephone number of contact person on all MBE, WBE matters.

   Contractor's Name: _____

   Address: _____

   Telephone Number: _____

2. Has the bidder met at least the minimum 3% and 5% goals?

   ☐ Yes (submit MBE/WBE DATA SHEET II, including certifications and subcontracts (or letters of intent signed by both parties, identifying the type of work and the dollar amount) within 21 days)

   ☐ No (submit MBE/WBE DATA SHEET III, including all documentation to support a good faith effort within 21 days)

   If no, please provide an explanation of the bidders inability to achieve the required goals and list any uncommitted areas of work.

   _____

   _____

   _____

   _____

   _____

   _____

   _____

   _____

   _____

   _____

   _____

MINORITY AND WOMEN'S BUSINESS ENTERPRISE PARTICIPATION POLICY

MBE/WBE DATA SHEET II

PROJECT NAME: _____ **BID DATE:** _____

1. Contractor's Name/Address: _____
2. Contact Person Name & Phone Number: _____
3. Total contract amount: _____
4. Total dollar amount/percent of contract of MBE participation: _____
5. Total dollar amount/percent of contract of WBE participation: _____
6. Certifications or self-certification* for each subcontractor enclosed: ☐ Yes ☐ No
7. Subcontracts or letters of intent signed by both parties enclosed: ☐ Yes ☐ No
8. **List of MBE Subcontractors:**

   Name: _____
   Address: _____
   Phone: _____
   Contact Person: _____
   Type of Contract: _____
   Work to be Done: _____
   Amount: _____

   Name: _____
   Address: _____
   Phone: _____
   Contact Person: _____
   Type of Contract: _____
   Work to be Done: _____
   Amount: _____

9. **List of WBE Subcontractors:**

   Name: _____
   Address: _____
   Phone: _____
   Contact Person: _____
   Type of Contract: _____
   Work to be Done: _____
   Amount: _____

   Name: _____
   Address: _____
   Phone: _____
   Contact Person: _____
   Type of Contract: _____
   Work to be Done: _____
   Amount: _____

Attach Additional Sheets, If Necessary

*Self-certification: The subcontractor's attorney certifies on his/her letterhead that the subcontractor is a MBE, WBE or both. Call our office at (502) 564-3410, extension 562 if there are any questions.

MINORITY AND WOMEN'S BUSINESS ENTERPRISE PARTICIPATION POLICY

MBE/WBE DATA SHEET III

PROJECT NAME: _____ **BID DATE:** _____

1. Information concerning the efforts for obtaining subcontractor(s)

   Name: _____
   Address: _____
   Phone: _____
   Contact Person: _____
   Contract Amount: _____
   Amount of subcontract work: _____
   Type of work to be subcontracted: _____

2. Information to be submitted by the bidder concerning good fair efforts taken

   a. Announcement: List each publication in which an announcement or notification was placed and attach the tear sheet of each announcement from each publication.

      Name of publication: _____

      Address: _____

      Dates of announcement: _____

      Specific subcontract areas announced: _____

   b. List all Minority and Women Business Associations and/or offices contacted for assistance (i.e.: Minority Affairs Office, Louisville Minority Business Development Center). (Attach a copy of each notification letter)

      _____

      _____

      _____

      _____

   c. Minority and Women's Business: List each Minority and Women's Business construction firm or supplier to which a letter of solicitation was sent or with whom negotiations were held.

      Company name and phone number: _____

      Area of Minority and Women's Business Expertise: _____

      Date of any follow-up call and person spoke to: _____

   d. Copies of returned envelopes.

   e. Copies of certified mail return receipts.

   f. Copies of letters from solicited firms declining offer.

REGION 4 DISADVANTAGED BUSINESS ENTERPRISE (DBE) NEGOTIATED RATES (Subject to change – refer to grant award for specific fair share objectives)

KENTUCKY

SRF Construction: (both programs)	3% MBE and 5% WBE
Equipment:	1.5% MBE and 6.4% WBE
Services:	4% MBE and 1.8% WBE
Supplies: *	2% MBE and 5% WBE

BONDS AND INSURANCE

Bonding requirements for contracts of $100,000 or less are contained in 40 CFR 31.36(h).

Bond requirements for contracts in excess of $100,000 are:

Bid guarantee equivalent to five percent of the bid price. The bid guarantee shall consist of a firm commitment such as a certified check or bid bond submitted with the bid;

Performance bond equal to 100 percent of the contract price, and

Payment bond equal to 100 percent of the contract price. Bonds must be obtained from companies holding Certificates of Authority as acceptable sureties, issued by the U.S. Treasury.

Insurance requirements are contained in the General Conditions of the contract. In addition to the other required insurance, the owner or the contractor, as appropriate, must acquire any flood insurance made available by the Federal Emergency Management Agency as required by 44 CFR Parts 59-79, if construction will take place in a flood hazard area identified by the Federal Emergency Management Agency. The owner's requirements on Flood Insurance are contained in the Special Conditions Section of the Contracts Documents.

Attachment Number 15

OUTLAY MANAGEMENT

The contractor must provide a contract progress schedule of percentage of work in place and costs against time; and a schedule of projected payments (cumulative) for construction and for the architectural/ engineering contract when the contract is awarded. The payment schedule must be submitted, in a format similar to the attached sample, to the owner for forwarding to the State when the contract is awarded, and whenever actual payments on a project vary beyond -5 percent and +10 percent from the schedule, as determined by the grantee.

Contractor will be required to review each of these contract schedules during the month of June and to submit revised schedules, as necessary, no later that July 1st of each year.

THIS FORMAT IS A SAMPLE ONLY.

CONSTRUCTION AND OUTLAY SCHEDULE

Project No.: _____

Applicant: _____

Contract Identification: _____

Description of Contract: _____

(INSTRUCTIONS FOR USE ON REVERSE SIDE)

SCHEDULE I – CONSTRUCTION SCHEDULE

Date for Advertisement: _____

Date for Opening Bids: _____

Pre-Construction Conference Date: _____

Date of Contract Award: _____

Contract Period: _____ days Projected Contract Completion Date: _____

Total Eligible Contract Amount: _____

Work Order Date: _____

Start Construction Date: _____

Contract Completed: _____

SCHEDULE II – CUMULATIVE OUTLAY SCHEDULE (55% EPA Share) – Projection only for quarters that remain in the fiscal year (FY) plus cumulative annual amount for the next FY.

Cum EPA Amount thru 1st Qtr. Oct./Dec.: $ _____
Cum EPA Amount thru 2nd Qtr. Jan./Mar.: $ _____
Cum EPA Amount thru 3rd Qtr. Apr./June: $ _____
Cum EPA Amount thru 4th Qtr. July/Sept.: $ _____
Cum EPA Amount for Next Fiscal Year: $ _____

INSTRUCTIONS

To insure timely achievement of the grant objectives the owner (grantee) must provide EPA with a grants activities schedule, contract construction schedules and corresponding payment outlay schedules for the grant and each contract under the grant. One copy of information similar to that showing the Construction and Outlay Schedule Form will be submitted for the grant schedule with the grant acceptance. A separate form will accompany each contract at time of contract award.

A. The grant activities schedule shall depict the period from grant award through grant closeout and cover all major milestone date. The grant activities schedule shall include Schedule I information items as well as other appropriate items necessary to monitor the grant. Schedule II shall be filled out to estimate the cumulative (all construction and architectural/engineering contracts) payment schedule to be requested by the grantee from EPA during the grant period, and whenever actual outlays vary beyond -5% and +10% from the schedule.

B. Individual contractor's construction schedules for each contract will be submitted to support the grant activities schedule. The Schedule I shall be submitted prior to date of advertisement of each contract and Schedule II along with the contractor's construction schedule shall be submitted seven (7) calendar days prior to the dates of the pre-construction conference. The contractor's construction schedule shall depict the contractor's plan for completing all contract requirements and show work placement in dollars versus contract time. Schedule II shall depict the contract payment outlay by month or quarter. The contract schedule will be coordinated with all parties at the pre-construction conference.

The grants activities schedule, contractor construction schedules, will be the basis for monitoring progress towards completion of the project. The schedules shall be maintained at the available for inspection and updated at least monthly. The schedules shall be revised to incorporate approved change orders as they occur.

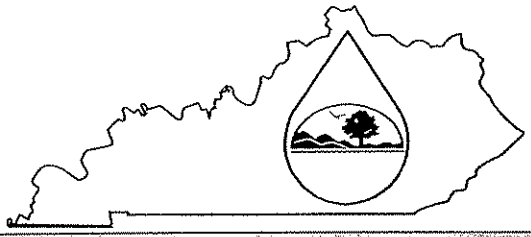
All of the schedules will be submitted to the State Division of Water.

Attachment Number 16

NOTICE OF INTENT

All construction projects with surface disturbance of more than 1 acre during the period of construction must have a KPDES Storm Water General Permit. The contractor must complete and submit the attached form at least 48 hours prior to start of construction to the address below:

Section Supervisor
Inventory and Data Management Section
KPDES Branch
Kentucky Division of Water
14 Reilly Road, Frankfort Office Park
Frankfort, Kentucky 40601



Kentucky Pollutant Discharge Elimination System (KPDES)
Notice of Intent (NOI)
for Storm Water Discharges
Associated with Industrial Activity Under the
KPDES General Permit

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form intends to be authorized by a KPDES permit issued for storm water discharges associated with industrial activity. Becoming a permittee obligates such discharger to comply with the terms and conditions of the permit.
ALL NECESSARY INFORMATION MUST BE PROVIDED ON THIS FORM. (See Instructions on back)

I. Facility Operator Information

Name:		Phone:	
Address:		Status of Owner/Operator:	
City, State, Zip Code:			

II. Facility/Site Location Information

Name:			
Address:			
City, State, Zip Code:			
County:			
Site Latitude: (degrees/minutes/seconds)		Site Longitude: (degrees/minutes/seconds)	

III. Site Activity Information

MS4 Operator Name:							
Receiving Water Body:							
Are there existing quantitative data?	Yes ☐ If Yes, submit with this form. No ☐						
SIC or Designated Activity Code Primary		2nd		3rd		4th	
If this facility is a member of a Group Application, enter Group Application Number:							
If you have other existing KPDES Permits, enter Permit Numbers:							

IV. Additional Information Required FOR CONSTRUCTION ACTIVITIES ONLY

Project Start Date:		Completion Date:	
Estimated Area to be disturbed (in acres):			
Is the Storm Water Pollution Prevention Plan in Compliance with State and/or Local Sediment and Erosion Plans?	Yes ☐ No ☐		

Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed or Typed Name:			
Signature:		Date:	

Kentucky Pollutant Discharge Elimination System (KPDES) Instructions

Notice of Intent (NOI) for Storm Water Discharges Associated with Industrial Activity
To Be Covered Under The KPDES General Permit

WHO MUST FILE A NOTICE OF INTENT (NOI) FORM
Federal law at 40 CFR Part 122 prohibits point source discharges of stormwater associated with industrial activity to a water body of the Commonwealth of Kentucky without a Kentucky Pollutant Discharge Elimination System (KPDES) permit. The operator of an industrial activity that has such a storm water discharge must submit a NOI to obtain coverage under the KPDES Storm Water General Permit. If you have questions about whether you need a permit under the KPDES Storm Water program, or if you need information as to whether a particular program is administered by the state agency, call the Storm Water Contact, Industrial Section, Kentucky Division of Water at (502) 564-3410.

WHERE TO FILE NOI FORM
NOIs must be sent to the following address:

Section Supervisor
Inventory & Data Management Section
KPDES Branch, Division of Water
Frankfort Office Park
14 Reilly Road
Frankfort, Kentucky 40601

COMPLETING THE FORM
Type or print legibly in the appropriate areas only. If you have any questions regarding the completion of this form call the Storm Water Contact, Industrial Section, at (502) 564-3410.

SECTION I – FACILITY OPERATOR INFORMATION
Give the legal name of the person, firm, public organization, or any other entity that operates the facility or site described in this application. The name of the operator may or may not be the same as the name of the facility. The responsible party is the legal entity that controls the facility's operation, rather than the plant or site manager. Do not use a colloquial name. Enter the complete address and telephone number of the operator.

Enter the appropriate letter to indicate the legal status of the operator of the facility.

F = Federal	M = Public (other than federal or state)
S = State	P = Private

SECTION II – FACILITY/SITE LOCATION INFORMATION
Enter the facility's or site's official or legal name and complete street address, including city, state, and ZIP code.

SECTION III – SITE ACTIVITY INFORMATION
If the storm water discharges to a municipal separate storm sewer system (MS4), enter the name of the operator of the MS4 (e.g., municipality name, county name) and the receiving water of the discharge from the MS4. (A MS4 is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by a state, city, town, borough, county, parish, district, association, or other public body which is designed or used for collecting or conveying storm water.)

If the facility discharges storm water directly to receiving water(s), enter the name of the receiving water.

Indicate whether or not the owner or operator of the facility has existing quantitative data that represent the characteristics and concentration of pollutants in storm water discharges.

If data is available submit with this form.

List, in descending order of significance, up to four 4-digit standard industrial classification (SIC) codes that best describe the principal products or services provided at the facility or site identified in Section II of this application.

If the facility listed in Section II has participated in Part 1 of an approved storm water group application and a group number has been assigned, enter the group application number in the space provided.

If there are other KPDES permits presently issued for the facility or site listed in Section II, list the permit numbers.

SECTION IV – ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION ACTIVITIES ONLY
Construction activities must complete Section IV in addition of Sections I through III. Only construction activities need to complete Section IV.

Enter the project start date and the estimated completion date for the entire development plan.

Provide an estimate of the total number of acres of the site on which soil will be disturbed (round to the nearest acre).

Indicate whether the storm water pollution prevention plan for the site is in compliance with approved state and/or local sediment and erosion plans, permits, or storm water management plans.

SECTION V – CERTIFICATION
Federal statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor; or

For a municipality, state, Federal, or other public facility: by either a principal executive officer or ranking elected official.

Attachment Number 17

WAGE RATES

Federal Davis-Bacon rates are not applicable for these funds. This determination applies only to the grant/loan portion of this project. Please contact the other funding sources, if applicable, for their requirements pertaining to federal wage rates. You must contact the Kentucky Labor Cabinet for determination of applicable state wages.

Ernie Fletcher
Governor

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT OF LABOR
OFFICE OF WORKPLACE STANDARDS
1047 US Hwy 127 S STE 4
Frankfort, Kentucky 40601
Phone: (502) 564-3070
www.labor.ky.gov

Teresa J. Hill
Secretary

Philip J. Anderson
Commissioner

Jim Zimmerman
Executive Director

May 16, 2007

Kerry Odle
CMW, Inc.
138 N Keeneland Drive Ste E
Richmond KY 40475

Re: Madison County utilities District, Cont 1 Utilities Imp & Cont 2 Water Storage
076-H-00162-07-3

Advertising Date as Shown on Notification: May 16, 2007

Dear Kerry Odle:

This office is in receipt of your written notification on the above project as required by KRS 337.510 (1).

I am enclosing a copy of the current prevailing wage determination number CR-3-034, dated April 13, 2007 for MADISON County. This schedule of wages shall be attached to and made a part of the specifications for the work, printed on the bidding blanks, and made a part of the contract for the construction of the public works between the public authority and the successful bidder or bidders.

The determination number assigned to this project is based upon the advertising date contained in your notification. There may be modifications to this wage determination prior to the advertising date indicated. In addition, if the contract is not awarded within 90 days of this advertising date or if the advertising date is modified, a different set of prevailing rates of wages may be applicable. It will be the responsibility of the public authority to contact this office and verify the correct schedule of the prevailing rates of wages for use on the project. Your project number is as follows: 076-H-00162-07-3, Heavy/Highway

Sincerely,

Robin McQueary
Prevailing Wage Specialist

KENTUCKY DEPARTMENT OF LABOR
PREVAILING WAGE DETERMINATION
CURRENT REVISION
LOCALITY NO. 034

Determination No. CR-3-034

Date of Determination: April 13, 2007

Project No. 076-H-00162-07-3
Type: Heavy/Highway

This schedule of the prevailing rate of wages for Locality No. 034, which includes Lincoln, Madison and Rockcastle Counties, has been determined in accordance with the provisions of KRS 337.505 to 337.550. This determination shall be referred to as Prevailing Wage Determination No. CR-3-034.

Apprentices shall be permitted to work as such subject to Administrative Regulations adopted by the Executive Director of Workplace Standards. Copies of these regulations will be furnished upon request to any interested person.

Overtime is to be computed at not less than one and one-half (1 1/2) times the indicated BASE RATE for all hours worked in excess of eight (8) per day, or in excess of forty (40) per week. However, KRS 337.540 permits an employee and employer to agree, in writing, that the employee will be compensated at a straight time base rate for hours worked in excess of eight (8) hours in any one workday, but not more than ten (10) hours worked in any one workday, if such written agreement is prior to the over eight (8) hours in a workday actually being worked, or where provided for in a collective bargaining agreement. The fringe benefit rate is to be paid for each hour worked at a straight time rate for all hours worked. Fringe benefit amounts are applicable for all hours worked except when otherwise noted. Welders will receive rate for craft in which welding is incidental.

No laborer, workman or mechanic shall be paid at a rate less than that of the General Laborer except those classified as bona fide apprentices registered with the Kentucky State Apprenticeship Supervisor unless otherwise specified in this schedule of wage rates.

NOTE: The type of construction shall be determined by applying the following definitions.

BUILDING CONSTRUCTION

Building construction is the construction of sheltered enclosures with walk-in access for the purpose of housing persons, machinery, equipment, or supplies. It includes all construction of such structures, the installation of utilities and the installation of equipment, both above and below grade level, as well as incidental grading, utilities and paving.

CR-3-034
April 13, 2007

HIGHWAY CONSTRUCTION

Highway construction includes the construction, alteration or repair of roads, streets, highways, runways, taxiways, alleys, trails, paths, parking areas, and other similar projects not incidental to building or heavy construction. It includes all incidental construction in conjunction with the highway construction project.

HEAVY CONSTRUCTION

Heavy projects are those projects that are not properly classified as either "building" or "highway". For example, dredging projects, water and sewer line projects, dams, flood control projects, sewage treatment plants and facilities, and water treatment plants and facilities are considered heavy.

Jim Zimmerman, Executive Director
Office of Workplace Standards
Kentucky Department of Labor

Rev 5-1-2007

CR-3-034
April 13, 2007

CLASSIFICATIONS		RATE AND FRINGE BENEFITS	
LINCOLN & MADISON COUNTIES:			
ASBESTOS/INSULATION WORKERS:		BASE RATE	$18.00
ROCKCASTLE COUNTY:			
ASBESTOS/INSULATION WORKERS:		BASE RATE	$12.00
BOILERMAKERS:		BASE RATE	$27.15
		FRINGE BENEFITS	12.94
LINCOLN & MADISON COUNTIES:			
BRICKLAYERS:		BASE RATE	$12.00
ROCKCASTLE COUNTY:			
BRICKLAYERS:		BASE RATE	$14.00
CARPENTERS:			
Carpenters:	BUILDING	BASE RATE	$16.63
		FRINGE BENEFITS	6.08
Piledrivermen	BUILDING	BASE RATE	$17.13
		FRINGE BENEFITS	6.08
Carpenters:	HEAVY & HIGHWAY	BASE RATE	$23.60
		FRINGE BENEFITS	9.05
Pildrivermen:	HEAVY & HIGHWAY	BASE RATE	$23.85
		FRINGE BENEFITS	9.05
Divers:	HEAVY & HIGHWAY	BASE RATE	$35.77
		FRINGE BENEFITS	9.05
CEMENT MASONS:		BASE RATE	$ 9.50

CR-3-034
April 13, 2007

CLASSIFICATIONS		RATE AND FRINGE BENEFITS	
ELECTRICIANS:		BASE RATE	$25.91
		FRINGE BENEFITS	9.21

When working from Bosum chairs, trusses, stacks, tanks, scaffolds, catwalks, radio and TV towers, structural steel-open, unprotected, unfloored raw steel, bridges, or similar hazardous locations where workmen are subject to a direct fall (except for work performed using JLG's and bucket trucks up to 75 ft.): 50' to 75' - add 25% above workman's straight time rate; over 75' - add 50% above workman's straight time rate.

ELEVATOR CONSTRUCTORS:		BASE RATE	$25.15
		FRINGE BENEFITS	6.64

GLAZIERS:		BASE RATE	$7.39

IRONWORKERS:

Ironworkers:	BUILDING	BASE RATE	$23.16
		FRINGE BENEFITS	13.00
Structural:	HEAVY HIGHWAY	BASE RATE	$18.45
		FRINGE BENEFITS	5.80
Reinforcing:	HEAVY HIGHWAY	BASE RATE	$18.25
		FRINGE BENEFITS	5.80

LABORERS:

BUILDING GOUP 1:
General laborers, asbestos abatement laborer, toxic waste removal laborer, water boys, tool room checker, carpenter tenders, (civil engineer helpers, rodman, grade checkers, excluding all field work performed by Engineering Firms), concrete pouring and curing, concrete forms stripping and wrecking, hand digging and backfilling of ditches, clearing of right of ways and building sites, wood sheeting and shoring, signalman for concrete bucket and general cleaning, and environmental laborer - nuclear, radiation, toxic and hazardous waste - Level D:

	BUILDING	BASE RATE	$16.28
		FRINGE BENEFITS	7.38

CLASSIFICATIONS RATE AND FRINGE BENEFITS

LABORERS/BUILDING: (Continued)

BUILDING GROUP 2:
All air tool operators, air track drills, asphalt rakers, tampers, batchers plant and scale man, chain saw, concrete saw, cutter/burner, electric hand grinder, all electric bush and chipping hammers, flagmen, forklift operators, form setter (street or highway), metal form setters, heaters, mesh handlers on walkways, streets and roadways outside building, gunnite laborers, hand spiker, introflax burning rod, joint makers, mason tenders, multi-trade tender, pipe layers, plaster tenders, powderman helpers, power driven Georgia buggies, power posthole diggers, railroad laborers, sandblaster laborers, scow man and deck hand, signal man, sweeper and cleaner machines, vibrator/tamper operators(operated by hand or remote control), walk behind trenching machines, mortar mixer machines, water pumpmen, and environmental laborers - nuclear, radiation, toxic and hazardous waste - Level C:

BUILDING	BASE RATE	$16.68
	FRINGE BENEFITS	7.38

BUILDING GROUP 3:
Asphalt pavers crewman, gunnite nozzleman and gunnite nozzle machine operator, sand blaster nozzleman, concrete or grout pumpman, plaster pumpman:

BUILDING	BASE RATE	$16.88
	FRINGE BENEFITS	7.38

BUILDING GROUP 4:
Powderman and blaster, and environmental laborer - nuclear, radiation, toxic and hazardous waste - Level B:

BUILDING	BASE RATE	$16.98
	FRINGE BENEFITS	7.38

BUILDING GROUP 5:
Caisson holes (6 ft. and over) pressure and free air including tools, and environmental laborer-nuclear, radiation, toxic and hazardous waste - Level A:

BUILDING	BASE RATE	$17.48
	FRINGE BENEFITS	7.38

BUILDING GROUP 6:
Tunnel man and tunnel sand miner, cofferdam (pressure and free air), sand hog or mucker (pressure or free air):

BUILDING	BASE RATE	$17.78
	FRINGE BENEFITS	7.38

Building Projects: Employees handling chemically treated materials which are harmful to the skin add an additional $.25 to base rate. Any employee working on high work putting the employee 50 feet above the ground or a solid floor shall receive an additional $.50 per hour above the base rate. Any employee working on boilers, kilns, melting tanks, furnaces, or when refractory is done using live fire, drying fires, heatups or any hot work shall receive an additional 25% premium above the base rate.

CR-3-034
April 13, 2007

CLASSIFICATIONS RATE AND FRINGE BENEFITS

LABORERS/HEAVY HIGHWAY

HEAVY HIGHWAY GROUP 1:
Aging and curing of concrete (any mode or method), asbestos abatement worker, asphalt plant laborers, asphalt laborers, batch truck dumpers, carpenter tenders, cement mason tenders, cleaning of machines, concrete laborers, demolition laborers, dredging laborers, drill helper, environmental laborer - nuclear, radiation, toxic and hazardous waste - Level D, flagmen, grade checkers, all hand digging and hand back filling, highway marker placers, landscaping laborers, mesh handlers and placers, puddler, railroad laborers, rip-rap and grouters, right of way laborers, sign, guard rail and fence installers (all types), signal men, sound barrier installer, storm and sanitary sewer laborers, swampers, truck spotters and dumpers, and wrecking of concrete forms, general cleanup:

HEAVY & HIGHWAY	BASE RATE	$18.83
	FRINGE BENEFITS	8.58

HEAVY HIGHWAY GROUP 2:
Batter board men (sanitary and storm sewer), brickmason tenders, mortar mixer operator, scaffold builders, burner and welder, bushhammers, chain saw operator, concrete saw operators, deckhand scow man, dry cement handlers, environmental laborers - nuclear, radiation, toxic and hazardous waste - Level C, forklift operators for masonry, form setters, green concrete cutting, hand operated grouter and grinder machine operator, jack hammers, lead paint abatement, pavement breakers, paving joint machine, pipe layers-laser operators (non-metallic), plastic pipe fusion, power driven Georgia buggy or wheelbarrow, power post hole diggers, precast manhole setters, walk-behind tampers, walk-behind trenchers, sand blasters, concrete chippers, surface grinders, vibrator operators, wagon drillers:

HEAVY & HIGHWAY	BASE RATE	$19.08
	FRINGE BENEFITS	8.58

HEAVY HIGHWAY GROUP 3:
Asphalt luteman and rakers, gunnite nozzleman, gunnite operators and mixers, grout pump operator, side rail setters, rail paved ditches, screw operators, tunnel laborers (free air), and water blasters:

HEAVY & HIGHWAY	BASE RATE	$19.13
	FRINGE BENEFITS	8.58

HEAVY HIGHWAY GROUP 4:
Caisson workers (free air), cement finishers, environmental laborer - nuclear, radiation, toxic and hazardous waste - Levels A and B, miners and drillers (free air), tunnel blasters, and tunnel muckers (free air), directional and horizontal boring, air track drillers (all types), powderman and blasters, troxler and concrete tester if laborer is utilized:

HEAVY & HIGHWAY	BASE RATE	$19.73
	FRINGE BENEFITS	8.58

CR-3-034
April 13, 2007

CLASSIFICATIONS		RATE AND FRINGE BENEFITS	
LINCOLN & MADISON COUNTIES:			
MARBLE, TILE & TERRAZZO:			
Workers:		BASE RATE	$15.50
		FRINGE BENEFITS	2.76
Layoutmen:		BASE RATE	$15.75
		FRINGE BENEFITS	2.76
Finishers:		BASE RATE	$10.15
		FRINGE BENEFITS	2.76
ROCKCASTLE COUNTY:			
MARBLE, TILE & TERRAZZO:		BASE RATE	$9.88
LINCOLN & MADISON COUNTIES:			
MILLWRIGHTS:		BASE RATE	$17.53
		FRINGE BENEFITS	5.32
ROCKCASTLE COUNTY:			
MILLWRIGHTS:	BUILDING	BASE RATE	$13.90
		FRINGE BENEFITS	1.85
	HEAVY & HIGHWAY	BASE RATE	$12.41
		FRINGE BENEFITS	1.15
OPERATING ENGINEERS:			
Operating Engineers:	BUILDING	BASE RATE	$17.03
		FRINGE BENEFITS	2.95

CR-3-034
April 13, 2007

CLASSIFICATIONS — RATE AND FRINGE BENEFITS

Operating Engineers/ Heavy Highway:

HEAVY HIGHWAY CLASS A:
A-Frame Winch Truck, Auto Patrol, Backfiller, Batcher Plant, Bituminous Paver, Bituminous Transfer Machine, All types of Boom Cats, Bulldozer, Cableway, Carry-All Scoop, Carry Deck Crane, Central Compressor Plant Operator, Clamshell, Concrete Mixer (21 cu. ft. or over), Concrete Paver, Truck-Mounted Concrete Pump, Core Drills, Crane, Crusher Plant, Derrick, Derrick Boat, Ditching and Trenching Machine, Dragline, Dredge Operator, Dredge Engineer, Earth Movers, Elevating Grader and all types of Loaders, Grade-All, Gurries, Heavy Equipment Robotics Operator/Mechanic, Highlift, Hoe-Type Machine, Hoist (two or more drums), Hoisting Engine (two or more drums), Horizontal Directional Drill Operator, Hydraulic Boom Truck, Hydrocrane, Hyster, KeCal Loader, Letourneau, Locomotive, Mechanic, Mechanically Operated Laser Screed, Mechanic Welder, Mucking Machine, Motor Scraper, Orangepeel Bucket, Piledriver, Power Blade, Pumpcrete, Push Dozer, Rock Spreader attached to Equipment, All Rotary Drills, Roller (bituminous), Scarifier, Scoopmobile, Shovel, Side Boom, Subgrader, Tailboom, Telescoping Type Forklift, Tow or Push Boat, Tower Cranes (French, German and other types), Tractor Shovel, Truck Crane, Tunnel Mining Machines including Moles, Shields, or Similar types of Tunnel Mining Equipment:

HEAVY & HIGHWAY	BASE RATE	$22.15
	FRINGE BENEFITS	10.40

Operators on cranes with booms one hundred fifty feet (150') and over including jib shall receive $.50 above base rate.

HEAVY HIGHWAY CLASS B:
All Air Compressors (over 900 cu. ft. per min.), Bituminous Mixer, Boom Type Tamping Machine, Bull Float, Concrete Mixer (under 21 cu. ft.), Electric Vibrator Compactor/Self-Propelled Compactor, Elevator (one drum or buck hoist), Elevator (regardless of ownership when used to hoist building material), Finish Machine, Firemen, Flex-Plane, Forklift (regardless of lift height), Form Grader, Hoist (one drum), Joint Sealing Machine, Mechanic Helper, Outboard Motor Boat, Power Sweeper (riding type), Roller (rock), Ross Carrier, Skid Mounted or Trailer Mounted Concrete Pumps, Switchman or Brakeman, Throttle Valve Man, Tractair and Road Widening Trencher, Tractor (50 HP and over), Truck Crane Oiler, Tugger, Welding Machine, Well Points, and Whirley Oiler:

HEAVY & HIGHWAY	BASE RATE	$19.73
	FRINGE BENEFITS	10.40

HEAVY HIGHWAY CLASS B2:
Greaser on Grease Facilities servicing Heavy Equipment:

HEAVY & HIGHWAY	BASE RATE	$20.11
	FRINGE BENEFITS	10.40

CLASSIFICATIONS		RATE AND FRINGE BENEFITS	

OPERATING ENGINEERS/HEAVY HIGHWAY (Continued)

HEAVY HIGHWAY CLASS C:
Bituminous Distributor, Burlap and Curing Machine, Caisson Drill and Core Drill Helper (track or skid mounted), Cement Gun, Concrete Saw, Conveyor, Deckhand Oiler, Grout Pump, Hydraulic Post Driver, Hydro Seeder, Mud Jack, Oiler, Paving Joint Machine, Power Form Handling Equipment, Pump, Roller (earth), Steermen, Tamping Machine, Tractors (under 50 H.P.) and Vibrator:

	HEAVY & HIGHWAY	BASE RATE	$19.47
		FRINGE BENEFITS	10.40

All Heavy Highway operators assigned to work below ground level are to be paid ten percent (10%) above base wage rate. This does not apply to open cut work.

PAINTERS:

Painters:	BUILDING	BASE RATE	$10.00
	HEAVY & HIGHWAY	BASE RATE	$17.30
		FRINGE BENEFITS	3.80
Plasterers:		BASE RATE	$13.30

PLUMBERS/PIPEFITTERS:		BASE RATE	$23.95
		FRINGE BENEFITS	11.09

ROOFERS:		BASE RATE	$11.52
		FRINGE BENEFITS	.19

SHEETMETAL WORKERS: (includes sheet metal roofs)		BASE RATE	$27.45
		FRINGE BENEFITS	11.09

SPRINKLER FITTERS:		BASE RATE	$27.05
		FRINGE BENEFITS	12.90

CR-3-034
April 13, 2007

CLASSIFICATIONS		RATE AND FRINGE BENEFITS	

LINCOLN & MADISON COUNTIES:

TRUCK DRIVERS:

Truck Helper and Warehouseman:

BUILDING	BASE RATE	$15.30
	FRINGE BENEFITS	5.93

Driver - 3 tons and under, Greaser, Tire Changer and Mechanic Helper:

BUILDING	BASE RATE	$15.42
	FRINGE BENEFITS	5.93

Driver - over 3 tons, Drivers, Semi-Trailer or Pole Trailer; Dump Trucks, Tandem Axle; Farm Tractor when used to pull building material or equipment:

BUILDING	BASE RATE	$15.53
	FRINGE BENEFITS	5.93

Drivers, Concrete Mixer Trucks (all types, hauling on job sites only); Truck Mechanics:

BUILDING	BASE RATE	$15.60
	FRINGE BENEFITS	5.93

Drivers, Euclid and other Heavy Earth Moving Equipment and Low Boy, Winch Truck and A-Frame Truck and Monorail Truck when used to transport building materials, Forklift Truck when used inside warehouse or storage area:

BUILDING	BASE RATE	$15.70
	FRINGE BENEFITS	5.93

TRUCK DRIVER Fringe benefits - Apply to each employee (whose name appears on the payroll that week) who has been employed a minimum of twenty (20) work days within any ninety (90) consecutive day period for that employer.

ROCKCASTLE COUNTY:

TRUCK DRIVERS:	BUILDING	BASE RATE	$6.50

LINCOLN, MADISON & ROCKCASTLE COUNTIES:

HEAVY HIGHWAY TRUCK DRIVERS:

Truck helper and warehouseman: HEAVY & HIGHWAY	BASE RATE	$16.65
	FRINGE BENEFITS	5.80

CLASSIFICATIONS		RATE AND FRINGE BENEFITS	
TRUCK DRIVERS/HEAVY HIGHWAY: (Continued)			
Driver, winch truck & A-frame truck when used in transporting material:			
	HEAVY & HIGHWAY	BASE RATE	$16.75
		FRINGE BENEFITS	5.80
Driver, semi-trailer or pole trailer, dump truck, tandum axle, and driver of distributors:			
	HEAVY & HIGHWAY	BASE RATE	$16.85
		FRINGE BENEFITS	5.80
Driver on mixer trucks/all types:	HEAVY & HIGHWAY	BASE RATE	$16.90
		FRINGE BENEFITS	5.80
Truck mechanic:	HEAVY & HIGHWAY	BASE RATE	$16.95
		FRINGE BENEFITS	5.80
Driver, 3 tons & under, tire changer & truck mechanic helper:			
	HEAVY & HIGHWAY	BASE RATE	$16.98
		FRINGE BENEFITS	5.80
Driver of pavement breakers:	HEAVY & HIGHWAY	BASE RATE	$17.00
		FRINGE BENEFITS	5.80
Driver, over 3 tons & truck mounted rotary drill:			
	HEAVY & HIGHWAY	BASE RATE	$17.19
		FRINGE BENEFITS	5.80
Driver, Euclid & other heavy earth moving equipment & low boy:			
	HEAVY & HIGHWAY	BASE RATE	$17.76
		FRINGE BENEFITS	5.80
Greaser on greasing facilities:	HEAVY & HIGHWAY	BASE RATE	$17.85
		FRINGE BENEFITS	5.80

END OF DOCUMENT CR-3-034
April 13, 2007

MADISON COUNTY UTILITIES DISTRICT

CONTRACT #2 (Revised)
500,000 GALLON ELEVATED WATER STORAGE TANK

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01010 - SPECIAL CONDITIONS

1. RELATED DOCUMENTS

General Provisions of Contract, General and Supplementary Conditions apply to this section.

2. DESCRIPTION OF WORK

Provide labor, materials, equipment and services necessary for proper and complete construction of this contract for the Madison County Utilities District.

3. CONTRACTOR'S QUALIFICATIONS

At the request of the Owner, each bidder shall submit, in writing, the following information:

A. Name and address of principal owner of contracting company.

B. Net worth statement.

C. A list of all similar work performed within the past five (5) years with name and address of Engineer on each project.

4. CONTRACTOR'S SUPERINTENDENT

Contractor shall keep on his work, at all times during its progress, a competent superintendent satisfactory to Engineer. The Superintendent shall not be changed, except with consent of Engineer, unless he proves to be unsatisfactory to Contractor and ceases to be in his employ. Superintendent shall represent Contractor in his absence and all directives given to him shall be binding as if given to Contractor.

5. INTENT

The intent of these Specifications is to require a high level of quality in materials and workmanship resulting in timely completion of all Work in an orderly sequence and manner without inconvenience to the Owner, adjacent property owners or the public.

6. WORK REASONABLY INFERRED BUT NOT PARTICULARLY DELINEATED OR SPECIFIED

A. Contractor shall make a thorough examination of site and study all drawings and specifications and all conditions relating to work, and if any materials or labor are evidently necessary for proper and complete execution of work which are not specifically mentioned and included in drawings and specifications, although reasonably inferred therefrom, unless eliminated by special mention, or if any error or inconsistency appears therein, or in the event of any doubts arising as to the true intent and meaning of drawings or specifications, he shall report it to Engineer at least five (5) days in advance of date set for receiving bids. If appropriate, Engineer will then issue an addendum containing the proper information to all Contractors not later than three (3) days prior to the date set for opening of bids.

B. If Contractor fails to make such report and Engineer is not otherwise advised of such doubtful matters, Contractor is hereby made responsible for furnishing all necessary labor and material reasonably inferred for any additional work involved in correction of apparent errors or inconsistencies and in executing the true intent and meaning of drawings and specifications as interrupted by Engineer, and all such labor and material shall be provided at Contractor's expense and under no circumstances will any such labor and material be allowed as extra cost.

7. QUALITY OF MATERIALS, EQUIPMENT AND WORKMANSHIP

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

B. Approval of manufacturer's shop drawings of materials and equipment shall not mean final acceptance, but they shall be subject to inspection and test on delivery and installation. Contractor shall repair, replace, or adjust any materials or equipment found defective or not operating properly due to improper materials, workmanship, and adjustment for a period of one year after completion and acceptance of work.

C. Contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ anyone not skilled in the work assigned to him.

8. TRADE NAMES

Whenever manufactured products, devices or materials are specified under a particular trade name or name of manufacturer, it shall be understood that the specifications are open to other manufacturers whether or not the clause "or approved equal" is included. Other products comparable in type, quality, utility and price are acceptable if approved by Engineer and Owner. The burden of proof of equality shall rest with Contractor. Owner shall be the sole judge of equality and reserves the right to require the product or material specified by name and furnished at no increase in contract amount. If "no substitution" is included with the brand name, only the specified items will be accepted.

9. MANUFACTURER'S EQUIPMENT - SHOP DRAWINGS

A. Various items of equipment indicated on Drawings have been indicated schematically only; actual details of each item of equipment shall be verified in shop drawings submitted to Engineer for approval. Data shown on shop drawings shall be complete with respect to dimensions, design criteria, materials of construction, wiring diagrams and component parts, and all details to enable Engineer to review the information as required. At the time of submission, the manufacturer shall in writing, call Engineer's attention to any deviations that shop drawings may have from requirements of Engineer's specifications, or deviation in dimension or equipment weight which might affect structural design or stability. Engineer's approval of shop drawings shall not relieve Contractor from responsibility for compliance with requirements of specifications. Engineer shall not be held responsible for omission or deletion of any components of manufacturer's equipment. Equipment manufacturer shall be responsible for all components of equipment and shall guarantee that equipment will perform and operate satisfactorily in accordance with requirements set forth in these specifications.

B. Contractor shall furnish six (6) copies of all shop drawings to Engineer for review. No equipment or materials shall be ordered prior to Engineer's written approval of shop drawings.

10. EXISTING UTILITIES

A. Before proceeding with work, Contractor shall verify location of, and possible interference with, existing utilities, arrange for necessary suspension of service, and make arrangements to locate and avoid interference with all utilities.

B. Contractor shall protect all utility lines which are to remain in service.

C. Special precautions shall be taken by Contractor to avoid damage to existing overhead and underground utilities owned and operated by Owner or by public or private utility companies.

D. With particular respect to existing underground utilities, the available information concerning their location has been indicated on Drawings. While it is believed that the locations shown are reasonably correct, neither Engineer nor Owner can guarantee accuracy of adequacy of this information.

E. Before proceeding with work, Contractor shall confer with all public or private companies, agencies, or departments that own and operate utilities in vicinity of construction. The purpose of the conference, or conferences, shall be to notify said companies, agencies, or departments of proposed construction schedule, verify location of, and possible interference with, existing utilities that are indicated on Drawings, arrange for necessary suspension of service, and make arrangements to locate and avoid interference with all utilities (including house connections) that are not indicated on Drawings. Engineer and Owner have no objection to Contractor arranging for said utility companies, agencies, or departments to locate and uncover their own utilities; however, Contractor shall bear entire responsibility for and cost of locating and avoiding or repairing damage to any and all existing utilities.

F. Contractor shall be diligent in his efforts and use every possible means to locate existing utilities. Any claims for unavoidable damage, based on improper or unknown locations, will be thoroughly examined in light of Contractor's efforts to locate said utilities or obstructions prior to beginning construction.

G. For General Utility Information call:

B.U.D. (Before You Dig)
811

11. DAMAGE TO EXISTING UTILITIES

A. Contractor shall be responsible for any and all damage done to existing utilities.

B. Damage done to existing utilities shall be repaired promptly, to satisfaction of utility company, at no cost to Owner.

12. PUBLIC AND PRIVATE HIGHWAYS AND STREETS

A. Contractor shall ascertain and obey all State and County road load limits in order to prevent damage to pavements resulting from his operation.

B. Public Convenience and Safety

(1) Contractor shall, at all times, conduct work in such manner as to insure minimum obstruction to public travel. Convenience of general public and of residents along and adjacent to area of work shall be provided for in a satisfactory manner, consistent with operation and local conditions and as directed by the Engineer.

(2) Flagmen shall be used at any time that work of any kind is being performed on any portion of roadway pavement, shoulder or ditch or when equipment or employees are working on any portion of pavement, shoulder or ditch.

(3) "Construction" signs shall be placed immediately adjacent to work, in conspicuous positions at such locations as traffic demands. Signs shall conform to requirements of Manual on Uniform Traffic Control Devices (MUTCD) published by U.S. Department of Transportation, Federal Highway Administration, latest edition. The manual is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. At any time that streets are required to be closed, Contractor shall notify law enforcement agencies, fire departments, and parties operating emergency vehicles before streets are closed and again as soon as it is reopened. Access to fire hydrants and other fire extinguishing equipment shall be provided and maintained at all times.

(4) Trenches shall be backfilled at end of each day's work as directed by Engineer. Trenches left open shall be adequately protected with suitable flashing barricades, in compliance with MUTCD and as approved by Engineer. All trenches are required to be backfilled at end of work week. No trenches shall remain open over a weekend. Contractor shall place and maintain DGA on streets and in trenches in construction area when directed by Engineer to maintain roads in safe and traversable condition. Placement of DGA and maintenance of traffic in construction area is considered incidental to construction and will not be paid for separately.

13. WORK ON PRIVATE PROPERTY

A. In connection with work performed on "private property" (property other than public rights-of-way), Contractor shall confine equipment, storage of materials, and operation of his workmen to limits indicated on plans, or to lands and rights-of-way provided for the project by Owner, and shall take every precaution to avoid damage to private property owners' buildings, grounds and facilities.

B. Fences, hedges, shrubs, etc. within construction limits, shall be carefully removed, preserved, and replaced after construction on the private property is completed. Private property owners' facilities, and grounds, shall be restored to as good or better condition than found, as quickly as possible, at Contractor's expense.

C. Large trees or other facilities within construction limits that cannot be preserved and replaced shall be removed by Contractor with the approval of the Engineer. Such trees and facilities, however, may be indicated on Drawings. Contractor shall be solely and entirely responsible for any damage to trees or facilities whether indicated on Drawings or not.

D. Foundations, adjacent to excavations made below bottoms of the foundations, shall be supported by shoring, bracing, and underpinning as required as long as excavations remain open, and Contractor shall be responsible for any damage to foundations.

14. BLASTING

A. All blasting operations shall be conducted in strict accordance with Kentucky Revised Statutes 351.320 to 351.340 and 351.340, effective October 6, 1972, and subsequent revisions, which shall be deemed to be included in these specifications the same as though herein written out in full. Contractor shall also comply with applicable municipal ordinances, Federal safety regulations and Section 9 of the Manual of Accident Prevention in Construction published by the Associated General Contractors of America, Inc. All explosives shall be stored in conformity with said ordinances, laws and safety regulations. No blasting shall be done within any other underground utility lines, except with light charges of explosives. Any damage done by blasting is the responsibility of the Contractor and shall be promptly and satisfactorily repaired by him.

B. If directed by Engineer, all shots shall be covered with heavy timber or steel blasting mats to prevent flying material. Unless otherwise specified or directed, delay caps shall be used to reduce earth vibrations and noise.

C. All blasting shall be supervised and performed by qualified personnel.

15. CLEAN-UP

A. Clean-up shall be performed on a daily basis. All debris shall be removed from site regularly. The site shall be kept in a neat condition, ready for subsequent operations.

B. If Contractor fails to perform proper or adequate cleanup behind pipe laying operations, Engineer may recommend to Owner that an additional amount of retainage, not to exceed ten (10) percent, be withheld from payment(s) due Contractor.

16. PRECONSTRUCTION CONFERENCE

A. Following signing of Contract Documents and prior to actual beginning of construction, a Pre-Construction Conference will be held. Contractor, Contractor's Superintendent, and major subcontractors, shall be present to discuss the Construction Schedule, Contractor's Plan of Operation, Engineer's authority, Resident Inspector's authority, procedures for monthly progress reviews and payments, and other relevant questions. Preconstruction conference will be scheduled by Engineer within ten (10) calendar days following date of signing of Agreement.

B. Unless otherwise instructed by Engineer, Contractor shall prepare and submit five (5) copies of his proposed Construction Schedule for review at Preconstruction Conference.

(1) Construction Schedule shall be in a line-item/bar chart format showing anticipated starts, durations and completion of all major items, operations or disciplines or work.

17. TEMPORARY TOILETS, UTILITIES, STORAGE, ETC.

A. Contractor shall be responsible for providing suitable temporary toilets for use by all workmen.

B. Contractor shall be responsible for providing suitable sources of potable water for all operations required for completion of work.

C. Contractor can use any of the lot owned by Madison County Utility District for on-site areas for storage of materials and equipment, etc. All areas disturbed shall be graded and seeded.

D. Costs for any and all items covered under this paragraph shall be at Contractor's expense.

18. SECURITY

A. Contractor shall be responsible for protection of his materials, equipment and work during period of Contract. Damage done to construction stakes or to material, equipment, or to completed work shall be replaced or repaired to Engineer's satisfaction and at no additional cost to Owner.

B. Contractor shall be responsible for protection of adjacent public and private property affected by work performed under this Contract, and shall make all necessary and appropriate arrangements with adjacent property owners and with Engineer for such protection prior to commencing work. Damage done to adjacent property resulting from Contractor's operations, or loss suffered by owners of adjacent property, shall be repaired or otherwise compensated by Contractor to satisfaction of Engineer and the affected owner of adjacent property at no additional cost to Owner.

19. LAYING OUT WORK

A. Center of tank will be staked. A benchmark will be set near the tank site as shown on plans.

B. Contractor will be responsible for all construction staking and shall furnish all materials required for staking. Contractor's personnel engaged in staking work shall be capable of performing duties set out herein.

20. MEASUREMENTS

A. Contractor and each subcontractor shall be responsible for verification of all measurements at site before ordering materials or doing work. No extra charge or compensation shall be allowed due to differences between actual dimensions found in the field and dimensions indicated on Bid Form or on Drawings.

B. Contractor shall be prepared to guarantee to each of his subcontractors dimensions which he may require for layout and fitting of his work to surrounding work.

21. RECORD DOCUMENTS

Contractor shall maintain in good condition at project site one (1) set of prints of all Contract Drawings, upon which Contractor's Representative will record periodically as required the actual location and conditions of construction, if different than shown or indicated on Drawings. Approval of final payment is contingent in part, upon receipt of record drawings by Engineer.

22. PARTIAL PAYMENT SCHEDULE

A. Partial Payment Estimate forms will be furnished by Engineer at Preconstruction Conference. Contractor shall prepare monthly Payment Request Forms, as described in General Conditions.

B. Contractor shall attend monthly Progress Meetings, scheduled by Engineer, for purpose of reviewing Contractor's Request for Payment and other matters pertaining to performance of work. If directed by Engineer, Contractor shall arrange for his subcontractors to be present at Progress Meetings.

C. Payments Withheld

(1) Engineer may withhold or, on account or subsequently discovered evidence, nullify the whole or part of any certificate to such extent as may be necessary to protect Owner from loss on account of:

a. Defective work not remedied.

b. Claims filed or reasonable evidence indicating probable filing of claims.

c. Failure of the contractor to make payments properly to subcontractors or for material or labor.

d. A reasonable doubt that the contract can be completed for the balance then unpaid.

e. Damage to another Contractor.

f. Performance of work in violation of the terms of the contract.

D. Where work on unit price items is substantially complete but lacks clean-up and/or corrections order by Engineer, amounts shall be deducted from unit prices in payment certificates to amply cover such clean-up and corrections. When the above clean-up and/or corrections are made, payment shall be made for amounts withheld.

23. USE OF PREMISES AND REMOVAL OF DEBRIS

Contractor shall, at his own expense:

A. Take every precaution against injuries to persons or damage to property;

B. Store his apparatus, materials, supplies and equipment in such orderly fashion at site of work as will not unduly interfere with progress of his work or work of any other contractors or subcontractors;

C. Place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work;

D. Clean up daily all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of work shall present a neat, orderly and workmanlike appearance.

E. Before final inspection, remove all surplus materials, falsework, temporary structures, including foundations thereof, all debris resulting from his operation, and put the site in a neat, orderly condition;

F. Effect all cutting, fitting or patching of his work required to make same conform to intent of Plans and Specifications and, except with consent of Engineer, no cut or otherwise alter the work of any other Contractor.

24. FIELD CHANGES

Engineer may issue written "Changes" which interpret Contract Documents without change in contract price or contract time, and Contractor shall carry out such field orders promptly.

25. GENERAL GUARANTY

The Contractor shall guarantee all materials and equipment furnished and work performed for a period of one (1) year from date of substantial completion. Contractor warrants and guarantees for a period of one (1) year from date of substantial completion of system that completed system is free from all defects due to faulty materials or workmanship and Contractor shall promptly make such corrections as may be necessary by reason of such defects including repairs or damage of other parts of system resulting from such defects. Owner will give notice of observed defects with reasonable

promptness. In the event that Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, the Owner may do so and charge Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

26. SPECIFICATIONS BY REFERENCE

A. Whenever the term "Standard Specifications" is used, it shall mean "Standard Specifications for Road and Bridge Construction" of the Kentucky Transportation Cabinet, Department of Highways, Edition of 1998. Items described by reference to "Standard Specifications" shall comply with "Standard Specifications" as if they were printed herein.

B. Copies of "Standard Specifications" may be obtained from: Transportation Cabinet, Department of Administration, Division of Management Services, State Office Building, Frankfort, Kentucky 40622.

27. CHANGE ORDERS

A. Change Orders shall be negotiated between the Engineer and Contractor. No work on Change Order shall proceed until change or has been approved by all parties.

B. Change Orders must comply with DOW Procurement Guidance for Construction and Equipment Contracts.

C. Cost, pricing and certification for Change Orders exceeding $25,000 must comply with DOW Procurement Guidance for Construction and Equipment Contracts.

28. SAFETY STANDARDS

Contractor shall be in compliance with OSHA (P.L. 91-596) and the Contract Work Hours and Safety Standards Act (P.L. 91-54).

29. CUTTING OF TREES

Trees greater than six inches in diameter at breast height shall only be cut between October 15 and March 31. In cases where six inch diameter at breast height trees have to be cut from April 1 to October 15, a biologist will be required to evaluate the site and certify no Indiana bats are present.

30. ACCESS TO SITE

Access to site for all construction related traffic will be through the Orchard Hills Subdivision on the construction road. All improvements needed to road for construction of tank shall be done at contractor's expense. The access road shown on plans to driveway is for Madison County Utilities District employees only.

END SECTION

MADISON COUNTY UTILITIES DISTRICT

CONTRACT #2 (Revised)
500,000 GALLON ELEVATED WATER STORAGE TANK

DIVISION 2 – TECHNICAL SPECIFICATIONS

SECTION 02235 - SILTATION CONTROL

1. RELATED DOCUMENTS

General provisions of Contract, General and Supplementary General Conditions, and General Requirements apply to this Section.

2. DESCRIPTION OF WORK

A. Provide labor, material, equipment and services necessary for proper and complete siltation control.

B. This work shall consist of temporary control measures as ordered by Engineer during life of contract to control siltation through use of erosion control methods; and coordinating these measures with permanent erosion control features specified elsewhere in contract to extent practicable to assure effective and continuous erosion control throughout construction and postconstruction period.

C. Intent of this specification is to protect quality of water through prevention, control, and abatement of siltation resulting from construction project.

D. Contractor shall exercise every reasonable precaution at all times to prevent siltation of all streams. He shall conduct and schedule his operations so as to avoid or minimize muddying or siltation of all streams. No partially completed item of work shall be left in a manner that will contribute to erosion during period in which work on item is suspended.

3. QUALITY ASSURANCE

A. Progress Requirements

(1) Both permanent and temporary erosion control measures shall be progressively coordinated with construction operations throughout duration of project.

(2) As areas of erodible earth material are exposed to elements of erosion, every effort should be made to stabilize and protect areas as quickly as possible, and as directed. Upon failure of Contractor to coordinate erosion control measures with construction operations in a manner to effectively control erosion and to prevent water pollution, Engineer may suspend Contractor's operations and withhold monies due Contractor on current estimates until such time that all aspects of work are coordinated in an acceptable manner.

B. Payment

(1) Temporary erosion and pollution control measures which are required which are required due Contractor's negligence, carelessness, or failure to install permanent controls as a part of work as scheduled, and which are ordered by Engineer, shall be performed by Contractor at his own expense.

(2) If required, Engineer will direct temporary seeding operations. Temporary seeding will be considered part of the seeding bid item.

4. CONSTRUCTION

A. Prevention of Pollution

(1) Construction operations shall not be performed in stream channels except in those areas where channel clearings are indicated on Drawings.

(2) Material removed from excavation shall not be deposited in streams, stream channels, other areas subject to flooding, or other locations where it may be washed away by high stream flows or fast runoff.

(3) Fuels, oils, bitumens, calcium chloride, or other harmful materials shall not be placed where they may be carried into a stream or underground waters at any time.

(4) Duration of exposure of uncompleted construction shall be as short as practicable. All cut and fill slopes shall be permanently vegetated progressively with construction.

(5) Contractor shall exercise every reasonable effort to prevent grass or brush fires that will expose areas of soil to erosion. Areas exposed to erosion by fire resulting from Contractor's operations shall be seeded and protected at no cost to Owner.

(6) Lands and waters outside limits of construction, shall not be disturbed, except as may be found necessary and as permitted. Before final acceptance of work, all such disturbed areas, including abandoned haul roads, storage areas and plant sites, shall be reshaped to conform to adjacent ground and shall be revegetated by Contractor at his expense.

B. Temporary Control Measures

(1) Erodible earth material exposed by excavation, borrow, and fill operations shall receive temporary seeding if area is to be exposed at least 3 weeks before final seeding. Temporary seeding shall be in accordance to temporary seeding specification.

(2) Temporary pollution control measures shall be coordinated with permanent erosion control features to extent deemed practicable by Engineer to assure effective and continuous erosion control throughout construction and post-construction periods.

(3) Temporary erosion control measures shall be used at any time during life of project when directed to prevent soil erosion and pollution of streams.

(4) Erosion control features installed by Contractor shall be acceptably maintained by him.

(5) Silt fences shall be installed at areas as shown on plans and in accordance with typical details.

5. CLEAN-UP

At completion of project, and when approved by Engineer, all materials (straw bales, silt fences, etc.) shall be removed from the site and properly disposed of.

END SECTION

SECTION 02300 - EXCAVATING AND GRADING

1. RELATED DOCUMENT

General provisions of Contract, General and Supplemental General Conditions, and General Requirements apply to this Section.

2. DESCRIPTION OF WORK

Provide labor, material, equipment and services necessary for proper and complete site excavation and embankment for tank site and roadway.

3. CLASSIFICATION OF EXCAVATION

All excavation shall be considered as unclassified.

4. SITE PREPARATION

Prior to commencing construction operations, make all provisions necessary to assure protection of all existing improvements, both public and private. Protect trees, shrubs, plantings, and grassed areas and make provisions for maintaining public travel in an acceptable manner.

5. EXCAVATION

A. Use of Excavated Materials

(1) All suitable material removed from excavation shall be disposed of off-site or used at the tank site or roadway.

(2) Remove all soft or spongy material and dispose of as directed. Such materials shall not be used in construction of grade.

(3) All rocks and boulders, when directed, shall be placed in embankments, provided embankments are of sufficient depth to provide 12 inches or more soil cover over such rocks or boulders. Such rock and boulders shall not be placed under foundation when embankment is constructed principally of soils.

B. Excavation

(1) Where rock is encountered in excavation, it shall be removed to a depth below required grade as indicated on Drawings or as staked, with no points of rock projecting above such depth. Final surface of rock shall be left so that complete drainage will be provided, and no water will be pocketed at any point. Refill over this surface shall be made of selected materials and shall contain no stone or spalls larger than 4 inches, except when otherwise provided on Drawings for rock roadbed. All refill shall be replaced in layers not exceeding 12 inches in depth, loose measurement, and compacted.

(2) Excavated sections, whether it consists of existing material or refill material, shall be compacted. When material in place does not contain sufficient moisture to obtain proper compaction, area shall be thoroughly scarified and broken to a minimum depth of 6 inches, moisture content increased as directed, and roadbed compacted. Unsuitable material, when encountered at subgrade elevation, shall be removed to such depths as indicted on Drawings or as directed and disposed of as directed. No additional payment will be made for scarifying or manipulation necessary to increase or decrease moisture content as this is considered incidental to work.

6. EMBANKMENT

A. Description. Form embankments with materials to conform to lines, grades, and cross section specified. Material shall be obtained on excavation site.

B. Materials. Only acceptable materials from approved sources shall be used in embankment formation. No frozen material, stumps, logs, roots, or other perishable materials shall be placed in any embankment. No stone or masonry fragment greater than 4 inches in any dimension shall be placed within 12 inches of finished subgrade elevation.

C. Construction Requirements

(1) Embankment foundations shall be compacted as directed.

(2) When indicated on Drawings or when directed, remove unsuitable materials encountered in embankment areas prior to placement of embankment material thereon. Removed materials shall be wasted, stockpiled, or otherwise disposed of as directed.

D. Embankment Formation

(1) Form embankments constructed of earth, weathered rock, blasted rock, or similar materials by distributing materials in successive uniform horizontal layers not exceeding 12 inches in thickness, loose depth, to full width of cross section. However, layers less than 12 inches in loose thickness will be required when necessary to obtain specified density. Compact each layer.

(2) Shape upper surface of embankment to provide complete drainage of surface water at all times. Forming of ruts shall not be permitted.

(3) In embankments that are constructed principally of unweathered limestone or durable mudstone, layer thickness shall not exceed 3 feet; maximum dimensions of boulders or large rocks placed in embankment shall be 3 feet vertically and approximately 4.5 feet horizontally. Rock having any dimensions greater than 2 feet shall be kept at least 2 feet below subgrade elevation. Rock shall not be dumped into final position, but shall be distributed by blading or dozing in a manner that will ensure proper placement in embankment so that voids, pockets, and bridging will be reduced to a minimum. Slopes shall conform substantially with requirements of Drawings. Rock embankment shall not be constructed to an elevation higher than 12 inches below subgrade elevation. Remainder of embankment shall be constructed with selected material placed in uniform layers not exceeding 12 inches loose thickness and compacted as specified for embankments. Rolling will not be required in construction of rock embankment.

(4) In areas where layers of rock and shale or soil are encountered and embankments are constructed of a mixture of rock and soil, material shall be placed, manipulated and compacted in layers not exceeding 12 inches in thickness; however, when thickness of rock exceeds 12 inches, thickness of embankment layers may be increased as necessary due to nature of material and as approved by Engineer. In no case shall layer thickness exceed 3 feet. Mixture shall not be dumped into final position but shall be distributed by blading or dozing in a manner that will ensure proper placement in embankment so that voids, pockets, and bridging will be reduced to a minimum. Mixture shall then be compacted with suitable compaction equipment. When directed, material shall be wetted to aid compaction.

7. COMPACTION

A. Embankment

(1) Upon completion of stripping topsoil from embankment areas, exposed soil shall be proof -rolled. Areas of unstable soil shall be undercut and replaced with suitable soil, or shall be stabilized with broken pieces of limestone.

(2) Compact embankment to a density of at least 95 percent of maximum density as determined by ASTM D-698.

(3) During compaction, embankment material which does not contain sufficient moisture to obtain proper compaction shall be wetted and thoroughly mixed as deemed necessary. Embankment material containing an excess of moisture shall be allowed to dry before being compacted. Manipulation of wet material to speed drying will be permitted.

(4) To avoid uneven compaction, hauling equipment shall traverse, as much as possible, full width of cross section. Each layer shall be compacted as required before material for next layer is deposited.

8. TOPSOIL

A. Topsoil shall be salvaged from within limits of grading and stored in stockpiles.

B. Do not mix subsoil or other material with topsoil.

C. Locate stockpiles at approved locations. Contractor may elect to spread topsoil directly on areas designated to receive topsoil, without stockpiling, provided that seeding and protection operations are ready to begin.

D. Topsoil shall not be spread until grading and shaping of area to receive topsoil has been completed, and seeding and protection operations are ready to begin. Stockpiled material shall be spread to a uniform depth of 8 inches minimum over such areas and lightly compacted. Areas designated to receive topsoil will normally include, but are not limited to cut slopes no steeper than 3:1 and all other areas to be seeded. After topsoil has been spread and compacted, areas upon which it was stockpiled shall be neatly dressed.

E. After topsoil is spread, area covered shall be prepared for seeding in accordance with procedures specified in other sections.

9. DISPOSAL OF UNSUITABLE MATERIALS

Excavated materials which are unsuitable for fill or backfilling shall be removed from site of operations as soon as excavated. All excavated materials so removed shall be disposed of, at no additional cost to owner. Disposal shall be at locations on site designated by Engineer, and in a manner acceptable to Engineer. All such material shall be spread neatly, to drain, and seeded, fertilized and mulched.

10. DITCHES

Ditches shall be constructed in locations as shown on the plans or as directed by the Engineer in accordance with the typical details.

END SECTION

SECTION 02510 - WATER MAINS

1. RELATED DOCUMENTS

General Provisions of Contract, General, Supplemental and Special Conditions, and General Requirements apply to this Section.

2. DESCRIPTION OF WORK

Provide labor, material, equipment and services necessary for proper and complete installation of water pipe, valves and valve boxes, hydrants and miscellaneous appurtenances.

3. MATERIALS

A. Polyvinyl Chloride Pipe (PVC)

(1) Standard Polyvinyl Chloride Pipe

a. Polyvinyl Chloride Pipe shall conform to ASTM Specification D-2241, latest revision. Pipe shall be pressure rated Class 200 (SDR 21). Pipe material shall conform to latest revisions of ASTM D-1784 (PVC pipe compounds), ASTM D-2241 (PVC plastic pipe, SDR), and ASTM D-2672 (Bell-End PVC pipe).

b. Joints for PVC pipe shall conform to latest revision of ASTM D-3139, (joints for plastic pressure pipes using flexible elastomeric seals). Joints shall be bells that consist of an integral wall section with a locked-in, solid cross section elastomeric ring which meets requirements of ASTM F-477. Bell sections shall be at least as hydrostatically strong as pipe wall.

c. Fittings shall be ductile iron, mechanical joint, Class 250, conforming to AWWA specifications C110 for short body cast iron fittings. Fittings shall be tar-coated outside and shall receive standard cement lining with bituminous seal coat on inside as specified for ductile iron pipe.

B. Gate Valves and Boxes

(1) All gate valves shall be of double disc, parallel seat type or resilient seated type, iron body, non-rising stem, fully bronze mounted with O-ring seals. Valves shall be of standard manufacture and of highest quality both as to materials and workmanship and shall conform to latest revisions of AWWA Specification C-500. Valves shall have a rated working pressure of 200 psi, with standard mechanical joint, A-2380-23 as manufactured by Mueller Co., Darling, Smith, Kennedy, or approved equal.

(2) Gate valves for buried service shall be furnished with mechanical joint end connections, unless otherwise indicated on Drawings. End connections shall be suitable to receive ductile iron, or PVC.

(3) Gate valves for inside service shall be handwheel operated, double disc, parallel seat type, iron body, fully bronze mounted with O-ring stem seals, flanged faced and drilled to match ASA Class 125.

(4) All gate valves shall have name or monogram of manufacturer, year valve casting was made, size of valve, and working pressure cast on the body of valve.

(5) Gate valves set with valve boxes shall be provided with a 2" square operating nut and shall be opened by turning to left (counterclockwise); gate valves set in vaults or pits shall be furnished with handwheels.

(6) Gate valves shall be installed in a vertical position with cast iron valve box. Valve boxes shall be cast iron, screw type with drop over marked "WATER". They shall be set vertically and properly adjusted so that cover will be in the same plane as finished surface of ground, street, or sidewalk.

(7) Valve boxes shall be accurately centered over valve operating nut, and backfill thoroughly tamped about them. Valve box bases shall not rest on valves but shall be supported on crushed stone fill. They shall be set vertically and properly cut and/or adjusted so that tops of boxes will be at grade in any paving, walk or road surface, and two to three inches above ground in grass plots, fields, woods or other open terrain. Valve boxes shall be as manufactured by Mueller, M & H Valve Company, Darling, Russell Pipe and Foundry, or approved equal.

(8) A two feet by two feet by four inch thick concrete pad shall be furnished around valve boxes.

(9) Tracer wire shall be run outside of valve box and then laid inside the top of the box.

C. Fire Hydrants

(1) Contractor shall furnish and install dry head type fire hydrants where indicated on Drawings or as directed by Engineer. Hydrants shall conform in all respects to requirements of AWWA C502-73. Hydrant barrel shall have safety breakage feature above the ground line. All hydrants shall have mechanical joint shoe connection, two 2-1/2 inch discharge nozzles and one 4-1/2 inch pumper nozzle with caps fitted with cap chains. Connection threads and operating nuts shall conform to National Standard Specification as adopted by National Board of Fire Underwriters.

(2) Operating nut shall be 1-1/2 inches, and shall open left (counterclockwise). Main valve shall have 5-1/4 inch full opening for 6" hydrants and 4-1/2" opening for 4" hydrants, and be of the compression type opening against water pressure so that valve remains closed should the barrel be broken off.

(3) Hydrant shall be fully bronze mounted. Main valve shall have a threaded bronze seat ring assembly of such design that it is easily removable by unscrewing from a threaded bronze drain ring. Bronze drain ring shall have multiple ports providing positive automatic drainage as the main valve is opened or closed.

(4) Drainage waterways shall be completely bronze to prevent rust or corrosion.

(5) Operating stem shall be equipped with anti-friction thrust bearing to reduce operating torque and assure easy opening. Stop shall be provided to limit a stem travel. Stem threads shall be enclosed in a permanently sealed lubricant reservoir protected from weather and the waterway with O-ring seals.

(6) Hydrants shall be designed for 150 psi working pressure and shop tested to 300 psi pressure with main valve both opened and closed. Under test the valve shall not leak, the automatic drain shall function and there shall be no leakage into the bonnet.

(7) Hydrants shall be set plumb with not less than three cubic feet of crushed stone and backed with at least one cubic foot of Class "C" concrete or equivalent. Hydrants shall be attached to water main by an anchor tee, anchor coupling, gate valve and 36 inch PVC connecting coupling.

(8) Fire Hydrants shall be located not more than 10 feet from the edge of existing or proposed pavement unless otherwise specified. Hydrants shall be installed with a vertical distance from the center of the pumper nozzle to the ground of 16 to 18 inches. All fire hydrants shall be provided with a shut-off valve in the hydrant lateral as indicated on Drawings. Inlet cover depth shall be minimum 30 inches.

(9) Hydrants shall be Centurion Model A423 with 5-1/4" opening for 6" hydrants as manufactured by Mueller Company.

(10) Hydrants shall be painted with one (1) coat of No. 2472 Safety Red (Porter Paint or approved equal.) All cleaning, priming and painting shall be in accordance with paint manufacturers recommendations.

(11) Hydrants shall have bags over them until they are in operation.

D. Tapping Sleeves and Valves

(1) Tapping sleeves for connections to existing water lines shall be of the mechanical joint type suitable for working pressures of 150 psi and shall be Mueller No. H-612, or H-615C depending on pipe thickness or approved equal.

(2) Tapping valves shall be of mechanical joint type suitable for working pressures of 150 psi and shall be Mueller No. H-667, or approved equal.

E. Marking Tape

(1) Tape shall consist of a solid aluminum foil coil encased in a protective plastic jacket. The materials and ink color shall not change when exposed to the alkalis, acids and other destructive chemical variances commonly found in soil. The foil coil shall be visible to ensure continuity. Tape shall be a minimum width of 2 inches and colored blue with the word "water" marked on the tape. The minimum thickness shall be 5.5 mil with a minimum tensile strength of 4000 psi. Tape shall be installed a minimum of one foot above the top of the pipe".

(2) Marking tape shall be considered incidental to the water line and no additional payment will be made for the marking tape.

F. Tracer Wire

(1) A No. 8 copper wire shall be installed parallel to all nonmetallic pipe.

(2) Tracer wire shall be installed to ground level for all valves and hydrants as shown on typical details.

(3) Tracer wire shall be run outside valve box, over top of valve box with 4 feet of tracer wire in valve box.

(4) All service lines running under road will have tracer wire with 4 feet in meter box.

(5) Tracer wire shall be spliced with a split bolt connection.

G. PVC Encasement Pipe

(1) On creek crossings encasement pipe shall be installed as shown on the typical details with a minimum of 12 inch concrete over top of encasement pipe. All pipes to receive concrete encasement shall be sleeved in PVC encasement pipe.

(2) PVC Encasement pipe shall have a minimum dimension ration of 35.

(3) Spacers shall be used at every 7 feet.

(4) Manufacturer's end sections shall be used at end of encasement.

H. Meter Services

(1) Service clamps or saddles shall be used for service connections to PVC pipe of all sizes. Saddles for PVC mains shall be bronze and be Ford Series (no substitution).

(2) Corporation stops for use in service clamps or in direct taps shall be Ford (no substitution) for PVC pipe. Stops shall be appropriate for ¾ and 1 inch size polyethylene service pipe or 1-1/2 and 2 inch size PVC service pipe. Stainless steel insert stiffeners shall be used inside polyethylene pipe at junction with corporation stop.

I. Service Pipe

(1) 3/4" and 1" Polyethylene Pipe (PE)

a. Pipe shall be made from virgin, ultra-high molecular weight polyethylene resin.

b. Dimensions and tolerances shall meet values as listed in ASTM D-2737, latest revision, "Specifications for Polyethylene Plastic Pipe (SDR-PR)". Standard dimension ratio shall be SDR9-PE3048.

c. Pipe shall be rated for use with water at 73.4° F at hydrostatic design stress of 630 psi and a maximum working pressure of 200 psi. Pipe shall sustain water pressure of 340 psi for 1000 hours with water at 73.4°F.

d. Surface shall be homogeneous inside and out and completely free of irregularities. Random testing shall be performed at intervals during all production runs to assure uniformity in all respects. The tubing shall carry the National Sanitation Foundation seal of approval for potable water.

e. Pipe shall be marked in lettering at intervals of not more than five (5) feet and such marking shall include nominal size; manufacturer's name or trademark; pressure rating for water at 73.4° F., 200 psi; applicable ASTM specification; ASTM material specification, PE 3408; standard dimension ratio, SDR-9; the National Sanitation Foundation Seal of Approval (NSF mark) and production code.

(2) 2" polyvinyl chloride service pipe shall meet the same requirements as those for PVC water mains.

J. Meter Boxes

(1) Meter boxes shall be P.V.C. and shall be 18" in diameter x 24". Meter box shall be white or green and shall be by Ultra Rib or approved equal.

(2) Metal lids for boxes shall be flat type and be Ford C-32.

K. Meter Setting Equipment

(1) Copper meter setters for 5/8" x 3/4" meter settings without individual pressure reducing valves, shall be by Ford (no substitution). All setters shall have two valves, one being an angle ball valve and the other being a double check valve. Locking devices with pins and seals furnished, shall be provided for all setters. All connections shall be the type for PE pipe. Meter setters for settings having individual PRV's shall be those corresponding to the catalog numbers listed above.

(2) A stainless steel insert stiffener shall be used inside the PE pipe at its connection to both sides of the meter yoke. Stiffener shall be approved equal to Ford Catalog insert 51 for 3/4" pipe and insert 52 for 1" pipe.

(3) A 3/4" X 18" P.V.C. pipe shall be installed in box to hold the meter setter in place. The meter setter should have a brace eye to accommodate this pipe.

L. Check Valve

(1) Check valve shall be a weight and lever type and conform to the latest revision of AWWA Specification C-500. Valves shall have a rated working pressure of 200 psi with standard mechanical joint.

M. Altitude Valve

(1) The altitude valve shall be a one way valve which will provide for the automatic filling of the elevated tank. The altitude valve shall sense a drop or rise in the level of tank and open or close at a predetermined level.

(2) The altitude valve shall be a OCV Series 3330 or approved equal.

4. SHOP DRAWINGS

Contractor shall furnish to Engineer for approval, six (6) sets of shop drawings, catalog cuts and certifications for all materials used in construction of water lines. Contractor shall not order material or equipment until approval is given by Engineer.

5. EXCAVATION FOR TRENCHES

A. Except as otherwise noted or directed by Engineer, trenches in which water lines are to be laid shall be excavated in open cut to depths as indicated on Drawings. In general, this shall be interpreted to mean that machine excavation in earth shall not extend below an elevation permitting lower quadrant of pipe to be bedded in undisturbed ground, and excavation in rock shall extend below invert elevation a distance to accommodate a layer of bedding material as specified elsewhere in this section.

B. When excavated material is placed on gravel or dirt roads, the contractor shall place crushed stone to the same thickness of the road prior to construction as determined by the Engineer.

C. If foundation is good firm earth and machine excavation has been accomplished as set out hereinbefore, remainder of material shall be excavated by hand and earth pared or molded to give full support to lower quadrant of barrel of each pipe. Where bell and spigot pipe are involved, bell holes shall be excavated during this latter operation to prevent bells from being supported on undisturbed earth. If for any reason machine excavation in earth is carried below an elevation that will permit type of bedding specified, then a layer of granular material shall be placed so that lower quadrant of pipe will be securely bedded in granular fill.

D. If foundation is rock and excavation has been undercut as set out hereinbefore, a bed of No. 9 crushed stone or tamped earth shall be placed to provide continuous support for lower quadrant of pipe. No extra payment will be made for this No. 9 crushed stone.

E. Trenches shall be a minimum width of 12 inches plus to diameter of the pipe to provide free working space on each side of pipe and to permit proper backfilling around pipe, but unless specifically authorized by Engineer, trenches shall in no case be excavated or permitted to become wider than 2'-0" plus nominal diameter of pipe at level of or below top of pipe. If trench does become wider than 2' plus nominal diameter of pipe at level of or below top of pipe, special precautions may be necessary such as providing compacted, granular fill up to top of pipe or providing pipe with additional crushing strength as determined by Engineer after taking into account actual trench loads that may result and strength of pipe being used; Contractor shall bear the cost of such special precautions as are necessary. Trenches cut in roads and streets shall not exceed a maximum width of 3'-6" plus nominal diameter of pipe at level of road or street surface.

F. Unless specifically directed otherwise by Engineer, not more than 1000 feet of trench shall be opened ahead of pipe laying work of any one crew, and not more than 1000 feet of open ditch shall be left behind pipe laying work of any one crew. Watchmen or barricades, lanterns and other such signs and signals as may be necessary to warn public of dangers in connection with open trenches, excavations and other obstructions, shall be provided by and at expense of Contractor.

G. Pipe laying operation shall be continuous from beginning to end with no gaps allowed in the line unless approved by the Engineer.

6. REMOVAL OF WATER

Contractor, at his own expense, shall provide adequate facilities for promptly and continuously removing water from all excavation.

7. UNAUTHORIZED EXCAVATION

Whenever excavation is carried beyond or below required lines and grades, except as, and where authorized by Engineer, Contractor, at his own expense, shall refill said excavated space with suitable material in a manner approved by Engineer.

8. LAYING DEPTHS FOR WATER MAINS

A. In general, water mains shall be laid with a minimum cover of 30 inches, unless otherwise indicated on Drawings or directed by Engineer.

B. On state road right-of-ways, there shall be a minimum cover of 42 inches.

9. PIPE BEDDING

A. Foundation for pipes laid in trenches shall be prepared so that entire load of backfill on top of pipe will be carried uniformly on barrel of pipe. Pipe bells shall not carry any load of backfill.

B. In trenches where solid rock is removed from trench bottom, pipe shall be bedded on six (6) inches thickness of No. 9 crushed stone. No extra payment will be made for rock excavation or No. 9 crushed stone.

C. When wet, mucky, yielding or otherwise unsuitable material is located below proposed pipe bedding elevation, such material shall be removed and replaced with No. 9 crushed stone. In such case, payment will be made per ton of "Extra Crushed Stone Bedding" actually placed in trench to replace unsuitable material excavated. Unsuitable material shall be removed and replaced with crushed stone at direction of Engineer.

10. PIPE LAYING

A. All pipe shall be laid with ends abutting and true to lines indicated on Drawings or as directed by Engineer. Pipe shall be fitted and matched so that it will provide a smooth and uniform invert and be centered in the trench. All pipe shall be laid uphill when grade exceeds five percent.

B. Fittings and special attachments for water main shall be provided and laid as pipe is laid and where directed by Engineer or as indicated on Drawings.

C. Before each piece of pipe is lowered into trench, it shall be thoroughly swabbed out to insure its being clean. Any piece of pipe or fitting which is known to be defective shall not be laid or placed in trench. If defective pipe or fittings shall be discovered after pipe is laid, it shall be removed and replaced with a satisfactory pipe or fitting without additional charge. In case a length of pipe is cut to fit in a line, it shall be so cut as to leave a smooth end at right angles to longitudinal axis of pipe.

D. Jointing shall be accomplished in accordance with the manufacturer's recommendations.

E. Interior of pipe shall be cleaned of dirt, jointing materials, and superfluous materials of every description. When laying pipe is stopped for any reason, exposed end of pipe shall be closed with a plug fitted into pipe bell so as to exclude earth or other material and precautions taken to prevent floatation of pipe by runoff into trench.

F. No backfilling (except for securing pipe in place) over pipe will be allowed until Engineer has had an opportunity to make an inspection of joints, alignment and grade in section laid, but such inspection shall not relieve Contractor of further liability in case of defective joints, misalignment caused by backfilling and other such deficiencies that are noted later.

G. Anchorage of Bends, Tees, Plugs, Hydrants and Valves

(1) At all tees, plugs, caps and bends of 11-1/4° and greater, and at reducers or in fittings where changes in pipe diameter occur, movement shall be prevented by using suitable harness, thrust blocks or ballasts. Hydrants and valves shall be provided with similar protection. Thrust blocks and supports shall be as indicated on Drawings, with sufficient volumes of concrete being provided; however, care shall be taken to leave weep holes unobstructed and allow for future tightening of all nearby joints. Unless otherwise directed by Engineer, thrust blocks shall be placed so that pipe and fitting joints will be accessible for repair.

(2) Bridles, harness or pipe ballasting shall meet with approval of Engineer. Steel rods and clamps shall be galvanized or otherwise rust-proofed.

(3) No extra pay shall be allowed for work on proper anchorage of pipe, fittings or other appurtenances; such items shall be included in unit price bid for supported item.

H. In cold weather, extra caution shall be used in handling and laying PVC pipe.

I. No more pipe then can be used in one week shall be strung out in advance.

11. BACKFILLING PIPELINE TRENCHES

A. Backfilling pipeline trenches shall be accomplished in accordance with methods outlined hereinafter, and as indicated on Drawings. In all cases, walking or working on the completed pipelines, except as may be necessary in tamping or backfilling, will not be permitted until trench has been backfilled to a point one (1) foot above top of pipe. Filling of trench shall be carried on simultaneously on both sides of the pipe in such a manner that completed pipeline will not be disturbed and injurious side pressures do not occur.

The methods of backfilling shall be as follows:

Method A - Areas Not Subject to Vehicular Traffic

The lower part of the trench up to a point one (1) foot above the top of the pipe shall be hand placed backfilled with earth free from rock, acceptable to the Engineer, or with crushed stone when a condition exists as mentioned in Paragraph B, this article. In the remainder of the trench, the backfill material shall be reasonably free from large rock (over one-half cubic foot in volume) and may be shoveled into the trench without compacting and heaped over whenever, in the opinion of the Engineer, this method of backfilling may be used without inconvenience to the public. The backfilling of earth material or crushed stone under this method is NOT a separate pay item.

Method B - All Existing Gravel Streets, Roads and Drives
(Open Cut Method)

(1) Trench shall be backfilled with DGA. Backfill shall be placed full depth in trench to bottom of surfacing material.

(2) No extra payment will be made for crushed stone or backfilling.

B. In areas where large quantities of rock are excavated, and the available excavated earth in the immediate vicinity is insufficient for placing the required amount of backfill over the top of pipe as set forth in Method A this article, then the Contractor must either haul in earth or order

crushed stone aggregate for backfilling over the top of the pipe. Neither the hauling in and placing of earth nor the ordering and placing of crushed stone aggregate to fulfill the backfill requirements set forth in the aforesaid Method A is considered a pay item.

C. When directed by the Engineer, the Contractor shall add water to the backfill material or dry out the material when needed to attain a condition near optimum moisture content for a maximum density of the material when it is tamped. The Contractor shall obtain a compaction of the backfill of at least 90 percent of standard (ASTM D-698) Proctor density where mechanical tamping of backfill is required.

12. CONCRETE ENCASEMENT

Concrete encasement shall be placed where shown on contract drawings, or as directed by Engineer. Concrete shall be Class 3500 psi and shall be mixed sufficiently wet to permit it to flow under pipe to form a continuous bed. In tamping concrete, care shall be taken not to disturb grade or line of pipe or injure joints. All pipe to receive concrete encasement shall be sleeved in PVC pipe which should be included in the cost of the concrete. Concrete placed outside specified limits or without authorization from Engineer will not be subject to payment.

13. CLEAN-UP

Contractor shall remove all debris and surplus construction materials resulting from his work on a daily basis. Contractor shall grade ground along each side of pipe trench in a uniform and neat manner leaving construction area in a shape as near as possible to original ground line. If cleanup is not performed daily, Engineer will shut down project and/or suspend payments.

14. CONNECTION TO EXISTING SYSTEM

A. Unless otherwise directed by the Utility District, Contractor shall connect the new water main to the existing water system. The Contractor must notify the Utility District when the connection is to be made so that representatives of the Utility District may operate existing valves and witness the connection. A minimum notice of 48 hours must be given.

B. In case a wet tap must be made in connecting to the existing system, the tapping sleeve, valve and box and all other necessary material shall be provided by the Contractor.

15. SEEDING, FERTILIZING AND MULCHING

Trenches in areas that are not paved shall be prepared for seeding. Materials and methods for seeding, fertilizing and mulching are described elsewhere in these specifications.

16. RESTORATION

A. In general, contractor shall be responsible for proper care and maintenance of all existing structures, both above and below surface, which are encountered during progress of work. No structures of any kind shall be removed without consent of Engineer.

B. Contractor shall care for and maintain all pipes and services for gas, sewer, telephone or electricity where same are encountered in prosecution of work. In event any such services for water, gas, electricity, sewer or telephone are disturbed, damaged or destroyed, Contractor shall arrange with owner of such service, or facility, for its replacement and restoration at Contractor's expense.

17. TESTING

A. Water mains, services and all appurtenances, shall be tested to 50 psi over the operating pressure of the pipe. Defective joints of pipe shall be cut out and replaced as directed by Engineer. Cracked or defective pipe fittings, valves or hydrants disclosed in pressure test shall be replaced by Contractor with sound material, and test shall be repeated until test results are satisfactory to Engineer.

B. Contractor shall maintain required pressure for six hours and shall measure the amount of water necessary to maintain this pressure for this length of time. The amount of water used to maintain pressure shall not exceed five gallons per 24 hours per mile of pipe per inch nominal diameter of the pipe.

C. All leaks shall be repaired whenever or wherever there is evidence of a leak. Water used by Contractor shall be paid for by Contractor at the rate of $1.50 per 1,000 gallons.

D. All fittings, meters, equipment, tools and other material required for testing shall be provided by Contractor, and remain property of Contractor at completion of project.

18. DISINFECTION OF WATER LINES

A. New potable water lines shall not be placed in service, either temporarily or permanently, until they have been thoroughly disinfected in accordance with the following requirements and to the satisfaction of Engineer.

B. After testing, a solution of hypochlorite using HTH or equal shall be introduced into the section of the line begin disinfected sufficient to insure a chlorine dosage of at least 50 ppm in the main. While the solution is being applied, the water should be allowed to escape at the ends of the line until tests indicate that a dosage of at least 50 ppm has been obtained throughout the pipe. Open and close all valves and cocks while chlorinating agent is in the piping system. The

chlorinated water shall be allowed to remain in the pipe for 24 hours, after which a residual of at least 25 ppm shall be obtained. The disinfection shall be repeated until 25 ppm is obtained, after which time the main shall be thoroughly flushed until the residual chlorine content is not greater than 1.0 ppm. Contractor shall have testing equipment for testing chlorine content. A minimum of 48 hours notice to the Utility District is required prior to flushing. Chlorinated water resulting from disinfection of water line shall be disposed in a manner which will not violate 401 KAR 5:031.

C. Following disinfection of the line, bacteriological samples shall be collected by the Utility District and analyzed in accordance with the requirements of Kentucky Department for Natural Resources and Environmental Protection. When the samples have been approved, the new line then may be connected to the system. Copies of test results will be supplied to contractor. Cost of analyzing samples shall be paid by Contractor.

END SECTION

SECTION 02520 - ELEVATED STEEL WATER STORAGE TANK

1. RELATED DOCUMENTS

General provisions of Contract and General, Supplemental and Special Conditions apply to this Section.

2. DESCRIPTION OF WORK

A. Furnish all materials, tools, equipment, labor, services and incidentals necessary for manufacture, delivery, erection, disinfection and painting an elevated steel, all-welded construction, water storage tank. Tank is to be complete with all accessories specified herein and is to be erected on foundations to be designed and constructed by tank contractor. Tank shall have a minimum storage capacity of 500,000 gallons.

B. Bidder is to submit with proposal a preliminary design sketch showing sizes of supporting and bracing members, plate thickness and dimensions of tank, including grading and foundation footing plans for structures on which he is bidding. These preliminary sketches shall state cubic yards of concrete and weights of steel required for installation.

3. QUALITY ASSURANCE

A. Payment for water tank contract will be by individual sums listed on bid form and shall include tank, fence, foundations, piping, valves, painting, finish grading, seeding, fertilizing, accessories and all related appurtenances as specified and/or indicated on Drawings.

B. Payments will be made per construction cost breakdown as approved by Engineer.

4. GOVERNING SPECIFICATIONS

A. Materials, design, welding, shop fabrication, erection, testing and inspection of water storage tank shall conform to latest edition of American Water Works Association D 100-96 on latest edition and American Welding Society except as hereinafter stipulated.

B. The following design parameters shall apply and the structures shall safely withstand the following loads acting separately or in combination:

(1) Weight structure

(2) Weight of water in tank

(3) Wind stresses incurred by blowing at a minimum rate of 100 MPH from any direction.

(4) Earthquake Zone 1 per AWWA D 100.

(5) Snowload minimum of 25 PSF as specified in AWWA D 100.

C. Requirements of American Concrete Institute (ACI) 301, Specifications for Structural Concrete for Buildings, are applicable to concrete work.

5. ELEVATED WATER STORAGE TANK

A. Tank

(1) Capacity 500,000 gallons above low capacity level.

(2) Minimum height to overflow: 154 feet from top of foundation.

(3) All portions of the tank including the roof shall be of watertight construction and all material on contact with water shall have a minimum thickness of ¼".

B. Tower

The tank shall be supported on a suitable tower of structural tabular columns thoroughly braced by the tie rods and struts to provide for maximum wind loading.

C. Riser

The diameter of the steel riser shall be not less than 3 feet. Minimum thickness shall be ¼" and it shall be designed to carry all loads required by AWWA D 100. It shall be equipped with an elliptical manhole not less than 12 x 16 inches and located approximately 3 feet above the bottom of the riser.

6. INLET AND DISCHARGE PIPE AND BASE ELBOW

A. Inlet and discharge pipe shall be 12" steel or ductile iron.

B. Base elbow shall be standard flanged, cast iron type with suitable rubber gaskets or glands and cast iron bolts. Elbow shall be adequately supported by concrete pad. Coordinate installation of base elbow with water line construction.

7. ACCESSORIES

A. Balcony

Tank shall be equipped with balcony not less than 24 inches wide with handrail not less than 42 inches high. Floor of balcony shall be designed for a minimum vertical load of 1000 pounds assumed to be applied to any point. Floor shall be perforated for drainage. Handrail shall be capable of withstanding a 300 pound load applied laterally at top rail.

B. Ladders

(1) Fixed ladder which extends up one column a point 10 feet above ground to the balcony.

(2) Steel ladder from balcony to roof hatch.

(3) Fixed inside tank ladder from roof hatch to inside bottom of tank.

(4) Each ladder shall be equipped with an OSHA approved safety climbing device.

(5) Contractor shall furnish to Owner appropriate belt and clamp for use with climbing device.

C. Roof Hatch

A roof hatch shall be placed near outside tank roof ladder and shall be provided with a hinged cover and a hasp for locking. Opening shall have clear dimension of at least 24 inches in both directions. Opening shall have curb 4 inches in height, and cover shall overlap curb at least 2 inches.

D. A vent shall be provided at apex of roof and shall be of adequate size to safely vent tank during periods of maximum filling or withdrawal without using overflow pipe as a vent. Vent shall be constructed so as to prevent ingress or birds of small animals.

E. A 12" steel overflow pipe shall be provided which extends from high water level to headwall. End of pipe at headwall shall be screened to prevent ingress of foreign object or small animals.

F. Liquid Level Float Gauge: A float type level indicator, which shall be unaffected by high winds, shall be mounted so as to be readable from ground level. Float gauge shall be positioned as directed by Engineer.

G. Obstruction of Lights and Controls

(1) Double obstruction lights shall be bottom entrance conduit filling type and shall have two lamps receptacles each to accommodate 116 watt medium screw lamps with red fresnel lenses, and shall conform to FAA Specification L-810. Lights shall be Model OB 22 as manufactured by Hughey and Phillips, Inc. or approved equal.

(2) Lights shall be controlled by conduit mounted photoelectric control, conforming to FAA and FCC specifications. Photo control shall be 120v, 1 phase, Model No. S-800PC120 as manufactured by Hughey & Phillips, Inc. or approved equal.

8. FOUNDATIONS

Contractor shall design foundations for maximum bearing values for as listed in Geotechnical Report attached to this Section of the Specifications and indicated on Drawings. Foundation anchoring system shall resist overturning of tower structure from 100 miles per hour wind loads.

9. DETAILED DESIGN DRAWINGS

Contractor shall submit six (6) copies of detailed design and shop drawings of tank, foundation, and accessories to Engineer for approval. No fabrication shall be done prior to Engineer's approval.

10. WRITTEN REPORT (WELDING)

A. Written Report: At the conclusion of the work, the contractor shall submit, a written report prepared by the contractor's qualified personnel certifying that the work was inspected as set forth herein. The report shall include the following:

(1) A statement regarding the welder's credentials.

(2) A summary of inspection of radiographs and sectional segments and also inspection by air carbon and gouging, if used.

(3) Identification of unacceptable radiographs and sectional segments and a statement of the action taken to rectify unsatisfactory welds.

(4) The contractor's records of welders.

B. After acceptance of the structure, the radiographs or sectional segments, or both, shall become the property of the purchaser, unless otherwise agreed on.

C. Equipment. The contractor shall provide the required equipment and labor to take the radiographs or to remove the test segments.

D. Welder's Credentials

Before any welding is performed, the contractor's inspector shall make certain that the welders or welding operators have their credentials for acceptance or they shall be tested, after which welding may proceed.

11. CLEANING AND COATING

A. Reference Standard

(1) Except where otherwise specified, coating products and application shall meet the requirements of American Water Works Association Standard D-102-97 latest edition.

(2) SSPC or NACE surface preparation standards shall be on-site clearly visible to all workmen.

(3) A copy of project specifications shall be on job site at all times for workmen.

B. Quality

(1) Coating products listed in this specification provide an example of the type and quality of material required. Alternate products may be considered. Contractor shall submit in writing detailed explanation for requesting product change, along with pricing of product. If product is accepted any and all savings shall revert back to owner. Contractor shall bear any and all costs associated with evaluation of product by consultant, which may include but not limited to research, and testing by independent laboratories for product performance, and equality of those specified.

(2) Only approved thinners from coatings manufacture shall be used at all times. Any and all spills shall be reported to the Owner immediately at the time of incidence. Contractor shall bear responsibility, as well as all costs associated with cleanup and removal of any contaminated area (s).

(3) All coatings related to work shall be performed only by competent blasters and painters. If workmen exhibit lack of experience they may not be allowed to work on project. Consultant has final determination of workmen & foreman assigned to project.

C. Submittals:

Submit the following:

(1) Coating manufacturer's certificate for each coating proposed for use attesting that the coatings meet the specifications in this Section and are proper for the proposed application .

(1) Copy of manufacturer's technical information for coatings used on project. Shipping list with batch numbers for all coatings and thinners as well as shelf life delivered to site. MSDS sheets for all products on site shall be on site at all times.

(3) Color chart for Engineer's selection of colors.

D. Product Delivery, Storage, and Handling

(1) The Contractor shall be responsible for the delivery, storage, and handling of coating products.

(2) Deliver all materials to the job site in original, new and unopened packages and containers bearing manufacturer's name and label.

a. Name of material

b. Manufactures stock number and date of manufacture

c. Manufactures name

d. Contents by volume

e. Thinning instructions

f. Application instructions

g. Color name and number

E. Storage of Materials:

(1) Store only acceptable project materials on project site

(2) Store according to manufactures recommendation

(3) Comply with all State and Federal health and fire hazard regulations.

(4) MSDS sheets shall be in a bound set on job-site at all times, available to emergency personnel if required.

F. Environmental Requirements for application of coatings:

(1) Apply paints only when temperature of surfaces to be painted and surrounding air temps are between 55 and 90 degrees Fahrenheit unless otherwise permitted by paint manufactures printed instructions.

(2) Application of coatings will not be permitted in snow, rain, fog, mist or when the relative humidity exceeds 85%; or when the surface temp of substrate is less than 5 degrees Fahrenheit above the dew point; or to damp or wet surfaces.

(3) Painting will not be allowed during periods of inclement weather.

(4) The CONTRACTOR at all times shall provide adequate illumination in areas where painting operations are in progress. **Lighting shall be OSHA approved and explosion proof.**

G. Shop Surface Preparation:

(1) Prior to surface preparation, all surfaces shall be cleaned or all oil and grease in accordance with SSPC-SP 1 Solvent Cleaning. All interior and exterior surfaces shall be sand blasted to remove all dust, rust and scale, as well as all other foreign matter and shall result in a surface preparation equal to that of SSPC-SP 10 Near White Blast Cleaned Surface. Surface profile shall be 1.5 - 2.5 mils.

(2) Following surface preparation, all interior and exterior surfaces shall receive one coat of primer as hereinafter specified. The primer shall be applied in accordance with the recommendations of the manufacturer and not more than eight hours after surface preparation.

H. Field Cleaning: After erection and prior to painting, all interior and exterior surfaces shall be cleaned of all grease, oil, dirt, dust, rust, chalk residue, weld flux and spatter, and all other foreign matter or contaminants. All field welded edges and joints, as well as all abraded areas, shall be Near White Blasted in accordance with SSPC-SP 10.

I. Field Painting: After the tank is completely erected, any abraded spots and all field-welded areas shall be cleaned as specified in the paragraph above. Field application of the coatings to a field sandblasted area shall be done the same day that the cleaning operation is carried out. Surfaces not coated the same day as surface preparation operations shall be re-blasted prior to application of the prime coat. All field-sandblasted areas shall be primed and the entire interior and exterior of the tank shall be finish painted as hereinafter specified.

J. Tank Interior:

(1) Rust-Oleum Industrial

a. Rust-Oleum W 9200 Primer to a DFT of 5.0-8.0 Mils **Red**

b. Intermediate coat of Rust-Oleum W 9293 Total DFT 5.0-8.0 Mils **Marlin Blue**

c. Finish coat of Rust-Oleum W 9293 Total DFT 5.0-8.0 Mils **White**

d. All weld seams shall receive an additional roll coat to a DFT of 5.0-8.0 Mils **prior to finish application Red**

e. Total DFT shall not be less than 15 Mils not including the weld seams which shall be a minimum of 5 mils greater.

(2) Tnemec Co

a. Prime Coat: 1 coat of Tnemec Series 20-1255 to a DFT of 3.0-5.0 mils **Red**

b. Intermediate Coat: 1 coat of Tnemec Series 20-1255 to a DFT of 3.0-5.0 mils **Beige**

c. Finish Coat: 1 Coat of Tnemec Series WH02 to a DFT of 4.0-6.0 mils **Tank White**

d. All weld seams shall receive an additional roll coat to a DFT of 5.0 mils **prior to finish application** **Red**

e. Total DFT shall not be less than 10 Mils not including the weld seams which shall be a minimum of 5 mils greater.

(3) Induron

a. Induron PE-54 Epoxy Prime to a DFT 3.0 - 5.0 dry mils **Tan**

b. Intermediate Induron PE-54 Epoxy to a DFT of 3.0-5.0 mils. **Gray**

c. Finish Induron PE-54 Epoxy to a DFT of 3.0-5.0 mils **White**

d. All weld seams shall receive an additional roll coat to a DFT of 5.0 mils **prior to finish application** **White**

e. Total DFT shall not be less than 9 Mils not including the weld seams which shall be a minimum of 5 mils greater.

K. Tank Exterior:

(1) Rust-Oleum Industrial

a. Rust-Oleum 9380 to a DFT of 3-5 mils **Gray**

b. Rust-Oleum 9370 to a DFT of 3-5 mils **Buff**

c. Rust-Oleum 9400 to a DFT of 2-3 mils **White**

d. DFT shall not be less than 10 mils

(2) Tnemec Co

a. Tnemec Series 69 to a D.F.T. of 3.0-5.0 mils.
Red

b. Tnemec Series 69 to a D.F.T. on 3.0-5.0 mils.
Beige

c. Tnemec Series 73/74 to a D.F.T. of 3.0-5.0 mils.
White

d. DFT of the exterior 9 mils.

(3) Induron

a. Induron PE-54 Epoxy Prime to a DFT 3.0 - 5.0 dry mils
Tan

b. Induron Armorguard Epoxy to a D.F.T. of 3.0 – 5.0 dry mils.
Gray

c. Induron Indurethane 5500 HG to a D.F.T. of 1.5 – 2.0 dry mils
Color to be determined

(4) Exterior color: OWNER will determine them. The DFT specified shall be obtained additional coats shall be applied at the contractors expense, to achieve the specified DFT.

L. Surface Preparation

(1) In all cases, surfaces shall be primed and or treated, as specified the same day they are prepared. A prepared surface, which becomes corroded or contaminated, shall be re-prepared before painting at no additional cost to the OWNER.

(2) Dust from cleaning operations shall be properly removed by dry methods such as vacuuming or dry air blast, while not reducing the quality of the cleaned surface.

(3) CONTRACTOR shall have on the job at all times at least one (1) copy of the latest SSPC pictorial standards, which shall be followed.

(4) For ferrous metals, surface preparation shall consist of one or more of the methods contained in the methods supplied.

(5) Abrasives utilized for blasting operations shall contain less than 0.01% free silica during and following blasting operations. Contractor is responsible for all cleanup and removal of blasting media following operations, as well as total removal from Owners' site. Media shall be profiled and documentation submitted to Consultant prior to media leaving site.

(6) Abrasive shall be of the correct size to create the desired profile from the coatings manufactures data sheet.

M. Equipment and Procedures

(1) At least 10 days prior to commencing field painting, the CONTRACTOR shall submit to CONSULTANT for review and acceptance a list of major items of equipment and procedures he proposes for painting.

(2) The CONTRACTORS procedure for painting shall include the chronological sequence of operations.

(3) Equipment list shall include make and capacity of compressor, make and capacity of abrasive blasting and spraying equipment.

(4) Compressor shall be capable of delivering a minimum of 100 psi at the nozzle, at maximum working height of tank during blasting operations.

(5) Effective oil and water separators, and a air drier shall be used in all lines serving spray painting and abrasive blasting operations to remove oil and moisture from the compressed air.

N. Mixing of Coatings:

Owner shall designate an area where all coatings shall be stored and mixed only. All mixing shall be done over a double tarped area. *Any and all spills shall be reported to the Owner immediately at the time of incidence. Contractor shall bear responsibility, as well as all costs associated with cleanup and removal of any contaminated area (s).*

O. Painting

(1) Skilled, experienced painters on properly prepared surfaces shall do all painting. All surfaces, which are not to be coated, shall be protected.

(2) The CONTRACTOR shall be responsible for the compatibility of all paints used in work.

P. Ventilation

(1) Ventilation is essential to remove vapors during application and curing of coatings.

(2) Ventilation shall be exhausted from lowest portion of tank with top openings kept clear.

(3) During coating applications the capacity of the ventilating fans shall be at least 400 cfm per gallon of coating applied per hour.

(4) The ventilation requirements are to ensure proper curing of the applied coatings and are not to be taken as requirements to insure worker safety.

(5) Following the application of the final interior coating the tank shall be force ventilated by mechanical means from the lowest possible point for a minimum of 48 hours, ventilation shall be such that it creates a total turn over on the interior of the tank a least once per hour.

Q. Inspectors

(1) Engineer and/or an outside inspection service representing the Engineer will make inspections shown in the Article. Additional inspections will be made if required. It shall be the responsibility of the Contractor to request an inspection by at least 48 hours prior to the inspection day. Should the Engineer be summoned to inspect a completed phase of construction and find the work incomplete and, therefore, not ready for inspection, the Contractor shall bear the cost of inspection. It is not the intent to charge the Contractor for an inspection if discrepancies are found in the completed phase of construction as long as the discrepancies do not necessitate additional inspection trips. The contractor shall not proceed until the engineer inspection has been performed. The engineer will inspect:

a. The degree of surface preparation for cleanliness and profile.

b. Visual inspection of each coat for complete coverage and coating defects and measurements of the dry film thickness.

c. Final inspection of the complete coating system for coating defects and total dry film thickness.

d. Holiday testing for film discontinuities in the complete interior coating system.

(2) Contractor shall furnish a low voltage wet sponge holiday detector for checking film continuity. The Contractor shall also furnish a dry film thickness gauge and calibration shims for checking coating dry film thickness. The dry film thickness gauge used by the Engineer will be furnished by the Engineer.

(3) The Contractor shall provide safe access to the tank for the engineers inspection.

(4) After all coating work has been completed; at this time, the total required mil thickness, lack of "holidays", and aesthetic acceptability will be checked by the Engineer.

R. Sign

Lettering, as indicated on Drawings, shall be painted on one side of tank in Black Roman block letter. Submit shop drawings indicating size, style, spacing and placement of painted letter. Color shall be Tnemec AB05 black or approved equal. Letters shall be a minimum of 36 inches in height.

12. TESTING AND STERILIZATION

A. After curing at least the minimum number of days required by the paint manufacture, the CONTRACTOR shall wash the Head tank interior with an adequate volume of water to thoroughly wet all the interior surfaces including those above the high water level. All water will be removed and disposed of in accordance with approved regulations.

B. It is the CONTRACTORS responsibility after washing and curing to completely disinfect the interior portion of the tank, AWWA C652 Method 2 **ONLY.** . If acceptable to KY Division of Water, then method 1 or 3 shall be used at no additional expense to owner. The Owner shall take and send water samples to the laboratory, but shall assume no responsibility for the sampling technique or the care of the samples. The stored tank water shall comply with Current STATE, USEPA, and AWWA standards for organic, inorganic, and biological contaminants as influenced by the operations of the CONTRACTOR.

C. No separate payment will be made for sterilizing and testing the tank or for laboratory work.

D. All water for testing and sterilization shall be furnished by Owner.

13. EXCAVATION

A. Contractor shall include all excavation and grading required to accomplish the project, in base bid. No adjustment in contract price will be made for necessary excavation and grading of any type.

B. If the scope of work indicated on Drawings or listed in specifications is changed by Engineer, then and only then will unit prices furnished with bid be used to determine adjustment to contract price.

14. CHAIN LINK FENCING

A. Fencing

(1) Fabric shall be galvanized steel chain link 72" high, No. 9 gauge wire woven in a 2" mesh. Selvages shall be barbed. Fabric shall conform to ASTM 491-63T in its entirety. Minimum coating weight shall be 0.40 oz. per sq. ft.

(2) Barb wire shall consist of three lines of galvanized steel barbed wire which is to be of the 4-point pattern composed of two strands of 12-1/2 gauge line wires with 14 gauge aluminum barbs spaced on approximately 5" centers. Minimum weights of coating shall be 0.30 oz. per sq. ft. of wire surface.

(3) Barb wire arms: Intermediate post tops shall be of pressed steel or malleable iron base. Base shall include pressed steel extension farms to accommodate 3-barb style. Three-barb style shall extend at a 45 degree angle. Barb wire arms shall support a minimum of 400 lbs. vertical dead load from top of arm.

(4) Chain link fabric shall be securely fastened to all terminal posts using 3/16" x ¾" tension bars and heavy 12 gauge tension bands. There shall be one band for each foot in the height of the fence. The fabric shall be fastened to all intermediate posts with 9 gauge tie wires, spacing not to exceed 14" apart. Fabric shall be tied to top rail with 9 gauge tie wires, spacing not to exceed 24".

B. Framework

(1) All posts and other appurtenances used in the construction of this fence shall be hot dipped galvanized with a minimum of 1.8 oz. per sq. ft. of surface.

(2) Intermediate posts shall be 2-1/2" O.D. nominal weight 3.65 per lineal foot.

(3) All end, corner, and pull posts shall be 3" O.D. nominal weight pipe, nominal weight 5.79 lbs. per lineal foot..

(4) Posts for swing gates shall be standard weight pipe of 4" O.D. St. 5.79 lbs. PLS.

(5) Evenly spaced posts in the line of fence no further apart than 10'-0" on center.

(6) Top rails shall be 1-5/8" O. D. standard weight pipe wt 2.27 per lineal foot, provided with couplings approximately every 20-'0". Couplings are to be outside sleeve type.

(7) Brace pipe shall be same as top rail and extend from terminal post to first adjacent line post. Braces shall be furnished to fasten to posts by heavy sand cast aluminum or malleable fittings, then securely trussed from line post to base of terminal post with a 3/8" truss rod and tightener. Brace pipe is required only in heights of 6'-0" and higher.

C. Gates: Gate frames shall be 1-5/8" O.D. standard weight pipe, wt. 2.72 per lineal foot. Gates shall be fabricated using welded construction. Gates must be properly braced to eliminate any possible sagging condition.

(1) Gate Fillers: Frames shall be filled with same specification of fabric as is used in line of fence.

(2) Hinges: Hinges shall be a ball and socket offset type allowing gates to swing parallel with line of fence; shall be of malleable iron or forging, and shall have hot dipped galvanized finish.

(3) Double Latch: Double latch shall be drop bar type securely bolted to gate frame and shall engage in a heavy malleable iron gate stop.

D. Installation

(1) Installation shall be made in a workmanlike manner by skilled mechanics experienced in erection of this type of fence. Erect fence on line and to grade designated. Set all posts in concrete foundations in ground to a minimum depth of 48". Diameter of foundation shall be a minimum of 9", except for gate posts on which minimum diameter shall be three times the outside diameter of gate post. Foundation shall be 1-2-4 mixture of concrete. All foundations shall extend approximately 2" above grade and shall slope away from post to provide for proper drainage.

(2) Fabric and barb wire shall be stretched to proper tension between terminal posts and securely fastened to the framework members as covered in previous sections. Bottom of fabric shall be held as uniformly as is practicable to finished grade.

15. GUARANTEE

(SEE ALSO GENERAL CONDITIONS) . Tank contractor shall guarantee workmanship and materials (including piping and foundation) entering into his portion of work for a period of one two (2) year from date of substantial completion. In case leakage or other defects appear within the one-year period, he shall promptly make required repairs at his own expense upon written notice by Owner that such defects have been found. Leakage through side walks shall be defined as the appearance of free liquid showing stream flow in the exterior surface, the source of which is from the inside of the tank. A first warranty inspection will be scheduled prior to two (2) years after date of substantial completion.

16. SUBSURFACE INVESTIGATION

Information from Geotechnical Investigation is attached hereto. If contractor desires to have further positive subsurface information, he shall obtain it at his own expense.

END SECTION

SECTION 02630 - STORM DRAINAGE

1. RELATED DOCUMENTS

General Provisions of Contract, General and Supplemental Conditions and General Requirements apply to this Section.

2. DESCRIPTION OF WORK

Provide labor, material, equipment and services necessary for proper and complete storm drainage system.

3. QUALITY ASSURANCE

A. Method of Payment:

(1) Payment shall include all earth and rock trenching, removing water, bedding, furnishing and laying pipe, backfilling, construction of appurtenances, and all other work necessary to provide complete working storm drainage system. Payment for extra depth excavation and adjustment for changes in grades are described elsewhere in this Section.

(2) Pipe will be measured in linear feet for each type, class and size acceptably incorporated in work.

4. MATERIALS

A. Corrugated Plastic Pipe

(1) Pipe shall be high density polyethylene pipe with a corrugated exerior and smooth interior for 12 inch to 36 inch diameters meeting AASHTO M 294-96 (Type S) and a profile wall with a smooth interior and exterior for 42 inch and 48 inch diameter meeting AASHTO MP6-95, (Type D).

(2) Material for pipe shall meet ASTM D3350 resin cell classification 335420C.

(3) Joints for pipe shall be according to manufacturers recommendation and approved by the Engineer.

B. Manholes, Curb Inlets and Catch Basins

Manholes, curb inlets and catch basins shall be constructed where and as indicated on Drawings. Concrete shall be Class A, as described elsewhere in this specifications.

C. Storm Drain Headwalls and Wingwalls

Headwalls shall be constructed where and as indicated on Drawings. Concrete shall be Class A, as described elsewhere in this specifications.

D. Castings:

(1) Frames, grates and lids for catch basins and curb inlets shall be grey iron conforming to latest revision of Federal Specification QQ-I-651, dated February 2, 1932 or ASTM A-48 for Class 30, latest revision.

5. CONSTRUCTION

A. Trenching for storm drains shall be as described in Section "EXCAVATION, EMBANKMENT AND GRADING".

B. No unit shall be laid until proposed location has been approved by Engineer.

C. Unstable foundation material.

(1) When unstable foundation is encountered at grade established, unstable material shall be removed and replaced with suitable material to width and depth and in manner that will provide uniform and firm foundation.

(2) Accepted quantities of refill crushed stone placed in trench to replace authorized removal of unstable material will be paid for at contract unit price per ton for refill crushed stone.

D. In all operations such as placing pipe, jointing, bedding, backfilling, and embankment construction, care shall be exercised; and it shall be Contractor's responsibility to assure that pipes are not damaged during unloading or placement on bed, during compaction of backfill, by movement of excessively heavy equipment over fill, or by any other forces that may cause damage. Pipe which is not in true alignment and grade or which shows undue settlement after laying, or is otherwise damaged, shall be removed and replaced without extra compensation.

E. Pipe shall be placed beginning at outlet end of culvert with pipe being laid upgrade. Pipe having marks designating top and bottom shall be laid so designating mark is no more than 5 degrees from vertical plane throughout longitudinal axis of pipe.

6. BEDDING AND BACKFILL

A. Bedding

(1) Pipe shall be laid with bottom quadrant of barrel of pipe on original earth or No. 9 crushed stone.

(2) Pipe shall not be laid on solid rock. Provide 6 inch thick bed of No. 9 crushed stone in rock subgrade.

(3) Prepare cuts in earth subgrade or in crushed stone bedding for pipe bells.

B. Open cut

Backfilling of excavated trenches in open cut shall be commenced as soon as possible after storm pipe is laid and jointing and alignment are approved but not until authorized by ENGINEER.

C. Proposed Paved Surface

(1) Backfill in trenches within limits of paved or graveled surfaces and shoulders shall be No. 9 crushed stone. No.9 size crushed stone shall be as specified by "Standard Specifications". Stone shall be provided by CONTRACTOR subject to approval of ENGINEER. Final twelve (12) inches below pavement subgrade shall be DGA.

(2) Compaction of No.9 crushed stone shall be to a density of no less than 84 percent of solid volume. Density determination will be based on oven-dry, bulk specific gravity, Kentucky Method Test No. KM 64-607.

D. Grassed Areas

(1) Trenches outside limits of existing or proposed paved surfaces and shoulders shall be earth and rock, taken from trench, free of organic materials, and placed as indicated on drawings and as described below.

(2) Only finely divided earth, free from debris and organic materials, and stones less than 1-1/2 inch size, hand placed, shall be used as a backfill material up to 6 inches above top of pipe.

(3) After the above specified backfill is hand placed, rock may be used in backfill in pieces no larger than 18 inches in any dimension and to an extent not greater than one-half of backfill materials used. Larger rock fill will be allowed in wide trenches where side slopes are low enough to prevent rock from dropping over pipe line. If additional earth is required, it must be obtained and placed by contractor. Filling with rock and earth shall proceed simultaneously, in order that all voids in rock may be filled with earth. Above the hand placed backfill, machine backfilling may be employed without tamping, provided caution is used in quantity per dump and in uniformity of level of backfilling. Backfill material must be uniformly ridged over trench and excess hauled away, with no excavated rock over 1-1/2 inch diameter or pockets of crushed rock or gravel in top 6 inches of backfill. Ridged backfill shall be confined to width of trench and not allowed to overlap onto firm original earth, and its height shall not be in excess of needs for replacement of settlement of backfill. All excess rock including crushed rock or gravel from construction shall be removed. Streets shall be broomed to remove all earth and loose rock immediately following backfilling.

(4) In case of pipe crossings, at an angle of 45 degree or greater, and around manholes in and adjacent to streets, highways, railroads, sidewalks and driveways around all valve and meter boxes, backfill shall be machine compacted.

(5) Top twelve (12) inches of trench in shoulders and grassed areas shall be topsoil, placed and graded for seeding.

7. DRAINAGE

Contractor shall make provisions for handling all flows in existing creeks, ditches, sewers and trenches by pipes, flumes or other approved methods at all times when his operations would, in any way, interfere with natural functioning of said creeks, ditches, sewers and drains. Contractor shall at all times during construction provide and maintain sufficient equipment for disposal of all water which enters open cut trenches, to render trenches firm and dry, until structures to be built therein are completed.

8. SETTLEMENT OF TRENCHES

Contractor shall be responsible for trench settlement which occurs in trenches within one year from date of substantial completion.

9. DISPOSAL OF UNSUITABLE MATERIALS

Excavated materials which are either surplus and not required or are unsuitable for backfilling shall be removed from site of operations as soon as excavated. All excavated materials so removed shall be disposed of, at no additional cost to Owner. Disposal shall be at locations as shown on the drawings and in a manner acceptable to Engineer. All such material shall be spread neatly, to drain, and seeded, fertilized, and mulched.

END SECTION

SECTION 02920 - SEEDING, FERTILIZING AND MULCHING

1. RELATED DOCUMENTS

General provisions of Contract, and General, Supplemental, and Special Conditions apply to this Section.

2. DESCRIPTION OF WORK

Provide labor, material, equipment and services necessary for proper and complete seeding and mulching.

3. QUALITY ASSURANCE

A. The intent of these Specifications is to require the Contractor to provide, in all areas to be seeded, fertilized and mulched, a smooth uniform turf of the grasses specified free from bare spots, eroded areas, weeds or other deficiencies. Acceptance by the Engineer is conditional upon compliance with this intent after the initial growing season.

4. MATERIALS

A. Mulch shall be a high quality small-grain straw or a hydraulically applied wood-cellulose fiber mulch approved by Engineer.

B. Commercial fertilizer shall be a complete fertilizer, uniform in composition, dry and free flowing. Fertilizer which becomes caked or otherwise damaged making it unsuitable for use will not be accepted.

C. Lime shall be agricultural limestone containing not less than 85% of total carbonates and shall be grounds to a fineness that 50% will pass through a 100-mesh sieve and 80% will pass through a 20-mesh sieve. Coarser material will be acceptable provided that specified rates of application are increased proportionally on basis of quantities passing 100-mesh sieve.

D. Seed Mixture – Permanent Seeding

(1) Lawn Seed shall be guaranteed by dealer and distributed as follows:

40% Kentucky Bluegrass
40% Fine Leaf Fescue
20% Annual Ryegrass

Seed mixture shall be sown at rate of 5 pounds per 1000 square feet.

E. Seed Mixture – Temporary Seeding

(1) March 1 to October 31

a.	Oats	3 lbs. per 1000 sq. ft.
b.	Perennial Ryegrass	1 lb. per 1000 sq. ft.
c.	Tall Fescue	1 lb. per 1000 sq. ft.
d.	Wheat	3 lbs. per 1000 sq. ft.
e.	Annual Rye	3 lbs. per 1000 sq. ft.

(2) November 1 to February 28

a.	Annual Rye	3 lbs. per 1000 sq. ft.
b.	Wheat	3 lbs. per 1000 sq. ft.
c.	Perennial Ryegrass	1 lb. per 1000 sq. ft.
d.	Tall Fescue	1 lb. per 1000 sq. ft.

5. SOIL IMPROVEMENTS

Fertilizer shall be applied to all seeded areas as follows:

A. Agricultural limestone - 75 pounds per 1000 square feet.

B. Fertilizer - 20 pounds, 10-10-10 fertilizer per 1,000 square feet.

C. Application

(1) Limestone shall be thoroughly mixed into topsoil as far ahead of seeding as will not interfere with other grading operations.

(2) Fertilizer shall be applied to areas being prepared for seeding and shall be mixed lightly in top few inches of topsoil.

6. SEEDING AND MULCHING

A. Seeding

(1) Immediately before seed is sown, loosen soil to a depth of 3 inches by rotary tools, discs, harrows, or other approved methods. Engineer may reduce depth to which soil is loosened on steep slopes or places inaccessible to mechanical equipment.

(2) Remove all large or unsightly clods or stones, and other foreign material brought to surface and repair all gullies, washes, or disturbed areas before seed is applied.

(3) Seed shall be broadcast either by hand or by approved sowing equipment at rate specified.

(4) Do not perform seeding during high winds that would prevent uniform distribution of seed.

B. Mulching

(1) All seeded areas indicated or directed by Engineer shall be mulched with straw to depth of approximately 1-1/2 inches. Mulching shall follow seeding operation not later than 48 hours.

7. PLANTING SEASON

Spring seeding season for permanent seeding shall be between February 15 and April 15. Fall seeding season for permanent seeding shall be between August 1 and October 20. Seeding seasons may be extended only at direction of Engineer.

8. CLEAN-UP

Soil, peat or similar material which has been brought onto paved areas within or outside construction limit by hauling operations or otherwise shall be removed promptly, keeping these areas clean at all times. Upon completion of seeding, all excess soil, stones and debris which have not previously been cleaned up shall be removed from site or disposed of as directed by Engineer. All lawn areas shall be prepared for final inspection.

9. MAINTENANCE

Maintenance shall begin immediately following last operation of seeding and shall continue until lawn is formally accepted. Maintenance shall include sufficient watering, weeding, cultivating, mulching, regular mowing of seeded areas, and removal of dead materials.

10. INSPECTION FOR ACCEPTANCE

Inspection of work of this section to determine completion, exclusive of possible replacement of seed, will be made by Engineer upon written notice requesting such inspection submitted at least ten (10) days prior to anticipated date of inspection and provided that an 80% minimum coverage per square foot for all seeded lawn areas has been established. Contractor shall guarantee, at the time of this inspection, that the seeded areas will be in compliance with the intent of this Specification described herein. This guarantee shall apply to all permanent seeding performed in conjunction with project, regardless of type protection used or season in which seeding is performed.

11. GUARANTEE

A. When seeding does not meet guarantee requirements at time of inspection, Contractor will be advised of amount and location of corrective work deemed necessary. Additional work required may include preparation of a new seedbed, refertilizing, reseeding, remulching, or any erosion control items that are required. Contractor shall perform all corrective work as soon as favorable working conditions occur after being advised of corrective work required. Corrective work and materials required to fulfill guarantee requirements will not be paid for, except as hereinafter provided for unavoidable damage.

B. When unavoidable damage occurs after date project is declared complete and before inspection previously described, then payment will be made at original contract unit prices for additional seeding and protection work ordered by Engineer. Unavoidable damage may result from slides, vehicular traffic, fires, and deluges. Failure of seed to sprout and grow will not be considered unavoidable damage.

C. From time seeding and protection work begins until date project is declared complete, keep all seeded areas in good condition at all times. Damage to seeded areas or to mulch materials shall be promptly repaired as directed. All work and materials necessary to protect, maintain, and restore seeded areas during life of contract shall be performed at no additional cost to Owner, except additional work caused by changes in project authorized by Engineer.

D. When it becomes necessary to disturb previously seeded areas at direction of Engineer, payment for a reasonable amount of additional work, as determined by Engineer, will be made at original contract unit price. No payment will be made for additional work due to changes made for benefit of Contractor, nor will payment be made for corrective work required because Contractor has failed to properly coordinate his entire erosion control schedule thus causing previously seeded areas to be disturbed by operations that could have been performed prior to seeding.

END SECTION

SECTION 03300 - CAST-IN-PLACE CONCRETE

1. RELATED DOCUMENTS

General Provisions of Contract, General, Supplemental and Special Conditions, and General Requirements apply to this Section.

2. DESCRIPTION OF WORK

Provide labor, transportation, materials, tools, equipment and appliances necessary for proper and complete installation of all concrete work.

3. MATERIALS

A. General

All materials used in the work shall be stored and handled in such a manner as will prevent deterioration or intrusion of foreign matter. Material which has deteriorated or has been damaged shall be immediately and completely removed for premises. All material shall comply with requirements of standards of American Society for Testing and Materials.

B. Manufactured Materials

Manufactured materials such as cement, shall be delivered and stored in original packages, plainly marked with brand and maker's name. Material in broken containers or in packages showing water marks or other evidence of damage will be rejected. Unless otherwise noted, all materials used in concrete work shall be as specified below:

(1) Portland Cement---Type I or Type III - ASTM C-150.

(2) Aggregates----------ASTM C-33.

a. Fine aggregates shall consist of natural sand having clean, hard, uncoated particles and free form injurious amounts of soft friable, thin, elongated or laminated pieces. Aggregates shall not absorb more than 3% moisture by weight. Maximum size of pieces shall be 3/4".

(3) Air Entraining Agent----------ASTM C-33.

(4) Water shall be clean and free from deleterious amounts of acids, alkalis or organic materials.

C. Metal Reinforcement: All reinforcing shall be ASTM A-615, with a minimum yield of 60,000 psi.

D. Concrete Curing and Hardening Compound shall be Sonneborne "Kure-N-Seal" or equal.

E. Anti-spalling compound shall be Sonneborne "Pitt-Loc" or equal.

F. Expansion joint material shall be premoulded filler as manufactured by Homasote Co. (Homex 300); Dayton SUre-Grip (G-30) or equal.

4. CONCRETE - QUALITY

A. Ready-mixed concrete complying with these Specifications and conforming to ASTM designation C-94, Strength Method shall be used.

B. Type Concrete

Min. Compressive Strength at 28 days----------3,500 psi
Slump----------3-5 inches
Air Content----------4%

C. Use of admixtures is prohibited except where written consent is given by Engineer.

D. Ready mix design shall be submitted to Engineer for approval prior to ordering concrete for project.

5. REINFORCING

A. Detailing, fabrication and placing shall conform to American Concrete Institute "Manual of Standard Practice for Detailing Reinforced Structures" (ACI-315).

6. CONVEYING AND DEPOSITING CONCRETE

Procedures shall be in accordance with American Concrete Institute Standard "Recommended Practice for Measuring, Mixing and Placing Concrete." (ACI-614).

7. CURING

Concrete shall be maintained in a moist condition for seven (7) days after placing. Curing shall begin immediatlely after completion of final finishing operation.

8. COLD WEATHER REQUIREMENTS

Procedures shall be in accordance with American Concrete Institute "Recommended Practice for Winter Concreting" (ACI-604). Section "Minimum Requirements for Job Taking Maximum Risk" shall not be considered a part of this Specification.

9. FINISHING

A. Slabs

(1) Under no circumstances shall dry cement or a mixture of dry cement and sand be sprinkled directly on surface to absorb moisture or to stiffen mix.

(2) Finish for floor slabs shall be as follows:

Surface of slab shall be struck off true to elevations called for, and all surface water, laitance and dirt removed. After allowing the concrete to dry out from 20-30 minutes, depending on weather conditions, the surfaces shall be brought to final grade with a wood float. Surfaces shall be tested with a straight edge to detect high and low spots which shall be eliminated. After concrete has hardened sufficiently to prevent excess fine material from working to surface, surface shall be steel troweled to a smooth hard finish, impervious and free from imperfections, pits and other irregularities, and true to a maximum tolerance of 1/8" in six (6) feet.

10. CRUSHED ROCK FILL

Install a 4" crushed rock fill under all floor slabs on earth. Rock shall be clean crushed limestone, graded form 3/4" to 1-1/2" in diameter, spread evenly, tamped solid and brought to the proper elevation for the reception of the concrete slab, placed only after approval of graded and properly compacted subsurface.

11. INSPECTION

A. Concrete shall not be placed over pipes and conduits until such work has been tested, inspected and approved.

B. All concrete placed in violation of these provisions shall be subject to rejection.

12. NOTIFYING OTHER TRADES

Notify plumbing and Electrical Contractors and all other Contractors, at proper time to install all pipes, conduits, anchors or other equipment coming under their respective contracts in form work.

13. TESTING CONCRETE

A. Slump Test

At least one slump test shall be made before first concrete pour, at start of pouring any concrete at each 5 cubic yards deposited during one operation. These shall be made for the same samples as those taken for cylinder tests, and records of same kept therewith. Test shall be made according to ASTM Designation (C-143), and as required under ASTM Designation C-94 for ready-mixed concrete. Mix designed for a slump test of 2" and not more than 4", except in cases where thin sections would indicate in the opinion of the Engineer that a wetter mix is more desirable. The Contractor shall furnish necessary equipment for the slump test.

B. Cylinder Test

(1) At the start of concreting, the Contractor shall make from a single batch a set of four (4) cylinders per ASTM Designation C-31. Two shall be tested at 7 days and two at 28 days, per ASTM Designation C-39.

(2) At each time when twenty or more cubic yards of concrete are placed during one operation, and when the sum of smaller deposits of concrete equal thirty cubic yards since previous tests, and at any change in mix, four (4) cylinder tests will be required, two tested at 7 days and two at 28 days, per ASTM Designation C-39. In case of C-94 and C-172 shall be added. Class "A" concrete samples shall show a compressive strength of not less than 3500 lbs. per square inch in 28 days.

(3) The Contractor shall furnish all equipment for sampling and curing on the job, and shall bear the cost of laboratory curing and testing.

END SECTION