

CONTRACT DOCUMENTS AND SPECIFICATIONS
for the

**City County Park Water
System Improvements:
Contract 1 – Distribution
Improvements**

Prepared for:

Jessamine County Fiscal Court
101 North Main Street
Nicholasville, KY 40356

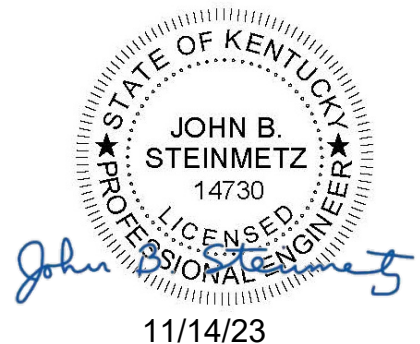


Prepared by:

Banks Engineering, Inc.
1211 Jessamine Station
Nicholasville, KY 40356
(859) 881-0020



November 2023



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Other Division 2 Work shall be in accordance with City of Nicholasville General Specifications (Appendix A), with the Kentucky Department of Highways Standard Specifications, current

edition, or the KDOH Standard Drawings unless otherwise specified in the contract documents.

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Unless otherwise specified in the City of Nicholasville General Specifications (Appendix A) or detailed on the plans, all Division 3 Concrete work shall be in accordance with the Kentucky Department of Highways Standard Specifications, current edition, and the KDOH Standard Drawings.

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Appendix A City of Nicholasville General Specifications

SECTION 00010 – ADVERTISEMENT FOR BIDS

Sealed Bids for the “**City County Park Water System Improvements: Contract 1 – Distribution Improvements**” for the Jessamine County Fiscal Court will be received at the office of the Jessamine County Judge Executive located at 101 North Main Street, Nicholasville, Kentucky 40356 until **11:00 a.m. (local time) on Monday, December 4, 2023**, at which time they will be opened and publicly read aloud.

The project consists of the construction of approximately 4,700 linear feet of 0.75-inch through 2-inch water service lines, 5 yard hydrants, 11 underground spigots, valves, meter settings, and associated appurtenances to replace the existing water distribution system within City County Park in Nicholasville, Kentucky.

The Instructions to Bidders, Bid Form, Agreement Forms, Performance and Payment Bonds, Plans, Specifications, and other Contract Documents may be examined at the following locations:

Jessamine County Fiscal Court
101 North Main Street
Nicholasville, Kentucky 40356
Phone (859) 885-4500

AGC/Dodge
950 Contract Street, Suite 100
Lexington, Kentucky 40505
Phone (859) 425-6630

AGC/Dodge
1717 Alliant Avenue, Suite 11
Louisville, KY 40299
(502) 240-6026

Banks Engineering, Inc.
1211 Jessamine Station
Nicholasville, KY 40356
(859) 881-0020

A non-mandatory Pre-Bid Meeting will be held in the Blue Building at City County Park at 10:00 a.m. on Wednesday, November 29, 2023.

Bid packages may be obtained from Lynn Imaging, 328 Old Vine Street, Lexington, Kentucky 40507, phone (859) 255-1021. Purchase price for the bid package will be determined by Lynn Imaging. Plans may be viewed and/or purchased on-line through www.lynnimaging.com. Partial sets of documents will not be provided. **Bids will only be accepted from plan holders who have purchased plans from Lynn Imaging and are subsequently registered as “official plan holders”.**

The OWNER reserves the right to waive any informality 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 Instructions to Bidders. No BIDDER may withdraw his Bid within ninety (90) consecutive calendar days after the actual date of the opening thereof.

David K. West, Jessamine County Judge Executive

SECTION 00100 - INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL INSTRUCTIONS AND INFORMATION

- 1.01 Each BIDDER is responsible for inspecting the work site and for being thoroughly familiar with the Contract Documents, including Addenda. The BIDDER shall in no way be relieved from any bidding obligation because of unfamiliarity with the site or documents. Neither the OWNER nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of bidding documents.
- 1.02 All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply throughout the Contract and they will be deemed to be included in the Contract the same as though herein written out in full.
- 1.03 A non-mandatory Pre-Bid Meeting will be held in the Blue Building at City County Park at 10:00 a.m. on Friday, November 17, 2023.
- 1.04 The OWNER of the Project is the Jessamine County Fiscal Court.
- 1.05 The ENGINEER of the Project is Banks Engineering, Inc., 1211 Jessamine Station, Nicholasville, Kentucky, 40356, (859) 881-0020, John Steinmetz, P.E., Project Manager.
- 1.06 The Contract Documents contain the provisions for construction of the Project. Information obtained from an officer, agent, or employee of the OWNER, or from any other person, shall not affect the risk or obligation assumed by the Contractor or relieve the Contractor from fulfilling any of the conditions of the Contract.
- 1.07 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 an 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.

PART 2 - SPECIAL INSTRUCTIONS AND INFORMATION

- 2.01 Bids are to be submitted on the forms provided by completing all blank spaces in the Bid Form.
- 2.02 ~~The Contract will be awarded based on the lowest responsive Base Bid or the lowest combination of Base Bid plus deductive alternate (if any) by a qualified BIDDER.~~
- 2.03 All BIDDERS must comply with the President's Executive Order No. 11,246 as

amended, which prohibit discrimination in employment regarding race, creed, color, sex or national origin.

- 2.04 All BIDDERS must make positive efforts to use minority and women owned businesses.
- 2.05 All BIDDERS, Contractors and Subcontractors must comply with 41 CFR 60-4, in regard to Affirmative Action, to ensure equal opportunity to females and minorities and will apply the timetables and goals set forth in 41 CFR 60-4 as applicable.

PART 3 - BIDDING PROCEDURE

- 3.01 Sealed Bids for the **“City County Park Water System Improvements: Contract 1 – Distribution Improvements”** for the Jessamine County Fiscal Court will be received at the office of the Jessamine County Judge Executive located at 101 North Main Street, Nicholasville, Kentucky 40356 until **11:00 a.m. (local time) on December 4, 2023**, at which time they will be opened and publicly read aloud.
- 3.02 Each bid must be submitted in a sealed envelope, addressed to David K. West, Jessamine County Judge Executive and must be plainly marked on the outside of the envelope as **“Sealed Bid for City County Park Water System Improvements: Contract 1 – Distribution Improvements”**. The envelope shall bear on the outside the BIDDER'S name, address and license number (if applicable), and date and time of opening. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed to David K. West, Jessamine County Judge Executive, 101 North Main Street, Nicholasville, Kentucky 40356.
- 3.03 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.
- 3.04 Each Bid must be accompanied by a separate Bid Bond for the Contract payable to the OWNER for five percent (5%) of the total amount of the Bid on the Contract. As soon as the Bid prices are compared, the OWNER will return the Bonds of all except the three lowest responsible BIDDERS. When the Agreements are 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 Bonds and Performance Bonds have been executed and approved, after which it will be returned. Certified checks payable to the OWNER, equal to five percent (5%) of the Bids, may be substituted for the Bid Bond.

- 3.05 A Bid may be withdrawn prior to the scheduled time for the opening of Bids, or authorized postponement thereof. A Bid received after the time and date specified will not be considered. No BIDDER may withdraw a Bid within ninety (90) consecutive calendar days after the actual date of the opening. Should the Contract not be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.
- 3.06 The OWNER may consider informal any Bid not prepared and submitted in accordance with the provisions hereof. The OWNER may waive any bidding informalities or minor defects or reject any and all Bids.
- 3.07 A conditional or qualified Bid will not be accepted.
- 3.08 The OWNER reserves the right to add, delete or change any part or portion of the proposed work.
- 3.09 Any BIDDER may modify his/her Bid by telegraphic communication at any time prior to the scheduled closing time for receipt of Bids, provided such telegraphic communication is received by the OWNER prior to the closing time, and provided further, the OWNER is satisfied that a written confirmation of the telegraphic modification over the signature of the BIDDER was mailed prior to the closing time. The telegraphic communication should not reveal the Bid price but should provide the addition or subtraction or other modification so that the final prices or terms will not be known by the OWNER until the sealed Bid is opened. If written confirmation is not received within two (2) consecutive calendar days from the closing time, no consideration will be given to the telegraphic modification. No FAX (Facsimile) bids or bid modifications will be accepted.
- 3.10 The successful BIDDER, upon his/her failure or refusal to execute and deliver the Contract and bonds required within ten (10) consecutive calendar days after he/she has received notice of the acceptance of his/her Bid, shall forfeit to the OWNER, as liquidated damages for such failure or refusal, the security deposited (Bid Bond) with his/her Bid.
- 3.11 Each BIDDER must inform him/herself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful BIDDER of his/her obligation to furnish all material and labor necessary to carry out the provisions of his/her Contract. Insofar as possible, the Contractor, in carrying out the work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.
- 3.12 No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any BIDDER orally.

Every request for such interpretation should be in writing addressed to John Steinmetz, P.E., Project Manager at Banks Engineering, Inc., 1211 Jessamine Station,

Nicholasville, Kentucky, 40356 and to be given consideration must be received at least five (5) consecutive calendar days prior to the date fixed for the opening of Bids. Any and all such interpretations and any supplemental instructions will be in the form of written Addenda to the specifications which, if used, will be mailed to all prospective BIDDERS (at the respective addresses furnished for such purposes), not later than three (3) consecutive calendar days prior to the date fixed for the opening of Bids. Failure of any BIDDER to receive any such addendum or interpretation shall not relieve such BIDDER from any obligation under his/her Bid as submitted. All Addenda so issued shall become part of the Contract Documents.

- 3.13 At the time of the opening of Bids, each BIDDER will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and Contract Documents (including all Addenda). The failure or omission of any BIDDER to examine any form, instrument or document shall in no way relieve any BIDDER from any obligation in respect of his/her Bid.

PART 4 - AWARD OF CONTRACT (AGREEMENT) – See Method of Award in Section 00400

- 4.01 ~~Award of Contract will be made to the qualified BIDDER with the lowest responsive Bid as determined in accordance with Part 2 of this Section, unless all Bids are rejected.~~ The OWNER reserves the right to reject any and all Bids, to waive any bidding informalities, and to disregard all nonconforming, nonresponsive or conditional Bids. Discrepancies between words and figures will be resolved in favor of words. Discrepancies between the indicated total unit amount and the correct total unit amount thereof will be resolved in favor of the correct total unit amount.
- 4.02 The BIDDER to whom the Contract is awarded will be required to execute the Agreement and obtain the Performance Bond and Payment Bond within ten (10) consecutive calendar days from the date of the Notice of Award. The Notice of Award will 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.
- 4.03 A Performance Bond and a Payment Bond each in the amount of 100 percent (100%) of the Contract price, with a corporate surety approved by the OWNER, will be required for the faithful performance of the Contract. Such Bonds shall not be dated with a date earlier than the date of the Agreement for the Contract (Project) being bonded.
- 4.04 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 and must be registered in the Commonwealth of Kentucky or counter-signed by a Kentucky Resident Agent, which will be subject to verification by the OWNER.

- 4.05 The OWNER within ten (10) consecutive calendar days of receipt of acceptable Performance Bond, Payment Bond and Agreement signed by the BIDDER 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 the signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.
- 4.06 The Notice to Proceed shall be issued by the OWNER within ten (10) consecutive calendar 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 specified periods or the period mutually agreed upon, the Contract or may terminate the Agreement without further liability on the part of either party.

END OF SECTION 00100

SECTION 00300 - BID FORM

BIDDER'S PROPOSAL

City County Park Water System Improvements: Contract 1 – Distribution Improvements

Proposal of _____ (hereinafter called "BIDDER"), organized and existing under the laws of the state of _____, doing business as _____ (insert "a corporation", "a partnership", or "an individual", as applicable), to the Jessamine County Fiscal Court, hereinafter called "OWNER".

In compliance with the Advertisement for Bids, BIDDER hereby proposes to furnish all equipment, materials and labor for the work required for the **City County Park Water System Improvements: Contract 1 – Distribution Improvements** project in strict accordance with the Contract Documents, within the time set forth herein, and at the following prices:

(Continued on next page)

City County Park Water System Improvements: Contract 1 – Distribution Improvements
BID SCHEDULE

<i>Item</i>	<i>Description</i>	<i>Unit</i>	<i>Qty</i>	<i>Unit Price</i>	<i>Item Cost</i>
1	GENERAL CONDITIONS	LS	1		
2	MOBILIZATION	LS	1		
3	CLEARING AND GRUBBING	LS	1		
4	MAINTENANCE OF TRAFFIC	LS	1		
5	3/4-INCH WATER SERVICE PIPE	LF	420		
6	1-INCH WATER SERVICE PIPE	LF	2,635		
7	1-1/2-INCH WATER SERVICE PIPE	LF	432		
8	2-INCH WATER SERVICE PIPE	LF	1,215		
9	CONNECT 1-INCH LINE TO 2-INCH MAIN	EA	1		
10	CONNECT 1-INCH LINE TO 8-INCH MAIN	EA	6		
11	CONNECT 2-INCH LINE TO 8-INCH MAIN	EA	2		
12	WATER METER ASSEMBLY - 3/4-INCH	EA	1		
13	WATER METER ASSEMBLY - 1-INCH	LF	6		
14	WATER METER ASSEMBLY - 2-INCH	EA	3		
15	YARD HYDRANT WITH SPLASH PAD	EA	5		
16	CONNECT TO EXISTING YARD HYDRANT	EA	1		
17	UNDERGROUND SPIGOT AND BOX - SINGLE	EA	2		
18	UNDERGROUND SPIGOTS AND BOX - DOUBLE	EA	2		
19	POLE-MOUNTED SPIGOT	EA	6		
20	WATER VALVE - 3/4-INCH	EA	6		
21	WATER VALVE - 1-INCH	EA	8		
22	WATER VALVE - 1.5-INCH	EA	1		
23	WATER VALVE - 2-INCH	EA	4		
24	CONNECT NEW SERVICE TO BUILDING	EA	10		
25	CONNECT TO EX. WATER FOUNTAIN OR VALVE	EA	2		
26	PAVEMENT RESTORATION	LF	612		
27	REMOVE AND RESET CHAIN LINK OR WIRE FENCE	LF	56		
28	REMOVE AND RESET 4-PLANK FENCE	LF	8		
29	NEW 4-PLANK FENCE	LF	100		
30	EROSION CONTROL	LS	1		

31	SEED AND PROTECT	SY	7,000		
32	DEMOBILIZATION	LS	1		

TOTAL AMOUNT OF BASE BID (Items 1 through 32):

_____ dollars (\$_____).

The price shall include all labor, materials, (all excavation is bid as unclassified and will not constitute any additional cost to OWNER if rock is encountered) overhead, profit, insurance and other costs necessary to cover the finished work of the several kinds called for.

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 180 (one hundred eighty) consecutive calendar days thereafter**. BIDDER further agrees to pay liquidated damages for each consecutive calendar day thereafter. Liquidated damages are to be calculated from the "Schedule of Liquidated Damages" in Section 00700 (Item 1.13).

Accompanying this Proposal is a certified check or standard Bid Bond in the sum of

_____ Dollars (\$_____),

five percent (5%) of the Bid amount. The BIDDER, by submittal of this Bid, agrees with the OWNER that the amount of the Bid security deposited with this Bid fairly and reasonably represents the amount of damages the OWNER will suffer due to the failure of the BIDDER to successfully secure and enter into the Agreement.

BIDDER acknowledges receipt of the following Addenda:

BIDDER agrees that the OWNER reserves the right to delete the whole or any part of the Project from the Contract.

BIDDER understands that the OWNER reserves the right to reject any or all Bids and to waive any informalities in the Bidding.

BIDDER agrees that this Bid shall be good and may not be withdrawn for a period of ninety (90) consecutive calendar days after the actual date of Bid opening.

Within ten (10) consecutive calendar days after receiving written Notice of Award of this Bid by the OWNER, the BIDDER will execute and deliver to the OWNER four (4) copies of the Agreement and such other required Contract Documents.

BIDDER:

By:

Name:

(type or print)

Title:

Address:

Date:

END OF SECTION 00300

SECTION 00400 - SUPPLEMENTS TO BID FORM

All BIDDERS must complete and submit the information required in this Section. Failure to submit all required information will result in the BID being considered unresponsive.

Reciprocal Preference for Kentucky Resident Bidders

KRS 45A.490 Definitions for KRS 45A.490 to 45A.494.

As used in KRS 45A.490 to 45A.494:

- (1) "Contract" means any agreement of a public agency, including grants and orders, for the purchase or disposal of supplies, services, construction, or any other item; and
- (2) "Public agency" has the same meaning as in KRS 61.805.

KRS 45A.492 Legislative declarations.

The General Assembly declares:

- (1) A public purpose of the Commonwealth is served by providing preference to Kentucky residents in contracts by public agencies; and
- (2) Providing preference to Kentucky residents equalizes the competition with other states that provide preference to their residents.

KRS 45A.494 Reciprocal preference to be given by public agencies to resident bidders -- List of states -- Administrative regulations.

- (1) Prior to a contract being awarded to the lowest responsible and responsive bidder on a contract by a public agency, a resident bidder of the Commonwealth shall be given a preference against a nonresident bidder registered in any state that gives or requires a preference to bidders from that state. The preference shall be equal to the preference given or required by the state of the nonresident bidder.
- (2) A resident bidder is an individual, partnership, association, corporation, or other business entity that, on the date the contract is first advertised or announced as available for bidding:
 - (a) Is authorized to transact business in the Commonwealth; and
 - (b) Has for one (1) year prior to and through the date of the advertisement, filed Kentucky corporate income taxes, made payments to the Kentucky unemployment insurance fund established in KRS 341.490, and maintained a Kentucky workers' compensation policy in effect.
- (3) A nonresident bidder is an individual, partnership, association, corporation, or other business entity that does not meet the requirements of subsection (2) of this section.
- (4) If a procurement determination results in a tie between a resident bidder and a nonresident bidder, preference shall be given to the resident bidder.
- (5) This section shall apply to all contracts funded or controlled in whole or in part by a public agency.
- (6) The Finance and Administration Cabinet shall maintain a list of states that give to or require a preference for their own resident bidders, including details of the preference given to such bidders, to be used by public agencies in determining resident bidder preferences. The cabinet shall also promulgate administrative regulations in accordance with KRS Chapter 13A establishing the procedure by which the preferences required by this section shall be given.
- (7) The preference for resident bidders shall not be given if the preference conflicts with federal law.
- (8) Any public agency soliciting or advertising for bids for contracts shall make KRS 45A.490 to 45A.494 part of the solicitation or advertisement for bids.

The reciprocal preference as described in KRS 45A.490-494 above shall be applied in accordance with 200 KAR 5:400.

Method of Award

Best Value – Ranking Approach

Jessamine County Fiscal Court intends to award a Contract to the Vendor, whose offer, conforming to the Solicitation, is the most advantageous on the basis of "best value" for all products, services, and requirements contained herein.

An evaluation committee, or a designated individual, will evaluate the information provided by the Vendor in response to the established measurable criteria contained in the Solicitation.

Measurable Criteria:

Price	90 Points
Experience	10 Points

TOTAL POINTS 100 Points

Each Vendor is responsible for submitting all relevant, factual and correct information with their offer to enable the evaluator(s) to afford each Vendor the maximum score based on the available data submitted by the Vendor. VENDOR SHALL ENTER UNIT PRICE AND TOTAL PRICE ON THE BID SHEET. If adequate space is not available, the Vendor must attach additional information that clearly cross-references the appropriate location in the solicitation (i.e. page number, paragraph, subject, etc.).

Vendors responding with the minimum Best Value requirements in this Solicitation shall not be credited with Best Value points. Vendors responding with greater than the minimum requirements shall receive Best Value points. Failure to provide adequate information will impact the evaluated points awarded to the Vendor.

Price (90 points)

The bidder with the lowest Price receives the maximum score. The bidder with the next lowest Price receives points by dividing the lowest Price by the next lowest price and multiplying that percentage by the available points. For example, 95 points is allocated to the lowest Price criteria for this procurement, Bidder "A" bids \$3.00 as the lowest bidder and receives the maximum 95 points ($\$3.00 / \$3.00 = 1.00 \times 95 = 95$). Assume Bidder "B" is the next lowest bidder at \$4.00, then "B" receives 71.3 points ($\$3.00 / \$4.00 = .75 \times 95 = 71.25$).

Experience- (10 points)

5 years experience is the minimum requirement for this criteria. Points are only given to bidders who exceed the 5 year requirement. The bidder with the greatest number of years experience (not to exceed 10 years for evaluation purposes) receives the maximum number of points. The bidder with the next largest number of years experience, receives points by dividing the next largest number of years experience by the largest number of years experience and multiplying that percentage by the available points. For example, 10 points is allocated to the largest number of years experience, over 5 years, for this procurement, Bidder "A" bids 10 years as the bidder with the largest number of years experience and receives the maximum of 10 points ($10 / 10 = 1.00 \times 10 = 10$). Assume Vendor "B" is the bidder with the next largest number of years experience at 5 years, then "B" receives 5 points ($5 / 10 = .50 \times 10 = 5$).

Vendor shall enter number of year's experience: _____ years

Best Value scoring is subject to **Reciprocal preference for Kentucky resident bidders and Preferences for a Qualified Bidder or the Department of Corrections, Division of Prison Industries (KAR 200 5:410).**

**REQUIRED AFFIDAVIT FOR BIDDERS, OFFERORS AND
CONTRACTORS CLAIMING
RESIDENT BIDDER STATUS**

FOR BIDS AND CONTRACTS IN GENERAL:

The bidder or offeror hereby swears and affirms under penalty of perjury that, in accordance with KRS 45A.494(2), the entity bidding is an individual, partnership, association, corporation, or other business entity that, on the date the contract is first advertised or announced as available for bidding:

1. Is authorized to transact business in the Commonwealth;
2. Has for one year prior to and through the date of advertisement
 - a. Filed Kentucky corporate income taxes;
 - b. Made payments to the Kentucky unemployment insurance fund established in KRS 341.49; and
 - c. Maintained a Kentucky workers' compensation policy in effect.

The BIDDING AGENCY reserves the right to request documentation supporting a bidder's claim of resident bidder status. Failure to provide such documentation upon request shall result in disqualification of the bidder or contract termination.

Signature

Printed Name

Title

Date

Company Name _____

Address _____

Subscribed and sworn to before me by _____

(Affiant)

(Title)

of _____ this _____ day of _____, 20____.
(Company Name)

Notary Public

[seal of notary]

My commission expires: _____

**REQUIRED AFFIDAVIT FOR BIDDERS, OFFERORS AND
CONTRACTORS CLAIMING
QUALIFIED BIDDER STATUS**

FOR BIDS AND CONTRACTS IN GENERAL:

I. The bidder or offeror swears and affirms under penalty of perjury that the entity bidding, and all subcontractors therein, meets the requirements to be considered a "qualified bidder" in accordance with 200 KAR 5:410(3); and will continue to comply with such requirements for the duration of any contract awarded. Please identify below the particular "qualified bidder" status claimed by the bidding entity.

_____ A nonprofit corporation that furthers the purposes of KRS Chapter 163

_____ Per KRS 45A.465(3), a "Qualified nonprofit agency for individuals with severe disabilities" means an organization that:

- (a) Is organized and operated in the interest of individuals with severe disabilities; and
- (b) Complies with any applicable occupational health and safety law of the United States and the Commonwealth; and
- (c) In the manufacture or provision of products or services listed or purchased under KRS 45A.470, during the fiscal year employs individuals with severe disabilities for not less than seventy-five percent (75%) of the man hours of direct labor required for the manufacture or provision of the products or services; and
- (d) Is registered and in good standing as a nonprofit organization with the Secretary of State.

The BIDDING AGENCY reserves the right to request documentation supporting a bidder's claim of qualified bidder status. Failure to provide such documentation upon request may result in disqualification of the bidder or contract termination.

Signature

Printed Name

Title

Date

Company Name

Address

Solicitation/Contract #: Water System Improvements

- _____ Must provide proof of general liability insurance in the minimum amount of \$1,000,000.00 with Jessamine County Fiscal Court named as additional insurer
- _____ Must have worker's compensation insurance coverage for all employees that perform work under the contract prior to execution of contract
- _____ Must be registered with the Jessamine County Occupational Tax Office and be in compliance
- _____ Must adhere to all local, state and federal regulations

Company _____

Authorized Representative _____

Date _____

Phone _____

Email _____

Address _____

Bid _____

PART 1 - BIDDER'S QUALIFICATIONS

- A. The required names and addresses of all persons interested in the foregoing Bid, as PRINCIPALS, are as follows:

- B. The requested statement of work within the past five (5) years of a similar character to that included in the proposed Contract and references to enable the OWNER to judge the BIDDER'S experience, skill and business standing are as follows:

[illegible]

(Add supplementary pages if necessary)

PART 2 - SUBCONTRACTORS

Proposed subcontractors are listed below for each branch of work included in the proposed Contract. (All subcontractors are subject to the approval of the OWNER. Failure to submit a completed list may be cause for rejection of the Bid.)

Branch of Work	Name and Address of Subcontractor
1. Waterline installation	
2. Fencing	
3. Asphalt Paving	
4. Site Restoration	
5.	
6.	
7.	
8.	
9.	

(Add supplemental pages if necessary)

PART 3 - LIST OF PROPOSED MANUFACTURERS/SUPPLIERS

The following list of proposed manufacturers/suppliers must be submitted within twenty (20) minutes following the opening of Bid. The OWNER reserves the right to reject any proposed manufacturer that is not listed in the Bid Documents; however, after the OWNER has accepted the BIDDER'S proposed manufacturers (including modifications), the BIDDER (Contractor) cannot change any manufacturer without processing a formal Change Order that is justifiable and acceptable to the OWNER. The list may be submitted at the same time the Bid is submitted but will not be considered a part of the Bid.

Material (Equipment)	Name and Address of Material Manufacturer
1. Waterline Pipe and Fittings	
2. Yard Hydrants	
3. Water Valves	
4. Meter Boxes	
5.	
6.	
7.	
8.	

PART 4 - UNIT PRICES

Bidders shall list unit prices for providing all labor, materials, and incidentals necessary to perform the following work items. These prices shall be used for any additions or deletions related to the project scope that are not included in the bid prices. Unit prices shall be evaluated during the Bid Award process, and unreasonable unit prices may be cause for rejection of a bid. Compensation for any other unforeseen work elements shall be on a time and material basis with no more than 15% markup.

Item	Unit Price
1. N/A	
2.	
3.	
4.	
5.	

END OF SECTION 00400

SECTION 00500 - AGREEMENT FORMS

PART 1 - NOTICE OF AWARD

TO:

Project: City County Park Water System Improvements: Contract 1 – Distribution
Improvements
Nicholasville and Jessamine County, KY

The OWNER has considered the Bid submitted by you for the above described Work on _____, 2023. You are hereby notified that your Bid has been accepted for items in the amount of _____ (\$_____).

You are required by the Instructions to Bidders to execute the AGREEMENT and furnish the required CONTRACTOR'S Performance Bond, and Payment Bond and certificates of insurance within ten (10) consecutive calendar days from the date of this notice to you.

If you fail to execute said AGREEMENT and to furnish said BONDS within ten (10) consecutive calendar days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your Bid as abandoned and as a forfeiture of your Bid Bond. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the OWNER.

Dated this _____ day of _____, 202____.

OWNER:

By:

(Insert Name_____)

Title:

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged this the _____ day
of _____, 202____.

CONTRACTOR:

By:

Name:

(type or print)

Title:

PART 2 - AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 2023, by and between the Jessamine County Fiscal Court, hereinafter called "OWNER", and

doing business as (a corporation, a partnership, or an individual), hereinafter called "CONTRACTOR."

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

1. The CONTRACTOR will commence and complete the City County Park Water System Improvements: Contract 1 – Distribution Improvements project, Jessamine County, Kentucky.
2. The CONTRACTOR will furnish all of the materials, supplies, tools, equipment, labor and other services necessary for the completion of the project described herein.
3. The CONTRACTOR will commence the work required by the Contract Documents within fifteen (15) consecutive calendar days after the date of the Notice to Proceed and will complete the same within 180 (one hundred eighty) consecutive 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: _____
_____ as shown in the Bidder's Proposal.

5. The term "Contract Documents" means and includes the following:
 - a. Advertisement for Bids
 - b. Instructions to Bidders
 - c. Information Available to Bidders
 - d. CDBG Information for Bidders (if applicable)
 - e. Bidder's Proposal
 - f. Bid Bond
 - g. Agreement
 - h. General Conditions
 - i. KIA Supplemental General Conditions (if applicable)
 - j. CDBG General Conditions (if applicable)
 - k. Special Conditions
 - l. Payment Bond
 - m. Performance Bond
 - n. Notice of Award
 - o. Notice to Proceed
 - p. Change Order(s), if any
 - q. Drawings prepared by Banks Engineering dated November 2023
 - r. Technical Specifications prepared by Banks Engineering dated November 2023
 - s. Addenda:

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

(Continued on next page)

IN WITNESS WHEREOF, the parties hereto have executed or caused to be executed by their duly authorized officials, this AGREEMENT in eight (8) copies each of which shall be deemed an original on the date first above written.

OWNER:

By:

(Insert Name)

Title:

ATTEST:

Name:

(type or print)

Title:

CONTRACTOR:

By:

Name:

(type or print)

Address:

ATTEST:

Name:

(type or print)

Title:

PART 3 - NOTICE TO PROCEED

TO: _____

Project: City County Park Water System Improvements: Contract 1 – Distribution
 Improvements
 Jessamine County, KY

You are hereby notified to commence work in accordance with the AGREEMENT dated _____, 202____, on or before _____, 202____, and you are to complete the work within 180 (one hundred eighty) calendar days thereafter. The date of completion of all work is therefore _____, 2024.

OWNER: _____
By: _____
(Insert Name) _____
Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

this the _____ day of _____, 202____.

By: _____
Title: _____

END OF SECTION 00500

SECTION 00600 - BONDS AND CERTIFICATES

PART 1 - PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

Name of CONTRACTOR:

Address of CONTRACTOR:

a (corporation, partnership, or individual), hereinafter called "PRINCIPAL", and

Name of SURETY:

Address of SURETY:

hereinafter called "SURETY", are held and firmly bound unto the

Name of OWNER: Jessamine County Fiscal Court

Address of OWNER: 101 North Main Street, Nicholasville, KY 40356

hereinafter called "OWNER", in the total aggregate penal sum of:

Dollars (\$).

in lawful money of the United States, for the payment of which sum will and truly to be made, we bind ourselves, our heirs, executors, administrators, 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 _____, 2023, a copy of which is hereto attached and made a part hereof for the construction of: City County Park Water System Improvements: Contract 1 – Distribution Improvements project.

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 the PRINCIPAL 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 AGREEMENT or Work to be performed thereunder or the Specifications accompanying the same shall in any way 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 it is expressly agreed that the BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the AGREEMENT not increasing the Contract price more than 20 percent (20%), so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the AGREEMENT as so amended. The term "Amendment", wherever used in this BOND, and whether referring to this BOND, the AGREEMENT or the Loan Documents shall include any alteration, addition, extension, or modification of any character whatsoever.

IN WITNESS WHEREOF, this instrument is executed in eight (8) counterparts, each one of which shall be deemed an original, this the ____ day of _____, 2023.

ATTEST:

PRINCIPAL:

(PRINCIPAL) Secretary

By:

Address:

WITNESS TO PRINCIPAL

Address:

ATTEST:

SURETY

Witness to SURETY

By Attorney in Fact

Address:

Address:

NOTE: Date of BOND must not be prior to date of AGREEMENT. If CONTRACTOR is a 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.

PART 2 - PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

Name of CONTRACTOR:

Address of CONTRACTOR:

a (corporation, partnership, or individual), hereinafter called "PRINCIPAL", and

Name of SURETY:

Address of SURETY:

hereinafter called "SURETY", are held and firmly bound unto the

Name of OWNER: Jessamine County Fiscal Court

Address of OWNER: 101 North Main Street, Nicholasville, KY 40356

hereinafter called "OWNER", in the total aggregate 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, our heirs, executors, administrators, 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 _____, 2023, a copy of which is hereto attached and made a part hereof for the construction of: City County Park Water System Improvements: Contract 1 – Distribution Improvements project.

NOW, THEREFORE, if the PRINCIPAL shall promptly make payment to all persons, firms, and corporations furnishing materials for or performing labor in the prosecution of the Work provided for in such AGREEMENT, and any authorized extensions or modifications 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 for all labor cost incurred in such Work including that by a SUBCONTRACTOR, and to any mechanic or materialman lienholder whether it acquires its lien by operation of State or Federal law; then this obligation shall be void, otherwise to remain in full force and effect.

PART 2 - PAYMENT BOND (Cont.)

PROVIDED, that beneficiaries or claimants hereunder shall be limited to the Subcontractors, and persons, firms, and corporations having a direct Contract with the PRINCIPAL or its Subcontractors, in addition to the OWNER.

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 way 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 this Contract or to the Work or to the Specifications.

PROVIDED, FURTHER, that no suit or action shall be commenced hereunder by any claimant: (a) Unless claimant, other than one having a direct Contract with the PRINCIPAL, shall have given written notice to any two of the following: The PRINCIPAL, the OWNER, or the SURETY above named within ninety (90) consecutive calendar days after such claimant did or performed the last of the Work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the Work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the PRINCIPAL, OWNER, or SURETY, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid Project is located, save that such service need not be made by a public officer; (b) After the expiration of eighteen (18) months following the date of which PRINCIPAL ceased Work on said AGREEMENT, it being understood, however, that if any limitation embodied in the BOND is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

PROVIDED, FURTHER, that it is expressly agreed that this BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the AGREEMENT not increasing the Contract price more than 20 percent (20%), so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the AGREEMENT as so amended. The term "Amendment", wherever used in this BOND and whether referring to this BOND, the AGREEMENT or the Loan Documents shall include any alteration, addition, extension or modification of any character whatsoever.

PART 2 - PAYMENT BOND (Cont.)

IN WITNESS WHEREOF, this instrument is executed in eight (8) counterparts, each one of which shall be deemed an original, this the ____ day of _____, 2023.

ATTEST:

PRINCIPAL:

(PRINCIPAL) Secretary

By:

Address:

WITNESS TO PRINCIPAL

Address:

ATTEST:

SURETY

Witness to SURETY

By Attorney in Fact

Address:

Address:

NOTE: Date of BOND must not be prior to date of AGREEMENT. If CONTRACTOR is a 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.

PART 3 - CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, _____, the duly authorized and acting legal representative of the:

_____ ,

do hereby certify as follows:

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

Date: _____

END OF SECTION 00600

SECTION 00700 - GENERAL CONDITIONS

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- 1.03 Drawings and Specifications
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SECTION 00700 - GENERAL CONDITIONS

PART I - GENERAL

1.01 CONTRACT DOCUMENTS

The Advertisement for Bids, Instructions to Bidders, Bidder's Proposal, Bid Bond, Agreement, Performance and Payment Bonds, Certificate of Insurance, Notice of Award, Notice to Proceed, Change Orders, General Conditions, Supplementary General Conditions, Special Conditions, Drawings, Addenda and Specifications shall all be binding on the Contractor, and shall be fully a part of the Contract as if thereto attached or therein repeated in words and figures.

1.02 DEFINITIONS AND MEANINGS OF TERMS

Whenever in the Contract Documents the following terms or pronouns referring to them are used, the intent and meaning shall be interpreted as follows which shall be applicable to both the singular and plural thereof:

- A. The Contract shall mean the Contract executed by the OWNER and the Contractor, of which these General Conditions form a part; the terms Contract and Agreement are synonymous.
- B. The terms OWNER and Contractor shall mean the respective parties to the Contract; the OWNER being a public or quasi-public body or authority, corporation, association, partnership, or individual for whom the work is to be performed; the Contractor being the individual, partnership or corporation with whom the OWNER has executed the Contract.
- C. The term Engineer shall mean Banks Engineering, Inc., successor, or duly authorized representative.
- D. Addenda shall mean 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.
- E. Bid shall mean the offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the Work to be performed; the terms Bid and Proposal are synonymous.
- F. BIDDER shall mean any individual, partnership or corporation submitting a Bid for the Work.

- G. Bonds shall mean Bid, Performance, and Payment Bonds and other instruments of security, furnished by the Contractor and his surety in accordance with the Contract Documents.
- H. Change Order shall mean 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.
- I. Contract Documents shall mean the Contract, including Advertisement for Bids, Instructions to Bidders, Bidder's Proposal, Bid Bond, Agreement, Payment Bond, Performance Bond, Certificate of Insurance, Notice of Award, Notice to Proceed, Change Orders, Drawings, General Conditions, Supplementary General Conditions, Special Conditions, Addenda and Specifications.
- J. Contract price shall mean the total monies payable to the Contractor under the terms and conditions of the Contract Documents.
- K. Contract time shall mean the number of consecutive calendar days stated in the Contract Documents for the completion of the Work.
- L. Drawings shall mean 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.
- M. Field order shall mean 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.
- N. Notice of award shall mean the written notice of the acceptance of the Bid from the OWNER to the successful BIDDER.
- O. Notice to proceed shall mean 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.
- P. Project shall mean the undertaking to be performed as provided in the Contract Documents.
- Q. Resident project representative shall mean the authorized representative of the OWNER who is assigned to the project site or any part thereof.
- R. Shop drawings shall mean 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; the terms shop drawings and submittals are synonymous.

- S. Specifications shall mean a part of the Contract Documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.
- T. Subcontractor shall mean individual, partnership 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.
- U. Substantial completion shall mean 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.
- V. Suppliers shall mean any person, supplier 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.
- W. Work shall mean labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in the project.
- X. Written notice shall mean 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.

1.03 DRAWINGS AND SPECIFICATIONS

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.

The Engineer, without charge, will furnish to the Contractor not more than eight (8) sets of the Drawings and Specifications. If additional sets of documents are required by the Contractor for the proper handling of the work, such documents will be furnished to the Contractor at cost.

The Contractor shall keep one set of the Drawings and Specifications on the site of the work. This set shall be kept current by the addition of all reviewed changes, addenda and amendments thereto.

The Drawings and Specifications are intended to be explanatory to each other, but should any discrepancy appear or any misunderstanding arise as to the importance of anything contained in either, the Engineer shall make the necessary interpretation. Corrections of errors or omissions in the Drawings or Specifications may be made by the Engineer when such corrections are necessary for the proper fulfillment of their intention as construed by the Engineer.

All work or materials shown on the Drawings and not mentioned in the Specifications, or any work specified and not shown on the Drawings, shall be furnished, performed, and done by the Contractor as if same were both mentioned in the Specifications and shown on the Drawings.

Should the Contractor in preparing his Bid find anything necessary for the construction of the project that is not mentioned in the Specifications or shown on the Drawings, or find any other discrepancy in the Contract Documents, he shall notify the Engineer so that such discrepancies may be corrected by Addenda prior to the Bid opening. Should the Contractor fail to notify the Engineer of such discrepancies, it will be assumed that his Bid included everything necessary for the complete construction in the spirit and intent of the designs shown.

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. The additional drawings and instructions 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.

1.04 SHOP DRAWINGS

The Contractor shall submit shop and working drawings of concrete reinforcement, structural details, piping layout, wiring, materials fabricated especially for the Contract, and materials and equipment for which such drawings are specifically requested.

Such drawings shall show the principal dimensions, weight, structural and operating features, space required, clearances, type and/or brand of finish or shop coat, grease fittings, etc., depending on the subject of the drawing. When it is customary to do so, when the dimensions are of particular importance, or when so specified, the drawings shall be certified by the manufacturer or fabricator as correct for the Contract.

When so specified or if considered by the Engineer to be acceptable, manufacturer's specifications, catalog data, descriptive matter, illustrations, etc., may be submitted in place of shop and working drawings. In such case, the requirements shall be as specified for shop and working drawings, insofar as possible, except that the submission shall be in quadruplicate.

The Contractor shall be responsible for the prompt and timely submittal of all shop and working drawings so that there shall be no delay to the Work due to the absence of such drawings. Prior to the submittal of any shop drawings, the Contractor shall submit a schedule of proposed shop drawing transmittals. The schedule shall identify the subject matter of each transmittal, the corresponding specification section number and the proposed date of submission. During the progress of the Work, the schedule shall be revised and resubmitted as necessary.

No material or equipment shall be purchased or fabricated especially for the Contract until the required shop and working drawings have been submitted as herein above provided and reviewed for conformance to the Contract requirements. All such materials and equipment and the work involved in their installation or incorporation into the Work shall then be as shown in and represented by said drawings. Until the necessary review has been made, the Contractor shall not proceed with any portion of the Work (such as the construction of foundations), the design or details of work, materials, equipment or other features for which review is required.

All shop and working drawings shall be submitted to the Engineer by and/or through the Contractor, who shall be responsible for obtaining shop and working drawings from his subcontractors and returning reviewed drawings to them. All shop and working drawings shall be prepared on standard size, 24-inch by 36-inch sheets, except those which are made by changing existing standard shop or working drawings. All drawings shall be clearly marked with the names of the OWNER, Contractor, and building, equipment, or structure to which the drawing applies, and shall be suitably numbered. Each shipment of drawings shall be accompanied by a letter of transmittal giving a list of the Drawing numbers and the names mentioned above.

Only drawings which have been checked and corrected by the fabricator should be submitted to the Contractor by his subcontractors and vendors. Prior to submitting drawings to the Engineer, the Contractor shall check thoroughly all such drawings to satisfy himself that the subject matter thereof conforms to the Drawings and Specifications in all respects. All Drawings which are correct shall be marked with the date, checker's name, and indication of the Contractor's approval, and then shall be submitted to the Engineer; other drawings shall be returned for correction.

If a shop drawing shows any deviation from the Contract requirements, the Contractor shall make specific mention of the deviations in his letter of transmittal.

The review of shop and working drawings hereunder will be general only, and nothing contained in these general conditions shall relieve, diminish or alter in any respect the responsibilities of the Contractor under the Contract Documents and in particular, the specific responsibility of the Contractor for details of design and dimensions necessary for proper fitting and construction of the work as required by the Contract and for achieving the result and performance specified thereunder.

Should the Contractor submit equipment that requires modifications to the structures, piping, electrical conduit, wires and appurtenances, layout, etc., detailed on the Drawings, he shall also submit details of the proposed modifications. If such equipment and modifications are accepted, the Contractor, at no additional cost to the OWNER, shall do all work necessary to make such modifications.

The marked-up shop and working drawings or one marked-up copy of catalog cuts will be returned to the Contractor. The Contractor shall furnish additional copies of such drawings or catalog cuts when so requested.

1.05 DISCREPANCIES IN DRAWINGS, SPECIFICATIONS AND SHOP DRAWINGS

In case of a discrepancy on the Drawings, figure dimensions shall govern over scale dimensions and large scale drawings shall govern over small scale drawings. In case of a discrepancy in the Specifications and Contract Documents, detailed technical specifications and special or supplementary conditions shall govern over general conditions and other sections of the Contract Documents. In case of a discrepancy between the Drawings and Specifications, the Specifications shall govern; addenda shall govern over all Drawings, Specifications and Contract Documents. Supplementary conditions shall govern over these General Conditions.

In case of discrepancy between the shop drawings and the requirements of the Drawings, Specifications and Contract Documents, the provisions of the Drawings, Specifications, and Contract Documents shall prevail, even though the shop drawings have been specifically waived in writing by the Engineer.

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.

1.06 CONTRACTOR

Only one Contractor is recognized as a party to this Contract and where the term Contractor is used, the prime Contractor who signed this Contract is referred to. For convenience, the Specifications may have been divided into separate headings or divisions to cover the various trades represented in the work, and where "Electrical Contractor", "Mechanical Contractor", "Plumbing Contractor" and other such "Contractors" are referred to, it is for convenience only.

It is understood and agreed that the Contractor has satisfied himself as to the nature and location of the work, the topography of the ground, the character and quality of materials to be encountered, the character of equipment or other facilities needed for the proper execution of the Work, the general and local conditions, and all other matters which in any way affect the work under the Contract. No verbal statement of any officer, agent or employee of the OWNER or the Engineer, either before or after the execution of the Contract, shall affect or modify any of the terms or obligations contained herein.

1.07 NOTICE AND SERVICE THEREOF ON CONTRACTOR

The address given in the Proposal upon which this Contract is founded and the Contractor's office at or near the site of the work are hereby designated as places to either of which notices, letters and other communications to the Contractor shall be certified, mailed or delivered. The delivering at the above name places, or depositing in a postpaid wrapper directed to the first named place, in any post office box regularly maintained by the United States Postal Service, of any notice, letter or other communication to the Contractor shall be deemed sufficient service thereof upon the Contractor, and the date of said service shall be the date of delivery or mailing. The first named address may be changed at any time by an instruction in writing, executed and acknowledged by the Contractor and delivered to the Engineer and the OWNER. Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter, or other communication upon the Contractor personally.

1.08 ASSIGNMENT OF CONTRACT

The Contractor shall not assign, sell, transfer or otherwise dispose of his Contract or any monies due or that may become due thereunder, without the prior written consent of the OWNER.

1.09 SUBLETTING CONTRACT

The Contractor may utilize the services of specialty subcontractors on those parts of the Work which, under contracting practices, are performed by specialty

subcontractors. However, the Contractor will not be permitted to sublet any portion of his contract to any individual, co-partnership, or corporation without the prior written consent of the OWNER and the approval of the Engineer. The Contractor shall not sublet more than fifty percent (50%) of the work without the consent of the OWNER and the approval of the Engineer prior to the receipt of Bids. The Contractor shall, if requested, notify the OWNER in writing of the names of subcontractors proposed for the work.

The Contractor shall be as fully responsible to the OWNER for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

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 General Conditions and other 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 provisions of the Contract Documents.

Nothing contained in this contract shall create any contractual relation between any subcontractor and the OWNER.

1.10 COMMENCEMENT AND COMPLETION OF WORK

The Contractor shall commence work on a date to be specified in a written order of the OWNER, and shall fully complete all work under the Contract within the number of consecutive calendar days set out in the Bid and Contract. As set forth in the Bid and Contract, the work under the Contract will be subject to liquidated damages in the event the work is not completed within the Contract time.

1.11 PROSECUTION OF WORK

The Contractor shall give his personal superintendence to the work or shall have a competent superintendent, satisfactory to the OWNER and the Engineer on the work at all times during its progress with full authority to act for him. The superintendent shall have been designated in writing by the Contractor as the Contractor's representative at the site. All communications given to the superintendent shall be as binding as if given to the Contractor. The Contractor shall also provide an adequate staff for properly coordinating and expediting his work. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction.

The Contractor shall be prepared to start the work as stipulated in the Proposal, but not until he has received official notice from the OWNER to do so. Official notice will

be in the form of a written Notice to Proceed. The work shall be prosecuted in a manner and with sufficient materials, equipment, and labor as is considered necessary to insure completion within the time set forth in the Contract. The Contractor shall not suspend the work or any portion of it without the written consent of the OWNER and the approval of the Engineer.

1.12 CONTRACT TIME - DELAYS AND EXTENSIONS

The number of consecutive calendar days in which the Contractor shall fully perform the proposed work has been set out in the Proposal and/or Contract. The date of beginning and the time for completion of the Work are essential conditions of the Contract.

In arriving at any credit due the Contractor for an extension of time on the Contract, the OWNER, upon the recommendation of the Engineer, may allow such credit as in his judgement is deemed equitable and just for all delays occasioned by any act, or failure to act, on the part of the Contractor or caused by forces beyond the Contractor's control. Additional time will also be allowed the Contractor to cover approved over-runs or additions to the Contract in the same proportion that the said over-runs or additions in monetary value bears to the original Contract amount. Delays caused by normal and ordinary weather conditions foreseeable at the time the work is Bid will not be the basis for an extension of the Contract time.

If the Contractor claims that any instructions by Drawings or otherwise involve an extension of time, he shall give the Engineer written notice of said claim within ten (10) consecutive calendar days after the receipt of such instructions, and in any event before proceeding to execute the work, stating clearly and in detail the basis of his claim or claims. No such claim shall be valid unless so made.

The Contractor shall make no claim for extra compensation due to delays of the project beyond his control. Such delays may include those caused by any act of neglect on the part of the OWNER or Engineer, or by any employee of either, or by any separate contractor employed by the OWNER, or by changes ordered in the work, or by labor disputes, fire, unusual delays in transportation, adverse weather conditions not reasonably anticipated, unavoidable casualties, or by delay authorized by the OWNER pending arbitration, or by any other cause which the Engineer determines may justify the delay.

Time extensions may be granted upon proper justification by the Contractor. Any claim for time extensions under these provisions shall be submitted in writing to the Engineer not more than twenty (20) consecutive calendar days following commencement of the delay; otherwise claim will be waived. With submission of claim, Contractor shall provide an estimate of the probable effect of such delay on the progress of the work.

Additional costs incurred in accelerating the work to compensate for such delays (as defined above) shall also not form the basis for extra compensation claims.

1.13 FAILURE TO COMPLETE WORK ON TIME

Should the Contractor fail or refuse to complete the work within the time specified in his Proposal and/or Contract (or extension of time granted by the OWNER), the Contractor shall pay liquidated damages in an amount set out in said Proposal and/or Contract. The amount of liquidated damages shall in no event be considered as a penalty, nor other than an amount agreed upon by the Contractor and the OWNER for damages, losses, additional engineering, additional resident representation and other costs that will be sustained by the OWNER, if the Contractor fails to complete the work within the specified time. Liquidated damages will be applied on a rate per day for each and every calendar day (Sundays and holidays included) beyond the Contract expiration date stipulated in the Contract Documents, considering all time extensions granted.

Should no liquidated damages amount be specified in the Proposal and/or Contract, then the following amounts shall be fixed and agreed upon by and between the contractor and OWNER because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the OWNER would in such event sustain.

SCHEDULE OF LIQUIDATED DAMAGES

<u>Original Amount of Contract</u>	<u>Liquidated Damages Per Day</u>
Up to \$100,000	\$150
\$100,000 to \$500,000	\$200
\$500,000 to \$1,000,000	\$250
\$1,000,000 to \$2,000,000	\$300
Over \$2,000,000	\$300 plus \$150 per each additional million dollars or fractions thereof

1.14 CHARACTER OF WORKMEN, EQUIPMENT, AND MATERIAL

The Contractor shall employ only workmen skilled in their various duties and shall remove from the project, at the request of the Engineer, any person employed in,

about, or upon the work, who misconducts himself or is incompetent or negligent in the performance of the duties assigned to him.

The Contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him. Any careless, untrustworthy, or incompetent workman shall be removed forthwith upon the request of the Engineer or his duly authorized representative. Particular application shall be to workmen who ignore quality specifications on pipe bedding, laying, and backfilling, below grade building, concrete pouring, and other work to be covered up or assuming an unalterable set.

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

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

Materials, supplies or equipment to be incorporated into the Work shall not be purchased by the Contractor or any subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

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

1.15 ENGINEER'S STATUS

In rendering general engineering service, resident engineering and review of construction, the Engineer is not in charge of, and shall not be responsible for, the methods of construction, the construction forces or the construction equipment, construction safety procedures, or Contractor payment for labor and materials on the project.

The Engineer may review the work as the authorized representative of the OWNER and will have authority to stop the work whenever, in his opinion, such action is necessary to insure the proper execution of the Contract. He will also have authority

to reject work and materials which do not conform to the Drawings, Specifications and Contract Documents and to direct the place or places where work shall be prosecuted. The Engineer is the agent of the OWNER only to the extent provided in the Specifications and Contract Documents, except in special instances when this authority is extended; in such latter instances he will, upon request, show the Contractor written proof of his authority.

The Engineer will also interpret the meaning and requirements of the Drawings, Specification and Contract Documents, decide all engineering questions, and decide all disputes that may arise between the OWNER and the Contractor. The Engineer's decisions on these matters will be final and binding on both the Contractor and the OWNER unless the dispute is submitted to arbitration or either party resorts to legal action for settlement.

The Engineer is the interpreter of the conditions of the Contract and the judge of its performance. In this duty, he will not favor either the OWNER or the Contractor but will use his authority under the Contract to insure and enforce its faithful performance by both parties.

In case of the termination of the employment of the Engineer, the OWNER will appoint a capable and reputable Engineer, whose status under the Contract will be the same as that of the former Engineer; any dispute in connection with such appointment shall be subject to arbitration.

1.16 ENGINEER'S DECISION

The Engineer shall, within a reasonable time after their presentation to him, make decisions on all claims of the OWNER or Contractor and on all matters relating to the execution and progress of the work or the interpretations of the Drawings, Specifications and Contract Documents.

Unless otherwise expressly provided in the Specifications and Contract Documents, all the Engineer's decisions are subject to arbitration, provided arbitration is agreed to by both the OWNER and the Contractor.

If, however, the Engineer fails to render a decision within ten (10) consecutive calendar days after the parties have presented their evidence, either party may then request arbitration. If the Engineer renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence but shall not disturb or interrupt such proceedings except when acceptable to the parties concerned.

1.17 REVIEW OF WORK

The City's Superintendent of Public Works shall serve as the City's on-site representatives for the purposes of coordination with the Contractor, resolving technical issues, and inspecting the materials and work. All materials and each part or detail of the work shall be subject to inspection by the Superintendent. The Superintendent shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is needed to adequately evaluate the work. Should the need arise, the City's Street Superintendent may consult with the City Administrator on particular issues.

1.18 REVIEW OF WORK AWAY FROM THE SITE

If work to be done away from the construction site is to be inspected on behalf of the OWNER during its fabrication, manufacture, or testing, or before shipment, the Contractor shall give notice to the Engineer of the place and time where such fabrication, manufacture, testing, or shipping is to be done. Such notice shall be in writing and delivered to the Engineer in ample time so that the necessary arrangements for the review can be made.

1.19 STANDARD SPECIFICATIONS

Where standard specifications, such as those of the American Society for Testing and Materials, the American National Standards Institute, the American Water Works Association, the American Association of State Highway and Transportation Officials, the Federal Aviation Agency, the Federal Specifications, etc., are referred to in the Specifications and Contract Documents and on the Drawings, said references shall be construed to mean the latest amended and/or revised versions of the said standard or tentative specification.

1.20 SPECIFIC BRANDS, MAKES OR MANUFACTURERS

Wherever in the Specifications one or more specific brands, makes or manufacturers are set out and qualified by the "or equal" clause, it is intended to denote the quality standard of the article desired, but unless otherwise noted does not restrict the Contractor to the specific brand, make or manufacturer. In cases where one or more specific brands, makes or manufacturers are named and these names are not qualified by the "or equal" clause, it is intended that the Contractor be restricted to one of those named unless otherwise set out.

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 Specifications 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 accept 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 accepted, 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 shall be made by the Contractor without a change in the Contract price or Contract time.

1.21 "OR EQUAL" CLAUSE

Whenever the words "or approved equal", or "or equal", or "similar to", etc., appear in the Specifications, they shall be interpreted to mean an item of material or equipment that, in the opinion of the Engineer is similar to that named, suited to the same use, capable of performing the same function as that named, has a record of service equal to that named, and is equal in quality, capacity and/or efficiency to that named.

The Engineer's decision as to the equality of any material or equipment to that specified shall be final, but acceptance by the Engineer shall not relieve the Contractor from his responsibility concerning such materials or equipment or affect the guarantee covering the workmanship, materials and equipment.

1.22 PERMITS AND CODES

Unless otherwise set out in the Specifications or required by the agencies involved, the Contractor shall make application for, obtain and pay for all licenses and permits of a temporary nature necessary for the prosecution of the Work and shall pay for all fees and charges in connection therewith. Permits, licenses and easements for permanent structures or permanent changes in existing facilities will be secured and paid for by the OWNER, unless otherwise specified. The Contractor shall be required to comply with all state or municipal ordinances, laws, and/or codes insofar as the same are binding on the OWNER.

The intent of this Contract is that the Contractor shall base his Bid upon the Drawings and Specifications, but that all work installed shall comply with all applicable codes and regulations as amended by any waivers. Before installing the work, the Contractor shall examine the Drawings and the Specifications for compliance with applicable codes and regulations bearing on the Work, and shall immediately report any discrepancy to the Engineer. Where the requirements of the Drawings and Specifications fail to comply with the applicable code or regulation, the OWNER will adjust the Contract by change order to conform to the code or regulation (unless waivers in writing covering the differences have been granted by the governing authority) and shall make appropriate adjustment in the Contract price. Should the Contractor fail to observe the foregoing provisions and install work at variance with

any applicable code or regulation as may be amended by waivers (notwithstanding the fact that such installation is in compliance with the Drawings and Specifications), the Contractor shall remove and/or replace such work without cost to the OWNER, except that a change order will be issued to cover any additional cost the Contractor would have been entitled to receive if the change had been made before the Contractor commenced work on the items involved.

1.23 WAGES AND HOURS

The Contractor shall pay not less than the prevailing wage scale set out in these Specifications and Contract Documents, as amended, and shall comply in every respect to applicable rules, regulations and statutes pertaining to wages and hours.

1.24 NON-REBATE OF WAGES

The Contractor shall comply with the regulations, rulings and interpretations of the Secretary of Labor of the United States, pursuant to the Federal Anti-Kickback Act of June 13, 1934, as amended, 48 Stat. 948; 62 Stat. 74; 63 Stat. 108 (Title 18, U.S.C. Sec. 874 and Title 40 U.S.C. Sec. 276c) including all subsequent amendments which makes it unlawful to induce any person employed in the construction or repair of public buildings or public works to give up any part of the compensation to which he is entitled under his Contract of Employment; and the Contractor agrees to insert a like provision in all subcontracts hereunder. The Contractor may be required to execute an affidavit covering each weekly payroll and certifying compliance with said Anti-Kickback Act.

1.25 CONTRACT SECURITY OR PERFORMANCE AND PAYMENT BOND

The Contractor will be required to furnish the OWNER with a Performance Bond and a Payment Bond to run for one year after the date of final acceptance of the Work by the OWNER and the Engineer. The Bonds shall be executed by a surety company duly authorized to do 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 570. Each Bond shall be in the amount not less than one hundred percent (100%) of the Contract price, as security for the faithful performance of this Contract and as security for the payment of all persons performing labor and furnishing materials in connection with this Contract. These Bonds must be executed in the form provided as a part of the Contract Documents, and the surety company shall hold a current certificate of authority, as issued by the Treasury Department, as an acceptable surety on Federal Bonds under an act of Congress approved July 30, 1947. The expense of these Bonds shall be borne by the Contractor.

If at any time a surety on any such Bond is declared 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 acceptable on Federal Bonds, the Contractor shall within ten (10) consecutive calendar 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.

1.26 SAFETY

The Contractor shall take all necessary precautions and provide all necessary safeguards to prevent personal injury and property damage. The Contractor shall provide protection for all persons including but not limited to his employees and employees of other contractors or subcontractors; members of the public; and employees, agents, and representatives of the OWNER, the Engineer, and regulatory agencies that may be on or about the Work. The Contractor shall provide protection for all public and private property including but not limited to structures, pipes, and utilities, above and below ground.

The Contractor shall provide and maintain all necessary safety equipment such as fences, barriers, signs, lights, walkways, guards and fire prevention and fire-fighting equipment and shall take such other action as is required to fulfill his obligations under this subsection.

The Contractor shall comply with all federal, state and local laws, ordinances, rules and regulations and lawful orders of all authorities having jurisdiction for the safety of persons and protection of property.

The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This responsible person shall have the authority to take immediate action to correct unsafe or hazardous conditions and to enforce safety precautions and programs.

1.27 INSURANCE, CONTRACTOR'S COVERAGE AND CANCELLATION PROVISION

The Contractor will not be permitted to commence work until he has obtained all insurance required by these documents and such insurance has been approved by the OWNER, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all insurance required has been so obtained and approved. Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the Work.

Such insurance shall be secured from an insurance company authorized to write casualty insurance in the state where the Work is located and shall protect the Contractor, his subcontractors, and the OWNER from claims of bodily injury, death, property damage, fire and other risks set out herein.

Each policy of insurance covering the Contractor's operations under the Contract shall provide either in the body of the policy, or by appropriate endorsement (rider) to the policy, that such policy cannot be altered or canceled in less than ten (10) consecutive calendar days after the mailing of written notice of such alteration or cancellation to the OWNER (insured) or not less than five (5) consecutive calendar days after actual receipt by the OWNER (insured), of written notice of such pending alteration or cancellation.

Certificates of Insurance coverage shall include a statement of alteration or cancellation provisions of the policy, sufficient to show definitely that such provisions comply with the requirements stated herein.

1.28 INSURANCE, WORKER'S COMPENSATION

The Contractor shall take out and maintain during the life of this Contract, Workmen's Compensation Insurance, as required by statute, for all of his employees employed at the site of the Project, and in case any work is sublet, for all the subcontractor's employees not otherwise insured. In case any class of employees engaged in hazardous work under this Contract at the site of the project is not protected under the Workmen's Compensation Statute, the Contractor shall provide adequate coverage for the protection of the employees not otherwise protected.

1.29 INSURANCE, PUBLIC LIABILITY

The Contractor shall take out and maintain during the life of this Contract such Public Liability (Bodily Injury and Property Damage) Insurance as shall protect him and any subcontractor performing work covered by this Contract from claims for damages because of bodily injury, including accidental death and from claims for property damages, which may arise from operations under this Contract, whether such operations be by him or by any subcontractor, or by anyone directly or indirectly employed by either of them.

Where work on railroad rights-of-way is involved, the Contractor shall also be covered by Railroad Protective Liability Insurance with limits of liability as required by the railroad company on whose property the work is being performed.

1.30 INSURANCE, BUILDERS RISK

The Contractor shall provide Builders Risk Insurance (fire and extended coverage) on all work in place and/or materials stored at the site where there is any considerable risk from such causes for damage. Such insurance shall provide coverage as set forth in Paragraph 1.31 hereinafter. The policy shall name as the insured the Contractor, the Engineer and the OWNER.

1.31 MINIMUM INSURANCE LIMITS

The minimum amounts of insurance to be furnished by and for the Contractor and the subcontractors, and for the OWNER as a named insured, under this Contract are:

- A. Workmen's Compensation:
 - 1. Applicable state statutes.
 - 2. Employers Liability = \$100,000 limit of liability.
- B. Commercial General Liability:
 - 1. Coverage A - Bodily Injury Liability and Property Damage:
 - a. General Policy Aggregate = \$1,000,000.
 - b. Products - Completed Operations Aggregate = \$1,000,000.
 - c. Each Occurrence = \$500,000.
 - 2. Coverage B - Personal and Advertising Injury Liability = \$1,000,000.
- C. Comprehensive Automobile Liability:
 - 1. Bodily Injury Liability:
 - a. \$500,000 each person.
 - b. \$1,000,000 each accident.
 - 2. Property Damage Liability: \$100,000 each accident or a combined single limit of \$500,000.
- D. Builders Risk Insurance: To include coverage for not less than the losses due to Fire, Explosion, Hail, Lightning, Vandalism, Malicious Mischief, Wind, Collapse, Riot, Aircraft, Smoke, Transportation and Extended Coverage for benefit of the OWNER, Engineer, Contractor, and subcontractors as their interests may appear during the Contract time and until the Work is accepted by the OWNER.

Property insurance to the full insurable value of the Work in accordance with the scope of Work as defined in these General Conditions as provided by the OWNER.

E. Railroad Protection Insurance - (where work to be within railroad right-of-way):

1. Loss of Life or Injury to Person: As required by Railroad.
2. Property Damage: As required by Railroad.

1.32 INSURANCE, PROOF OF CARRIAGE

The Contractor shall furnish the OWNER and the Engineer with satisfactory proof of carriage of the insurance required by submitting completed Insurance Certificates.

1.33 ROYALTIES AND PATENT FEES

The Contractor shall pay license fees and royalties and assume all costs incident to the use of any invention, design, process or device which is the subject of patent rights or copyrights held by others. As set forth in Paragraph 1.34, hereinafter, he shall indemnify and hold harmless the OWNER and all of its officers, agents and employees from and against all claims, damages, losses and expenses (including attorneys' fees) arising out of any infringement of such rights during or after completion of the work, and shall defend all such claims in connection with any alleged infringement of such rights.

1.34 RESPONSIBILITY FOR DAMAGE, CLAIMS, ETC.

The Contractor shall indemnify and save harmless the OWNER, the Engineer and subconsultants and all of their officers, agents and employees, from all claims, damages, losses and expenses including attorneys' fees of any character, name and description brought for, or on account of any injuries or damages received or sustained by any person, persons, or property by or from the said Contractor or by or in consequence of any neglect in safeguarding the Work or through the use of unacceptable materials used on construction or by or on account of any act or omission, neglect, or misconduct of the said Contractor or by or on account of any claims or amounts recovered from any infringement of patent, trademark or copyright, or from any claims or amounts arising or recovered under any law, ordinance, order, or decree, and so much of the money due the said Contractor under and by virtue of his Contract as shall be considered necessary by the OWNER may be retained for the use of the OWNER, or in case no money is due, his surety shall be held until such suit or suits, action or actions, claim or claims for injuries or damages as aforesaid, shall have been settled and suitable evidence to that effect furnished to the OWNER. Contractor shall purchase public liability, workers compensation and automobile liability insurance, for OWNER'S protection in the amounts set forth in Paragraph 1.31.

In any and all claims against the OWNER or the Engineer, or any of their agents or employees, by any employee 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, 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 benefit acts.

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.

1.35 HANDLING AND DISTRIBUTION

The Contractor shall handle, haul, and distribute all materials and all surplus materials on the different portions of the Work, as necessary or required; shall provide suitable and adequate storage room for materials and equipment during the progress of the Work; and shall be responsible for the protection, loss of, or damage to materials and equipment furnished by him, until the final completion and acceptance of the Work. Storage and demurrage charges by transportation companies and vendors shall be borne by the Contractor.

1.36 MATERIALS - SAMPLES - REVIEW

Unless otherwise expressly provided on the Drawings or in any of the other Contract Documents, only new materials and equipment shall be incorporated in the Work. All materials and equipment furnished by the Contractor to be incorporated in the Work shall be subject to the review of the Engineer. No material shall be processed or fabricated for the Work or delivered to the Work site without prior concurrence of the Engineer.

As soon as possible after execution of the Agreement, the Contractor shall submit to the Engineer the names and addresses of the manufacturers and suppliers of all materials and equipment he proposes to incorporate into the Work. When shop and working drawings are required as specified below, the Contractor shall submit prior to the submission of such drawings, data in sufficient detail to enable the Engineer to determine whether the manufacturer and/or the supplier have the ability to furnish a product meeting the Specifications. The Contractor shall also submit data relating to the materials and equipment he proposes to incorporate into the Work in sufficient detail to enable the Engineer to identify and evaluate the particular product and to determine whether it conforms to the Contract requirements. Such data shall be submitted in a manner similar to that specified for submission of shop and working drawings.

Facilities and labor for the storage, handling, and inspection of all materials and equipment shall be furnished by the Contractor. Defective materials and equipment shall be removed immediately from the site of the Work.

If the Engineer so requires, either prior to or after commencement of the Work, the Contractor shall submit samples of materials for such special tests as the Engineer deems necessary to demonstrate that they conform to the Specifications. Such samples, including concrete test cylinders, shall be furnished, taken, stored, packed, and shipped by the Contractor as directed. The Contractor shall furnish suitable molds for making concrete test cylinders.

All samples shall be packed so as to reach their destination in good condition, and shall be labeled to indicate the material represented, the name of the building or work and location for which the material is intended, and the name of the Contractor submitting the sample. To ensure consideration of samples, the Contractor shall notify the Engineer by letter that the samples have been shipped and shall properly describe the samples in the letter. The letter of notification shall be sent separate from and should not be enclosed with the samples.

The Contractor shall submit data and samples, or place his orders, sufficiently early to permit consideration, review and testing before the materials and equipment are needed for incorporation in the Work. The consequences of his failure to do so shall be the Contractor's sole responsibility.

In order to demonstrate the proficiency of workmen, or to facilitate the choice among several textures, types, finishes, surfaces, etc., the Contractor shall provide such samples of workmanship of wall, floor, finish, etc., as may be required.

When required, the Contractor shall furnish to the Engineer triplicate sworn copies of manufacturer's shop or mill tests (or reports from independent testing laboratories) relative to materials, equipment performance ratings, and concrete data.

After review of the samples, data, etc., the materials and equipment used on the Work shall in all respects conform therewith.

1.37 PAYMENT FOR MATERIALS STORED AT SITE OF PROJECT

Payment for materials or equipment purchased and stored at the site of the Project will be allowed by the OWNER at the cost of such materials or equipment, less the same percentage of retainage applicable to payment for completed work, upon specific recommendation of the Engineer. Such payment shall be conditional upon submission by the Contractor of bills of sale of such other procedure as will establish the OWNER'S title to such material or otherwise adequately protect the OWNER'S interest.

Only durable materials and equipment which in the opinion of the Engineer have been properly stored and protected shall be included in materials furnished in partial payment estimates. Clay pipe, brick and tile will be excluded. In the interest of simplification of checking and bookkeeping, miscellaneous supplies will also be excluded.

1.38 MATERIALS

- A. Materials, Domestic and Foreign Manufacture: Unless otherwise specified, only such unmanufactured articles, materials and supplies as have been mined or produced in the United States of America, and only such manufactured articles, materials and supplies as have been manufactured in the United States of America substantially all from articles, materials, or supplies mined, produced, or manufactured--as the case may be--in the United States of America, shall be employed under this Contract in the construction of the Project.
- B. Materials, Convict Manufacture: No materials manufactured or produced in a penal or correctional institution shall be incorporated in the Work under this Contract.

1.39 DEFECTIVE MATERIALS AND WORKMANSHIP

Materials brought to the site which are not in accordance with the Specifications shall be removed from the site of the Work by the Contractor at his own expense. Such material shall be so disposed of that there will be no probability of their being used on the work or in the construction.

Upon notice from the Engineer, all defective workmanship shall be immediately remedied by the Contractor, at his own expense.

If the Contractor fails to remove defective materials or to correct defective workmanship within a reasonable time, fixed in the notice from the Engineer, the OWNER may remove the defective materials and/or correct the defective work and charge all the expense in connection therewith to the Contractor.

1.40 GUARANTY

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.

1.41 FIELD OFFICE (see also section 01590)

The Contractor shall establish and maintain a field office on this project and have available at the office a responsible representative who can officially receive instructions from the Engineer. The Contractor shall have one complete, up-to-date set of Drawings, Specifications and Addenda in this office at all times.

Each office shall be provided with telephone and facsimile services, toilet facilities, light and heat; the cost of which shall be borne by the Contractor.

1.42 SANITARY FACILITIES

The Contractor shall provide adequate sanitary facilities for the use of those employed on the Work. Such facilities shall be made available when the first employees arrive on the site of the Work, shall be properly secluded from public observation, and shall be constructed and maintained during the progress of the Work in suitable numbers and at such points and in such manner as may be required.

The Contractor shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the Work, on the lands of the OWNER, or on adjacent property.

1.43 EMPLOYMENT QUALIFICATIONS

No person under the age of eighteen (18) years and no convict labor shall be employed to perform any work under this Contract. No person whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health or safety of others shall be employed to perform any work under this Contract, provided that this shall not operate against the employment of physically handicapped persons, otherwise employable, where such persons may be safely assigned to work which they can ably perform. There shall be no discrimination because of race, creed, color, sex or political affiliation in the employment of persons for work under this Contract.

1.44 EMPLOYMENT SERVICES AND LABOR PREFERENCES

With respect to additional skilled, semi-skilled and unskilled workers employed to perform work on the Project, preference in employment shall be given first to persons who reside in the city in which the Work is to be performed, and second to persons residing in the county in which the Work is to be performed.

1.45 PAYMENT OF EMPLOYEES

The Contractor and each of his subcontractors shall pay each of his employees engaged in work on the Project in full (less deductions made mandatory by law) in cash or by check once each week.

1.46 SCHEDULES, REPORTS AND RECORDS

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

When required, the Contractor shall furnish the OWNER with proof that all payrolls for services rendered and invoices for materials or equipment supplied have been duly paid. The Contractor shall provide all such other data as the Engineer and/or OWNER may require.

In connection with all lump sum contracts or lump sum portions of unit price contracts, the Contractor shall furnish the Engineer a detailed breakdown on which to base partial payment estimates. The detailed breakdown shall be subject to review by the Engineer.

The Contractor shall furnish and keep current a progress chart or schedule showing the estimated and actual progress of the Work. The progress chart or schedule shall be subject to review by the Engineer.

The Contractor shall furnish all the necessary information for and assist in the preparation of, and/or prepare the partial payment estimates on forms furnished by the Engineer.

1.47 PLANNING AND PROGRESS SCHEDULES

Before starting the Work and from time to time (at least once per month) during its progress, as the Engineer may request, the Contractor shall submit to the Engineer a written description of the methods he plans to use in doing the Work and the various steps he intends to take. Within fifteen (15) consecutive calendar days after the date of formal execution of the Agreement, the Contractor shall prepare and submit to the Engineer: (a) a written schedule fixing the dates on which additional drawings, if any, will be needed by the Contractor; and (b) a written schedule fixing the

respective dates for the start and completion of various parts of the Work. Each such schedule shall be subject to review from time to time during the progress of the Work.

The Contractor shall also submit a schedule of payments that he anticipates he will earn during the course of the Work.

The OWNER, or his authorized representatives and agents, shall be permitted to inspect all payroll, records of personnel, invoices for materials or equipment and other relevant data and records.

For lump sum bid projects, the Progress Schedule shall contain at least 10 line items showing labor and material for each item and shall be made current and submitted as a part of the partial payment estimate. For unit price bid projects, the Bid Schedule shall contain all the unit price line items, however should the OWNER require additional break-down of bid items, then the Contractor shall provide whatever the OWNER requests without change in the Contract price.

1.48 PAYMENTS BY CONTRACTOR

The Contractor shall pay: (a) for all transportation and utility services not later than the 20th day of the calendar month following the month in which such services are rendered; (b) for all materials, tools and other expendable equipment to the extent of ninety percent (90%) of the cost thereof, not later than the 20th day of the calendar month following the month in which such materials, tools and equipment are delivered at the site of the Project, and the balance of the cost thereof not later than the 30th day following completion of that part of the work in or on which such materials, tools and equipment are incorporated or used; and (c) to each of his subcontractors, not later than the 5th day following each payment to the Contractor, the respective amounts allowed the Contractor on account of the work performed by his subcontractors, to the extent of each subcontractor's interest therein.

1.49 FUNDS FOR PARTIAL PAYMENT ESTIMATES

Funds for partial payment estimates have been provided by the OWNER so that they may be paid as set out herein. The Contractor must understand, however, that in handling the financing of such work, delays beyond the control of the OWNER are liable to occur in meeting the partial payments, and a reasonable delay on the part of the OWNER in making payment to the Contractor for any period shall not be construed as a breach of contract on the part of the OWNER.

1.50 PARTIAL PAYMENT ESTIMATES

On or about the 15th of each calendar month, the OWNER will make partial payment to the Contractor on the basis of a duly certified approved estimate of the Work performed during the preceding calendar month by the Contractor, but the OWNER will retain not more than ten percent (10%) of the amount of each estimate until final completion and acceptance of all Work covered by this Contract, subject to possible modification as set out hereinafter. After fifty percent (50%) of the Work has been completed, if the Engineer and the OWNER determines that the Contractor's performance and progress have been satisfactory, the OWNER may make the remaining partial (monthly) payments for the Work completed in full, thereby decreasing the retainage to five percent (5%) of the total Contract price upon completion but prior to acceptance. An escrow account, where applicable, will be established in a local bank, an escrow agent identified, a release procedure established, and an acceptable escrow fee agreed upon between the OWNER and Contractor prior to the Notice-to-Proceed is issued by the OWNER. (These will be executed in accordance with the requirements of KRS 371.160.)

The partial payment estimate shall be completed and signed by the Contractor and shall be 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) consecutive calendar days after receipt of each partial payment estimate, either indicate in writing his approval of payment or present 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) consecutive calendar days of presentation to him of an approved partial payment estimate, pay the Contractor a progress payment on the basis on the approved partial payment estimate.

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.

All Work covered by partial payment made shall thereupon become the sole property of the OWNER, but this provision shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the Work upon which payments have been made or the restoration of any damaged Work, or as a waiver of the right of the OWNER to require the fulfillment of all terms of the Contract Documents.

Upon completion and acceptance of the Work, the Engineer shall issue a certificate attached to 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) consecutive calendar days of completion and acceptance of the Work.

The Contractor will indemnify and save the OWNER and 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.

If the OWNER fails to make payment thirty (30) consecutive calendar 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.

1.51 OWNER'S RIGHT TO WITHHOLD PAYMENTS

In order to protect the OWNER from loss, payment may be withheld which would otherwise be due the Contractor on account of:

- A. Defective work not remedied or defective materials not removed from site.
- B. Claims filed, or reasonable evidence indicating imminent filing of claims, against the Contractor.
- 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.
- G. Expiration of Contract time.

Should the OWNER withhold payment for any of the reasons listed in Article 1.51, the OWNER will provide written notice to the Contractor giving reason for withholding payment.

1.52 DEDUCTIONS FOR UNCORRECTED WORK

If the Engineer and OWNER deem it inexpedient to correct work damaged or not done in accordance with the Contract, a deduction from the Contract price may be negotiated.

1.53 PROTECTION OF WORK, PROPERTY AND PERSONS

The Contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He shall take all necessary precautions for the safety of, and shall 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.

The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He shall erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. He shall notify owners of adjacent utilities when prosecution of the Work may affect them. The Contractor shall remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any subcontractor of anyone directly and 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.

In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor with special instruction or authorization from the Engineer or OWNER, shall act to prevent threatened damage, injury or loss. He shall 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.

1.54 WORK ON "PRIVATE PROPERTY"

Private property is defined as property other than that belonging to the OWNER. Highway and railroad rights-of-way, public parks, school yards and other such properties shall be considered "private properties" for the purpose of this Paragraph.

In connection with water line, sewer line, gas line or similar work performed on "private property", the Contractor shall confine his equipment, the storage of materials and the operations of his workmen to the limits indicated on the Drawings, or to lands and rights-of-way provided for the Project by the OWNER, and shall take every precaution to avoid damage to the buildings, grounds and facilities of the owners' of private property.

Fences, walls, hedges, shrubs, etc., shall be carefully removed, preserved, and replaced when the construction is completed. Grassed areas, other than lawns, shall be graded, fertilized and seeded when construction is completed and in accordance with the requirements of the technical Specifications. Where ditches or excavations cross lawns, the sod shall be removed carefully and replaced when the backfilling has been completed. If sod is damaged or not handled properly, it shall be replaced with new sod equal to existing sod at the Contractor's expense. When construction is completed, the facilities and grounds of the private property owners shall be restored to as good or better condition than found as quickly as possible at the Contractor's expense.

When directed by the Engineer, large trees or other facilities that cannot be preserved and replaced shall be removed by the Contractor. The OWNER will assume the responsibility for settling with the property owner for the loss of said trees or facilities.

The Contractor shall be solely and entirely responsible for any damage to all other trees or facilities.

Foundations, adjacent to where an excavation is to be made below the bottom of the foundation, shall be supported by shoring, bracing or underpinning as long as the excavation shall remain open, or thereafter if required to insure the stability of the foundation and the Contractor shall be held strictly responsible for any damage to said foundations.

1.55 LANDS FOR WORK

The OWNER will provide the lands upon which the work under this Contract is to be done or the necessary easements over said lands to include sufficient space for the proper execution of the work, together with right of access to same. The OWNER will provide the Contractor information which delineates and describes the lands owned and rights-of-way acquired. The Contractor shall, at his own expense and without liability to the OWNER, provide land required for storage of his construction materials and for any temporary construction facilities for the storage of his equipment. The Contractor will construct at his own expense, any temporary roads or bridges necessary for his own use; he will also furnish his own power and water supply unless otherwise specifically set out herein.

1.56 INTERFERENCE WITH AND PROTECTION OF STREETS

The Contractor shall not close or obstruct any portion of a street, road, or private way without obtaining permits therefore from the proper authorities. If any street, road or private way shall be rendered unsafe by the Contractor's operations, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the proper authorities.

Streets, roads, private ways, and walks not closed shall be maintained passable and safe by the Contractor, who shall assume and have full responsibility for the adequacy and safety of provisions made therefore.

The Contractor shall, at least twenty-four (24) hours in advance, notify the Police and Fire Departments in writing, with a copy to the Engineer, if the closure of a street or road is necessary. He shall cooperate with the Police Department in the establishment of alternate routes and shall provide adequate detour signs, plainly marked and well lighted, in order to minimize confusion.

All excavated materials and equipment to be incorporated in the Work shall be placed so as not to injure any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the Work. Materials and equipment shall be kept neatly piled and compactly stored in such locations as will cause a minimum of inconvenience to public travel and adjoining owners, tenants and occupants.

1.57 EXISTING UTILITIES

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

The location of existing underground utilities is *sometimes* shown on the Drawings. When utilities are shown, it is believed that the locations are reasonably correct but neither the Engineer nor the OWNER can guarantee the accuracy or adequacy of the information presented. Before proceeding with the Work, the Contractor shall confer with all public or private companies, agencies or departments that own and operate utilities in the vicinity of the Construction Work. The purpose of the conference, or conferences, shall be to notify said companies, agencies or departments of the proposed construction schedule, verify the location of, and possible interference with, the existing utilities that are shown on the Drawings, arrange for necessary suspension of service, and make arrangements to locate and avoid interference with all utilities (including house connections) that are not shown on the Drawings. The Engineer and OWNER have no objection to the Contractor arranging for the said utility companies, agencies, or departments to locate and uncover their own utilities; however, the Contractor shall bear the entire responsibility and cost for locating and avoiding, or repairing, damage to said existing utilities.

The Contractor shall locate all unknown metallic hazards, namely buried pipe, metals, etc., by using a pipe locator. The pipe locator shall immediately precede the trench ditching and all hazards located shall be marked in such a manner as to notify the machine operator of such hazard.

Where existing utilities or appurtenant structures, either underground or above-ground, are encountered, they shall not be displaced or molested unless necessary, and in such case shall be replaced in as good or better condition than found as quickly as possible. Relocation and/or replacement of all utilities and appurtenant structures to accommodate the construction work shall be at the Contractor's expense, unless such relocation and/or replacement is by statute or agreement the responsibility of the owner of the utility.

1.58 ARBITRATION

- A. Request for Arbitration: Any decision of the Engineer which is subject to arbitration may be submitted to arbitration only upon agreement of both parties to the dispute.

The Contractor shall not cause a delay of the Work because of pending arbitration proceedings, except with the written permission of the Engineer, and then only until the arbitrators shall have had an opportunity to determine whether or not the Work shall continue until they decide the matters in dispute.

The request for arbitration shall be delivered in writing to the Engineer and the adverse party, either personally or by registered mail to the last known address of each, within ten (10) consecutive calendar days of the receipt of the Engineer's

decision, and in no case after final payment has been accepted except as otherwise expressly stipulated in the Contract Documents. If the Engineer fails to make a decision within a reasonable time, a request for arbitration may be made as if his decision has been rendered against a requesting party.

- B. Arbitrator: No one shall be nominated or act as an arbitrator who is in any way financially interested in this Contract or in the business affairs of the OWNER, or the Contractor, or the Engineer or otherwise connected with any of them. Each arbitrator shall be a person in general familiar with the work or the problem involved in the dispute submitted to arbitration, preferably a recognized Engineer, experienced in the type of construction in question.

Unless otherwise provided by controlling statutes, the parties may agree upon one arbitrator; otherwise there shall be three, one named in writing by each party to this Contract, and a third chosen by these two arbitrators, or, if they should fail to select a third within fifteen (15) consecutive calendar days, then he shall be appointed by the presiding officer, if a disinterested party, of the Bar Association nearest to the location of the Work. Should the party requesting arbitration fail to name an arbitrator within ten (10) consecutive calendar days and upon his failure to do so then such arbitrator shall be appointed, on the petition of the party requesting arbitration, by a judge of the Federal Court in the District where such arbitration is to be held.

The said presiding officer shall have the power to declare the position of any arbitrator vacant by reason of refusal or inability to act, sickness, death, resignation, absence or neglect. Any vacancy shall be filled by the party making the original appointment, and unless so filled within five (5) consecutive calendar days after the same has been declared vacant, it shall be filled by the said presiding officer. If testimony has been taken before a vacancy has been filled by the presiding officer, the matter must be reheard unless a rehearing is waived in the submission or by the written consent of the parties. If there be one arbitrator, his decision shall be binding; if three, the decision of any two shall be binding in respect to both the matters submitted and the procedure followed during the arbitration.

- C. Arbitration Procedure: The arbitrators shall deliver a written notice to each of the parties and to the Engineer, either personally or by registered mail to the last known address of each, of the time and place for the beginning of the hearing of the matters submitted to them. Each party may submit to the arbitrators such evidence and argument as he may desire and the arbitrators may consider pertinent. The arbitrators shall, however, be the judge of all matters of law and fact relating to both the subject matter of and the procedure during arbitration and shall not be bound by technical rules of law or procedure. They may hear evidence in whatever form they desire. The parties may be represented before them by such person or persons as each may select, subject to the disciplinary power of the arbitrators if such

representative shall not interfere with the orderly or speedy conduct of the proceedings.

Each party and the Engineer shall supply the arbitrators with such papers and information as they may request, or with any witness whose movements are subject to the respective control, and upon refusal to comply with such requests, the arbitrators may render their decision without the evidence which might have been elicited therefrom and the absence of such evidence shall afford no ground for challenge of the award by the party refusing or neglecting to comply with such demand.

The submission to arbitrators (the statement of the matters in dispute between the parties to be passed upon by the arbitrators) shall be in writing duly acknowledged before a notary. Unless waived in writing by both parties to the arbitration, the arbitrators, before hearing testimony, shall be sworn by an officer authorized by law to administer an oath, to faithfully and fairly hear and examine the matters in controversy and to make a just award according to the best of their understanding.

The arbitrators, if they deem the case demands it, are authorized to award to the party whose contention is sustained such sums as they shall consider proper for the time, expense and trouble incident to the arbitration, and if the arbitration was requested without reasonable cause, damages for delay and other losses. The arbitrators shall fix their own compensation, unless otherwise provided by agreement, and shall assess the costs and charges of the arbitration upon either or both parties.

The award of the arbitrators shall be in writing and acknowledged like a deed to be recorded, and a duplicate shall be delivered personally or by registered mail, forthwith upon its rendition, to each of the parties to the controversy and to the Engineer. Judgment may be rendered upon the award by the Federal Court or the highest State Court having jurisdiction to render same.

The award of the arbitrators shall not be open to objection on account of the form of proceedings or the award, unless otherwise provided by controlling statutes. In the event such statutes provide otherwise on any matter covered by this Article than hereinbefore specified, the method procedure throughout and the legal effect of the award shall be wholly in accord with said statutes, it being the intention hereby to lay down a principle of action to be followed, leaving its local application to be adapted to the legal requirements of the jurisdiction having authority over the arbitration.

The Engineer shall not be deemed a party to the dispute. He is given the right to appear before the arbitrators to explain the basis of his decision and give such evidence as they may require.

1.59 ALTERATION IN DRAWINGS AND SPECIFICATIONS

The OWNER reserves the right to make such alteration in the Drawings and Specifications or in the character of the Work as may be considered by the Engineer necessary or desirable from time to time to complete the Project in an acceptable manner; provided that, if alterations are made, the general character of the Work as a whole is not changed thereby.

Such alterations shall not be considered as a waiver of any condition of the Contract nor to invalidate any of the provisions nor to release the bond thereof.

1.60 CHANGES IN THE WORK

The OWNER may make changes in the work of the Contractor by making alterations therein, or by making additions thereto, or by omitting work therefrom, without invalidating the Contract, and without relieving or releasing the Contractor from any guarantee given by him pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such changes shall be in the form of a Change Order issued by the Engineer, and executed by the OWNER and Contractor, under the conditions of the original Contract.

Except in an emergency endangering life or property, no change shall be made by the Contractor unless in pursuance of a written Change Order. No claim for an adjustment of the Contract price or time shall be valid unless so ordered.

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 entitles him to a change in Contract price or time, or both, in which event he shall give the Engineer written notice thereof within fifteen (15) consecutive calendar days after the receipt of the ordered change, and the Contractor shall not execute such changes pending the receipt of an executed Change Order or further instruction from the OWNER.

Should the Contractor encounter or discover during the progress of the Work subsurface or latent conditions at the site materially differing from those shown on the Drawings or indicated in the Specifications, the attention of the Engineer shall immediately be called to such conditions before they are disturbed. If the Engineer finds that they so materially differ, he will at once make such changes in the Drawings or Specifications as he may find necessary. Any adjustment in the Contract price or time as may be justifiable shall be made by means of a written change order as provided herein.

1.61 CLAIMS FOR EXTRA WORK

If the Contractor claims that any instructions by Drawings or otherwise involve extra cost, he shall give the Engineer written notice of said claim within ten (10) consecutive calendar days after the receipt of such instructions, and in any event before proceeding to execute the Work, stating clearly and in detail the basis of his claim or claims. No such claim shall be valid unless so made.

Claims for additional compensation for extra work, due to alleged errors in spot elevations, contour lines, or bench marks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work than would reasonably be estimated from the Drawings and topographical maps issued.

Any discrepancies which may be discovered between actual conditions and those represented by the topographical maps and Drawings shall at once be reported to the Engineer, and Work shall not proceed, except at the Contractor's risk, until written instructions have been received by him from the Engineer.

If, on the basis of the available evidence, the Engineer determines that an adjustment of the Contract price or time is justifiable, the procedure shall then be as provided herein for "Changes in the Work".

By execution of this Contract, the Contractor warrants that he has visited the site of the proposed work and fully acquainted himself with the conditions there existing relating to construction and labor, and that he fully understands the facilities, difficulties, and restrictions attending the execution of the work under this Contract. The Contractor further warrants that he has thoroughly examined and is familiar with the Drawings, Specifications and all other documents comprising the Contract. The Contractor further warrants that by execution of this Contract his failure when he was bidding on this Contract to receive or examine any form, instrument or document, or to visit the site and acquaint himself with conditions there existing, in no way relieves him from any obligation under the Contract, and the Contractor agrees that the OWNER shall be justified in rejecting any claim based on facts regarding which he should have been on notice as a result thereof.

1.62 DETERMINATION OF THE VALUE OF EXTRA (ADDITIONAL) OR OMITTED WORK

The value of extra (additional) or omitted work shall be determined in one or more of the following ways:

- A. On the basis of the actual cost of all the items of labor (including on-the-job supervision), materials, and use of equipment, plus fifteen percent (15%) which shall

cover the Contractor's general supervision, overhead and profit. In case of subcontracts, the fifteen percent (15%) is interpreted to mean the subcontractor's supervision, overhead and profit, and an additional five percent (5%) may then be added to such costs to cover the Contractor's supervision, overhead and profit. The cost of labor shall include required insurance, taxes and fringe benefits. Equipment costs shall be based on current rental rates in the areas where the work is being performed but, in no case shall such costs be greater than the current rates published by the Associated Equipment Distributors, Chicago, IL.

- B. By estimate and acceptance in a lump sum.
- C. By unit prices named in the Contract or subsequently agreed upon. Provided, however, that the cost or estimated cost of all extra (additional) work shall be determined in advance of authorization by the Engineer and approved by the OWNER.

All extra (additional) work shall be executed under the conditions of the original Contract. Any claim for extension of time shall be adjusted according to the proportionate increase or decrease in the final total cost of the work unless negotiated on another basis.

Except for over-runs in Contract unit price items, no extra (additional) work shall be done except upon a written change order from the Engineer, and no claim on the part of the Contractor for pay for extra (additional) work shall be recognized unless so ordered in writing by the Engineer.

1.63 SEPARATE CONTRACTS

The OWNER reserves the right to let other contracts in connection with this Work. The Contractor shall afford other contractors reasonable opportunity for ingress, egress, storage of their materials, the execution of their work, and shall properly connect and coordinate his work with theirs. The respective rights of various interests involved shall be established by the Engineer to secure proper completion of the various portions of the Work.

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.

1.64 OWNER'S RIGHT TO DO WORK

If the Contractor should neglect or fail to prosecute the Work properly or fail or refuse to perform any provision of the Contract, the OWNER, after ten (10)

consecutive calendar days written notice to the Contractor, may without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from any monies due or which may thereafter become due to the Contractor.

1.65 SUSPENSION OF WORK

The OWNER shall have authority to suspend the Work in whole or in part by giving five (5) consecutive calendar days' notice to the Contractor in writing. The written notice shall fix the date on which the Work shall be resumed, and the Contractor shall resume the Work on the date so fixed. The OWNER shall reimburse the Contractor for expenses incurred by him in connection with the Work under this Contract as a result of suspension if the suspension of the Work is caused through no fault of the Contractor himself.

1.66 RIGHT OF OWNER TO TERMINATE CONTRACT

If the Contractor fails to begin the Work under the Contract within the specified time, or fails to perform the Work with sufficient workmen and equipment or with sufficient materials to insure the prompt completion of said Work within the specified time, or shall, in the opinion of the Engineer, perform the Work improperly, or shall neglect or refuse to remove materials or perform anew such Work as shall be rejected as defective or unsuitable or shall be stopped by court order resulting from injunctive action, or shall become insolvent or be declared bankrupt or commit any act of bankruptcy or insolvency, or allow any final judgment to stand against him unsatisfied for a period of five (5) consecutive calendar days, or shall fail or refuse to remove within forty-eight (48) hours after receipt of proper notice, any employee or person engaged in work under the Contract, or shall make an assignment for the benefit of creditors or from any other cause whatsoever shall not carry out the Work in an acceptable manner, the OWNER shall give notice in writing to the Contractor and his surety, of such delay, neglect, or default, specifying the same, and if the Contractor within a period of ten (10) consecutive calendar days after such notice shall not proceed in accordance therewith, then the OWNER shall, upon written certificate from the Engineer of the face of such delay, neglect or default, and the Contractor's failure to comply with such notice, have full power and authority without violating the Contract to terminate the Contractor's right to proceed with the Work, to take over the prosecution of the work of said Contractor, to appropriate or use any and all materials and equipment on the ground as may be suitable and acceptable, and may enter into an agreement for the completion of said Contract according to the terms and provisions thereof, and use such other methods as in the OWNER'S opinion shall be required for the completion of said Contract in an acceptable manner. All costs and charges incurred by the OWNER, together with the costs of completing the work under Contract, shall be deducted from any monies due or which may become due said Contractor. In case the expense so incurred by the

OWNER shall be less than the sum which would have been payable under the Contract, if it had been completed by said Contractor, then the Contractor shall be entitled to receive the difference, and in case such expense shall exceed the sum which would have been payable under the Contract, then the Contractor and/or his surety shall be liable and shall pay to the OWNER the amount of said excess.

After ten (10) consecutive calendar 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.

1.67 CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT

If the Work shall be stopped under an order of any court, or other public authority, for a period of three (3) months, through no fault of the Contractor or of anyone employed by him, or if the Engineer should fail to issue any estimate of payment within thirty (30) consecutive calendar days after it is due, or if the OWNER shall fail to pay the Contractor within thirty (30) consecutive calendar days of its maturity and presentation of any sum certified by the Engineer or award by arbitrators, then the Contractor may, upon fifteen (15) consecutive calendar days written notice to the OWNER and the Engineer, terminate this Contract and recover from the OWNER payment for all work executed, plus loss sustained upon any plant or materials, plus reasonable profit and damages.

In addition and in lieu of terminating the Contract, if the Engineer has failed to make any payment as aforesaid, the Contractor may upon ten (10) consecutive calendar days' 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.

1.68 USING COMPLETED PORTION OF WORK

The OWNER shall have the right to take possession of and use any completed portion or portions of the Work even though the time of completing the entire work or such portions may not have expired. The possession and use by the OWNER shall not be deemed an acceptance of any work not completed in accordance with the Contract. If such prior use increases the cost of or delays the Work, the Contractor shall be entitled to such extra compensation, or extension of time, or both as the Engineer may determine. The use by the OWNER of any portion of the Work shall release the Contractor from his Builders Risk Insurance covering such portion used.

1.69 ACCEPTANCE AND FINAL PAYMENT

Upon written notice from the Contractor that the work is ready for final inspection, the Engineer will make such a review and subsequent reviews as required. When, in the Engineer's opinion, the Work is acceptable under the Contract, he will promptly issue a Certificate of Acceptance.

Upon acceptance of the Work by the OWNER, the balance due the Contractor including the percentage retained during the construction period, will then be paid in approximately sixty (60) consecutive calendar days, and said final payment shall evidence the OWNER'S acceptance of the Work unless the OWNER has made acceptance or partial acceptance thereof in writing prior to said final payment.

Before the OWNER makes final payment, the Contractor shall submit to the OWNER a final release, as described hereinafter, stating that all payrolls, material bills, subcontractors, and other indebtedness connected with the Work have been paid and providing for handling claims that may be outstanding or that may arise after the settlement.

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 Bond.

1.70 CONTRACTOR'S FINAL RELEASE

Before the OWNER pays the Contractor his final payment on the Work, the Contractor will be required to sign a final release as set out hereinbefore. This final release shall be notarized and shall state that all claims against the OWNER on the Contractor's part have been met in full; it shall further state that all accounts for labor performed, materials furnished, liens, judgments and claims of every nature against the Contractor have been satisfied by him. It shall further state that any obligation or lawsuit whatsoever arising from the Contractor's operations on the Project which may be presented or filed after the settlement shall be borne by the Contractor. In case the Contractor is unable to settle any claim that may be in dispute or litigation, the OWNER may allow him to furnish a proper bond to indemnify the OWNER against the claim and then release the final payment to him.

It is understood that the Contractor is to guarantee to the OWNER all construction against defective materials, equipment and workmanship for a period of twelve (12) months after acceptance, and shall take immediate steps to correct or replace such defective materials, equipment or workmanship without cost to the OWNER.

1.71 FINAL CLEAN-UP

The Work will not be considered as completed, and final payment will not be made, until all final cleanup has been done by the Contractor in a manner satisfactory to the Engineer.

END OF SECTION 00700

SECTION 00800 – SPECIAL CONDITIONS

1. PERMITS – The Owner has acquired a Waterline Construction permit from the Kentucky Division of Water (KDOW). Unless otherwise provided in these Contract Documents and Specifications, all other permits needed to complete the work as shown on the plans will be the responsibility of the CONTRACTOR as described in the General Conditions. Any fees associated for permits that are the responsibility of the CONTRACTOR will be paid for by the CONTRACTOR. All coordination, submissions, etc. shall be the responsibility of the CONTRACTOR.

Land disturbance is not expected to exceed one acre; therefore a KPDES Stormwater Construction Permit is not required. Contractor shall take all appropriate measures described in the Contract Documents to control erosion and siltation on this project.

Contractor shall acquire a City of Nicholasville grading permit.

2. BURNING & BLASTING - burning or blasting will not be allowed on the project site.
3. CONTRACTOR shall be responsible for obtaining staging areas, material storage areas, and earthwork borrow or waste areas.
4. CONTRACTOR shall take special precautions to protect existing buildings, paved areas, signs, trees, etc. from damages during construction.
5. CONTRACTOR shall maintain access to existing properties, streets, and entrances. Temporary closures are allowed but shall be coordinated with the Owner and property owners a minimum of 48 hours in advance of anticipated closures.
6. MAINTENANCE OF TRAFFIC – Contractor shall employ maintenance of traffic measures where needed and in accordance with the Jessamine County Road Department specifications.
7. EXISTING UTILITIES

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. If it is discovered that conflicts with existing utility facilities are unavoidable, the Contractor shall stop work in this area and immediately notify the Owner.

The OWNER and the Engineer makes no guarantees regarding the existence of utilities, the location of utilities, the utility companies in the project scope, or the potential for conflicts encountered during construction. It will be the contractor's responsibility to locate utilities before construction. If necessary, the contractor shall determine the exact location and elevation of utilities by hand digging to expose utilities before excavating in the area of a utility.

8. BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. A partial list of potential utility companies in the area is listed below. It is the Contractor's responsibility to fully determine, and contact, all utility companies that may have facilities in the project area.

AREA UTILITIES CONTACT LIST

Electric

Kentucky Utilities
500 Stone Road
Lexington, KY 40503
859-367-4219

Cable TV

Spectrum
121 Quinn Drive
Nicholasville, KY 40356
866-725-0919

Telephone

Windstream
130 W. New Circle Road
Lexington, KY 40505
859-394-0137

Sanitary Sewers

City of Nicholasville
601 North Main Street
Nicholasville, KY 40356
859-885-9473

Water

City of Nicholasville
601 North Main Street
Nicholasville, KY 40356
859-885-9473

Natural Gas

Delta Natural Gas Co.
3517 Lexington Road
Winchester, KY 40391
859-744-6171

END OF SECTION 00800

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Installation of water distribution / water service facilities to replace the existing distribution system in City County Park, as shown on the Drawings.
- B. The Contractor shall include all materials, labor and equipment necessary for completion of the Project. The Contract Documents are intended to provide the basis for proper completion of the work suitable for the intended use of the Owner. Anything not expressly set forth but which is reasonably implied or necessary for proper performance of the Project shall be included.
- C. Continuous Operations: The existing systems must be maintained in continuous operation to the extent practicable in such a manner that it meets all local, state, and federal requirements. Temporary service interruptions shall be coordinated with Jessamine County and the City of Nicholasville. The Contractor is responsible for payment of all fines resulting from any action or inaction on his part or the part of his subcontractors during performance of the Work that is illegal.

1.02 PERMITS

Obtain any local business and/or grading permits related or required by the Work in this Contract – see Section 00800.

1.03 CODES

Comply with applicable codes and regulations of authorities having jurisdiction. Submit copies of inspection reports, notices, citations, etc. to the Owner.

1.04 EXISTING CONDITIONS AND DIMENSIONS

- A. The Work in this Contract will primarily be performed in or around existing facilities of which a portion must remain functional. This Contractor must maintain the required items and/or systems functional without additional effort by the Owner's personnel and at no extra costs to the Owner.
- B. The Contractor is responsible for verifying all existing conditions, elevations, dimensions, etc., and providing his finished work to facilitate existing conditions.

END OF SECTION 01010

SECTION 01015 - WORK SEQUENCE

PART 1 – GENERAL

1.01 WORK INCLUDED

The Contractor shall conform to all miscellaneous requirements as contained in the Contract.

1.02 RELATED REQUIREMENTS

- A. Section 00700 - General Conditions.
- B. Section 01010 - Summary of Work.
- C. Section 01040 - Coordination.

PART 2 - PRODUCTS

2.01 MATERIALS

The Contractor shall comply with the Specifications for type of work to be done.

PART 3 - EXECUTION

3.01 SEQUENCE OF CONSTRUCTION OPERATIONS

The Contractor shall submit to the Engineer for review and acceptance a complete schedule (progress chart) of his proposed sequence of construction operations prior to commencement of work. However, the Engineer shall not accept a construction schedule that fails to utilize the entire time allocated for the construction of the Project. The Contractor shall schedule the various construction activities to complete the Project throughout the entire allotted time period. This schedule requirement in no way prevents the Contractor from completing the Project in a shorter time frame than scheduled. The construction schedule along with a cost breakdown schedule shall be submitted and approved by the Owner prior to the submittal of the first partial payment request in accordance with the General Conditions. A revised construction schedule shall be submitted to the Owner with each pay request. This revised schedule must be approved by the Owner prior to payment.

END OF SECTION 01015

SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 WORK INCLUDED

The Contractor shall furnish all necessary labor, machinery, tools, apparatus, equipment, materials, services and other necessary supplies and perform all work shown on the Drawings and/or described in the Specifications and Contract Documents at the unit or lump sum prices for the items enumerated in Part 2 of this Section.

1.02 COMPUTATION OF QUANTITIES

- A. For estimating quantities in which the computation of areas by geometric methods would be comparatively laborious, it is agreed that the planimeter shall be considered an instrument of precision adapted to the measurement of such areas.
- B. It is further agreed that the computation of the volume of prismsoids shall be by the method of average end area.

1.03 PROGRESS AND PAYMENT SCHEDULES (Also see Section 00700)

- A. Within fifteen (15) days after the date of formal execution of the Agreement, the Contractor shall prepare and submit to the Engineer, for approval, a construction schedule which depicts the Contractor's plan for completing the Contract requirements and show work placement in dollars versus Contract time. The Contractor's construction schedule must be approved by the Engineer before any payments will be made on this Contract.
- B. Within fifteen (15) days after the date of formal execution of the Agreement, the Contractor shall prepare and submit to the Engineer, for approval, a periodic estimate which depicts the Contractor's cost for completing the Contract requirements and shows by major unit of the project work the Contractor's dollar value for the material and the labor (two separate amounts) to be used as a basis for the periodic payments. The Contractor's periodic estimate must be approved by the Engineer before any payments will be made on this Contract.
- C. The Engineer's decision as to sufficiency and completeness of the Contractor's construction schedule and periodic estimate will be final.

- D. The Contractor must make current, to the satisfaction of the Engineer, the construction schedule and periodic estimate each time he requests a payment on this Contract.
- E. The Contractor's construction schedule and periodic estimate must be maintained at the construction site available for inspection and shall be revised to incorporate approved change orders as they occur.
- F. When the Contractor requests a payment on this Contract, it must be on the approved periodic estimate and be current. Further, the current periodic estimate and construction schedule (both updated and revised) shall be submitted for review and approval by the Engineer before monthly payments will be made by the Owner. The Contractor shall submit five (5) current copies of each (periodic estimate and construction schedule) when requesting payment.

1.04 CONDITIONS FOR PAYMENT (See also Article 1.50/Section 00700)

- A. The Owner will make payments for acceptable work in place and materials properly stored on-site. The value of payment shall be as established on the approved construction schedule and periodic estimate, EXCEPT the Owner will retain ten percent (10%) of the work in place and a percentage as hereinafter listed for items properly stored or untested.
- B. No payment will be made for stored materials unless a proper invoice from the supplier is attached to the pay request. Furthermore, no item whose value is less than \$1,000.00 will be considered as stored materials for pay purposes.
- C. No payment will be made for the labor portion of the piping line items until the piping has been tested and accepted by the Engineer.
- D. Payment for equipment items shall be limited to ninety percent (90%) of their scheduled value (materials portion only) until they are set in place. Ninety percent (90%) payment for stored materials and equipment shall be contingent on proper on-site storage as recommended by the manufacturer or required by the Engineer.
- E. Payment for equipment items set in-place shall be limited to ninety percent (90%) of their scheduled value until they are ready for operation and have been certified by the manufacturer. Ninety percent (90%) payment for installed equipment shall be contingent on proper routine maintenance of the equipment in accordance with the manufacturer's recommendations.
- F. Payment for the labor portion of equipment items will be subject only to the degree of completeness and the appropriate retainage.

- G. The Owner will reduce the percent of retainage once the Project has achieved satisfactory progress and is at the fifty percent (50%) construction status. The dollar amount of retainage for work-in-place will not be reduced but will remain constant following the fifty percent (50%) constructed status. The retainage on the equipment items shall be determined as defined hereinbefore.

1.05 CLAIMS FOR EXTRA WORK (See also Article 1.61/Section 00700)

- A. If the Contractor claims that any instructions by Drawings or otherwise involve extra cost, he shall give the Engineer written notice of said claim within ten (10) days after the receipt of such instructions, and in any event before proceeding to execute the work, stating clearly and in detail the basis of his claim or claims. No such claim shall be valid unless so made.
- B. Claims for additional compensation for extra work, due to alleged errors in spot elevations, contour lines or bench marks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material or performing more work than would be reasonably estimated from the Drawings and topographical maps issued.
- C. Any discrepancies which may be discovered between actual conditions and those represented by the topographical maps and Drawings shall at once be reported to the Engineer, and work shall not proceed, except at the Contractor's risk, until written instructions have been received by him from the Engineer.
- D. If, on the basis of the available evidence, the Engineer determines that an adjustment of the Contract Price or time is justifiable, the procedure shall then be as provided herein for "Changes in Work".
- E. By execution of this Contract, the Contractor warrants that he has visited the site of the proposed work and fully acquainted himself with the conditions there existing relating to construction and labor, and that he fully understands the facilities, difficulties and restrictions attending the execution of the work under this Contract. The Contractor further warrants that he has thoroughly examined and is familiar with the Drawings, Specifications and all other documents comprising the Contract. The Contractor further warrants that by execution of this Contract his failure when he was bidding on this Contract to receive or examine any form, instrument or document or to visit the site and acquaint himself with conditions there existing, in no way relieves him from any obligation under the Contract, and the Contractor based on facts regarding which he should have been on notice as a result thereof.

1.06 DETERMINATION OF THE VALUE OF EXTRA (ADDITIONAL) OR OMITTED WORK (See also, Article 1.62/Section 00700)

- A. The value of extra (additional) or omitted work shall be determined in one or more of the following ways:
 - 1. On the basis of the actual cost of all the items of labor (including on-the-job supervision), materials and use of equipment plus a maximum of fifteen percent (15%) which shall cover the Contractor's general supervision, overhead and profit. In case of subcontracts, the fifteen percent (15%) is interpreted to mean the subcontractor's supervision, overhead and profit, and an additional five percent (5%) may then be added to such costs to cover the General Contractor's supervision, overhead and profit. The cost of labor shall include required insurance, taxes and fringe benefits. Equipment costs shall be based on current rental rates in the areas where the work is being performed, but in no case shall such costs be greater than the current rates published by the Associated Equipment Distributors, Chicago, Illinois.
 - 2. By estimate and acceptance in a lump sum.
 - 3. By unit prices named in the Contract or subsequently agreed upon.
- B. Provided, however, that the cost or estimated cost of all extra (additional) work shall be determined in advance of authorization by the Engineer and approved by the Owner.
- C. All extra (additional) work shall be executed under the conditions of the original Contract. Any claim for extension of time shall be adjusted according to the proportionate increase or decrease in the final total cost of the work unless negotiated on another basis.
- D. Except for over-runs in Contract unit price items, no extra (additional) work shall be done except upon a written Change Order from the Engineer, and no claim on the part of the Contractor for pay for extra (additional) work shall be recognized unless so ordered in writing by the Engineer.

PART 2 - PRODUCTS

2.01 MOBILIZATION

Payment for the Contractor's mobilization will be made at the Contract unit price and shall include cost incurred for insurance, performance bond, payment bond, moving equipment onto the project area and any pertinent costs related thereto. The payment for mobilization shall be no more than 200 percent of the payment for demobilization.

2.02 GENERAL CONDITIONS

Payment for General Conditions will be made based on the Contract unit price distributed over the initial term of the Contract and shall include field supervision and support staff, office supervision and support staff, costs associated with maintaining the field operation, and other items required by the conditions of the Contract that are not included in other pay items.

2.03 CLEARING AND GRUBBING

This item includes the clearing and grubbing of vegetation, trees, stumps, brush, bushes, cement concrete and/or stone masonry, steps, fences, walls, and structures within the construction limits not otherwise removed by the excavation and grading operations or included in the summary items. Also included is the proper removal and disposal of such materials in accordance with all local, state, and federal requirements and in a manner not detrimental to the inhabitants of the area. The CONTRACTOR will be responsible for determining and complying with local ordinances regarding disposal and/or burning of such materials. Trees, shrubbery, fences, retaining walls, and other such items not specifically noted on the plans to be removed or saved in place, or not shown on the plans, but suspected of being within the project construction limits shall not be disturbed until so directed by the ENGINEER. Clearing and grubbing shall not commence without approval of the ENGINEER.

Work shall not be performed outside the construction limits and existing vegetation outside the construction limits shall not be disturbed unless authorized by the ENGINEER.

The CONTRACTOR shall reset any street and traffic signs disturbed by the work as near the original locations as practical or as otherwise directed by the ENGINEER. The CONTRACTOR shall carefully remove and stockpile for pickup by the OWNER all signs, grates, manhole frames and covers and other such salvageable and reusable items, not intended to be reset on the job.

Vegetated areas on which excavation or fill operations are to be performed shall be stripped of all vegetation, topsoil, and other organic material as directed by the ENGINEER.

Stockpiling of topsoil-type material will be required, and no topsoil shall be removed from the site, unless otherwise specifically designated on the Drawings or in the Specifications. After grading work has been completed, topsoil shall be evenly spread in areas to be revegetated. Stripped material may not be placed beneath proposed paving areas or in stormwater management areas.

To the extent that it does not conflict with the content of the Plans and Contract Documents and Specifications, Section 202 of KDOH Standard Specifications, current edition, is incorporated into this Technical Specification.

Payment for Clearing and Grubbing shall be paid for at the lump sum bid price.

2.04 SAWCUT EXISTING PAVEMENT AND CONCRETE

Work for this Section shall consist of the cutting of existing pavement and/or concrete as necessary to construct the work as shown on the plans. Payment for sawcutting existing pavement and concrete shall be included in the payment for all other work items that require this Work. There will be no separate payment for Sawcut Existing Pavement and Concrete.

2.05 WATER LINE

- A. Payment for water line will be made at the Contract unit price per linear foot type in place, which shall include compensation for furnishing pipe, trenching, bedding, laying, jointing, shoring, sheeting and bracing, initial backfill, and all other appurtenances required but not specifically delineated herein. Ductile iron fittings (including thrust blocking) are included in this pay item.
- B. The quantity of piping to be paid for shall be the length of pipe measured along the centerline of the completed pipe line without deducting the length of fittings.
- C. Payment for final backfill shall be included in this pay item except for bituminous material and concrete required in restoration of paved areas. Bituminous material and concrete shall be included in the pay item "Pavement Restoration". Class II material (DGA and/or crushed stone paving) required in the restoration of gravel roadways and drives shall be included in this pay item.
- D. All excavation is unclassified and is included in this pay item and will not be paid for separately.
- E. Payment for this item shall include the testing of the completed water main and any electric, gas or other utility relocation if necessary.
- F. Unless included as a separate pay item, payment for seeding and final clean-up including furnishing and placing topsoil, finish, grading, seeding mulching and erosion control, removal of construction materials and debris, cleaning, and site restoration is included in this pay item; however, the Owner will not pay eight percent (8%) per foot of the line unit cost until final clean-up and seeding has been performed to the satisfaction of the Owner.

- G. Unless included as a separate pay item, fence repair/replacement incidental to water line construction is included in this pay item and will not be paid for separately.

2.06 WATER VALVES

Payment for water valves will be made at the Contract unit price each which shall include valves, thrust blocking, valve box, concrete pad, at least one operating wrench per job, and all appurtenances necessary for a complete installation. Valves related to valve vaults are not included in this pay item.

2.07 YARD HYDRANT AND UNDERGROUND SPIGOTS (HOSE BIBS)

Payment for yard hydrant assemblies will be made at the Contract unit price and shall include the hydrant, spigot, ball valve or other flow control device, blocking, piping from main line and all items necessary for a complete installation. Surface mounting and enclosures for underground installations are included in this pay item and will not be paid for separately.

2.08 SERVICE METER SETTINGS

Payment for meter settings will be made at the unit price each, complete in place, which includes meter setter, meter box, meter box lid, lock, corporation stop, service saddle, pressure reducing valve (as specified) and all appurtenances required complete in place which shall include compensation for furnishing, hauling, excavation (including rock excavation), bedding, laying, backfilling and final clean-up. **The City of Nicholasville shall provide and install the meters.**

2.09 DRY TIE-INS AND WET TAP-INS

Payment for connections of the new water line to the existing water system will be made at the Contract unit price each which includes the gasket, installation of pipe valve, saddle, tap excavation, backfill, cutting and/or tapping the existing pipe, and fittings required to complete the connections. Curb stops or water valves for wet taps are included in this pay item and will not be paid for separately.

2.10 SERVICE PIPE

- A. Payment for service pipe and fittings will be made per linear foot in place, with attendant work completed. Excavation is unclassified and included in this pay item.
- B. Unless otherwise approved by the Owner, all pipe to meter settings across the road from the water line shall be pushed under the road; this work is included in this pay item and will not be paid for separately.

2.11 PAVEMENT REPLACEMENT

Payment for pavement replacement will be paid for at the Contract unit price, which shall include base, placement of bituminous concrete, compaction and all appurtenances necessary for a complete installation.

2.12 DEMOBILIZATION

Payment for the Contractor's demobilization upon completion of the Project will be made at the Contract lump sum price and shall include all costs incurred for removing equipment and materials from the Project area and any pertinent costs related thereto. The payment for demobilization shall be no less than 50 percent of the payment for mobilization.

PART 3 - EXECUTION

3.01 PAY ITEMS

- A. The pay items listed hereinbefore refer to the items listed in the Bid Schedule and cover all of the pay items for this Contract.
- B. Any and all other items of Work listed in the Specifications or shown on the Drawings for this Contract shall be considered incidental to and included in those pay items.

3.02 QUANTITIES OF ESTIMATE

Wherever the estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of the documents, including the Bid Proposal, they are given for use in comparing bids and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete the Work contemplated by this Contract, and such increase or diminution shall not give cause for claims or liability for damages. The Engineer will not be financially responsible for any omissions from the Contract Documents and therefore not included by the Contractor in his proposal.

END OF SECTION 01025

SECTION 01030 - LABOR PROVISIONS

PART 1 - GENERAL

1.01 WORK INCLUDED

The Contractor shall conform to all provisions of the Kentucky Department of Labor, Latest Revisions, relative to wages and hours as they may apply to the work to be accomplished under these Specifications.

In addition to the above, certain Federal laws and regulations shall govern the work and shall supplement or supplant the Kentucky Department of Labor Wage Decisions cited above, as the case may be.

1.02 WAGE RATES

Federal wage rates do NOT apply to this project.

END OF SECTION 01030

SECTION 01040 - COORDINATION

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Contractor shall coordinate the Work of all crafts, trades and subcontractors engaged on the Work, and he shall have final responsibility in regards to the schedule, workmanship and completeness of each and all parts of the Work.
- B. All crafts, trades and subcontractors shall be made to cooperate with each other and with others as they may be involved in the installation of work which adjoins, incorporates, precedes or follows the work of another. It shall be the Contractor's responsibility to point out areas of cooperation prior to execution of subcontract agreements and the assignment of the parts of the Work. Each craft, trade and subcontractor shall be made responsible to the Owner, for furnishing embedded items, giving directions for doing all cutting and fitting, making all provisions for accommodating the Work, and for protecting, patching, repairing and cleaning as required to satisfactorily perform the Work.
- C. The Contractor shall be responsible for all cutting, digging and other action of his subcontractors and workmen. Where such action impairs the safety or function of any structure or component of the Project, the Contractor shall make such repairs, alterations and additions as will, in the opinion of the Engineer, bring said structure or component back to its original design condition at no additional cost to the Owner.
- D. Each subcontractor is expected to be familiar with the General Requirements and all Sections of the Detailed Specifications for all other trades and to study all Drawings applicable to his work to the end that complete coordination between the trades will be affected. Each Contractor shall consult with the Engineer if conflicts exist on the Drawings.
- E. No extra compensation will be allowed to cover the cost of removing piping, conduits, etc., or equipment found encroaching on space required by others.

END OF SECTION 01040

SECTION 01045 - CUTTING AND PATCHING

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide cutting and patching work to properly complete the work of the project, complying with requirements for:
 - 1. Connection to existing waterlines, sewers, and structures.
 - 2. Connection to existing sidewalks and paving
 - 3. Connection of new utility services to existing buildings
- B. Do not cut and patch in a manner that would result in a failure of the work to perform as intended, decreased energy performance, increased maintenance, decreased-operational life, or decreased safety.

PART 2 - PRODUCTS

- 2.01 MATERIALS - Match existing materials for cutting and patching work with new materials conforming to project requirements.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Inspect conditions prior to work to identify scope and type of work required. Protect adjacent work. Notify Owner of work requiring interruption to building services or Owner's operations.
- B. Perform work with workmen skilled in the trades involved. Prepare sample area of each type of work for approval.
- C. Cutting: Use cutting tools, not chopping tools. Make neat holes. Minimize damage to adjacent work. Check for concealed utilities and structure before cutting.
- D. Patching: Make patches, seams, and joints durable and inconspicuous. Comply with tolerances for new work.
- E. Clean work area and areas affected by cutting and patching operations.

END OF SECTION 01045

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 WORK INCLUDED

Shop drawing, descriptive literature, project data and samples (when samples are specifically requested) for all manufactured or fabricated items shall be submitted by the Contractor to the Engineer for examination and review in the form and in the manner required by the Engineer. All submittals shall be furnished in at least three (3) copies to be retained by the Engineer and shall be checked and reviewed by the Contractor before submission to the Engineer. The review of the submittal by the Engineer shall not be construed as a complete check, but will indicate only that the general method of construction and detailing is satisfactory. Review of such submittal will not relieve the Contractor of the responsibility for any errors which may exist as the Contractor shall be responsible for the dimensions and design of adequate connections, details, and satisfactory construction of all work.

1.02 RELATED REQUIREMENTS

- A. Section 00700 - General Conditions.
- B. Section 01720 - Project Record Documents (As-Built).

1.03 DEFINITIONS

The term "submittals" shall mean shop drawings, manufacturer's drawings, catalog sheets, brochures, descriptive literature, diagrams, schedules, calculations, material lists, performance charts, test reports, office and field samples, and items of similar nature which are normally submitted for the Engineer's review for conformance with the design concept and compliance with the Contract Documents.

1.04 GENERAL CONDITIONS

Review by the Engineer of shop drawings or submittals of material and equipment shall not relieve the Contractor from the responsibilities of furnishing same of proper dimension, size, quantity, materials and all performance characteristics to efficiently perform the requirements and intent of the Contract Documents. Review shall not relieve the Contractor from responsibility for errors of any kind on the shop drawings. Review is intended only to assure conformance with the design concept of the Project and compliance with the information given in the Contract Documents. Review of shop drawings shall not be construed as releasing the Contractor from the responsibility of complying with the Specifications.

1.05 GENERAL REQUIREMENTS FOR SUBMITTALS

- A. Shop drawings shall be prepared by a qualified detailer. Details shall be identified by reference to sheet and detail numbers shown on Contract Documents. Where applicable, show fabrication, layout, setting and erection details. Shop drawings are defined as original drawings prepared by the Contractor, subcontractors, suppliers, or distributors performing work under this Contract. Shop drawings illustrate some portion of the work and show fabrication, layout, setting or erection details of equipment, materials and components. The Contractor shall, except as otherwise noted, have prepared the number of reviewed copies required for his distribution plus three (3) which will be retained by the Engineer and Owner. Shop drawings shall be folded to an approximate size of 8-1/2 inch x 11 inch and in such manner that the title block will be located in the lower righthand corner of the exposed surface.
- B. Project data shall include manufacturer's standard schematic drawings modified to delete information which is not applicable to the Project, and shall be supplemented to provide additional information applicable to the Project. Each copy of descriptive literature shall be clearly marked to identify pertinent information as it applies to the Project.
- C. Where samples are required, they shall be adequate to illustrate materials, equipment or workmanship, and to establish standards by which completed work is judged. Provide sufficient size and quantity to clearly illustrate functional characteristics of product and material, with integrally related parts and attachment devices, along with a full range of color samples.
- D. All submittals shall be referenced to the applicable item, section and division of the Specifications, and to the applicable Drawing(s) or Drawing schedule(s) and shall be with transmittal forms and format provided by the Engineer.
- E. The Contractor shall review and check submittals, and indicate his review by initials and date.
- F. If the submittals deviate from the Contract Drawings and/or Specifications, the Contractor shall advise the Engineer, in letter of transmittal of the deviation and the reasons therefor. All changes shall be clearly marked on the submittal with a bold mark other than red. Any additional costs for modifications shall be borne by the Contractor.
- G. In the event the Engineer does not specifically reject the use of material or equipment at variance to that which is shown on the Drawings or specified, the Contractor shall, at no additional expense to the Owner, and using methods reviewed by the Engineer, make any changes to structures, piping, controls, electrical work,

mechanical work, etc., that may be necessary to accommodate this equipment or material. Should equipment other than that on which design drawings are based be accepted by the Engineer, shop drawings shall be submitted detailing all modification work and equipment changes made necessary by the substituted item.

- H. Additional information on particular items, such as special drawings, schedules, calculations, performance curves, and material details, shall be provided when specifically requested in the technical Specifications.
- I. Submittals for all electrically operated items (including instrumentation and controls) shall include complete wiring diagrams showing lead, runs, number of wires, wire size, color coding, all terminations and connections, and coordination with related equipment.
- J. Equipment shop drawings shall indicate all factory or shop paint coatings applied by suppliers, manufacturers and fabricators; the Contractor shall be responsible for insuring the compatibility of such coatings with the field-applied paint products and systems.
- K. Fastener specifications of manufacturer shall be indicated on equipment shop drawings.
- L. Where manufacturer's brand names are given in the Specifications for building and construction materials and products, such as grout, bonding compounds, curing compounds, masonry cleaners, waterproofing solutions and similar products, the Contractor shall submit names and descriptive literature of such materials and products he proposes to use in this Contract.
- M. No material shall be fabricated or shipped unless the applicable drawings or submittals have been reviewed by the Engineer and returned to the Contractor.
- N. All bulletins, brochures, instructions, parts lists, and warranties packaged with and accompanying materials and products delivered to and installed in the Project shall be saved and transmitted to the Owner through the Engineer.
- O. All submittals shall be made by the use of a multi-copy transmittal form supplied by the Engineer. All applicable blanks on the form shall be filled in with the appropriate data.

1.06 CONTRACTOR RESPONSIBILITIES

- A. Verify field measurements, field construction criteria, catalog numbers and similar data.

- B. Coordinate each submittal with requirements of Work and Contract Documents.
- C. Notify Engineer, in writing at time of submission, of deviations in submittals from requirements of Contract Documents.
- D. Begin no work, and have no material or products fabricated or shipped which required submittals until return of submittals with Engineer's stamp and initials or signature indicating review.

END OF SECTION 01300

SECTION 01380 - CONSTRUCTION PHOTOGRAPHS

PART 1 - GENERAL

1.01 WORK INCLUDED

Provide monthly photographs of the construction throughout the progress of the Work.

1.02 RELATED WORK

- A. Section 00700 - General Conditions.
- B. Section 01700 - Project Closeout.

1.03 PHOTOGRAPHY

- A. Provide monthly photographs (two sets) of the construction throughout progress of the Work. Provide twenty-four (24) views of Work each month or more as may be necessary to clearly show any new work.
- B. Take the photographs as close as possible to the cutoff date for each Application for Payment.
- C. Take photographs at the beginning, during, and completion of each element of construction.

1.04 PRINTS (If requested by Owner)

- A. Color; two prints of each view, bound into separate sets.
- B. Paper: Single weight, neutral black image tone, white base.
- C. Finish: Matte.
- D. Size: 3 x 5 inch. Mount with binder tabs.

- E. Identify each print on front. List name of Project, orientation of view, date and time of view, and photographer's numbered identification of exposure.

1.05 NEGATIVES OR DIGITAL FILES

Negatives or digital files shall be provided to the Owner of all views.

1.06 TECHNIQUE

- A. All views shall provide factual presentation of the Work progress.
- B. All photos shall provide correct exposure and focus, high resolution and sharpness, maximum depth of field and minimum distortion.

1.07 VIEWS

The photographs shall be from varied views which show the most representative sample of the Work progress.

1.08 SUBMITTALS

Submit prints at or near the time of each Application for Payment.

END OF SECTION 01380

SECTION 01400 - QUALITY CONTROL

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Work of all crafts and trades shall be laid out to lines and elevations as established by the Contractor from the Drawings or from instructions by the Engineer.
- B. Unless otherwise shown, all work shall be plumb and level, in straight lines and true planes, parallel or square to the established lines and levels. The Work shall be accurately measured and fitted to tolerance as established by the best practices of the crafts and trades involved, and shall be as required to fit all parts of the Work carefully and neatly together.
- C. All equipment, materials and articles incorporated into the Work shall be new and of comparable quality as specified. All workmanship shall be first-class and shall be performed by mechanics skilled and regularly employed in their respective trades.
- D. The Contractor shall determine that the equipment he proposes to furnish can be brought into the facility and installed in the space available. Equipment shall be installed so that all parts are readily accessible for inspection and maintenance.

1.02 WORKMANSHIP

Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.

1.03 MANUFACTURERS' INSTRUCTION

Comply with manufacturer's instructions in full detail as to shipping, handling, storing, installing, start-up and operation.

1.04 MANUFACTURERS' FIELD SERVICES

- A. The Contractor shall arrange for the services of qualified service representatives from the companies manufacturing or supplying each type of equipment required in the Specification sections and/or in Section 01450.
- B. The manufacturer or supplier shall provide sufficient engineering and technician manhours to satisfactorily complete Supervision of Installation, Equipment Check-out, Field Acceptance Tests, Pre-startup Operator Training, and Post-startup Services (see Section 01450).

1.05 TESTING SERVICES

- A. Tests, inspections and certifications of materials, equipment, subcontractors or completed work, as required by the various sections of the Specifications shall be provided by the Contractor and all costs shall be included in the Contract Price.
- B. The Contractor shall submit to the Owner the name of testing laboratory to be employed.
- C. Contractor shall deliver written notice to the Engineer at least two (2) work days in advance of any inspections or tests to be made at the Project site. All inspections or tests to be conducted in the field shall be done in the presence of the Owner or his representative.
- D. Certifications by independent testing laboratories may be by properly attested copies of the data including scientific procedures and results of tests.

END OF SECTION 01400

SECTION 01530 - BARRIERS

PART 1 - GENERAL

1.01 WORK INCLUDED

The Contractor shall provide all temporary barriers in conformance with federal, state, and local codes.

END OF SECTION 01530

SECTION 01535 - PROTECTION OF INSTALLED WORK

PART 1 - GENERAL

1.01 WORK INCLUDED

Protection for products, including Owner-provided products, after installation.

1.02 RELATED REQUIREMENTS

Division 1 - General Requirements.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 PROTECTION AFTER INSTALLATION

- A. Protect installed products and control traffic in immediate area to prevent damage from subsequent operations.
- B. Restrict traffic of any kind across planted lawn and landscape areas.

END OF SECTION 01535

SECTION 01540 - SECURITY

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Project area has to remain safely accessible to Owner's personnel; however, the Contractor will provide any non-interfering security he deems necessary to protect his work, equipment, etc.
- B. Provide an adequate system to secure the Project area at all times, especially during non-construction periods; the Contractor shall be solely responsible for taking proper security measures.

1.02 COSTS

Contractor shall pay for all costs for protection and security systems.

END OF SECTION 01540

SECTION 01550 - ACCESS ROADS AND PARKING AREAS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Access roads.
- B. Temporary parking.
- C. Existing pavements and parking areas.
- D. Permanent pavements and parking areas.
- E. Maintenance.
- F. Removal and repair.

1.02 RELATED REQUIREMENTS

- A. Section 01045 - Cutting and Patching.

PART 2 - PRODUCTS

2.01 MATERIALS

For temporary construction: Contractor's option but must be approved by the Owner.

PART 3 - EXECUTION

3.01 PREPARATION

Clears areas, provide proper surface and storm drainage of premises and adjacent areas. Install erosion protection.

3.02 ACCESS ROADS

- A. Construct temporary all-weather access roads from public thoroughfares to serve construction area, of a width and load-bearing capacity to provide unimpeded traffic for construction purposes.

- B. Construct temporary bridges and/or culverts to span low areas and allow unimpeded drainage.
- C. Extend and relocate as work progress requires, and provide detours as necessary for unimpeded traffic flow.
- D. Locate temporary access roads as approved by the Owner and/or the Engineer.
- E. Provide and maintain access to all Owner facilities.

3.03 TEMPORARY PARKING

Construct temporary parking areas to accommodate use of construction personnel in an area acceptable to the Owner and/or the Engineer. Pay all costs relating to temporary parking.

3.04 MAINTENANCE

- A. Maintain traffic and parking areas in a sound condition, free of excavated material, construction equipment, products, mud, snow and ice. Use whatever dust control measures required to prevent airborne particles.
- B. Maintain existing paved areas used for construction; promptly repair breaks, potholes, low areas, standing water and other deficiencies to maintain paving and drainage in original and/or specified condition.

3.05 REMOVAL AND REPAIR

- A. Remove temporary materials and construction when permanent facilities are usable as directed by the Engineer.
- B. Remove underground work and compacted materials to a depth of two (2) feet; fill and grade site as specified.
- C. Repair existing permanent facilities damaged by usage to original and/or specified condition.

END OF SECTION 01550

SECTION 01560 - TEMPORARY CONTROLS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Dust control.
- B. Erosion and sediment control.

1.02 RELATED REQUIREMENTS

- A. Section 01565 - Erosion and Sediment Control.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 DUST CONTROL

Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere. Provide spraying of dust with water so no dust leaves the site.

3.02 EROSION AND SEDIMENT CONTROL

- A. Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
- B. Minimize amount of bare soil exposed at one time.
- C. Provide temporary measures such as berms, dikes, drains, hay bales, gabions, etc., as directed by the Engineer so as to minimize siltation due to runoff.
- D. Construct fill and waste areas by selective placement to avoid erosive exposed surface of silts or clays.
- E. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

END OF SECTION 01560

SECTION 01565 - EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Contractor shall do all Work and take all measures necessary to control soil erosion resulting from construction operations, shall prevent the flow of sediment from the construction site, and shall contain construction materials (including excavation and backfill) within his protected working area so as to prevent damage to the adjacent properties and water courses.
- B. The Contractor shall not employ any construction method that violates a rule, regulation, guideline or procedure established by Federal, State or local agencies having jurisdiction over the environmental effects of construction.
- C. Pollutants such as chemicals, fuels, lubricants, bitumen, raw sewage and other harmful waste shall not be discharged into or alongside of any body of water or into natural or man-made channels leading thereto.
- D. All erosion and sediment control inside of the Kentucky Transportation Cabinet right of way shall be done in accordance with current KYTC specifications.

PART 2 - PRODUCTS

2.01 MATERIALS

Materials for erosion control devices and structures shall be in accordance with the details and notes on the plans. Filter fabric for sediment traps shall be of suitable materials acceptable to the Engineer. Stone for construction entrances shall be as specified in the Contract Documents.

Exceptions – see Item 1.01 D above

PART 3 - EXECUTION

3.01 METHODS OF CONSTRUCTION

- A. The Contractor shall use any of the acceptable methods necessary to control soil erosion and prevent the flow of sediment to the maximum extent possible. These methods shall include, but not be limited to the installation of construction

entrance(s), the use of water diversion structures, diversion ditches and settling basins. It is recommended that excavated trench material be placed on opposite side of trench from adjacent water courses.

- B. Construction operations shall be restricted to the areas of work indicated on the Drawings and to the area which must be entered for the construction of temporary or permanent facilities. The Engineer has the authority to limit the surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations and to direct the Contractor to provide immediate permanent or temporary pollution control measures to prevent contamination of the wetlands and adjacent watercourses. Such work may involve the construction of temporary berms, dikes, dams, sediment basins, slope drains, and use of temporary mulches, mats, or other control devices or methods as necessary to control erosion.
- C. Excavated soil material shall not be placed adjacent to the wetlands or watercourses in a manner that will cause it to be washed away by high water or runoff. Earth berms or diversions shall be constructed to intercept and divert runoff water away from critical areas. Diversion outlets shall be stable or shall be stabilized by means acceptable to the Engineer. If for any reason construction materials are washed away during the course of construction, the Contractor shall remove those materials from the fouled areas as directed by the Engineer.
- D. For Work within easements or rights-of-way, all materials used in construction such as excavation, backfill, roadway, and pipe bedding and equipment shall be kept within the limits of these easements or rights-of-way.
- E. The Contractor shall not pump silt-laden water from trenches or other excavation into the wetlands, or adjacent watercourses. Instead, silt-laden water from his excavations shall be discharged within areas surrounded by baled hay or into sediment traps or ensure that only sediment-free water is returned to the watercourses. Damage to vegetation by excessive watering or silt accumulation in the discharge area shall be avoided.
- F. Prohibited construction procedures include, but are not limited to the following:
 - 1. Dumping of spoil material into any streams, wetlands, surface waters, or unspecified locations.
 - 2. Indiscriminate, arbitrary, or capricious operation of equipment in wetlands or surface waters.
 - 3. Pumping of silt-laden water from trenches or excavations into surface waters, or wetlands.
 - 4. Damaging vegetation adjacent to or outside of the construction area limits.
 - 5. Disposal of trees, brush, debris, paints, chemicals, asphalt products, concrete curing compounds, fuels, lubricants, insecticides, washwater from concrete

trucks or hydroseeders, or any other pollutant in wetlands, surface waters, or unspecified locations.

6. Permanent or unauthorized alteration of the flow line of any stream.
7. Open burning of debris from the construction work.

G. Any temporary working roadways required shall be clean fill approved by the Engineer. In the event fill is used, the Contractor shall take every precaution to prevent the fill from mixing with native materials of the site. All such foreign fill materials shall be removed from the site following construction.

H. Exceptions to all sub categories in Item 3.01 – see Item 1.01 D above

3.02 EROSION CHECKS

The Contractor shall furnish and install erosion checks surrounding the base of all deposits of stored excavated material outside of the disturbed area, and where indicated by the Engineer. Checks located surrounding stored material shall be located approximately 6 feet from that material.

Exceptions – see Item 1.01 D above

END OF SECTION 01565

SECTION 01570 - TRAFFIC REGULATION

NOTE – Maintenance of Traffic will be performed in accordance with all Jessamine County Road Department and/or KY Dept, of Highways standard drawings and specifications. This section is a supplement to those standards and specifications.

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Construction parking control.
- B. Flagmen.
- C. Flares and lights.
- D. Haul routes.
- E. Removal.

1.02 RELATED REQUIREMENTS

- A. Section 01530 - Barriers.
- B. Section 01580 - Project Identification and Signs.

PART 2 - PRODUCTS

2.01 SIGNS AND DEVICES

- A. Traffic Cones and Drums, Flares and Lights: As approved by local jurisdictions.
- B. Flagman Equipment: As required by local jurisdictions.

PART 3 - EXECUTION

3.01 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles and Owner's operations.
- B. Monitor parking of construction personnel's vehicles in existing facilities. Maintain

vehicular access to and through parking areas.

- C. Prevent parking on or adjacent to access roads or in non-designated areas.

3.02 TRAFFIC CONTROL

- A. Whenever and wherever, in the Engineer's opinion, traffic is sufficiently congested or public safety is endangered, Contractor shall furnish uniformed officers to direct traffic and to keep traffic off the highway area affected by construction operations.
- B. Contractor shall abide by county and state regulations governing utility construction work.
- C. Traffic control shall be provided according to the Kentucky Department of Highways Manual on Uniform Traffic Control Devices for Streets and Highways.

3.03 FLAGMEN

Provide trained and equipped flagmen to regulate traffic when construction operations or traffic encroach on public traffic lanes.

3.04 FLARES AND LIGHTS

Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

3.05 HAUL ROUTES

- A. Consult with authorities, establish public thoroughfares to be used for haul routes and site access.
- B. Confine construction traffic to designated haul routes.
- C. Provide traffic control at critical areas of haul routes to regulate traffic and minimize interference with public traffic.

3.06 REMOVAL

Remove equipment and devices when no longer required.

END OF SECTION 01570

SECTION 01600 - MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.01 STORAGE OF MATERIALS AND EQUIPMENT

All excavated materials and equipment to be incorporated in the Work shall be placed so as not to injure any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the Work. Materials and equipment shall be kept neatly piled and compactly stored in such locations as will cause a minimum of inconvenience to public travel and adjoining owners, tenants and occupants.

1.02 HANDLING AND DISTRIBUTION

- A. The Contractor shall handle, haul, and distribute all materials and all surplus materials on the different portions of the Work, as necessary or required; shall provide suitable and adequate storage room for materials and equipment during the progress of the Work, and be responsible for the protection, loss of, or damage to materials and equipment furnished by him, until final completion and acceptance of the Work.
- B. Storage and demurrage charges by transportation companies and vendors shall be borne by the Contractor.

1.03 MATERIALS, SAMPLES, INSPECTION

- A. Unless otherwise expressly provided on the Drawings or in any of the other Contract Documents, only new materials and equipment shall be incorporated in the Work. All materials and equipment furnished by the Contractor to be incorporated in the Work shall be subject to the inspection of the Engineer. No material shall be processed or fabricated for the Work or delivered to the Work site without prior concurrence of the Engineer.
- B. As soon as possible after execution of the Agreement, the Contractor shall submit to the Engineer the names and addresses of the manufacturers and suppliers of all materials and equipment he proposes to incorporate into the Work. When shop and working drawings are required as specified below, the Contractor shall submit prior to the submission of such drawings, data in sufficient detail to enable the Engineer to determine whether the manufacturer and/or the supplier have the ability to furnish a product meeting the Specifications. As requested, the Contractor shall also submit data relating to the materials and equipment he proposes to incorporate into the Work in sufficient detail to enable the Engineer to identify and evaluate the

particular product and to determine whether it conforms to the Contract requirements. Such data shall be submitted in a manner similar to that specified for submission of shop and working drawings.

- C. Facilities and labor for the storage, handling, and inspection of all materials and equipment shall be furnished by the Contractor. Defective materials and equipment shall be removed immediately from the site of the Work.
- D. If the Engineer so requires, either prior to or after commencement of the Work, the Contractor shall submit samples of materials for such special tests as the Engineer deems necessary to demonstrate that they conform to the Specifications. Such samples, including concrete test cylinders, shall be furnished, taken, stored, packed, and shipped by the Contractor as directed. The Contractor shall furnish suitable molds for and make the concrete test cylinders. Except as otherwise expressly specified, the Contractor shall make arrangements for, and pay for, the tests.
- E. All samples shall be packed so as to reach their destination in good condition, and shall be labeled to indicate the material represented, the name of the building or work and location for which the material is intended, and the name of the Contractor submitting the sample. To ensure consideration of samples, the Contractor shall notify the Engineer by letter that the samples have been shipped and shall properly describe the samples in the letter. The letter of notification shall be sent separate from and should not be enclosed with the samples.
- F. The Contractor shall submit data and samples, or place his orders, sufficiently early to permit consideration, inspection and testing before the materials and equipment are needed for incorporation in the Work. The consequences of his failure to do so shall be the Contractor's sole responsibility.
- G. In order to demonstrate the proficiency of workmen, or to facilitate the choice among several textures, types, finishes, surfaces, etc., the Contractor shall provide such samples of workmanship of wall, floor, finish, etc., as may be required.
- H. When required, the Contractor shall furnish to the Engineer triplicate sworn copies of manufacturer's shop or mill tests (or reports from independent testing laboratories) relative to materials, equipment performance ratings, and concrete data.
- I. After review of the samples, data, etc., the materials and equipment used on the Work shall in all respects conform therewith.

END OF SECTION 01600

SECTION 01620 - STORAGE AND PROTECTION

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. General storage.
- B. Enclosed storage.
- C. Exterior storage.
- D. Maintenance of storage.

1.02 RELATED REQUIREMENTS

Division 1 - General Requirements.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 GENERAL STORAGE

- A. Store products, immediately on delivery, in accordance with manufacturer's instructions, with seals and labels intact. Protect until installed.
- B. Arrange storage in a manner to provide access for maintenance of stored items and for inspection.

3.02 ENCLOSED STORAGE

- A. Store products, subject to damage by the elements, in substantial weathertight enclosures.
- B. Maintain temperature and humidity within ranges stated in manufacturer's instructions.
- C. Provide humidity control and ventilation for sensitive products as required by manufacturer's instructions.

- D. Store unpacked and loose products on shelves, in bins, or in neat groups of like items.

3.03 EXTERIOR STORAGE

- A. Provide substantial platforms, blocking, or skids, to support fabricated products above ground; slope to provide drainage. Protect products from soiling and staining.
- B. For products subject to discoloration or deterioration from exposure to the elements, cover with impervious sheet material. Provide ventilation to avoid condensation.
- C. Store loose granular materials on clean, solid surfaces such pavement, or on rigid sheet materials, to prevent mixing with foreign matter.
- D. Provide surface drainage to prevent erosion and ponding of water.
- E. Prevent mixing of refuse or chemically injurious materials.

3.04 MAINTENANCE OF STORAGE

- A. Periodically, inspect stored products on a scheduled basis. Maintain a log of inspections, make available to Engineer on request.
- B. Verify that storage facilities comply with manufacturer's product storage requirements.
- C. Verify that manufacturer required environmental conditions are maintained continually.
- D. Verify that surfaces of products exposed to the elements are not adversely affected; that any weathering of finishes is acceptable under requirements of Contract Documents.

3.05 MAINTENANCE OF EQUIPMENT STORAGE

- A. For mechanical and electrical equipment in long-term storage, provide manufacturer's service instructions to accompany each item, with notice of enclosed instructions shown on exterior of package.
- B. Service equipment on a regularly scheduled basis, in accordance with the manufacturer's recommendations, maintaining a log of services; submit as a record document.

END OF SECTION 01620

SECTION 01700 - PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 RELATED REQUIREMENTS

- A. Section 00700 - General Conditions.
- B. Section 01710 - Final Cleaning.
- C. Section 01720 - Project Record Documents.

1.02 SUBSTANTIAL COMPLETION

- A. Contractor:
 - 1. Submit written certification to Engineer that project is substantially complete.
 - 2. Submit list of major items to be completed or corrected.
- B. Engineer will make an inspection within seven days after receipt of certification, together with the Owner's representative.
- C. Should Engineer consider that work is substantially complete:
 - 1. Contractor shall prepare, and submit to Engineer, a list of the items to be completed or corrected, as determined by on-site observation.
 - 2. Engineer will prepare and issue a Certificate of Substantial Completion, containing:
 - a. Date of Substantial Completion.
 - b. Contractor's list of items to be completed or corrected, verified and amended by Engineer.
 - c. The time within which Contractor shall complete or correct work of listed items.
 - d. Time and date Owner will assume possession of work or designated portion thereof.
 - e. Responsibilities of Owner and Contractor for:
 - (1) Insurance.
 - (2) Utilities.
 - (3) Operation of mechanical, electrical and other systems.
 - (4) Maintenance and cleaning.
 - (5) Security.

- f. Signatures of:
 - (1) Engineer.
 - (2) Contractor.
 - (3) Owner.

- 3. Contractor: Complete work listed for completion or correction, within designated time.

- D. Should Engineer consider that work is not substantially complete:
 - 1. He shall immediately notify Contractor, in writing, stating reasons.
 - 2. Contractor: Complete work, and send second written notice to Engineer, certifying that Project, or designated portion of project is substantially complete.
 - 3. Engineer will re-review work.

1.03 FINAL INSPECTION

- A. Contractor shall submit written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Project has been inspected for compliance with Contract Documents.
 - 3. Work has been completed in accordance with Contract Documents.
 - 4. Equipment and systems have been tested in presence of Owner's representative and are operational.
 - 5. Project is completed and ready for final inspection.
- B. Engineer will make final on-site observation/review within seven (7) days after receipt of certification.
- C. Should Engineer consider that work is finally complete in accordance with requirements of Contract Documents, he shall request Contractor to make Project Closeout submittals.
- D. Should Engineer consider that work is not finally complete:
 - 1. He shall notify Contractor, in writing, stating reasons.
 - 2. Contractor shall take immediate steps to remedy the stated deficiencies, and send second written notice to Engineer certifying that work is complete.
 - 3. Engineer will re-review the work.

1.04 FINAL CLEANING UP

The work will not be considered as completed and final payment made until all final cleaning up has been done by the Contractor in a manner satisfactory to the Engineer. See Section 01710 for detailed requirements.

1.05 CLOSEOUT SUBMITTALS

- A. Project Record Documents: to requirements of Section 01720.
- B. Operation and Maintenance Data: to requirements of particular technical specifications and Section 01730.
- C. Warranties and Bonds: to requirements of particular technical specifications and Section 01740.

1.06 INSTRUCTION

Instruct Owner's personnel in operation of all systems, mechanical, electrical and other equipment.

1.07 FINAL APPLICATION FOR PAYMENT

Contractor shall submit final applications in accordance with requirements of General Conditions.

1.08 FINAL CERTIFICATE FOR PAYMENT

- A. Engineer will issue final certificate in accordance with provisions of General Conditions.
- B. Should final completion be materially delayed through no fault of Contractor, Engineer may issue a Semi-final Certificate for payment.

END OF SECTION 01700

SECTION 01710 - CLEANING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. On a continuous basis, maintain premises free from accumulations of waste, debris, and rubbish, caused by operations.
- B. At completion of Work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight-exposed surfaces; leave Project clean and ready for occupancy.

1.02 RELATED REQUIREMENTS

- A. Section 01045 - Cutting and Patching.
- B. Section 01700 - Project Closeout.
- C. Cleaning for Specific Products or Work: Specification Section for that work.

1.03 SAFETY REQUIREMENTS

- A. Hazards control:
 - 1. Store volatile wastes in covered metal containers, and remove from premises daily.
 - 2. Prevent accumulation of wastes which create hazardous conditions.
 - 3. Provide adequate ventilation during use of volatile or noxious substances.
- B. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn or bury rubbish and waste materials on Project site without written permission from the Owner.
 - 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
 - 3. Do not dispose of wastes into streams or waterways.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute cleaning to ensure that building, grounds and public properties are maintained free from accumulations of waste materials and rubbish.
- B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- C. At reasonable intervals during progress of Work, clean site and public properties, and dispose of waste materials, debris and rubbish.
- D. Provide on-site containers for collection of waste materials, debris and rubbish.
- E. Remove waste materials, debris and rubbish from site and legally dispose of at public or private dumping areas off Owner's property.
- F. Handle materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.
- G. The Contractor shall thoroughly clean all materials and equipment installed.

3.02 FINAL CLEANING

- A. Employ experienced workmen, or professional cleaners, for final cleaning.
- B. In preparation for substantial completion, conduct final inspection of sight-exposed interior and exterior surface, and of concealed spaces.
- C. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.
- D. Broom clean paved surfaces; rake clean other surfaces of grounds.

- E. Maintain cleaning until Project, or portion thereof, is occupied by Owner.
- F. The Contractor shall restore or replace existing property or structures as promptly and practicable as work progresses.

END OF SECTION 01710

SECTION 01720 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 RELATED REQUIREMENTS

- A. Section 00700 - General Conditions.
- B. Section 01300 - Submittals.

1.02 MAINTENANCE OF DOCUMENTS

- A. Maintain at job site, one copy of:
 - 1. Contract Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Reviewed Shop Drawings.
 - 5. Change Orders.
 - 6. Other Modifications to Contract.
- B. Store documents in approved location, apart from documents used for construction.
- C. Provide files and racks for storage of documents.
- D. Maintain documents in clean, dry legible condition.
- E. Do not use record documents for construction purposes.
- F. Make documents available at all times for inspection by Engineer and Owner.

1.03 MARKING DEVICES

Provide colored pencil or felt-tip marking pen for all marking.

1.04 RECORDING

- A. Label each document "RECORD DRAWING" in 2-inch high printed letters.
- B. Keep record documents current.
- C. Do not permanently conceal any work until required information has been recorded.

D. Contract Drawings: Legibly mark to record actual construction:

1. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
2. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
3. Field changes of dimension and detail.
4. Changes made by Change Order or Field Order.
5. Details not on original Contract Drawings.

E. Specifications and Addenda: Legibly mark up each Section to record:

1. Manufacturer, trade name, catalog number, and Supplier of each product and item of equipment actually installed.
2. Changes made by Change Order or Field Order.
3. Other matters not originally specified.

F. Shop Drawings: Maintain as record documents; legibly annotate Shop Drawings to record changes made after review.

1.05 SUBMITTAL

A. At completion of project, deliver record documents to Engineer.

B. Accompany submittal with transmittal letter, in duplicate, containing:

1. Date.
2. Project title and number.
3. Contractor's name and address.
4. Title and number of each record document.
5. Certification that each document as submitted is complete and accurate.
6. Signature of Contractor or his authorized representative.

END OF SECTION 01720

SECTION 01740 - WARRANTIES AND BONDS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Compile specified warranties and bonds.
- B. Compile specified service and maintenance contracts.
- C. Co-execute submittals when required.
- D. Review submittals to verify compliance with Contract Documents.

1.02 RELATED REQUIREMENTS

- A. Bid Bond.
- B. Performance and Payment Bonds.
- C. Guaranty.
- D. General Warranty of Construction.
- E. Warranties and Bonds required for specific products: As listed in other Specification sections.

1.03 WARRANTY BONDS OR CORPORATE GUARANTEES IN LIEU OF EXPERIENCE RECORD

- A. When specifically requested in the products and installation general provisions of a Specification section for a particular piece of equipment or product, a record of five (5) years of successful full-scale operation shall be required from the equipment manufacturer. This record of full-scale operation shall be from existing facilities utilizing the equipment or product specified, in an application similar to the application intended for this Project.
- B. The manufacturer shall certify in writing to the Contractor that it has the required record of successful full-scale operation. This certification shall be submitted by the Contractor with his construction materials and/or equipment data list. In the event the manufacturer cannot provide the five (5) year certification of experience to the Contractor, the Contractor shall furnish within thirty (30) days after the Notice of Award, a Warranty Bond or Corporation Guarantee from the equipment manufacturer written in the name of the Contractor and acceptable to the Owner.

The Warranty Bond or Corporate Guarantee shall be kept in force for five (5) years from the Date of Substantial Completion of the Contract less the number of years of experience the manufacturer may be able to certify to the Engineer. As a minimum, the Bond or Guarantee shall be in force for one (1) year after the Date of Substantial Completion of the Contract. The Warranty Bond shall be written in an amount equivalent to the manufacturer's quotation, the Contractor's installation cost plus 100 percent (100%). The Warranty Bond or Corporate Guarantee will assure the Owner that, if in the judgement of the Engineer, the equipment does not perform its specified function, the Contractor shall remove the equipment and install equipment that will perform the specified function and the work by the Contractor shall be paid for by the Warranty Bond or Corporate Guarantee.

1.04 SUBMITTALS REQUIREMENTS

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

1.05 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
 - 1. Size 8 1/2-inch x 11 inches, punch sheets for 3-ring binder: Fold larger sheets to fit into binders.

2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS". List:

- a. Title of Project.
- b. Name of Contractor.

C. Binders: Commercial quality, three-ring, with durable and cleanable plastic covers.

1.06 TIME OF SUBMITTALS

- A. For equipment or component parts of equipment put into service during progress of construction: Submit documents within ten (10) days after inspection and acceptance.
- B. Otherwise, make submittals within ten (10) days after date of substantial completion, prior to final request for payment.
- C. For items of work, where acceptance is delayed materially beyond the Date of Substantial Completion, provide updated submittal within 10 days after acceptance, listing the date of acceptance as the start of the warranty period.

1.07 SUBMITTALS REQUIRED

Submit warranties, bonds, service and maintenance contracts as specified in the respective sections of the Specifications. Additionally, the Contractor shall warrant the entire contract, including all concrete, paving, building, plumbing, HVAC, mechanical and electrical equipment to be free from defects in design and installation for one (1) year from the date of startup. In the event a component fails to perform as specified or is proven defective in service during the warranty period, the Contractor shall repair the defect without cost to the Owner.

END OF SECTION 01740

SECTION 02100 - CLEARING, GRUBBING, AND SITE PREPARATION

PART 1 -- GENERAL

1.01 THE REQUIREMENT

- A. Includes all labor, material, equipment and appliances required for the complete execution of any additions, modifications, or alterations to existing building(s) and new construction work as shown on the Drawings and specified herein.
- B. Principal items of work include:
 - 1. Notifying all authorities owning utility lines running to or on the property. Protecting and maintaining all utility lines to remain and capping those that are not required in accordance with instructions of the Utility Companies, and all other authorities having jurisdiction.
 - 2. Clearing the site within the Contract Limit Lines, including removal of grass, brush, shrubs, trees, loose debris and other encumbrances except for trees marked to remain.
 - 3. Boxing and protecting all trees, shrubs, lawns and the like within areas to be preserved. Relocating trees and shrubs, so indicated on the Drawings, to designated areas.
 - 4. Repairing all injury to trees, shrubs, and other plants caused by site preparation operations shall be repaired immediately. Work shall be done by qualified personnel in accordance with standard horticultural practice and as approved by the Engineer.
 - 5. Removing topsoil to its full depth from designated areas and stockpiling on site where directed by the Engineer for future use.
 - 6. Disposing from the site all debris resulting from work under this Section.

1.02 STREET AND ROAD BLOCKAGE

- A. Closing of streets and roads during progress of the work shall be in compliance with the requirements of the Owner and other authorities having jurisdiction. Access shall be provided to all facilities remaining in operation.

1.03 PROTECTION OF PERSONS AND PROPERTY

- A. All work shall be performed in such a manner to protect all personnel, workmen, pedestrians and adjacent property and structures from possible injury and damage.
- B. All conduits, wires, cables and appurtenances above or below ground shall be protected from damage.
- C. Provide warning and barrier fence where shown on the Drawings and as specified herein.

PART 2 -- EXECUTION

2.01 CLEARING OF SITE

- A. Before removal of topsoil, and start of excavation and grading operations, the areas within the clearing limits shall be cleared and grubbed.
- B. Clearing shall consist of cutting, removal, and satisfactory disposal of all trees, fallen timber, brush, bushes, rubbish, sanitary landfill material, fencing, and other perishable and objectionable material within the areas to be excavated or other designated areas. Prior to the start of construction, the Contractor shall survey the entire Contract site and shall prepare a plan which defines the areas to be cleared and grubbed, trees to be pruned, extent of tree pruning, and/or areas which are to be cleared but not grubbed. This plan shall be submitted to the Engineer for approval. Should it become necessary to remove a tree, bush, brush or other plants adjacent to the area to be excavated, the Contractor shall do so only after permission has been granted by the Engineer.
- C. Excavation resulting from the removal of trees, roots and the like shall be filled with suitable material, as approved by the Engineer, and thoroughly compacted per the requirements contained in Section 02200, Earthwork.
- D. Unless otherwise shown or specified, the Contractor shall clear and grub a strip at least 15 ft. wide along all permanent fence lines installed under this Contract.
- E. In temporary construction easement locations, only those trees and shrubs shall be removed which are in actual interference with excavation or grading work under this Contract, and removal shall be subject to approval by the Engineer. However, the Engineer reserves the right to order additional trees and shrubs removed at no additional cost to the Owner, if such, in his opinion, are too close to the work to be maintained or have become damaged due to the Contractor's operations.

2.02 STRIPPING AND STOCKPILING EXISTING TOPSOIL

- A. Existing topsoil and sod on the site within areas designated on the Drawings shall be stripped to whatever depth it may occur, and stored in locations directed by the Engineer.
- B. The topsoil shall be free of stones, roots, brush, rubbish, or other unsuitable materials before stockpiling the topsoil.
- C. Care shall be taken not to contaminate the stockpiled topsoil with any unsuitable materials.

2.03 GRUBBING

- A. Grubbing shall consist of the removal and disposal of all stumps, roots, logs, sticks and other perishable materials to a depth of at least 6-inches below ground surfaces.
- B. Large stumps located in areas to be excavated may be removed during grading operations, subject to the approval of the Engineer.

2.04 DISPOSAL OF MATERIAL

- A. All debris resulting from the clearing and grubbing work shall be disposed of by the Contractor as part of the work of this Contract. Material designated by the Engineer to be salvaged shall be stored on the construction site as directed by the Engineer for reuse in this Project or removal by others.
- B. Burning of any debris resulting from the clearing and grubbing work will not be permitted at the site.

2.05 WARNING AND BARRIER FENCE

- A. The fence shall be made of a visible, lightweight, flexible, high strength polyethylene material. The fence shall be MIRASAFE as manufactured by Mirafi, Inc., or equal.
- B. Physical Properties

Fence:

Color:	International Orange
Roll Size:	4' x 164'
Roll weight:	34 lbs.
Mesh opening:	1-1/2" x 3"

Posts:

ASTM Designation:	ASTM 702
Length:	5 feet long (T-Type)
Weight:	1.25 #/Foot (min)
Area of Anchor Plate:	14 Sq. In.

- C. Drive posts 12 to 18 inches into ground every 10' to 12'. Wrap fence material around first terminal post allowing overlap of one material opening. Use metal tie wire or plastic tie wrap to fasten material to itself at top, middle and bottom. At final post, cut with utility knife or scissors at a point halfway across an opening. Wrap around and tie at final post in the same way as the first post.
- D. Use tie wire or tie wrap at intermediate posts and splices as well. Thread ties around a vertical member of the fence material and the post, and bind tightly against the post. For the most secure fastening, tie at top, middle and bottom. Overlap splices a minimum of four fence openings, tie as above, fastening both edges of the fence material splice overlap.

END OF SECTION 02100

SECTION 02930 - SEEDING AND SODDING

PART 1 - WORK INCLUDED

1.01 CLEAN-UP

Upon completion of the Project, the Contractor shall remove all debris and surplus construction materials resulting from his work. The Contractor shall grade the ground along each side of the pipe trenches and/or structures in a uniform and neat manner leaving the construction area in a shape as near as possible to the original ground line, or as shown on the Drawings.

PART 2 - PRODUCTS

2.01 SEED

Grass seed shall be mixed and guaranteed by the supplier to consist of the following:

Annual Rye	60 percent
Kentucky Bluegrass	20 percent
Falcon Fescue	20 percent

2.02 TOPSOIL

Topsoil shall be material stripped and stored under work of Section 02200 and shall be used for all work under this Section. If the quantity of stored topsoil is inadequate or if none has been salvaged from the Project site, the Contractor shall furnish at his own expense sufficient topsoil to properly install all work as specified herein. Topsoil shall be original surface loam obtained from well drained areas from which topsoil has not been removed previously, either by erosion, clearing and removal of trees or mechanical means. It shall not contain subsoil material and shall be clean and free of clay lumps, roots, stones or similar substances more than 2 inches in any dimension, debris, discarded fragments of building materials or weeds and weed seeds.

2.03 SOIL IMPROVEMENTS

- A. Commercial fertilizers shall be of analyses specified, or as recommended by the Agricultural Extension Service for treatment of topsoil in the area from which removed, and shall conform to the applicable state fertilizer laws. Fertilizer shall be uniform in composition, dry and free flowing, and shall be delivered to the site in the original, unopened containers, each bearing the manufacturer's guaranteed analysis. Any fertilizer which becomes caked or otherwise damaged, making it unsuitable for use, will not be accepted.

- B. Lime, if recommended for soil treatment by the Agricultural Extension Service, shall be ground limestone (Dolomite) containing not less than 85 percent of total carbonates, and shall be ground to such a fineness that 50 percent will pass through a 100-mesh sieve, and 90 percent will pass through a 20-mesh sieve. Coarser material shall be acceptable provided that required rates of application are increased proportionally on the basis of quantities passing the 100-mesh sieve.

PART 3 - EXECUTION

3.01 SEEDING AND SODDING

- A. After installation of the Project, topsoil shall be spread evenly to a minimum 4-inch depth and lightly compacted. No topsoil shall be spread in a frozen or muddy condition.
 - 1. Any stored topsoil remaining after work is in place shall be disposed of by the Contractor as directed by the Engineer.
- B. Soil improvement shall be made if and as recommended by the Agricultural Extension Service prior to seeding.
 - 1. Ground limestone, if required, shall be applied at the recommended rates per square yard and shall be thoroughly mixed into the topsoil.
 - 2. Fertilizers, if required shall be of analysis and rates per square yard as recommended in the topsoil analysis and shall be mixed lightly in the top few inches of topsoil.
- C. Immediately before any seed is to be sown, the ground shall be scarified as necessary and shall be raked until the surface is smooth, friable and of a uniformly fine texture. Areas shall be seeded evenly with a mechanical spreader at a rate of 2 pounds per 1,000 square feet, lightly raked and watered with a fine spray.
- D. After seed has been distributed, the Contractor shall cover areas that are likely to washout with straw to a depth of 1-1/2 inches.
- E. Seeded areas shall be protected and maintained by watering, regular mowing and reseeded as may be necessary to produce a uniform stand of grass. Maintenance shall continue throughout the guarantee period until a dense, uniform turf is established.
- F. All paved streets, roads, sidewalks, curbs, fences, stonewalls, lawns, etc., disturbed during construction shall be restored, repaired, or replaced to as good a condition as

existed prior to construction. All materials and workmanship shall conform to standard practices and specifications of the Owner and/or the Kentucky Department of Highways, whichever applies.

- G. The Contractor shall remove from the site all equipment, unused materials and other items at his expense. The construction site shall be left in a neat, orderly condition, clear of all unsightly items, before the Work is finally accepted.

END OF SECTION 02930

APPENDIX A

CITY OF NICHOLASVILLE, KY

GENERAL SPECIFICATIONS FOR THE CONSTRUCTION OF WATER FACILITIES, SEWERAGE FACILITIES, STREETS, AND STORM DRAINAGE FACILITIES

NOTE – The specifications in Appendix “A” shall supersede any ambiguities in “Division 1 - General Requirements” specifications

**GENERAL SPECIFICATIONS
FOR THE CONSTRUCTION OF
WATER FACILITIES, SEWERAGE FACILITIES,
STREETS, AND STORM DRAINAGE FACILITIES
CITY OF NICHOLASVILLE, KENTUCKY**

September 25, 1991
Rev. December 2011
Rev. July 2013
Rev. March 2020

Excerpts limited to construction
included in this Contract

Note: These specifications must be used in conjunction with Subdivision Regulations for the City of Nicholasville.

TITLE: General Specifications for the Construction of Water Facilities, Sewerage Facilities, Streets, and Storm Drainage Facilities, City of Nicholasville, Kentucky.

DATE: September 25, 1991 (Rev. December 2011, July, 2013, March 2020)

REGIONAL PLANNING

AGENCY: Bluegrass Area Development District

STATE PLANNING

AGENCY: Kentucky Department for Local Government

SOURCE OF COPIES: Nicholasville Planning Commission
City Hall
Nicholasville, Kentucky 40356

NO. OF PAGES: 42

ABSTRACT: These specifications represent a revision of the 1980 General Specifications for the City of Nicholasville, to incorporate changes adopted by the City Commission since that date, and to include revisions recommended by a Technical Review Committee composed of engineers, contractors, attorneys, and businessmen. These specifications are intended to assist not only the Planning Commission and Zoning Enforcement Officer, but also residents of Nicholasville in providing a minimum design standard and a vehicle for assurance of adequate construction of water facilities, sewerage facilities, streets, and storm drainage facilities.

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SECTION I WATER FACILITIES

Section I-1. GENERAL

Specifications given hereafter outline the minimum standards for materials, installation methods, testing procedures, and inspections required by the City of Nicholasville for the construction of water distribution mains, customer services, and other appurtenances necessary to provide adequate fire protection and maintenance operations.

Section I-2. SCOPE

The scope of these specifications is to set forth the policies of the City of Nicholasville regarding construction of potable water related facilities. Design of the facilities covered herein must be performed by and carry the seal and signature of a qualified registered Professional Engineer.

Section I-3. DISTRIBUTION MAINS

- (1) Definition - Distribution mains are those pipes 6 inches and larger in size used to transport large volumes of potable water to small areas.
- (2) Design - This section is given to set forth minimum design standards for water distribution mains. These are the minimum requirements acceptable to the City of Nicholasville, but are not given as a substitute for design by a qualified Professional Engineer.
 - (a) Pipe Sizes - Distribution mains shall be designed in accordance with all requirements of the Commonwealth of Kentucky Department for Environmental Protection, Division of Water. Pipes for domestic flow only shall be sized to provide a minimum residual pressure of 30 pounds per square inch (psi) at any meter considering a peak flow condition of 2 gallons per minute (gpm) draw off occurring simultaneously at each meter. The pipe shall be large enough to provide 1,000 gpm fire flow with 20 psi residual pressure from any fire hydrant. All distribution mains that are more than 500 feet long shall be looped to eliminate dead-end lines. Distribution mains that are looped and distribution mains that are designed for future extension shall be 8 inches or larger in size. A fire hydrant or a flushing hydrant (minimum 2-1/2 inch diameter outlet) shall be provided at the end of dead-end lines for flushing purposes. The City of Nicholasville shall provide the Design Engineer with flow and pressure data at a fire hydrant near each proposed connection to the City's water main. The Design Engineer shall provide the City with design data showing that the requirements listed herein have been met.

(Adopted: 03/19/20 Ordinance 003-2020)
 - (b) Valving - Gate valves of the same size as the distribution main shall be installed in the lines at each intersection and in such a manner that only the customers on one street between intersections will be without service whenever line repair or servicing is required. Additional valves shall be installed such that the distance between gate valves on distribution mains shall not exceed 1,000 feet.

(3) Materials - Water distribution mains may be constructed only of the following materials and to the specifications given hereafter:

- (a) Ductile Iron Pressure Pipe - Ductile Iron Pipe shall be centrifugally cast iron pipe with rubber "Push Joints". Pipe and fittings shall be designed in accordance with American Waterworks Association Standards A-21.1, C151 and C110. Pipe shall be full "enamelined" and given a bituminous coating. Pipe shall be Fastite, Boltite, or Tyton.
- (b) PVC Pressure Pipe - PVC plastic pressure pipe shall be PVC 1120 manufactured of Class 12454-A or Class 12454-B resin material with a hydrostatic-design-basis (HDB) rating of 4,000 psi at 73.4 degrees F (23 degrees C). PVC pipe must be NSF approved and bear the NSF seal. The pipe shall be designed, manufactured, and tested in conformance to the latest revision of the American Waterworks Association designation AWWA C900 and each length of pipe shall be so labeled. Each length of pipe shall be furnished and labeled to show that the outside diameter (O.D.) is equal to that for ductile iron and cast iron pipe. The pipe shall have a standard dimensional ratio (SDR) of 18 and 14 for Class 150 and 200 respectively. Pipe joints shall be rubber gasket push-on joints either constructed integrally with the pipe or as a separate coupling constructed of the same material and to the same pressure specifications as the pipe. SDR 14 Class 200 pipe shall be used if the static and/or working pressure is expected to exceed 100 pounds per square inch (psi).

(Adopted: 07-18-02 Ordinance 418-2002)

(4) Installation - All water lines shall be installed so as to have a minimum cover of 30 inches above the top of the pipe. Distribution mains shall be laid at least 10 feet horizontally from any existing or proposed sewer. The distance shall be measured edge to edge. In cases where it is not practical to maintain a 10 foot separation, the distribution main may be laid on an undisturbed shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer. This deviation will not be allowed for force mains. Distribution mains crossing sewers shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. At crossings, one full length of water pipe shall be located so both joints will be as far from the sewer as possible. Special structural support for the water and sewer pipes may be required. No connections shall be made to the City's water distribution system until the City specifically authorizes the connections.

- (a) Trenching - The walls of all excavations shall be vertical from the bottom of the excavation to a minimum of 1 foot above the top of the pipe. If necessary, the trench walls may be sloped from a point 1 foot above the pipe to the original ground line. Trench width at the top of the pipe shall not be less than 1 foot plus the outside diameter of the pipe, and shall not be greater than 2 feet plus the outside diameter of the pipe.
- (b) Bedding and Backfill - The pipe shall be bedded on at least 8 inches of No. 9 or No. 11 crushed stone, and shall be backfilled with No. 9 or No. 11 crushed stone for a minimum of 10 inches above the top of the pipe. Backfill above this cushion shall not contain pieces of rock larger than Six (6) inches in any dimension. When the trench excavation is

within a street (i.e. back of curb to back of curb), then the entire trench shall be backfilled to subgrade with No. 57 or No. 68 crushed stone from the top of the initial 18 inches bedding/backfill .

(Adopted: 03/19/20 Ordinance 003-2020)

- (c) Detectable Marking Tape - A continuous, detectable underground metalized mylar water line marking tape shall be placed directly above all water mains, 12 to 18 inches below finished grade, prior to final backfill of the trench. The marking tape shall be 2 inches wide minimum, blue in color, and shall bear a continuous printed inscription stating "CAUTION WATER LINE BURIED BELOW". The tape shall have integral wires, foil backing, or other means to enable detection by a metal detector when the tape is buried up to 3 feet deep. The metallic core shall be encased in a protective jacket or provided with other means to protect it from corrosion. Detectable marking tape shall be as manufactured by Lineguard, Inc., Wheaton, IL 60187, or equal.

(Adopted: 04-12-2001 Ordinance 364-2001)

Section I-4. FITTINGS

Fittings are defined as those items which are installed in a pipeline to change direction and include all bends, tees, crosses, and wyes necessary to provide a smooth transition from one direction to another.

- (1) Materials - Fittings used in the construction of distribution mains shall be bituminous coated ductile iron mechanical joint and shall be fully cement mortar lined.
- (2) Thrust Blocks - Thrust blocks shall be constructed at each fitting to adequately resist the thrust developed at each fitting. Each block shall be constructed of portland cement concrete with a compressive strength of not less than 3,000 psi at 27 days. No block shall be constructed to dimensions less than those given on the STANDARD DRAWINGS when the bearing surface is original undisturbed solid material. Whenever adequate bearing surfaces are not available, then the dimensions of the block must be increased to adequately resist the maximum thrust.

Section I-5. GATE VALVES AND BOXES

- (1) VALVES - All gate valves shall be AWWA, Class C valves or Resilient Seat valves and designed for a minimum water working pressure of not less than 200 psi and shall be given a shop test to successfully withstand a hydrostatic test of 300 psi. AWWA gate valves shall be iron body, fully bronze-mounted, double disc, parallel seated, with bell ends so as to be directly connected to pipe with rubber ring joints. Resilient Seat gate valves shall be iron body with bell ends so as to be directly connected to pipe with rubber ring joints, and shall meet all applicable AWWA standards. Valves shall open counter-clockwise. Valves shall have the interior thoroughly cleaned and shall be inspected in both the opened and closed positions just prior to installation. Valves shall be as manufactured by Mueller Co., Decatur, Ill., Any deviation from this valve shall be noted and specifically approved.

(Adopted: 03/19/20 Ordinance 003-2020)

- (2) VALVE BOXES - All valves in paved areas shall have adjustable two-piece cast iron valve

boxes and covers suitable for 24 to 36 inch pipe cover. Valves located outside paved areas may have 6 inch diameter PVC boxes with cast iron or aluminum castings specifically designed to be fastened to the top of the PVC for the covers. Covers shall be cast iron and stamped "WATER". The tops of valve boxes located outside paved areas shall be set at finish grade in a minimum 18 inch square concrete slab. All aluminum surfaces that will be in contact with concrete shall receive a bitumastic coating prior to placing the concrete. Earth shall be thoroughly tamped under the concrete slab. Valve boxes, castings, and lids shall be as manufactured by Tyler Pipe, Tyler, Texas, or equal as approved by the City or their authorized representative.

Section I-6. FIRE HYDRANTS

Fire hydrants within the Nicholasville city limits shall be located on lines 6 inches or larger in size, and shall meet the minimum flow and pressure requirements of 1,000 gpm at 20 psi residual pressure. Fire hydrants shall be installed at all street intersections, and at other places as necessary to provide a spacing not to exceed 500 feet between the hydrants as measured along public right-of-way. Additional fire hydrants shall be installed in multi-family residential, commercial, and industrial areas so that buildings are not located more than 250 feet from a hydrant, and so that buildings requiring a sprinkler system are not located more than 150 feet from a hydrant. All fire hydrants shall be installed such that nozzles face roadway. Fire hydrants shall be rodded to the mechanical joint using stainless steel rodding, or mechanical joint anchor fittings to restrain the hydrant and valve to the water main in addition to the required concrete kicker. Per detail the hydrant valve shall be located at the main. Upon installation, and prior to acceptance by the City of Nicholasville for operation and maintenance, each fire hydrant shall be flow tested and certified by a licensed professional engineer to meet the minimum flow and pressure requirements.

(Adopted: 03/19/20 Ordinance 003-2020)

Fire hydrants outside the Nicholasville city limits shall be located on lines 6 inches or larger in size, and shall meet the minimum flow and pressure requirements of 250 gpm at 20 psi residual pressure. If the minimum flow and pressure requirements can be met, fire hydrants shall be installed at all street intersections, and at other places as necessary to provide a spacing not to exceed 500 feet between the hydrants as measured along public right-of-way. Additional fire hydrants shall be installed outside of public right-of-way in other places requested by the City of Nicholasville. Fire hydrants shall be installed on the opposite side of the street from the water main as shown on the STANDARD DRAWINGS, unless stainless steel rodding, or mechanical joint anchor fittings are used to restrain the hydrant and valve to the water main. Upon installation, and prior to acceptance by the City of Nicholasville for operation and maintenance, each fire hydrant shall be flow tested and certified by a licensed professional engineer to meet the minimum flow and pressure requirements.

All fire hydrants shall be of the compression type, with cast iron body, fully bronze-mounted, have a mechanical joint 6" shoe, suitable for a working pressure of 200 psi and shall be in accordance with the latest specifications of the AWWA. Hydrants located within the Nicholasville city limits shall have two pumper nozzles, and hydrants located outside the Nicholasville city limits shall have two hose nozzles.

Fire hydrants shall be constructed in a manner permitting withdrawal of internal working parts without disturbing barrel of casing. Hydrants shall be provided with sliding frost cases or a porous fill around barrel. Valve, when shut, shall be reasonably tight if upper portion of barrel should be broken off. Valve opening shall be at least 5-1/4 inches in diameter. There shall be no chattering under any conditions of operation. Each hydrant shall be shop tested to a hydrostatic pressure of 300 psi with valve in both opened and closed position. Hydrants shall open counter clockwise. The direction of opening shall be cast in the head of the hydrant. Hydrants shall be painted with one coat of red lead and two finishing coats of Hydrant Enamel, fire department red, in color.

Fire hydrants shall have bell ends for receiving rubber rings for direct joining to pipe and shall be as manufactured by Mueller Co., Decatur, Illinois, Super Centurion 200, 2-way catalog number A-425 for hydrants located within the Nicholasville city limits and Super Centurion 200, 2-way catalog number A-422 for hydrants located outside the Nicholasville city limits.

(Adopted: 04-12-07 Ordinance 645-2007)

Section I-7. FLUSHING HYDRANTS

Fire hydrants shall be used at the end of all lines 6 inches or larger for the purpose of flushing. Flushing hydrants shall be installed at the end of dead-end distribution mains smaller than 6 inches.

Flushing hydrants shall be Mainguard #78 as mfg. by Kupferle, St. Louis, Mo., or equal as approved by the City or their authorized representative.

(Adopted: 03/19/20 Ordinance 003-2020)

Section I-8. SERVICES

This part of these specifications includes all necessary construction and supplies required to bring the water from the distribution main to the customers side of the meter. Services shall include the service saddle, corporation stop, copper pipe service line, meter yoke, and meter vault.

- (1) Service Saddles - Service saddles shall be brass, AWWA taper CC threads as manufactured by Mueller, Decatur, ILL, or The Ford Meter Box Company, Inc., Wabash, Indiana or Smith-Blair, Inc., South San Francisco, CA.

(Adopted: 03/19/20 Ordinance 003-2020)

- (2) Corporation Stops - Corporation stops shall be brass, AWWA taper CC threads as manufactured by The Ford Meter Box Company, Inc., Wabash, Indiana or Mueller Co., Decatur, Ill.

- (3) Service Lines - Service Lines shall not be connected any closer than 24" to a bell/fitting joint to of main and service connects shall be spaced a minimum of 24" apart. Service Lines up to and including the 1 inch size shall be the type "k" copper. Service lines larger than 1 inch shall be Copper, Brass, Ductile Iron or PVC meeting the material and installation

requirement listed for Distribution Mains. In the event that elbows are needed, copper or threaded brass will be required, and plans must be approved by the appropriate utility prior to installation. If PVC pipe is used in service connections, glued joints will not be permitted, and connections to corporation stops and meter setters must be by compression/male adapter fittings. Copper service lines installed under public streets shall be encased in 3 inch PVC pipe or conduit extended from back of curb to back of curb. The service line shall be installed so as to have a minimum cover of 30 inches in a straight line perpendicular to the centerline of the street and shall be of the specified material from the distribution main to the meter vault. Service lines shall extend a minimum of 24 inches beyond the meter setters on the customers' side of the meter, and into the individual properties where they shall be capped. Joints, if required, will not be permitted at closer intervals than 10 feet. Joints for copper pipe shall not be located under streets. If a joint is required for a copper service line, it shall be made by using a brass compression fitting. All service lines shall be installed with a corporate stop. Service lines installed by the customer on his side of the meter can be material of his choosing so long as the material complies with State requirements. The size of the service line shall not be less than that given in Table I for the number of equivalent residual units.

(Adopted: 07-02-09 Ordinance 739-2009)

TABLE I
MINIMUM SIZES OF WATER SERVICE LINES
NOT EXCEEDING 100 FT. IN LENGTH

<u>No. Residential Equivalent Units</u>	<u>Size of Service Line</u>
1	3/4"
2	1"
3-6	1-1/4"
7-12	1-1/2"
13-16	2"
26-50	2-1/2"
Over 50	3"

- (4) Meter Setters - Meter Setters for 3/4" services shall be AWWA 5/8" X 3/4" with brace eye, cutoff, check valve at the meter outlet, and all-purpose fittings (brass). Meter setters for 1" services shall have brace eyes, cutoff, check valve at the meter outlet, and all-purpose fittings (brass). Meter setters for 1-1/2" and 2" services shall be for 1-1/2" and 2" flanged meters and shall have brace eyes, key valve inlets, angle check valve outlets, bypass, and female iron pipe inlets and outlets. It shall be necessary to contact the appropriate utility for the type of meter setter to be used for services larger than 2". All meter setters shall be as manufactured by the Ford Meter Box Company, Inc., Wabash, Indiana or Mueller Co., Decatur, Ill. The riser height shall be sufficient to place the meter within 24 inches of the meter vault lid.

(5) Meter Vaults

- (a) Boxes - The boxes for meter vaults shall be polyethylene with an inside diameter of 18 inches for 3/4" single services, 24 inches for 1" and duplex services, 30 inches for 1-1/2" services, and 36 inches for 2" services. It shall be necessary to contact the appropriate utility for the type of meter vault to be used for services larger than 2". Extension rings shall be required for all boxes larger than 18 inches in diameter.
- (b) Cover and Lid - The cover and lid shall be cast iron with standard pentagon bolt as manufactured by the Ford Meter Box Company, Inc., Wabash, Indiana, Catalog No. C32 or equal if located outside of the City of Nicholasville service territory; Catalog No. C32-T with one 1-3/4" hole for single 3/4" services within the City of Nicholasville service territory; and Catalog No. C32-TT with two 1-3/4" holes for double meter settings within the City of Nicholasville service territory. Cast iron flat top covers and lids shall be, used only at locations specifically approved by the City of Nicholasville for replacements of existing covers and lids and shall be as manufactured by Vestal MFG, Sweetwater, Tennessee.

(6) Location of Meter Vaults

- (a) Residential - Water service lines and meter vaults shall be installed at the approximate mid-point of each front property line at finish grade utilizing a single meter setting for single family dwellings and a double meter setting for duplexes for lots with street frontages greater than 50 feet. Double meter settings may be installed on common side lot lines for townhouses if the location complies with the approved Development Plan lots with street frontages of 50 feet or less.
- (b) Commercial and Industrial - It shall be necessary to contact the appropriate utility for the location of meter vaults and water service lines on commercial and industrial lots.
- (c) Meter vaults shall be installed a minimum of 4 feet horizontally from the distribution main but shall not extend more than 10 feet beyond the street right-of-way. They shall not be located and/or installed in parking lots, driveways or sidewalks. They shall be located on house side of main.

(Adopted: 03/19/20 Ordinance 003-2020)
(Adopted: 03-30-00 Ordinance 330-2000)

Section I-9. SPECIAL CONNECTIONS

This section of these specifications outlines the policies of the City of Nicholasville, Kentucky, in regard to special connections.

- (1) Fire Protection Service - When it is necessary for any customer to have full line flow for fire protection purposes, there shall be installed in the line a device known as a "Detector Check Valve" with a metered by-pass. A detailed drawing of the Detector Check Valve Vault shall be submitted to the City for review and approval prior to installation. The metered by-pass

shall be of sufficient size to carry normal usage without activating the "Detector Check Valve". The Detector Check Valve shall be as manufactured by the Kennedy Valve Manufacturing Company Figure Number 1371 Model Number B-2 or equal as approved by the City. Owners that install or upgrade fire suppression systems that require a fire department connection (FDC) shall install a 5 inch "Storz"(tm) fitting with cover attached to a 30 degree down turn on the fire departments connection outlet fitting. The distance from the ground to the bottom edge of the fitting shall be no less than 24 inches or no more than 30 inches. All FDC's shall be located at least 15 feet away from the structure, unless the installation of a new sprinkler system or substantial upgrade of a sprinkler system is in an existing building and a remote FDC away from the building is not possible. The FDC shall not be obstructed in any way that would hinder access or operation from a fire department apparatus. If the FDC is in an un-curbed vehicle accessible area, it shall be protected by brightly colored traffic bollards engineered to protect it from vehicular traffic. The owner and/or operator during renovation or new installation shall install or upgrade the system to include Double Check Valves installed within the sprinkler pit after the Post Indicator Valve (PIV) line. All PIV installations or upgrades shall be electronically monitored and painted bright red with the indicator sight glass facing the roadway and/or FDC. All FDC and PIV installations shall have a marker affixed on or near the device that clearly indicates the property or area that the device serves. A fire hydrant meeting City of Nicholasville specifications shall be installed or located within 50 feet of the FDC and shall be located within 10 feet of a paved surface roadway capable of access by and of supporting a fire apparatus.

(Adopted: 09-20-07 Ordinance 674-2007)

- (2) Other Special Connections - All other requests for special connections shall be made to the City in writing explaining the type of connection and the purpose for which it will be used. The City will then consult its engineer for recommendations regarding the requested special connection.

Section I-10. TESTING AND STERILIZATION

This section includes the minimum requirements for testing and sterilization of the completed project. The Developer and/or Contractor shall notify the City at least 24 hours prior to any testing. The water distribution systems shall not be placed into service until written test results for all tests are furnished to the City of Nicholasville.

(Adopted: 03/19/20 Ordinance 003-2020)

- (1) Testing - All lines shall be laid, joints completed, fittings and valves installed, service lines and meter yokes installed and the system backfilled prior to testing. Each section of the system shall be subjected to a pressure of not less than 150 psi for Class 150 pipe and 200 psi for Class 200 pipe. The entire section shall be subjected to and maintained at the pressures indicated above for a period of 24 hours. Allowable leakage for any section shall be calculated in proportion to the amounts of each length of pipe used within the section being tested. Should any test of sections of pipe line disclose leakage per mile greater than the specified limit, the defective part or parts shall be located and repaired until leakage is within specified limits. No section will be accepted until leakage, when tested as indicated above, meets the following requirements of Table II.

TABLE II
ALLOWABLE LEAKAGE

Length of <u>Pipe</u>	Allowable Leakage Per 24 Hours Per Inch Nominal <u>Pipe Diameter Per Mile</u>
3' - 3"	25 gallons
6' - 6"	20 gallons
10'	15 gallons
13'	15 gallons
16'	13 gallons
18'	13 gallons
20'	12 gallons

- (2) Sterilization - All extensions to existing water distribution systems shall be thoroughly disinfected before being placed into service, by the use of chlorine or chlorine compounds in such amounts as to produce a concentration of at least 50 ppm and a residual of at least 25 ppm at the end of 24 hours and followed by a thorough flushing. Samples shall be taken at the beginning and end of the 24 hour period, and certified test results including sample locations shall be furnished to the City of Nicholasville. Table III (See Page 12) gives the theoretical amount of HTH to produce 50 ppm of chlorine in pipe. Cl₂ solution must be injected through a hydrant or corporation stop. Granular HTH can not be distributed through the new pipe during installation. It must be injected through corporation and/or hydrant.

(Adopted: 03/19/20 Ordinance 003-2020)

- (3) Bacteriological Tests - Bacteriological samples shall be taken by a certified tester and shall be submitted for each extension to existing water distribution system after disinfection and flushing. A core zone which includes up to the first 1/2 mile shall be established. Two samples shall be taken from the core zone. Additionally, one sample per mile for each mile of new distribution line shall be taken. New water distribution lines shall not be placed into service until the proper number of representative bacteriological samples taken at the specified points are examined and are shown to be negative. Each sample shall include the sample location, and notification of the analytical results shall be furnished to the City of Nicholasville.

TABLE III
AMOUNT OF HTH REQUIRED TO PRODUCE 50 PARTS PER MILLION OF CHLORINE IN PIPE
CHLORINE IN PIPE

Normal Pipe Size	Contents in 100 Ft. Section			Amount of HTH required per 100 ft. length to give 50 ppm available chlorine			Length of pipe in which one ounce of HTH will produce 50 ppm available Cl ²
	Cu. Ft.	Lbs.	Gals.	Ounces (approx.)	Pounds	Tablespoons Level	
4	8.75	545	65.5	5/8	0.039	2	168.0
6	19.65	1,225	147.0	1-3/8	0.087	4	71.9
8	34.90	2,180	261.0	2-1/2	0.159	7-1/3	39.4
10	54.55	3,405	408.0	3-7/8	0.244	11-1/3	25.6
12	78.55	4,905	587.0	5-5/8	0.350	16-1/3	17.9

Section I-11. EROSION AND SEDIMENTATION CONTROLS

Temporary erosion and sedimentation controls shall be erected and maintained for all disturbed and/or regraded areas during construction, and until final controls become effective. Erosion and sedimentation controls shall be detailed on the Construction Plans.

- (1) Erosion Control - Erosion controls include, but are not limited to, interceptor ditches, seeding, mulching, watering, and reseeding on all disturbed surfaces including regraded areas, borrow areas, stockpiles, and waste areas. Areas disturbed on the construction site which will not be redisturbed within a 60 day period, shall be seeded to produce a temporary cover of grass. Fertilizer (10-10-10, or equivalent) shall be broadcast uniformly on the areas to be seeded at a rate of 400 pounds per acre. The mixture of seeding shall be 30 pounds of tall fescue and 20 pounds of ryegrass per acre. Seed shall be broadcast evenly over the areas to be seeded, and cultipacked or otherwise pressed into the soil. Seed and fertilizer may be mixed together and applied after the soil has been prepared. After the seed has been sown, the areas so seeded shall be mulched with straw at a rate of approximately one bale per 2,000 square feet (approximately 1 inch loose depth).
- (2) Sedimentation Control - Sedimentation controls include, but are not limited to, silt fences, staked straw bales, silt dams, and silt traps. Silt control measures shall be used to prevent off-site siltation, and silt shall be removed periodically as required.

Section I-12. APPROVALS

This section provides information related to the various approvals that are required prior to start of construction and prior to acceptance by the City of Nicholasville of the completed project.

- (1) State Approval - Four sets of plans carrying the seal and signature of a registered Professional Engineer for the proposed construction, along with a copy of a letter from the City of Nicholasville, or appropriate utility, stating that the project is being reviewed and water will be supplied, must be submitted to the Commonwealth of Kentucky Department for Environmental Protection, Division of Water, for their review and approval. No construction shall take place prior to approval from the Commonwealth of Kentucky. Upon completion of the construction, the City shall certify to the Department for Environmental Protection, Division of Water that the water supply facilities were constructed and tested in accordance with the approved plans, specifications, and stipulations listed in the Division of Water approval letter.
- (2) Planning Commission Approval - Two sets of the water distribution plans shall be submitted to the Planning Commission Staff Office for review. The Planning Commission's review will be to verify that the project complies with the requirements of the Nicholasville Subdivision Regulations and General Specifications, and that the proposed construction integrates satisfactorily into the City's distribution system. After the review, eight sets of the plans shall be submitted for written approval. At least one set shall contain the original seal and signature of a registered Professional Engineer on each sheet. Prior to the Planning Commission's approval of the Construction Plans for the water distribution system, the Developer shall make available to the City a copy of the approval letter from the

Commonwealth of Kentucky. Construction shall not begin until the Planning Commission has issued written approval of the plans. Upon completion of the construction, the Developer shall make a written request to the Planning Commission Staff Office for a detailed inspection by the City for acceptance of the public facilities.

- (3) Changes - The Developer's Engineer may make minor changes to the approved plans if written notification of the changes is given to the Planning Commission Staff Office, if such changes meet the requirements of the Nicholasville Subdivision Regulations and General Specifications, and if the changes do not violate any City or State regulation. Any changes from the approved plans that are not in compliance with the regulations must be approved by the Commonwealth of Kentucky Department for Environmental Protection, Division of Water, and by the Planning Commission prior to making the proposed changes.
- (4) As-built Drawings - After the completion of the construction, the Developer shall submit six sets of prints and one set of reproducible mylars to the City for the As-Built System. The As-Built Drawings shall consist of the Construction Plans with notations of changes shown.

Section I-13. INSPECTION

All water system construction shall be inspected by the City's authorized representative before covering to insure that the construction progresses in compliance with the approved plans and specifications; however, small area spot coverings of the water line prior to inspection are acceptable to prevent flotation. The City's authorized representative shall have the right to require any part of the water system covered prior to inspection, to be uncovered prior to approval. The Developer and/or Contractor shall provide ready access to the construction site for inspection by City representatives throughout the construction period. If a City representative determines that the construction is not in compliance with the approved plans or specifications, he shall notify the Contractor and the Developer. The City's authorized representative shall have the right to stop the construction until the deficiencies are corrected.

Section I-14. PENALTIES

Failure to construct the improvements in accordance with approved plans and specifications, and the regulations contained herein (including violations of conditions or safeguards established in connection with approval) shall constitute a misdemeanor. Any person who so violates these requirements shall upon conviction thereof be fined not less than one hundred dollars (\$100.00) but not more than five hundred dollars (\$500.00) for each conviction. Each day of violation shall constitute a separate offense.

The Owner or Developer of any subdivision and any engineer, contractor, builder, agent, employees or other person who commits, participates in, assists in, or maintains such violation may each be found guilty of a separate offense and suffer the penalties herein provided. Nothing herein contained shall prevent the City from taking such other lawful action as is necessary to prevent or remedy any violation.

SECTION III STREETS

Section III-1. GENERAL

Specifications given hereafter outline the minimum standards for materials, installation methods, testing procedures, and inspections required by the City of Nicholasville for the construction of streets, including curbs & gutters and sidewalks. The basic guidelines to be followed shall be the Kentucky Department of Highways' design and construction procedures except as herein modified.

Section III-2. SCOPE

The scope of these specifications is to set forth the policies of the City of Nicholasville regarding construction of streets. Design of the facilities covered herein must be performed by and carry the seal and signature of a qualified registered Professional Engineer.

Section III-3. PAVEMENT DESIGN

All streets shall have a CBR test conducted by a qualified geotechnical engineer licensed in the State of Kentucky and produce a Geotechnical Report to submit with the construction plans with a pavement recommendation. CBR test shall be conducted two (2) per street or one (1) for every 1000 linear feet of roadway, which ever is greater. The Geotechnical Engineer will make a recommendation based on the CBR value to determine if the minimum pavement section is adequate for roadway. Pavement section modifications or subgrade improvements will be based on the recommendation of the Geotechnical Engineer. The minimum pavement section will be 8 inches of DGA, 4 inches of asphalt base and 1.5 inches of asphalt surface.

(Adopted: 03/19/20 Ordinance 003-2020)

Section III-4. STREETS

All streets shall be constructed to the dimensions and geometric designs given in the Subdivision Regulations for Nicholasville, Kentucky. The specifications outlined herein shall apply only to residential construction. When streets are constructed to serve industrial and commercial users, each street shall be designed to adequately carry the anticipated loads without road failure. However, in no instance shall the base and pavement thicknesses be less than that required hereinafter for residential construction. Pavement design calculations shall be provided for review by the City for commercial and industrial areas. Construction shall not commence until City approval of the design has been secured.

- (1) Subgrades - Subgrades for streets shall be constructed of thoroughly compacted material. Compaction and placement of subgrade material shall meet the requirements of the Kentucky Department of Highways. The Developer and/or Contractor shall notify the City at least twenty-four (24) prior to any testing. Costs of compaction testing shall be the responsibility of the Developer and/or Contractor.

(Adopted: 03/19/20 Ordinance 003-2020)

- (a) Subgrades of streets in rock cuts or rock outcrops areas shall be cut to the elevation of the bottom of the base material. Overcut areas shall be filled with compacted material to bottom of base elevation prior to placement of base. All high areas shall be removed prior to placement of base material.
- (b) Prior to placing any base material, the 1/4 inch per foot crown of the subgrade shall be verified by the City, and compaction shall be verified by an independent testing facility approved by the City or by the City's authorized representative. No base material shall be placed unless the subgrade compaction is at least 95 percent Standard Proctor (ASTM D698). The in-place density shall be determined by using nuclear gauges. Tests shall be made at such frequencies as deemed necessary to ensure that the entire subgrade is compacted to the specified density. The maximum test interval shall be 100 feet. Written test results shall be furnished to the City of Nicholasville prior to acceptance by the City.

(Adopted: 03/19/20 Ordinance 003-2020)

- (2) Base Material - Base material shall consist of dense graded crushed limestone meeting the Kentucky Department of Highways' specifications for this material. The Developer and/or Contractor shall notify the City at least twenty-four (24) hours prior to any testing. Costs of compaction testing shall be the responsibility of the Developer and/or Contractor. No base material shall be placed until a proof-roll is conducted and witnessed by the City or by the City's authorized representative. The proof-roll shall be performed by an on-road, tri-axle, fully loaded dump truck.

(Adopted: 03/19/20 Ordinance 003-2020)

- (a) Placement of the base material shall be made in layers not to exceed 4.5 inches compacted depth. Each layer shall be compacted to a at least 95 percent Standard Proctor (ASTM D698). Each layer shall be tested by an independent testing facility approved by the City or by the City's authorized representative. Acceptability of compaction shall be determined by nuclear gages. Tests shall be made at such frequencies as deemed necessary to ensure that the entire base layer is compacted to the specified density. The maximum test interval shall be 100 feet. Written test results shall be furnished to the City of Nicholasville prior to acceptance by the City.

(Adopted: 03/19/20 Ordinance 003-2020)

- (b) Thickness of base material shall not be less than the minimum required pavement section specified in Section III-3 or the pavement section determined by the geotechnical engineer in the pavement design based upon CBR testing. Prior to

placing the surface material, the 1/4 inch per foot crown of the base material shall be verified by the Contractor.

(Adopted: 03/19/20 Ordinance 003-2020)

- (3) Surfacing - Surfacing for street construction may be asphaltic concrete or portland cement concrete, each meeting Kentucky Department of Highways' specifications. No material shall be placed until a proof-roll is conducted and witnessed by the City or by the City's authorized representative. The proof-roll shall be performed by an on-road, tri-axle, fully loaded dump truck.

(Adopted: 03/19/20 Ordinance 003-2020)

- (a) Asphalt surface and asphalt base shall not be less than the minimum required pavement section specified in Section III-3 or the pavement section determined by the geotechnical engineer in the pavement design based upon CBR testing. Placement and compaction shall be performed as specified in the latest specifications of the Kentucky Department of Highways. Prior to placement of the Class I surface, all street crossings for the sanitary sewers and water lines shall be made.

(Adopted: 07-02-09 Ordinance 743-2009)

(Adopted: 03/19/20 Ordinance 003-2020)

- (b) Portland cement concrete pavement shall consist of a minimum 10 inch thick slab of 3,500 psi concrete for arterial and collector streets or an 8 inch thick slab of 3,500 psi concrete for all other street classifications. Joints shall be scribed or sawed transversely at 25 foot intervals. A continuous joint shall be installed at the pavement centerline. Expansion joints shall be installed at 100 hundred foot intervals.

(Adopted: 04-12-07 Ordinance 644-2007)

Section III-5. CURBS AND GUTTERS

Materials used in construction of curbs and gutters shall be portland cement concrete with a compressive strength of 3,500 psi. Both curb and gutter shall be constructed as one unit. All subdivisions shall be constructed with box curb only. Refer to the STANDARD DRAWINGS for details. Curbs and gutters shall be constructed on at least 4 inches of compacted dense graded crushed limestone meeting the Kentucky Department of Highways' specifications, true to line and grade established for the finished street. Construction joints shall be installed at 500 foot intervals, and control joints shall be sawed transversely at 25 foot intervals to a minimum depth of 2 inches.

The curb shall be removed (only by sawing) to allow entrances, exits, and sidewalks to gradually slope to the street. Handicap ramps are required at all street intersections.

Section III-6. SIDEWALKS

Materials used in construction of sidewalks shall be portland cement concrete with a compressive strength of 3,500 psi. Sidewalks shall be at least 4-1/2 inches thick, 4 feet wide with expansion joints at 100 foot intervals, and scribed every 4 to 6 feet.

Sidewalks shall be higher than the elevation of the curb and sloping towards it with a slope not to exceed 1/2 inch per foot. The slope of the ground between the sidewalk and curb shall not exceed two to one (2H:1V).

(Adopted: 03/19/20 Ordinance 003-2020)

Section III-7. EROSION AND SEDIMENTATION CONTROLS

Temporary erosion and sedimentation controls shall be erected and maintained for all disturbed and/or regraded areas as per Section I-11.

Section III-8. APPROVALS

This section provides information related to the various approvals that are required prior to start of construction and prior to acceptance by the City of the completed project.

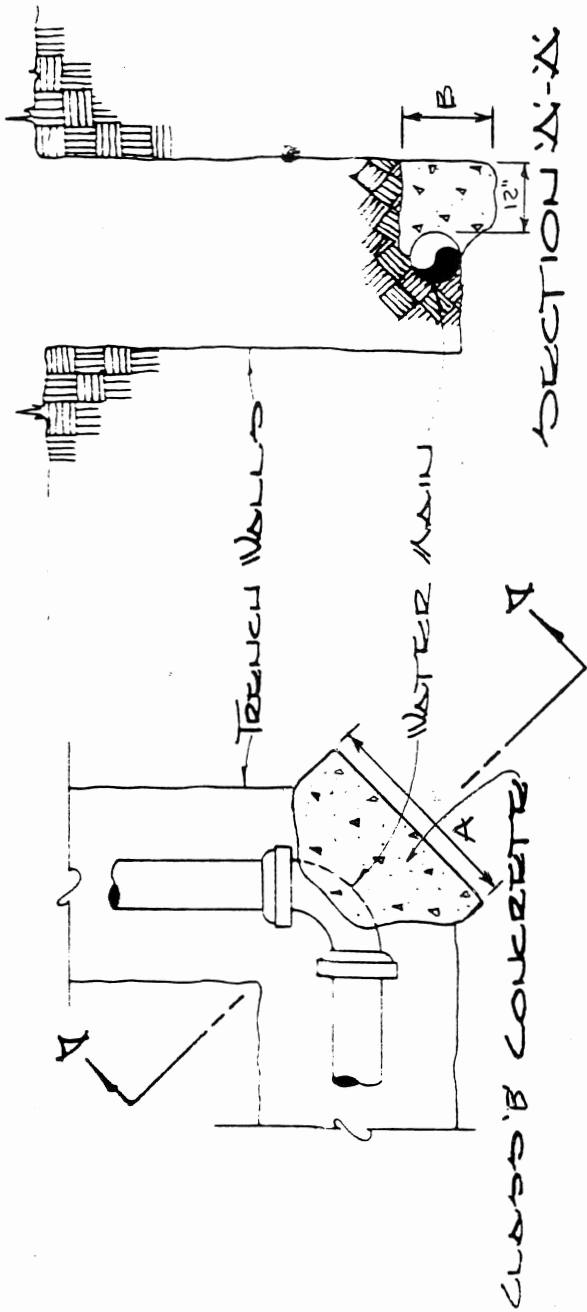
- (1) Planning Commission Approval - Two sets of the street plans shall be submitted to the Planning Commission Staff Office for review and approval. The Planning Commission's review will be to verify that the project complies with the requirements of the Nicholasville Subdivision Regulations and General Specifications, and that the proposed construction integrates satisfactorily into the City's system. After the review, eight sets of the plans shall be submitted for written approval. At least one set shall contain the original seal and signature of a registered Professional Engineer on each sheet. Construction shall not begin until the Planning Commission has issued written approval of the plans. Upon completion of the construction, the Developer shall make a written request to the Planning Commission Staff Office for a detailed inspection by the City for acceptance of the public facilities.
- (2) Changes - The Developer's Engineer may make minor changes to the approved construction plans if written notification of the changes is given to the Planning Commission Staff Office, if such changes meet the requirements of the Nicholasville Subdivision Regulations and General Specifications, and if the changes do not violate any City or State regulation. Any changes from the approved plans that are not in compliance with the regulations must be approved by the Planning Commission prior to making the proposed changes.
- (3) As-built Drawings - After the completion of the construction, the Developer shall submit six sets of prints and one set of reproducible mylars to the City for the As-Built System. The As-Built Drawings shall consist of the Construction Plans with notations of changes shown.

Section III-9. INSPECTION

All street construction shall be inspected by the City's authorized representative to insure that the construction progresses in compliance with the approved plans and specifications. The Developer and/or Contractor shall provide ready access to the construction site for inspection by City representatives throughout the construction period. If a City representative determines that the construction is not in compliance with the approved plans or specifications, he shall notify the Contractor and the Developer. The City's authorized representative shall have the right to stop the construction until the deficiencies are corrected.

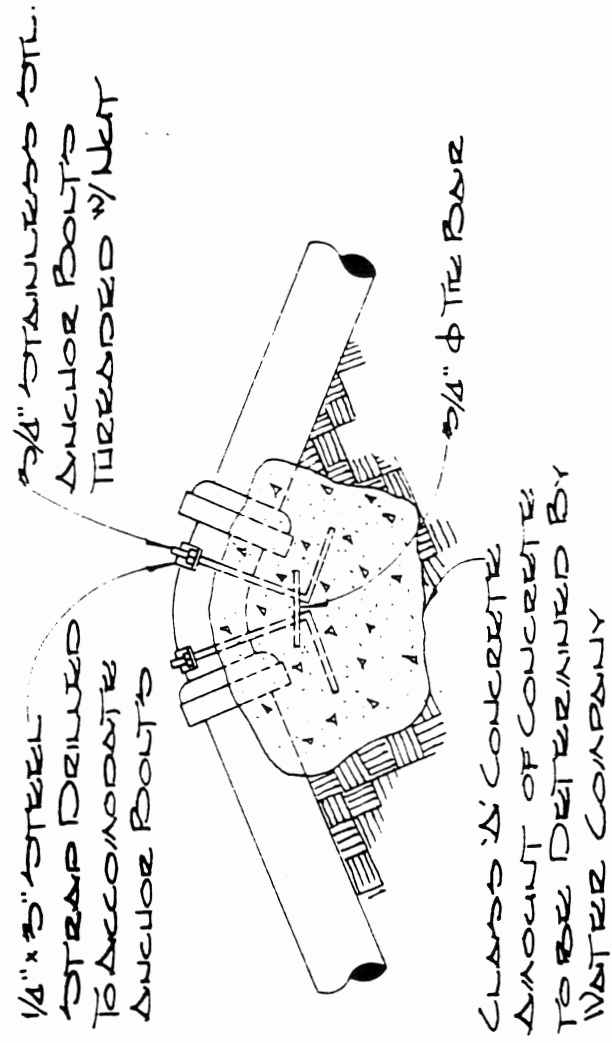
Section III-10. PENALTIES

Failure to comply with the approved plans and specifications shall be punishable as per Section I-14.

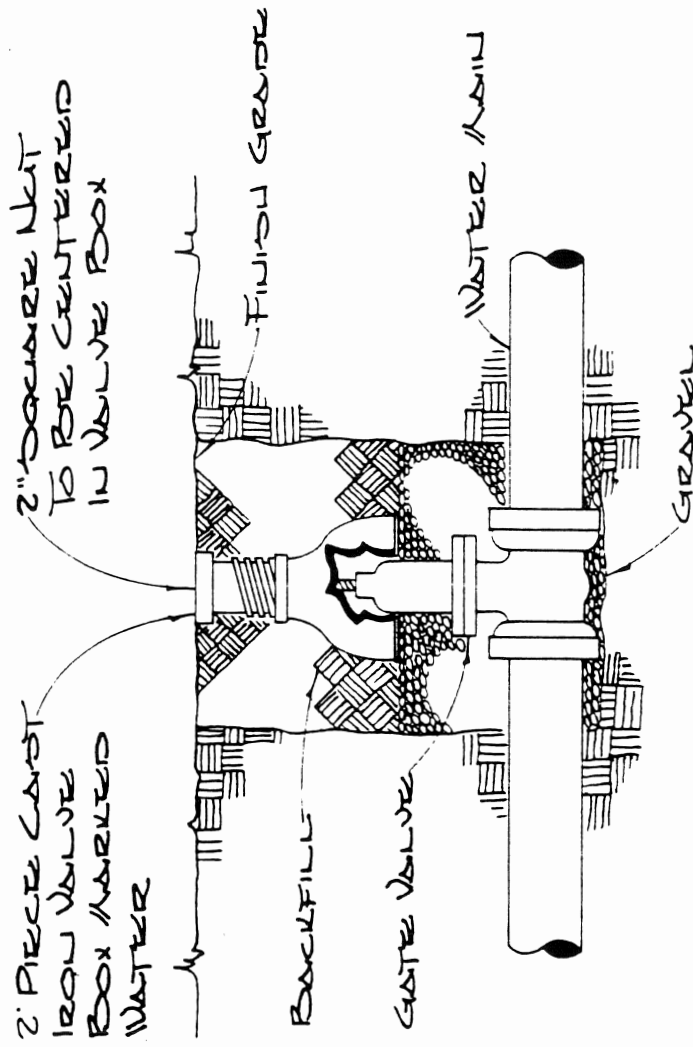


THRUST BLOCK PLAN & SECTION

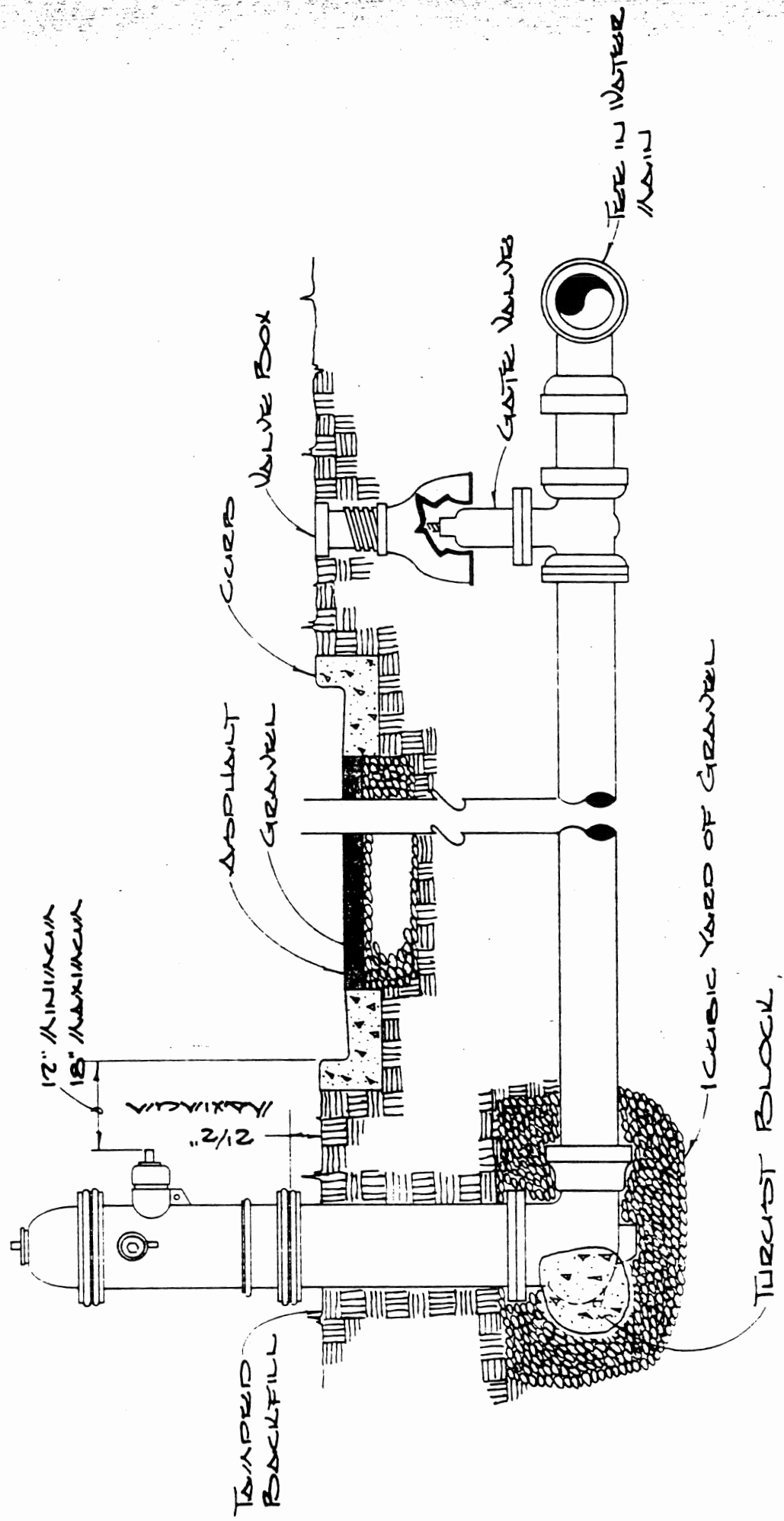
THRUST BLOCK SCHEDULE									
PIPE SIZE	DO. 0.00	DO. 0.00	DO. 0.00	DO. 0.00	DO. 0.00	DO. 0.00	DO. 0.00	DO. 0.00	DO. 0.00
12"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30"	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



ANCHOR BLOCKS

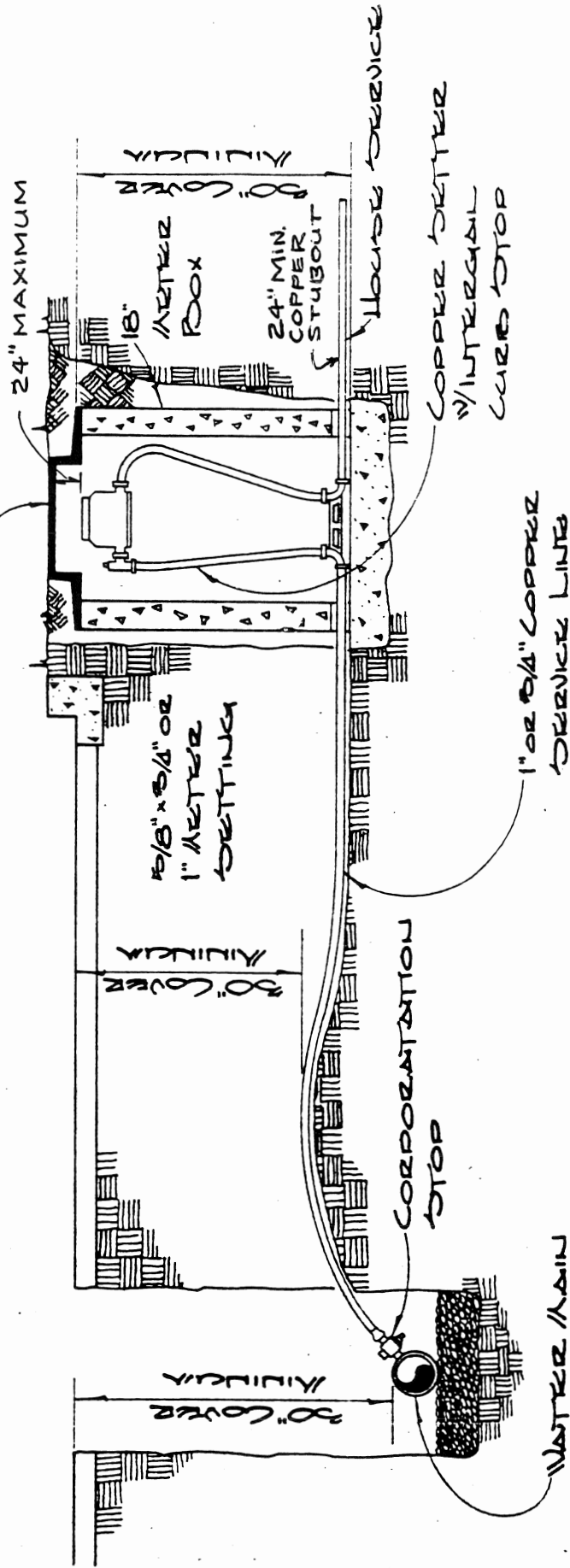


TYPICAL GATE VALVE SETTING

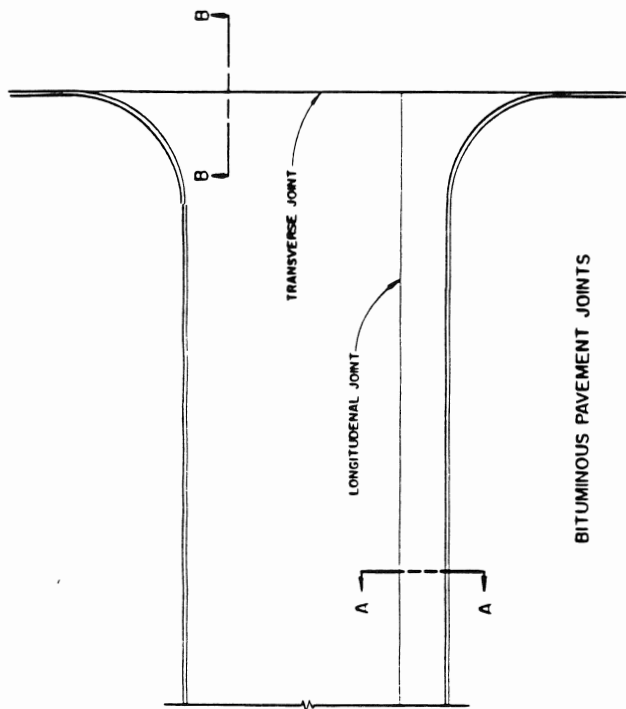


TYPICAL FIRE HYDRANT INSTALLATION

TYPE X NO. 32 FORD WATER
BOX COVER OR AN
APPROVED EQUIVALENT

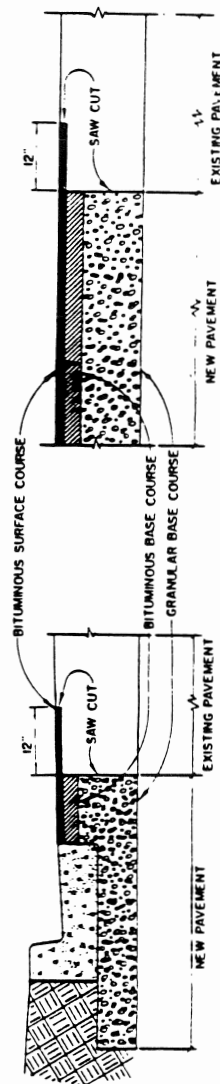


TYPICAL SERVICE CONNECTION



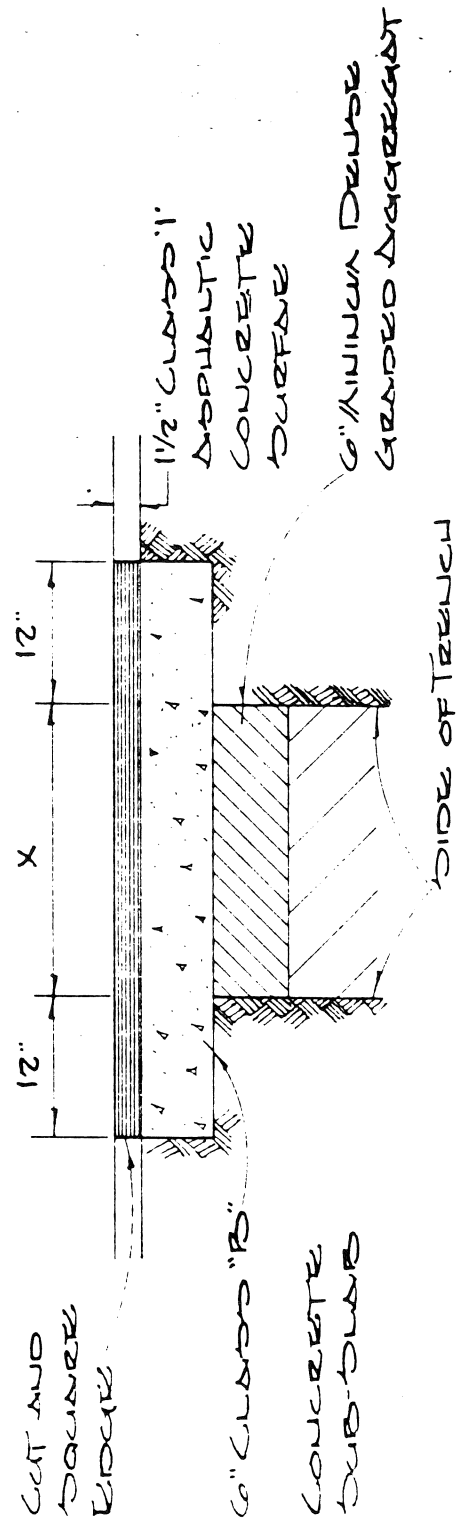
NOTE:

1. ALL SAW-CUTS SHALL BE NEAT AND STRAIGHT.
2. IMMEDIATELY BEFORE LAYING NEW BITUMINOUS COURSES, ALL SAW CUT EDGES SHALL BE CLEANED OF DUST AND DEBRIS AND SPRAYED WITH A BITUMINOUS TACK COAT.
3. EDGE KEY SHALL NOT BE REQUIRED IF BOTH EXISTING AND NEW PAVEMENT ARE TO RECEIVE AN OVERLAY AS PART OF THIS CONTRACT.

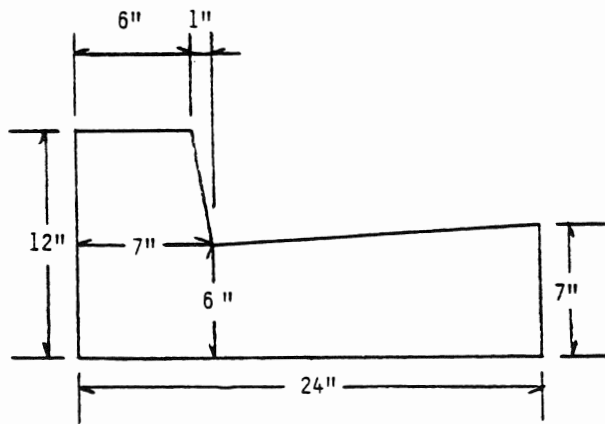


SECTION A-A
LONGITUDINAL EDGE KEY

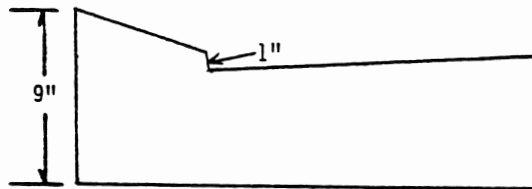
SECTION B-B
TRANSVERSE EDGE KEY



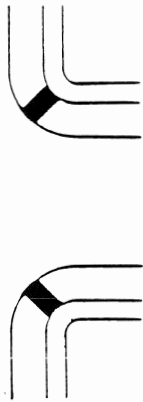
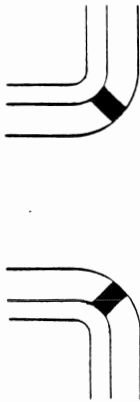
PAVEMENT REPLACEMENT



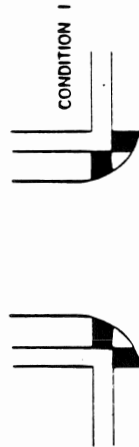
Standard Box Curb and Gutter



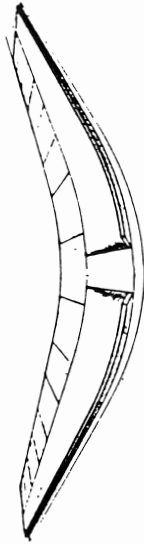
Entrance, Exit and Sidewalk Cut
(Dimensions other than shown remain as above)



RAMP TYPE 1
NORMAL TREATMENT FOR RESIDENTIAL LOCAL
AND COLLECTOR STREETS



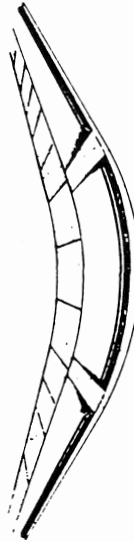
RAMP TYPE 2
NORMAL TREATMENT FOR ARTERIALS
AND SIGNALIZED INTERSECTIONS



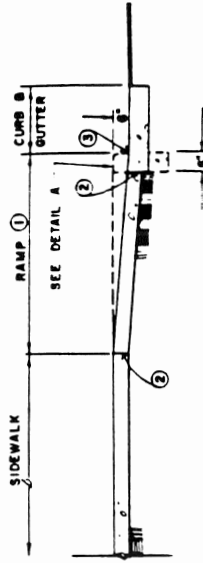
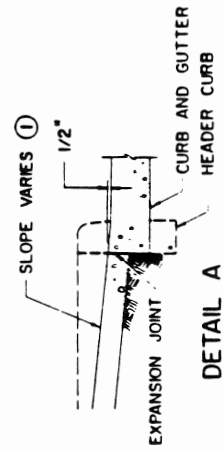
RAMP TYPE 1



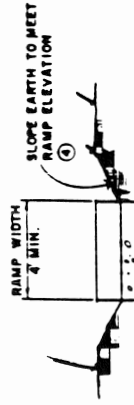
RAMP TYPE 2 CONDITION 1



RAMP TYPE 2 CONDITION 2



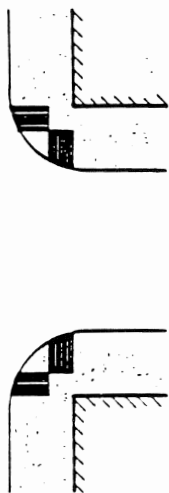
PROFILE RAMP TYPE 1 & 2



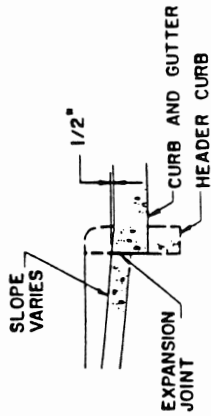
**CROSS SECTION
RAMP TYPE 1 & 2**

NOTES

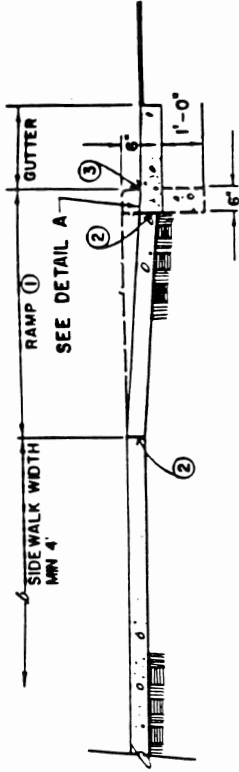
- 1 INLET LOCATIONS WILL VARY, DEPENDENT ON CROSS-WALK AND RAMP LOCATION.
- 2 THE RAMP SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE. A BROOM FINISH OR EQUAL NON-SKID FINISH IS REQUIRED.
- 3 THE NORMAL GUTTER LINE SHALL BE MAINTAINED THROUGH THE RAMP. RAMP SHOULD BE LOCATED WITHIN MARKED LIMITS OF CROSSWALKS.
- 4 MAXIMUM RAMP SLOPE 1" : 1'
- 5 1/2" EXPANSION JOINT AT BACK OF CURBLINE AND SIDEWALK LINE.
- 6 NO BUMP PERMITTED.
- 7 SLOPE VARIES UNIFORMLY TO A MAXIMUM OF 4"/FT AT GUTTER LINE



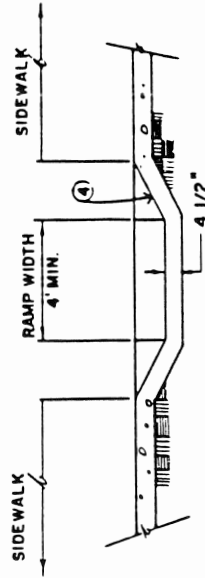
RAMP TYPE 3
NORMAL TREATMENT FOR SIDEWALK
ADJACENT TO CURB



DETAIL A



PROFILE RAMP TYPE 3

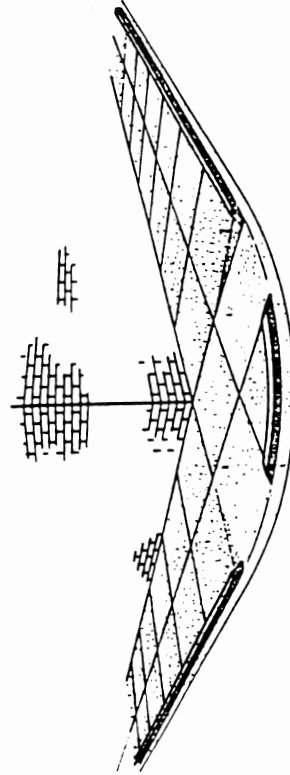


CROSS SECTION RAMP TYPE 3

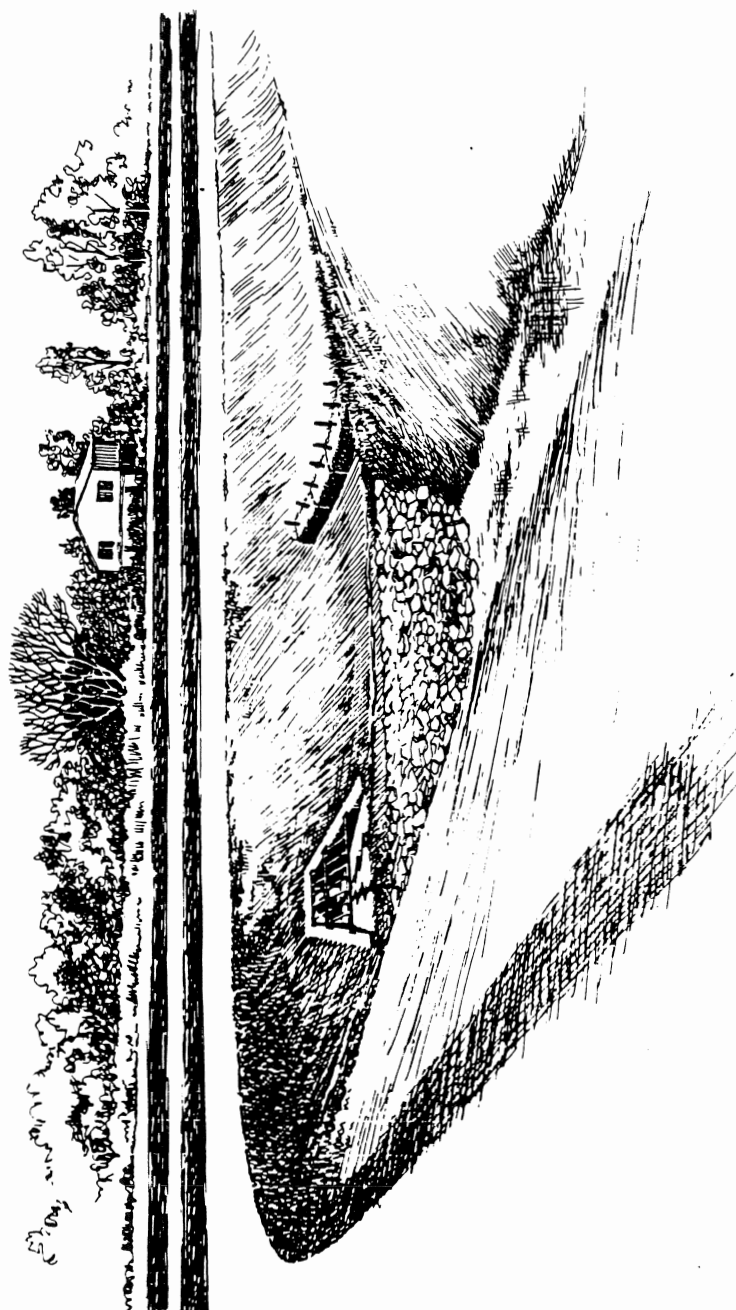
NOTES

INLET LOCATIONS WILL VARY, DEPENDENT ON CROSS-WALK AND RAMP LOCATION.
THE RAMP SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE. A BROOM FINISH OR EQUAL NON-SKID FINISH IS REQUIRED.
THE NORMAL GUTTER LINE SHALL BE MAINTAINED THROUGH THE RAMP.
RAMPS SHOULD BE LOCATED WITHIN MARKED LIMITS OF CROSSWALKS.

- ① MAXIMUM RAMP SLOPE 1" : 1'
- ② 1/2" EXPANSION JOINT AT BACK OF CURBLINE AND SIDEWALK LINE.
- ③ NO BUMP PERMITTED.
- ④ SLOPE VARIES UNIFORMLY TO A MAXIMUM OF 4 7/8" : 1' AT GUTTER LINE



RAMP TYPE 3



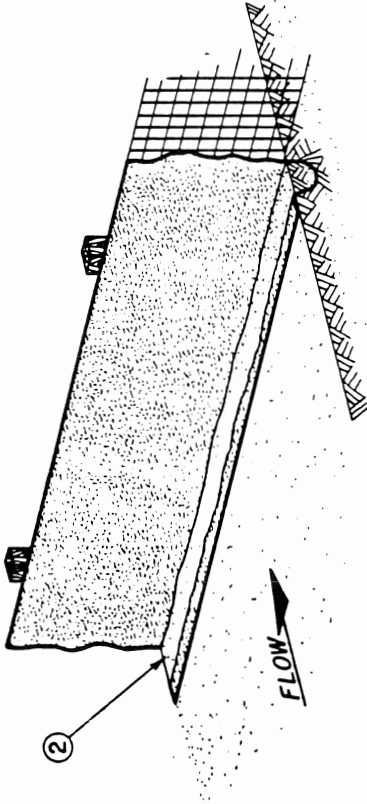
NOTES

This drawing depicts an example installation of Straw Bale, and Stone Silt Checks, and is for general guidance only. Silt Checks shall be constructed, measured, paid, maintained, and disposed of in accordance with Section 213 of the Standard Specifications and will not require precise construction lines.

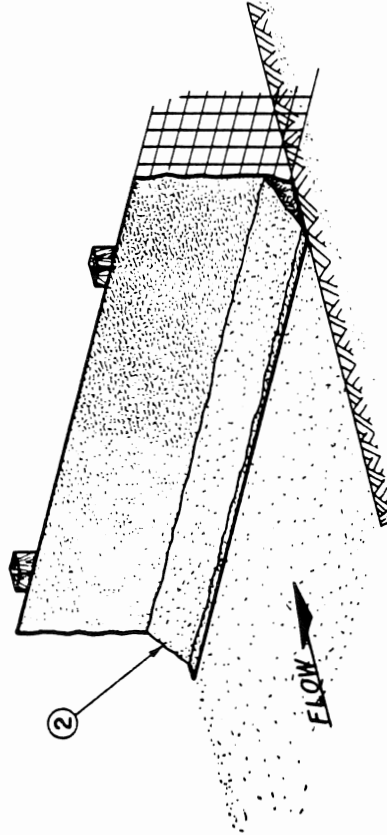
KENTUCKY BUREAU OF HIGHWAYS	STANDARD DRAWING No. RDX - 200 SUBMITTED 5/23/12 APPROVED 5/23/12 DATE KENTUCKY HIGHWAY
SILT CHECKS	

NOTES

1. Materials and construction shall be in accordance with the Standard Specifications.
- ② The bottom 12 inches of the fabric shall be buried in a 6 inch trench cut into the ground or covered by 6 inches of fill material, to prevent sediment escaping under the fence. All earthwork shall be on the upstream side of the fence.



ALTERNATE NO. 1

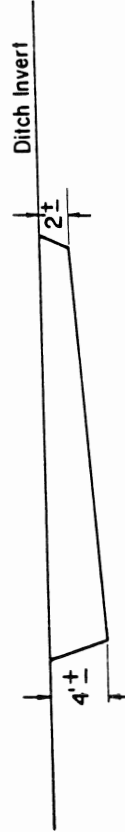
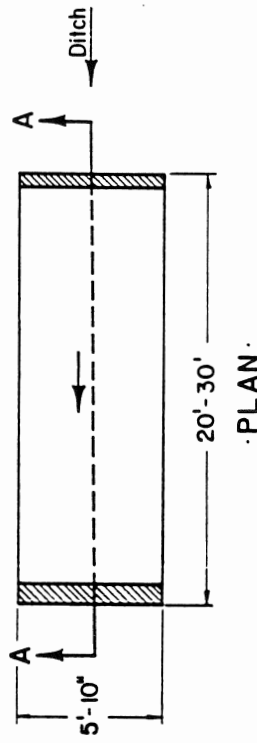


ALTERNATE NO. 2

KENTUCKY BUREAU OF HIGHWAYS
TEMPORARY SILT FENCE
STANDARD DRAWING No. RDX-210 SUBMITTED <i>[Signature]</i> APPROVED <i>[Signature]</i> DATE <i>4/16/82</i>

METRIC CONVERSIONS
 1 FT. = 0.3048 m
 1 IN. = 25.4 mm

SILT TRAP TYPE A



NOTES

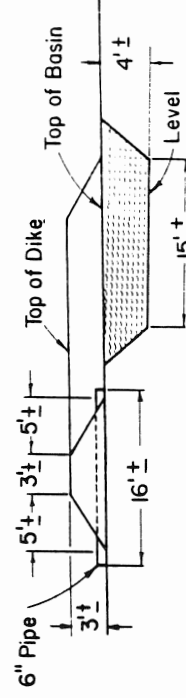
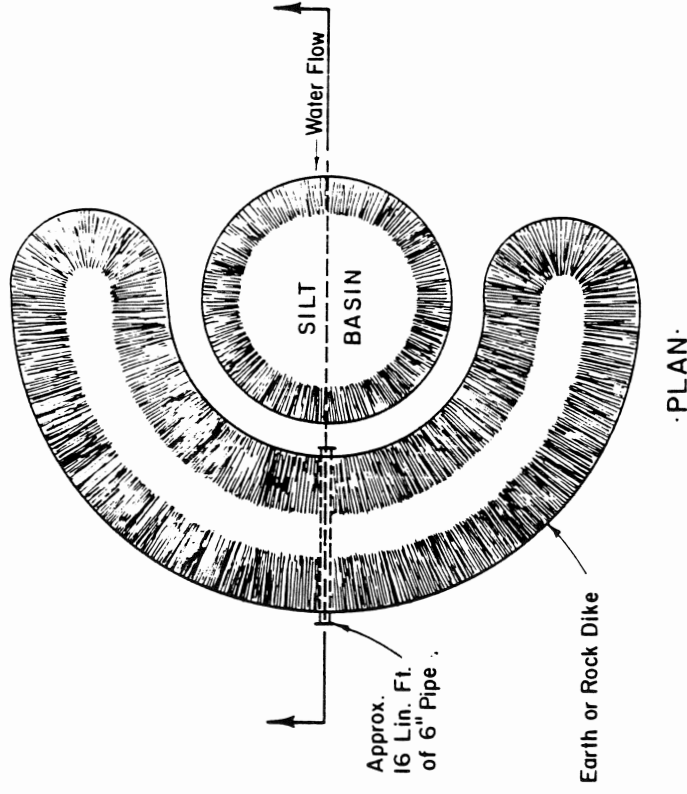
The size, shape and location of trap may be adjusted from that shown in the plans, as directed by the Engineer.

The dike when constructed of rock may not require use of a pipe.

The silt basin may be constructed as directed by the Engineer as long as the area and depth is at least as large as that indicated on the plans.

Silt traps shall be constructed and paid for in accordance with Section 213 of the Standard Specifications.

SILT TRAP TYPE B



KENTUCKY BUREAU OF HIGHWAYS
SILT TRAP TYPE A & B
STANDARD DRAWING No. BDX-220-01 SUBMITTING ENGINEER: [Signature] DATE: 6-18-77 APPROVED: [Signature] DATE: 6-18-77

METRIC CONVERSIONS
1 FT. = 0.3048 m
1 IN. = 25.4 mm

CITY OF NICHOLASVILLE
STREET SIGN INSTALLATION REQUIREMENTS

