SPECIFICATIONS FOR CONSTRUCTION

In general, unless specifically set forth herein, the work, materials, and methods of measurement and payment shall conform to the applicable divisions and paragraphs (as noted on the Bid Proposal or in the plans) of the most current edition of the:

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS, FRANKFORT

Standard Specifications
for
Road and Bridge Construction

SPECIAL NOTE FOR EMBANKMENT SLIDE REPAIR

I. DESCRIPTION

This work shall be performed in accordance with the Kentucky Transportation Cabinet's Current Standard Specifications and applicable Special Provisions except as hereafter specified. Article references are to the Standard Specifications.

This work shall consist of: (1) Do necessary excavation; (2) Furnish and install railroad rails; (3) Furnish and install wall cribbing; (4) Place geotextile material, and backfill the area around the railroad rails and on the fill slope; (5) Reconstruct shoulder area; (6) Install guardrail, as stated in the Special Note for Guardrail; (7) Maintain and control traffic; and (8) any other work as specified by this contract.

Repairs using drilled railroad steel and guardrail cribbing, as shown in the Embankment Repair Detail, are to occur at locations indicated on the Plan Sheets and Summary Sheets. Begin and End limits at each area are to be field verified with approval from the Engineer.

II. MATERIALS

All materials shall be sampled and tested in accordance with the Kentucky Transportation Cabinet's Sampling Manual and the materials shall be available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

A. Railroad Rails. Use recycled (used) railroad rails classified with a nominal weight of 130 lb/yd (pounds per yard) size or greater. Use only visibly straight recycled railroad rails with no splices. The Engineer will verify rail nominal weights (Manufacturer's Stamp with lb/yd, date, etc.). Provide Certification for nominal weight if the Manufacturer's Stamp is unidentifiable.

B. Wall Cribbing. Use recycled (used) steel "W" beam guardrail. Cribbing material will furnished by the Contractor.

C. Backfill material for Drilled Sockets. Use the following for backfill material for Drilled sockets: concrete, free flowing sand, pea gravel, crushed limestone, or crushed sandstone. Use backfill material with one hundred percent (100%) passing a one-half (1/2) inch sieve. Do not use auger tailings. Engineer will use visual inspection and/or material testing, as applicable to determine acceptability.

D. Fill Material for CRIBBING. Use one of the following backfill materials: Kentucky Aggregate Gradation No. 2's or larger. Backfill material shall meet requirements of Section 805. The Engineer will use visual inspection and/or material testing, as applicable, to determine acceptability.

E. DGA. Furnish Dense Graded Aggregate as per Section 805. Do not use Crushed Stone Base.

F. Final Dressing, Seed and Protection. Use Seed Mixture No. 1.

G. Geotextile Fabric. Furnish Geotextile Fabric Type IV as per Section 843.

H. Erosion Control. See Special Note for Erosion Control.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. See Traffic Control Notes on Plans.

B. Staking. Establish proper slope elevations and ratios, shoulder widths, existing ditch profile and final ditch profile to insure positive drainage. Be responsible for field layout. Positive drainage is required upon completion of the project and is the responsibility of the Contractor.

C. Site Preparation. Prepare repair sites. This includes clearing and grubbing, if necessary. Remove all obstructions. Sweep and remove debris, if necessary. The area to be cleared has not been measured by the Engineer and the bidder must draw his own conclusions. Construct silt checks, temporary silt fence, or other erosion control devices, as necessary to satisfy the BMP, at locations directed by the engineer. The Engineer shall approve all site preparation. The City will not make direct payment for site preparation.

D. Installation of Railroad Rails. See attached plans for site locations and estimated quantities of materials required. Install 1 Row of RR Rails on 3 foot centers unless otherwise shown on the plans or mentioned in these notes. From a Geotechnical Overview, based on the field review and brief review of the geology, it is anticipated that rock will vary from 20 to 25 feet. No geotechnical borings were advanced, and, as such, rock depths may differ from those estimated above. Therefore the contractor is responsible for determining actual depth to rock and providing to the Engineer for approval. The embankment failures at these sites are caused by erosion from steep slopes and poor drainage.

Install used railroad rail piling in drilled sockets in rock or stable material under the landslides as project location dictates or as directed by the Engineer. Drill the socket, furnish, and install the railroad rails into holes at slide locations. If the Engineer determines from the sounding obtained at a drilled socket that railroad rail piling cannot be used in that socket, the depth of the socket shall be measured and 50% of the depth shall be paid as "Railroad Rail-Drilled". Drill sockets into solid rock, if possible. Embed the railroad rail into solid rock no less than one-half the free end length of the rail. (See Detail Sheet in Plans). If solid rock cannot be obtained, the Engineer will determine the length of embedment required in other stable foundation. Allow adequate size of the drilled socket to allow free insertion of the railroad rail, but the maximum socket size is 1 foot in diameter.
After each hole is drilled, install railroad rail immediately with the flanges positioned perpendicular to the direction of the landslide or break (See Detail Sheet in Plans). Determine

the height of rail that is needed to reestablish pavement and shoulder typical section. Cut off excess rail flush with the proposed ground line that is not needed. Use cutoffs elsewhere in the project if possible; unusable cutoffs remain the property of the Contractor.

Crib any exposed portion of railroad rail before placing backfill.

E. Excavation and Backfill. Excavate each repair area to provide a platform for drilling the used railroad rails, if necessary. Excavate for roadway ditches as necessary for slope, shoulder, and pavement drainage. Place geotextile fabric, and then construct backfill behind railroad rails, cribbing, and on slope, as per Section 206. Construct backfill to the proposed dimensions as shown on the Embankment Repair Detail, or as directed by the Engineer. Construct the backfill in the shoulder area to an elevation 4" below the proposed final edge of pavement elevation.

Finish the shoulder area reconstruction with a 4" layer of DGA to match flush with the final edge of pavement elevation and grade to the dimensions shown on the Embankment Repair Detail, or to a minimum width of 2 Feet at each slide location, or as directed by the Engineer. Do not pond water on the shoulder area or at the shoulder edge. Reconstruct the shoulder before installing guardrail.

DO NOT USE EXCAVATED MATERIAL FROM THE SITE AS FILL MATERIAL.

Excess excavation may be wasted at sites on the right-of-way, ONLY if approved by the Engineer. Material may NOT be wasted in flood prone areas or in streams. If the Engineer deems no suitable sites are available within the right-of-way, the Contractor will be required to waste excess material off the right-of-way at sites obtained by the Contractor at no cost to the City.

F. Installation of Wall Cribbing. Install Cribbing as shown on the Detail Sheet of the Plans as slide location dictates or as directed by the Engineer. Extend wall cribbing 2 feet below the existing ground line. If bedded rock is encountered, install the cribbing to the bedded rock only. If necessary, the Engineer will direct changes to this procedure. Furnish all labor and equipment to deliver and install wall cribbing on the recycled (used) railroad rail piling. Wall cribbing shall be lapped, bolted, and attached solid to the drilled railroad rails.

G. Final Dressing, Seeding and Protection. Apply Final Dressing, Class A to all disturbed areas, both on and off the right-of-way. Sow with Seed Mixture No. 1. The City will NOT make direct payment for final dressing, or seeding and protection, but shall be incidental to Erosion and Water Pollution Control.

H. On-Site Inspection. Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his bid and shall thoroughly familiarize themselves with the existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made.

I. Right-of-Way Limits. Right-of-Way and easement limits shown on the plans are approximate only. The Contractor shall make every effort to limit his activities to obvious right-of-way and permanent or temporary easements and shall be responsible for encroachments onto private lands.

J. Property Damage. The Contractor will be responsible for all damage to public and/or private property resulting from his work.

K. Erosion Control. See Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

A. Maintain and Control Traffic. See Traffic Control Notes on Plans.

B. Staking. See Special Note for Staking.

C. Site Preparation. Other than the bid items listed, site preparation will NOT be measured for payment, but shall be incidental to the bid item Excavation and Backfill.

D. Railroad Rail-Drilled. The finished in-place length of this item will be measured in Linear Feet. Laps, cutoffs, excess, and waste will NOT be measured for payment. If the Engineer determines from the sounding obtained at a drilled socket that railroad rail piling cannot be used in that socket, the depth of the socket shall be measured and 50% of the depth shall be paid as Railroad Rail-Drilled.

E. Wall Cribbing. Cribbing will be measured in square feet finished in place area. Laps, cutoffs, excess, and waste will not be measured for payment.

F. Excavation and Backfill. This item will be measured in cubic yards in the field as per Section 204 (Roadway Excavation) or other accepted methods of measurement as directed by the Engineer.

G. DGA. DGA will be measured according to Section 302.

H. Geotextile Fabric. Geotextile Fabric Type IV will NOT be measured for payment, but shall be incidental to the bid item Excavation and Backfill.

I. Clean Up, Disposal of Waste. This item will NOT be measured for payment. These activities shall be incidental to project bid items.

J. Final Dressing, Seeding and Protection. The operations of Final Dressing and Seeding and Protection will NOT be measured for payment. These activities shall be incidental to Erosion Control.

K. Erosion Control. Erosion Control will be measured as a lump sum.

V. BASIS OF PAYMENT

A. Maintain and Control Traffic. See Traffic Control Notes on Plans.

B. Staking. See Special Note for Staking.

C. Railroad Rail-Drilled. The City will pay for the completed and accepted quantities under the bid item of Railroad Rail-Drilled. The City will consider payment full compensation for all work required in these notes and elsewhere in the Contract.

D. Excavation and Backfill. The City will pay for the completed and accepted quantities under the bid item "Excavation and Backfill." Payment will be based on the quantity measured in the field. The City will consider payment full compensation for all work and incidentals necessary to excavate and backfill the areas indicated on the plans or as directed by the Engineer.

E. DGA. The City will make payment according to Section 302.

F. Geotextile Fabric. The City will NOT make payment of Geotextile Fabric Type IV. This shall be incidental to Excavation and Backfill.

G. Wall Cribbing. The City will pay for the completed and accepted quantities under the bid item "Cribbing." Payment will be based on the finished, in place quantity installed in the field. The City will consider payment full compensation for all work and incidentals necessary to install the cribbing in the areas indicated in the proposal or as directed by the Engineer.

H. Clean Up, Disposal of Waste. The City will NOT make payment for the operations of Clean Up and Disposal of Waste. These activities shall be incidental to project bid items.

I. Final Dressing, Seeding and Protection. The City will NOT make payment for the operations of Final Dressing and Seeding and Protection. These activities shall be incidental to Erosion Control.

J. Erosion Control. The City will pay for the completed and accepted quantities under the "Erosion and Water Pollution Control." Payment will be based on the lump sum price.

SPECIAL PROVISIONS

ITEMS 105.07 / 107.15 - COOPERATION WITH UTILITIES

All portions of Item 105.07 and Item 107.15 of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction shall apply.

At least two (2) working days prior to commencing construction operations in an area which may involve underground utility facilities as shown on the plans, the Contractor shall notify the Engineer, the registered utility protection service, and the owners of each underground utility facility not members of the registered utility protection service.

The existing underground utilities are shown as accurately as possible on the plans, based on information available. The Owner and/or the Engineer do not assume any liability for location of these underground utility service lines. Any utility services damaged that were previously marked in the field shall be replaced at the Contractor's expense.

Where the plans provide for conduit to be connected to, or to cross either over or under, or close to an existing underground structure, it shall be the responsibility of the Contractor to locate the existing structure, both as to line and grade, before he starts to lay the proposed conduit, in order to assure compatibility with line and grade of the proposed conduit. Payment for all operations described above shall be included in the unit price bid for the pertinent conduit item.

The Contractor shall adjust or arrange with utility company to adjust to proposed grade all existing utility facilities, i.e., manholes, catch basins, valves, boxes, etc., prior to the commencement of paving operations. This shall include utility facilities not shown on the plans, which may be found to be located within the pavement area. Work performed on the utility facilities shall be in strict accordance with the specifications of the applicable utility company and shall be performed under the direction, supervision, and inspection of said company.

COORDINATION WITH UTILITIES

Coordination of work schedules with affected utilities will be required. Upon the contract award, the coordination of all necessary relocations or adjustment of all utility facilities becomes the responsibility of the Contractor.

ITEM 105.06 - COOPERATION BETWEEN CONTRACTORS

The Contractor shall coordinate his work with other Contractors within or adjacent to the project limits. All improvements completed under this contract shall meet the line and grade of other work in an acceptable manner.

ITEM 106 - CONTROL OF MATERIAL

Unless otherwise specified, all materials shall be new, and both workmanship and materials shall be of proper quality and sufficient for the purpose contemplated. The Contractor shall furnish, if so required, satisfactory evidence as to type and quality of materials and workmanship.

All items of equipment and/or material proposed by the Contractor for substitutions must be approved by the Engineer in writing and shall be equal or superior to the items specified in the contract documents. If said substitution proposed by the Contractor for a specified item requires engineering revisions, the total expense of said revisions shall be paid by the Contractor.

Any items of labor and materials required, but not shown as a separate pay item in the proposal, shall be furnished and installed as incidental to the contract, except as noted in the plans and specifications.

ITEM 106.08 - STORAGE OF MATERIALS

The Contractor shall obtain prior approval in writing from the Owner for the locations to be used for the temporary storage of construction materials, tools, and/or machinery. All such materials, tools, and machinery shall be neatly and compactly piled in such a manner as to cause the least inconvenience to the property owners and to traffic. Under no circumstances shall existing drainage courses be blocked or water hydrants, valves, or meter pits covered. All materials, tools, machinery, etc., stored upon public thoroughfares must be provided with warning lights and reflective sheeting at nighttime and weekends to alert traffic of such obstructions.

ITEM 108.02 - PRECONSTRUCTION CONFERENCE

Prior to the commencement of construction activities, the Engineer will arrange a meeting between the Contractor, the representatives of the Owner, and the representatives of each of the utility companies. The time, date, and location of said meeting will be determined after the awarding of the contract, and the parties will be notified by the Engineer.

The agenda for the preconstruction meeting shall include the following items:

1. Announcement of Award
2. Utility Company Requirements
3. Designation of Emergency 24-hour Contractor Contacts
4. Discussion of Critical Plan Items
5. Review of Testing and Inspection Procedures
6. Operations Schedule
7. Listing of Haul Roads
8. Identification of Subcontractors
9. Review of Change Order Process
10. Payment Request Submittal Procedure

The Contractor shall coordinate all work with the Engineer. A detailed schedule of operations shall be furnished by the Contractor to the Engineer at the preconstruction meeting and shall list the order of operations and the time frame for the completion of each item of work. The schedule of operations shall be approved by the Engineer and the Owner in writing prior to the beginning of the work. Changes to said schedule are to be issued in writing and approved by the Engineer and the Owner before operations are changed or rescheduled. No payment will be made to the Contractor while he is delinquent in the submission of a progress schedule.

The Contractor shall supply to the Engineer at the preconstruction meeting, a list of the local roads to be used for the purpose of hauling equipment and/or material to or from the job site. Only the local roads in the vicinity of the project have to be listed; state and/or federal roads do not have to be included. Where necessary, the list shall include the extent of the roads to be affected and any special restrictions, such as height or weight restrictions, which may be applicable along said roads. Construction shall not commence until the Engineer and/or Owner has reviewed the haul road list and approved the haul roads in writing.

The submission of the list to and the review and approval of the list by the Engineer do not relieve the Contractor of the responsibility for the conforming to and the obeying of all applicable height and weight restrictions on the haul roads and of the responsibility for any damage done to and/or along said haul roads. The Contractor is referred to Item 105.10 concerning load restrictions.

ITEM 107.04 - PERMITS, LICENSES AND TAXES

The Contractor shall insure that all required notices are given and all permits acquired before the commencement of work. The Engineer will discuss any special permits required for this project at the preconstruction meeting.

ITEM 107.14 - CONTRACTOR'S RESPONSIBILITY FOR WORK

It shall be the responsibility of the Contractor to perform his work in such a manner as not to damage or destroy any existing feature (i.e., existing inlets, conduits, etc.), which is not marked for replacement or removal. The Contractor shall exercise due care during construction so as not to destroy any trees, plants, shrubs or structures not specifically marked for removal or relocation within the work limits. In some instances, the Contractor will be required to excavate under and around the existing utilities. Extreme care should be used not to damage the utility during this operation. The Contractor shall schedule his operations so that the improved areas have had sufficient time to cure, set and/or harden before the area is opened to traffic or use. The Contractor shall be responsible for the immediate repair of the improved area if any damage is done by traffic. The Contractor shall also be responsible for the immediate rectification of problems created in areas outside of the improved areas which are attributable to the failure of the improved area, i.e., the tracking of materials into unimproved areas.

The Contractor shall be responsible for the protection of areas outside of the designated work limits, but which may be adjacent to those work limits. This will include those areas used by construction

traffic for access to and from the work areas. Where the Engineer and/or the Owner determine that the Contractor's operations have been responsible for damage to areas outside of the work limits, the Contractor shall be responsible for the repair of the area subject to the approval of the Engineer. No additional compensation will be due to the Contractor for any such repairs as described above.

ITEM 112 - MAINTAINING TRAFFIC

The contractor shall be allowed to close Mason Road within the project limits for a duration not to exceed seven (7) calendar days. The contractor shall be allowed to close Old Taylor Mill road within the project limits during work hours. Work hours shall be limited to the hours of 8:00 a.m. to 6:00 p.m., Monday through Saturday.

All maintenance of traffic procedures shall meet the requirements of the Manual of Uniform Traffic Control Devices and section 112 of KTC standard specifications. The contractor shall provide sufficient sign, warning lights, barricades, detour signs, or other necessary devices to make the site safe to the traveling public. Cost for these items shall be included in Item 112 - Maintenance of Traffic.

It shall be the contractor's responsibility to submit to the engineer and the owner a traffic control plan for this project. Prior to any construction, the contractor shall notify the City of Taylor Mill police department and fire department. At all times, emergency vehicles shall be given access.

ITEM 212 / 213 - EROSION CONTROL AND WATER POLLUTION CONTROL

The Contractor shall take extreme care to prevent unnecessary erosion, water pollution and siltation at all points of the project. Temporary seeding and mulching, straw bales, slope drains, etc., shall be used as necessary or as directed by the Engineer. The cost of all temporary erosion shall be included in the lump sum price.

FULL-DEPTH PAVEMENT SAWING

All existing pavement to be widened and/or removed shall be sawed full depth at the limits of removal, using a diamond saw blade to provide a uniform edge and prevent damage to pavement that is to remain in place. The cost of the sawing shall be incidental to the contract.

ITEM SPL – FULL-DEPTH PAVEMENT REPAIR

Full-depth pavement repair will be marked and located in the field immediately following the pavement planing operation or prior to the installation of the asphalt pavement leveling course. The Contractor will be required to place the asphalt leveling course within 48-hours of the pavement planing operation. After the asphalt leveling course is constructed, the limits of full depth pavement repair will be re-marked by the Engineer.

The unit price bid for Item Special, Full-Depth Repair, shall include all the costs incurred in the removal of the new leveling course pavement, the existing asphalt pavement and subgrade, the compaction of the subgrade as required, and the construction of the pavement courses as per plan.

ITEM 302 / SPL – GRAVEL BASE, DGA FOR SUBGRADE REPAIR

A contingency amount of Item 302/SPL – Gravel Base, DGA for Subgrade Repair has been included for repair of soft and yielding, unsuitable subgrade material and should be used only when directed by the engineer. The cost of all labor, equipment, and material necessary to excavate and dispose of unsuitable material, place and compact the aggregate as per plan shall be included in the unit price bid for item 302/SPL – Gravel Base, DGA for Subgrade Repair.

ITEM 403 - SEALING EDGES

All edges of the asphalt concrete surface course constructed under this Contract shall be sealed with asphalt cement as directed by the Engineer and meeting the same specifications as used in Item 403, the cost of same to be included in the unit price bid for Item 403, Asphalt Concrete. After completion of the surface course, gutters shall be sealed with asphalt cement as directed by the Engineer. The material shall be applied at a uniform width of approximately 4 inches and at a rate just sufficient to fill surface voids. Sealing edges at building walls, foundations, existing curbs or other visible surfaces shall be done neatly and without more than one-half (1/2) inch of the sealant being visible on the surface. Any extra sealant applied to visible surfaces shall be carefully and thoroughly removed by the Contractor at no additional cost to the Owner.

CONTROL OF WORK

Construction work shall take place between the hours of 8:00 A.M. to 6:00 P.M., Monday through Saturday.

PAYMENT

No adjustments to unit prices shall be due to the Owner or the Contractor for increases or decreases in the Engineer's approximate unit quantities shown in the proposal resulting from changes in the amount of work performed.

THE OWNER RESERVES THE RIGHT TO AWARD OR DELETE ANY OR ALL COMBINATIONS.

ELECTRIC UTILITY NOTES

DUKE ENERGY

1. **DANGER** - Contractor shall contact the company prior to excavation in vicinity of electric underground facilities (approximate plan location shown) or when working near overhead electric facilities.

   (A) For Field Inspector to locate underground electric line, in Ohio call "Ohio Utilities Protection Service" at 1-800-362-2764, and in Kentucky call "Kentucky Underground Protection Service (KUPS)" at 1-800-752-6007 (at least 48 hours in advance), excluding hours Sat., Sun., and State Legal Holidays.

   (B) For notification of construction activity near energized electric facilities, call Mr. Bob Schroeder, 513-287-3426.

   (C) For additional underground electric record information, call 513-287-2454.

   (D) For electric engineering notification, agreements and correspondence, address to Mr. Tom Birkenhauer, Duke Energy Corporation, Distribution Design Engineering, Room 467A, 139 East Fourth Street, P.O. Box 960, Cincinnati, Ohio 45202-0960.

2. Contractor shall be responsible for all damages to electric facilities during construction.

3. Electric facilities to be kept in service at all times.

4. Contractor shall be responsible for supporting existing electric facilities affected by the proposed construction.

   A. Where high pressure oil filled pipe type cable installations are exposed or otherwise interfered with by the Contractor, protection by the Contractor will be required against damage to the coating or surrounding thermal sand envelope.

   B. Where concrete encased conduit systems or direct buried cable systems are exposed or otherwise interfered with, the Contractor shall protect the system as necessary against damage. As soon as feasible, the Contractor shall take additional appropriate steps to provide permanent measures to restore support. The methods used shall be based on conditions to be determined by the utility.

   C. Where poles or anchors that support overhead electric facilities are exposed or otherwise interfered with, the Contractor shall protect them from damage and provide temporary support to insure the integrity of the system. As soon as feasible, the Contractor shall take additional appropriate steps to provide permanent measures to restore support. The methods used shall be based on conditions to be determined by the utility.

   D. Where the depth of excavation for the proposed work is greater than five (5) feet, the Contractor shall sheet and shore the trench to continuously maintain the support of electric facilities at locations where the electric facilities are within the zone of influence adjacent to the excavation as determined by the natural angle of repose of the soil.

   E. All damage to electric facilities and services requiring adjustments, relocations and/or repairs will be made at the Contractor's cost.

5. Contractor shall not backfill exposed electric facilities until the company has inspected its facility or performed any adjustments and/or maintenance that may be required.

NOTE: Should Contractor damage electric facilities, Contractor shall immediately notify the Electric Service Desk through the Company Operator (513-421-9500). Contractor shall keep everyone clear of damaged electric facilities until company personnel arrive at the work site.

GAS FACILITY NOTES

DUKE ENERGY COMPANY

Gas Facility Notes

I. For Gas Engineering Notification, agreements, and official correspondence, address to:

Duke Energy
139 East Fourth Street
P.O. Box 960, Room 460-A
Cincinnati, Ohio 45202

II. The gas main information provided shows the approximate locations and depths of cover and is provided to comply with statutory regulations. This information should be used only for planning, not construction.

III. All gas main depths of cover noted are approximate depths of cover recorded at the time of installation. Any resulting grade changes since the time of the main installation will cause the existing depth of cover to be different. Extreme care must be taken to ensure safe excavation when approaching known or suspected gas facilities.

IV. All gas services were installed at a minimum of 1'-6" of cover. See item III above.

V. For additional gas facility record information, call 1-800-372-7612.

VI. To comply with federal and state regulations concerning damage prevention programs, the utility companies must be contacted at least 48 hours (two working days) prior to excavation by calling the OHIO UTILITIES PROTECTION SERVICE (OUPS), toll free, at 1-800-362-2764.

Construction Notes

I. Gas facilities are to be kept in service at all times.

II. The contractor shall be responsible for all damages to gas facilities during or as a result of the Contractor's construction. All damage to gas facilities requiring adjustments, relocations and/or repairs will be made at the contractor's cost.

III. The contractor shall sheet and shore all excavations as required to continuously support gas facilities within the zone of influence (as determined by the natural angle of repose of the soil).

IV. Crossing buried gas facilities with heavy construction equipment may cause damage to the gas facilities. Contact the Duke Energy Gas Engineering Department for details on how to protect the gas facilities from damage.

V. The contractor shall not backfill exposed gas facilities until the utility has inspected its facilities and performed any maintenance and/or adjustments that may be required.

VI. The contractor is responsible for preventing any damage to our gas facilities. This includes protection of coatings and wrappings on steel gas mains. It also includes any damage with may have occurred to plastic gas mains, such as crimps or gouges.

VII. When cast iron or similar gas facilities are exposed or interfered with by the contractor, replacement or reinforcement by Duke Energy may be required at the contractor's expense. Backfill with control low strength material will be required.

VIII. Blasting or other construction procedures which may transmit loads or vibrations in the vicinity of gas facilities must be approved by Duke Energy Gas Engineering Department. A blasting plan, identifying all pertinent information, must be submitted in writing by a blasting expert prior to any work.

Proposed Developments at Gas R/W & Easements (If Applicable)

I. Proposed development plans around and near gas facilities within private easements must be submitted to Duke Energy Gas Engineering Dept. for review. These plans must be approved before any work may begin within our easements.

II. Specified easement widths must be maintained in order for Duke Energy to protect its facilities.

III. No permanent structures may be built within the easements.

IV. Cuts and fills are generally not permitted within the easements. Some fills may be allowed, and will be reviewed on an individual basis. Any permitted fills will be limited to an amount which will allow Duke Energy to properly maintain its facilities.

V. Perpendicular utility crossings of gas easements are acceptable, provided proper clearances are maintained. Parallel installations are normally not allowed.

WATER WORKS NOTES

All work pertaining to water works items shall be done in strict accordance with the specifications of the Northern Kentucky Water Service District and under the direction, supervision and inspection of the Water District. Water main items are to be constructed in accordance with the provisions of the Kentucky 2000 Transportation Cabinet / Department of Highways, Standard Specifications for Road and Bridge Construction, dated January 1, 2000, and any supplements or changes thereto. Copies of all pertinent specifications may be obtained from the Northern Kentucky Water Service District.

A cushion of 12" shall be maintained between the proposed water mains and the existing sewers, inlet connections, and drains. If a greater clearance is desired, it will be so designated. Building sewer laterals are not to be disturbed or trapped. Existing drains, sewers and culverts are not be disturbed. If the water main is to be under culverts or pipe sewers, they shall be tunneled and backfilled with Class "T" concrete.

It shall be the Contractor's responsibility to arrange for removal and replacement of any poles and guys necessary for the installation of the proposed water mains, and any cost connected thereto shall be his expense.

All backfill to be Method "A" except where otherwise noted.

No part of any fire hydrant setting shall be installed closer than five feet to any driveway, inlet, utility pole, or guy wire anchor.

No extra payment will be made for lead joints.

SANITARY SEWER NOTES

Sanitary sewer and/or combination sewer items are to be constructed in accordance with the provisions of the Sanitation District No. 1, and under the direction, supervision and inspection of the Sanitation District No. 1. Sanitation sewer items are to be constructed in accordance with the provisions of the Kentucky 2000 Transportation Cabinet / Department of Highways, Standard Specifications for Road and Bridge Construction, dated January 1, 2000, and any supplements or changes thereto.

The Contractor shall supply separate bid items for raising manholes using manhole adjustment rings and for using brick and mortar. If only one bid item is received, the Contractor shall raise all manholes with brick and mortar. Sewer manhole adjustment prior to machine paving shall be done in accordance with the Sanitation District No. 1 Rules and Regulations.

In the event that manhole adjusting rings cannot be used on sanitary and/or storm sewer manholes, the Contractor shall be required to use brick masonry and to adjust manholes to grade. Stacking of adjusting rings shall not be permitted. Substandard or damaged manhole casting shall be replaced with standard casting.