

Before any Work at the site is started, CONTRACTOR shall deliver to OWNER, with a copy to ENGINEER, certificates, and other evidence of insurance requested by OWNER which CONTRACTOR is required to purchase and maintain in accordance with the Contract Documents.

### **E3 Intent of the Contract Documents**

E3.1 The Contract Documents comprise the entire agreement between OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.

If, during the performance of the Work, CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, CONTRACTOR shall so report to ENGINEER in writing at once, and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from ENGINEER; any work performed by CONTRACTOR without reporting such conflicts, errors, or discrepancies, in writing, to the ENGINEER will be at the CONTRACTOR's risk.

In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, in one or more of the following ways:

- ENGINEER'S approval of Shop Drawing(s) or sample(s)
- ENGINEER's written interpretation or clarification

### **E4 Availability of Lands; Report of Differing Conditions; Underground Facilities; Reference Points**

#### E4.1 Availability of Lands

OWNER shall furnish the lands upon which the Work is to be performed and rights-of-way and easements which, in the opinion of the ENGINEER, are required for construction. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities, specific access routes to the site of the work, or storage of materials and equipment.

#### E4.2 Report of Differing Conditions

If CONTRACTOR believes that any physical condition uncovered or revealed at the site differs materially from that indicated, reflected or referred to in the Contract Documents, he shall promptly, after becoming aware thereof and before performing any Work in connection therewith (except in an emergency), notify OWNER and ENGINEER in writing about the difference.

#### E4.3 Underground Facilities

The information and data shown or indicated in the Contract Documents with respect to existing underground utilities, structures and/or other facilities at or contiguous to the site, is based on information and data furnished to OWNER or ENGINEER by the owners of such underground facilities or by others. CONTRACTOR shall have full responsibility for: reviewing and checking all such information and data; for locating all underground facilities; and for coordination of the Work with the owners of such underground facilities during construction and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.

#### E4.4 Definition of "Underground Facilities"

For the purposes of this paragraph, the term "underground facilities" includes without limitation: pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems, water, wastewater or stormwater.

#### E4.5 Reference Points

OWNER will provide certain reference points for construction which in ENGINEER's judgment are adequate to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for surveying and laying out the Work, shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point is lost or destroyed or required relocation because of necessary changes in grades or locations and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.

## **E5 Bonds and Insurance**

### E5.1 Performance and Other Bonds

CONTRACTOR shall furnish Bonds, each in an amount equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents; CONTRACTOR shall also furnish such other Bonds as are required by the Contract Documents. All Bonds shall be in the forms prescribed by the bidding documents or Supplemental General Conditions and be executed by such Sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U. S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act.

If the Surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of the above paragraph, CONTRACTOR shall within five days thereafter, substitute another Bond and Surety, meeting the OWNER's approval.

### E5.2 Contractor's Liability Insurance

CONTRACTOR shall purchase and maintain such insurance as is appropriate for the Work being performed and furnished and will provide protection from claims which may arise out of or result from CONTRACTOR's performance and furnishing of the Work and CONTRACTOR's other obligations under the Contract Documents, whether it is to be performed or furnished by CONTRACTOR, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable.

The insurance required shall include the specific coverages and be written for not less than the limits of liability and coverages provided in the Supplemental General Conditions. The Certificate of Insurance included in Section K of these documents shall be required to be completed prior to the commencement of any construction work. All of the policies of insurance required to be purchased and maintained shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused, until at least ten days' prior written notice has been given to OWNER and ENGINEER. All such insurance shall remain in effect until final payment and at all times thereafter when CONTRACTOR may be

correcting, removing, maintaining, repairing or replacing defective Work.

## **E6 Certain Responsibilities of the CONTRACTOR**

E6.1 Supervision and Superintendence CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. CONTRACTOR shall be responsible to see that the finished Work complies with the requirements of the Contract Documents.

CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications during construction and before issuance of the Final Payment, given to the superintendent, shall be as binding as if given to CONTRACTOR.

### E6.2 Labor, Materials and Equipment

CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Sunday or any legal holiday without OWNER's written consent.

CONTRACTOR shall furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities and all other facilities and incidentals necessary for the execution, testing, start-up and completion of the Work.

All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If



required, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment.

All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to impose on ENGINEER responsibility for the means, methods, techniques, sequences or procedures of construction or for safety precautions or programs incident thereto.

#### E6.3 Adjusting Progress Schedule

CONTRACTOR shall submit to ENGINEER adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the Contract Documents applicable thereto. Progress schedules shall be updated on a monthly basis and be submitted for review and discussion at the regularly scheduled progress meetings.

#### E6.4 Substitutions

Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be approved if sufficient information is submitted by CONTRACTOR to allow ENGINEER to determine that the material or equipment proposed is equivalent to that named. The OWNER's decision to accept or not accept substitutions (either conditionally or otherwise) will be final.

#### E6.5 Concerning Subcontractors, Suppliers and Others

CONTRACTOR shall not employ any Subcontractor, Supplier (including those who are to furnish the principal items of materials or equipment) or other person or organization to perform or furnish any of the Work whether initially or as a substitute, without the prior written approval of the OWNER. Acceptance of any such Subcontractor, Supplier or other person or organization by OWNER or ENGINEER shall not constitute a waiver of any right of OWNER or ENGINEER to reject defective Work or any Work which may otherwise not be in conformance with the Contract Documents.

CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any Subcontractor, Supplier or other person or organization.

The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or delineating the Work to be performed by any specific trade.

All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to all terms and conditions of the Contract Documents.

#### E6.6 Indemnity

CONTRACTOR agrees to protect, defend, indemnify, exonerate and hold OWNER and ENGINEER harmless from and against any and all suits, claims, liability, losses, liens and demands, fines, costs, criminal and civil penalties, cause of action or any other obligations arising out of or in any manner connected with incidents involved in bodily injury, death, property damage or any violation or alleged violation of any federal, state, provincial or local law or regulation, except as solely caused by the OWNER and/or ENGINEER.

#### E6.7 Permits

Unless otherwise provided in the Supplemental Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids.

#### E6.8 Laws and Regulations

CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.

If CONTRACTOR observes that the Specifications or Drawings are at variance with any Laws or Regulations, CONTRACTOR shall give ENGINEER prompt written notice thereof, and any necessary changes will be authorized. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Laws or Regulations, and without such notice to ENGINEER, CONTRACTOR shall bear all costs arising therefrom.

#### E6.9 Taxes

CONTRACTOR shall pay all sales, consumer, use, business and occupation and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

#### E6.10 Use of Premises

CONTRACTOR shall confine its work on the Project site and land and areas to which the OWNER holds title, rights-of-way, permits, or easements. Contractor shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against OWNER or ENGINEER or resulting from the acts and/or deeds of the CONTRACTOR, its agent and/or employees, or invitees, CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER and ENGINEER harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against OWNER or ENGINEER arising in whole, or in part, out of CONTRACTOR's performance of the Work.

During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery and surplus materials, and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore the original condition all property not designated for alteration by the Contract Documents.

CONTRACTOR shall not impose any load nor permit any part of any structure or pipeline to be loaded in any manner that will endanger said structures or pipelines, nor shall CONTRACTOR subject any part of the work or adjacent property to stresses or pressures that will endanger it.

E6.11 Record Documents

In addition to any requirements imposed by law or regulations, CONTRACTOR shall maintain at the site one record copy of all Drawings, Specifications, Addenda, Change Orders, and written interpretations and clarifications in good order and annotated to show all changes made during construction. Said documents together with all approved Shop Drawings will be available to OWNER for reference. Upon completion of the Work, the documents, samples and Shop Drawings will be delivered to the OWNER.

E6.12 Safety and Protection

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

- all employees on the Work and other persons who may be affected thereby.
- all the Work and materials and 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.

CONTRACTOR shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and utility owners when prosecution of the Work may affect them, and shall cooperate with utility owners in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property caused,

directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier or person directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR at CONTRACTOR's sole cost (except damage or loss caused solely by the negligent acts or omissions of OWNER or ENGINEER). Nothing herein shall be construed to impose any obligation upon the OWNER or ENGINEER to supervise, inspect or otherwise police the CONTRACTOR's observance of these or any other safety standards or render either of them liable to third parties for any failure of the CONTRACTOR in observance of the requirements of this paragraph.

#### E6.13 Emergencies

In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, CONTRACTOR, without special instruction or authorization from ENGINEER or OWNER, is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give ENGINEER prompt written notice if he believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If OWNER determines that a change in time or contract sum is required because of the action taken in response to an emergency, a Change Order will be issued to document the consequences of the changes.

#### E6.14 Shop Drawings and Samples

After checking and verifying all field measurements and compliance with applicable procedures specified in the Contract documents CONTRACTOR shall submit to ENGINEER for review and approval a minimum of six copies of all Shop Drawings. The data shown on the Shop Drawings shall be complete with respect to quantities, dimensions, specified performance criteria, materials and similar data, as well as specification exceptions and deviations to enable ENGINEER to review the information with respect to requirements of the Contract Documents.

CONTRACTOR shall also submit to ENGINEER for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples shall be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

Before submission of each Shop Drawing or sample, CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.

ENGINEER will review and return within twenty-one calendar days of the receipt thereof all Shop Drawings and samples, but ENGINEER's review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence, or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make corrections required by ENGINEER and shall return the required number of corrected copies of Shop Drawings and submit new samples as required for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

ENGINEER's review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of submission. Any approval by ENGINEER shall not relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or coordination with the detailed plans and/or other Shop Drawings.

No work associated with information provided with the shop drawings shall be permitted until the same information is returned approved by the ENGINEER. Any work performed without shop drawing approval shall be performed at the CONTRACTOR's risk and responsibility.

#### E6.15 Continuing the Work

CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements.

## **E7 Other Work**

### E7.1 Related Work at Site

OWNER may perform other work related to the Project at the site by OWNER's own forces, have other work performed by utility owners or let other direct contracts therefore which shall contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, notice thereof will be given to CONTRACTOR by the OWNER or his representative prior to starting any such other work; and, if CONTRACTOR believes that such performance will involve additional expense to CONTRACTOR or required additional time and the parties are unable to agree as to the extent thereof, CONTRACTOR may make a claim therefore.

CONTRACTOR shall afford each utility owner and other contractor who is a party to such a direct contract (or OWNER, if OWNER is performing the additional work with OWNER's employees), proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs. CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected.

If any part of CONTRACTOR's Work depends upon proper execution or results on the work of any other contractor or utility owner, CONTRACTOR shall inspect and promptly report to ENGINEER in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for proper execution and results. CONTRACTOR's failure to report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR's Work except for latent or non apparent defects and deficiencies in the other work.

### E7.2 Coordination

If OWNER contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors (the "Coordinating Contractor") may be identified in the Supplemental General Conditions, and the specific matters to be covered by such authority and responsibility will be itemized and the

extent of such authority and responsibilities will be provided in the Supplemental General Conditions. Notwithstanding any of the above, neither the OWNER nor the ENGINEER assumes any responsibility for the coordination of the activities or the work among the various prime contractors. In the event that any contractor is delayed by the coordinating contractor or any other contractor, it shall have no claim or cause of action against the OWNER or ENGINEER and its exclusive remedy for such delay shall be against the CONTRACTOR or coordinating contractor responsible for the delay. The ENGINEER's interpretation shall be final and binding upon all interested parties.

#### E7.3 Clarifications and Interpretations

ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as ENGINEER may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

#### **E8 Changes in the Work**

E8.1 Without invalidating the Agreement and without notice to any surety, OWNER may, at any time order additions, deletions or revisions in the Work; these will be authorized by a Change Order. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the changes in the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

E8.2 OWNER and CONTRACTOR shall execute appropriate Change Orders covering:

- changes in the Work which are ordered by OWNER pursuant to the foregoing paragraph; are required because of acceptance of defective Work at the Owner's option; or are agreed to by the parties;
- changes in the Contract Price or Contract Time which are agreed to by the parties; and
- changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by ENGINEER; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable law, but during any



such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule.

## **E9 Change of Contract Price**

E9.1 The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.

E9.2 The Contract Price may only be changed by a Change Order. Any claim for an increase or decrease in the Contract Price shall be based on written notice outlining the bases for the claim and be delivered by the party making the claim to the other party promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within sixty days after such occurrence and shall be accompanied by claimant's written statement that the amount claimed covers all known amounts (direct, indirect and consequential) to which the claimant is entitled as a result of the occurrence of said event.

E9.3 The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

- Where the Work is covered by unit prices contained in the Contract Documents, value shall be determined by application of unit prices to the quantities of the items involved.
- By mutual acceptance of an agreed price, if work is not covered by unit prices.
- If the Work is not covered by unit prices and the parties are unable to agree upon a price, the value shall be determined on the basis of the Cost of the Work, plus a Contractor's Fee for overhead and profit, the total amount of which shall be determined on the basis of the sum of the following items (1) through (6):
  - (1) The actual cost to the CONTRACTOR or subcontractor, if employed by the CONTRACTOR, of

labor, including foremen (but not including superintendence), said cost to include Base Wages, Social Security (FICA) payments, Federal and State Unemployment Compensation payments and Workmen's Compensation payments;

- (2) The actual cost to the CONTRACTOR or subcontractor of materials and equipment utilized or being installed permanently into the work; and, expendable materials necessary for the conduct and performance of the work (as approved prior to performance of the work) -- the cost of all such approved permanent and expendable materials to be reconciled from suppliers' invoices;
- (3) The rental cost of construction machinery and equipment during the time of use on the extra work, said rental rates to be 75% of those published in daily, weekly and/or monthly rate schedules of a recognized Contractors' association;
- (4) The actual cost of power and any other necessary utility services;
- (5) Business and occupation, sales and/or other applicable taxes;
- (6) An allowance for Profit and Overhead -- to be determined by calculating the sum of the following:
  - (a) The resultant obtained by multiplying the Base Wages referred to in paragraph (1) above times a factor of 0.15;
  - (b) The resultant obtained by multiplying the actual cost of materials and equipment referred to in paragraph (2) above times a factor of 0.05;
  - (c) The resultant obtained by multiplying the cost of extra work if performed by subcontractor times a factor of 0.02.

## **E10 Change of Contract Time**

E10.1 The Contract Time may only be changed by a Change Order. Any claim for an extension or shortening of the Contract Time shall be based on written notice outlining the basis for the claim and be delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within sixty days after such occurrence and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. Any failure to comply with the time limit set forth herein shall constitute a waiver of the CONTRACTOR's right to claim.

## **E11 Warranty and Guarantee; Access to Work; Tests and Inspections; Owner May Stop Work; Correction, Removal or Acceptance of Defective Work**

### E11.1 Warranty and Guarantee

CONTRACTOR warrants and guarantees to OWNER that all Work will be in accordance with the Contract Documents and is not defective. Notice of all defects shall be given to CONTRACTOR after the same are detected. All defective Work, whether or not in place, shall be rejected and promptly corrected in accordance with paragraph E11.5.

### E11.2 Access to Work

ENGINEER and ENGINEER's representatives, other representatives of OWNER, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspection and testing. CONTRACTOR shall provide proper and safe conditions for such access.

### E11.3 Tests and Inspections

CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests or approvals.

If Laws and Regulations of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested or approved, CONTRACTOR shall assume full responsibility therefore, pay all costs in connection therewith and furnish OWNER the required certificates of inspection, testing or

approval. CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with OWNER's or ENGINEER's acceptance of a Supplier of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work.

#### E11.4 Owner May Stop the Work

If the Work is defective or CONTRACTOR fails to supply sufficient skilled workmen or suitable materials or equipment, or fails to perform the Work in accordance with the Contract Documents, the OWNER acting through an authorized representative, may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any other party.

#### E11.5 Correction or Removal of Defective Work

If required by ENGINEER, CONTRACTOR shall, as directed, either correct all defective Work, or work that does not comply with the Contract Documents, or remove it from the site and replace it with non defective Work or Work that does comply with the Contract Documents. CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

#### E11.6 Eighteen Month Correction Period

If within 18 months after the date of Substantial Completion, any Work is found to be defective, or not in compliance with the Contract Documents, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions, either correct such defective Work or work that does not comply with the contract documents or remove it from the site and replace it with non defective Work or work that does comply with the Contract Documents. If CONTRACTOR does not comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous service before Substantial completion of all the

Work, the correction period for that item may begin from an earlier date if so provided in the Technical Specifications. The rights and remedies of the OWNER hereunder are in addition to and not in limitation of all other rights and remedies of the OWNER for any breach by the CONTRACTOR of any provision of the Contract Documents regardless of when detected.

#### E11.7 OWNER May Correct Defective Work

If CONTRACTOR fails, within the specified time given in written notice by OWNER, to proceed to correct defective Work or to remove and replace rejected Work, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. To the extent necessary to complete corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees such access to the site as may be necessary to enable OWNER to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of OWNER in exercising such rights and remedies will be charged against CONTRACTOR, and OWNER shall be entitled to an appropriate decrease in the Contract Price. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals required and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR's defective Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies hereunder.

### **E12 Termination**

#### E12.1 Owner May Terminate the Work

Upon the occurrence of any one or more of the following events the OWNER may terminate the work:

- (a) if CONTRACTOR commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United

States Code), as now or hereafter in effect, or if CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency and the OWNER does not receive adequate assurances from the CONTRACTOR, and Trustee in Bankruptcy, and the CONTRACTOR's surety that the CONTRACTOR will complete the Contract in accordance with the terms thereof and at the time specified therein within 20 days of the filing of such petition;

- (b) if a petition is filed against CONTRACTOR under any chapter of The Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or state law in effect at the time relating to bankruptcy or insolvency and the OWNER does not receive adequate assurances from the CONTRACTOR, any Trustee in Bankruptcy and the CONTRACTOR's Surety that the CONTRACTOR will complete the Contract in accordance with the terms thereof and at the time specified therein within 20 days of the filing of such petition;
- (c) if CONTRACTOR makes a general assignment for the benefit of creditors;
- (d) if a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law, or under contract, whose appointment or authority to take charge or property of CONTRACTOR is for the purpose of enforcing a lien against such property for the general administration of such property for the benefit of CONTRACTOR's creditors;
- (e) if CONTRACTOR admits in writing an inability to pay its debts generally as they become due;
- (f) if CONTRACTOR, in the opinion of the ENGINEER, persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workmen or suitable materials or equipment or failure to adhere to the progress schedule as revised from time to time);

(g) if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction.

OWNER may, after giving CONTRACTOR and Surety seven days' written notice and to the extent permitted by law, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price (less any liquidated damages which may be imposed because of the CONTRACTOR'S failure to complete the Contract within the time period set forth in the Contract Documents) exceeds the direct, indirect and consequential costs of completing the Work such excess will be paid to CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER, plus any liquidated damages. Such costs incurred by OWNER will be reviewed as to reasonableness by ENGINEER, but when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

Where CONTRACTOR'S services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR or Surety Company then existing or which may thereafter accrue, including their liability to OWNER of liquidated damages because of CONTRACTOR'S failure to complete the work within the contract time. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR or Surety Company from liability.

Upon seven days' written notice to CONTRACTOR, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, CONTRACTOR shall be paid for all Work executed and expenses sustained plus reasonable termination expenses.

No payment will be paid to CONTRACTOR for profits applicable to the uncompleted work or for damages of any kind regardless of whether the termination is a termination for convenience or a termination for fault. If the OWNER terminates the CONTRACTOR for fault and a court, arbitrator, or other body having

jurisdiction over this Contract determines that such termination was wrongful, the termination will be deemed a termination for convenience and the rights and remedies of the CONTRACTOR will be limited to such rights and remedies he would have had if the Contract had been terminated for the OWNER's convenience pursuant to Section E12.2 hereof.

#### E12.2 Owner May Terminate for Convenience

The OWNER reserves the right to terminate this Contract for its convenience, without any fault upon the part of the CONTRACTOR, at any time in its sole discretion. If termination for convenience occurs prior to commencement of work by the CONTRACTOR, the OWNER will pay the CONTRACTOR reasonable mobilization costs the CONTRACTOR incurred prior to notice of termination, but no payment will be made for the CONTRACTOR's costs in bidding and entering into the Contract, loss of profits, or damages of any kind. If the OWNER terminates the contract for its convenience after the CONTRACTOR has commenced work, the OWNER will pay the CONTRACTOR any retentions due on previously approved estimates, the value of the work installed by the CONTRACTOR since the last approved estimate, and reasonable demobilization expenses. No payment will be made for any loss of profit on the omitted work or damages of any kind.

#### E12.3 Contractor May Stop Work or Terminate

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



## **E13 Miscellaneous**

### E13.1 Giving Notice

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

### E13.2 Acceptance of Final Payment Constitutes Release

The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the OWNER and the ENGINEER and others relating to or arising out of this work. No payment, however final or otherwise, shall operate to release the CONTRACTOR or his Sureties from any obligations under this Contract, under the Performance Bond, or Payment Bond.

### E13.3 Payments by Contractor

The CONTRACTOR shall pay: (a) for all transportation and utility services not later than the 15th day of the calendar month following that in which services are rendered; (b) for all materials, tools, and equipment not later than the 28th day of the calendar month following that 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 the completion of installation, and testing where applicable, 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 14th day following each progress, periodic, or final 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.

### E13.4 Assignments

The CONTRACTOR shall not assign the whole or any part of this Contract or moneys due to become due hereunder without written consent of the OWNER. In case the CONTRACTOR assigns all or any part of the moneys due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the CONTRACTOR shall

be subject to prior claims of all persons, firms and corporations for services rendered or materials supplied for the performance of the work called for in this Contract.

#### E13.5 Engineer's Decisions

While the ENGINEER will endeavor to interpret the Contract and render his decisions in a fair and unbiased manner, his exercise of such interpretation shall not give rise to any duty or responsibility to the CONTRACTOR or to any Subcontractor and he shall not be liable to the CONTRACTOR or any Subcontractor for any interpretation, decision or measurement made pursuant to Paragraph E3.1, E6.4 or any other provision of the Contract Documents.

#### E13.6 Work Hours/Schedule

The CONTRACTOR must provide the OWNER/ENGINEER with a written schedule of proposed activities prior to commencement of any work on the project. The written schedule shall include adequate detail to allow determination of work to be completed within any given week. The schedule shall be updated on a monthly basis throughout the length of the contract if work is not progressing as outlined in the original schedule. The schedule shall include the number of days per week and hours per day the CONTRACTOR proposes to work. The OWNER/ENGINEER shall be given a one week notice of any work schedule changes.

#### E13.7 Night and Weekend Work

The CONTRACTOR shall confine his work schedule to a Monday through Friday, dawn to dusk schedule. Any work the CONTRACTOR proposes to perform at night or on weekends must receive prior (3 days notice) written approval of the OWNER.

**End of Section E**

**General Conditions**

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## Section F

### SUPPLEMENTAL GENERAL CONDITIONS

#### **F1 Required Contractors Insurance Coverages**

Under Section E5 of the General Conditions certain stipulations are set forth regarding Contractor's Liability Insurance, Property Insurance, Receipt and Application of Proceeds and Partial Utilization -- Property Insurance. All policies of insurance shall name the CONTRACTOR as the insured party. The CONTRACTOR and his insurance agent shall be required to complete the Certificate of Insurance appended in Section K of the Contract Documents prior to, or at the time that the Agreement is executed and the surety bonds are posted by the CONTRACTOR. OWNER and KLH Engineers, Inc. shall be an additional insured with respect to liability arising out of and from the work performed by CONTRACTOR for OWNER. Insurer waives all right of subrogation against OWNER, its clients, or its employees. The insurance coverage under the insurance contract is primary to any comparable liability insurance carried by the OWNER or its agent. The specific coverages required to be provided prior to commencement of construction by the CONTRACTOR and any and all subcontractors on this project shall be as follows:

#### **F. INSURANCE**

CONTRACTOR shall obtain insurance of the types and in the amounts described below. The insurance shall be written by insurance companies with an A. M. Best rating of A- or better and on forms acceptable by OWNER.

#### **F.1 COMMERCIAL GENERAL AND UMBRELLA LIABILITY INSURANCE**

CONTRACTOR shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella insurance with a limit of not less than \$2,000,000 each occurrence. If such CGL insurance contains a general aggregate limit, it shall apply separately to the Project.

F.1.1 CGL insurance shall be written on ISO occurrence form CG 00 01 (or a substitute form providing equivalent coverage) and shall cover liability arising from premises, operations, independent contractors, products-completed operations, and personal injury and advertising injury.

F.1.2 OWNER and KLH Engineers, Inc. shall be added by endorsement as named additional insureds under the CGL and under the commercial umbrella, if any. This insurance, including insurance provided under the commercial umbrella, if any, shall apply as primary insurance with respect to

any other insurance or self-insurance programs providing coverage to Owner and/or KLH Engineers, Inc. and shall at a minimum provide to Owner and KLH Engineers, Inc. the same coverage, as that provided to Contractor, including completed operations coverage and shall provide coverage to Owner and KLH Engineers, Inc. for any liability arising from or in any way related to Contractor's work, regardless of any alleged or actual apportionment of negligence or liability.

F.1.3 There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability arising from pollution, explosion, collapse, or underground property damage.

F.1.4 Waiver of Subrogation. Contractor waives all rights against Owner and/or KLH Engineers, Inc. and their agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the commercial general liability or commercial umbrella liability insurance maintained pursuant to paragraph F.1 of this Agreement.

F.1.5 Continuing CGL Coverage. Contractor shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella liability insurance, with a limit of not less than \$2,000,000 each occurrence for at least 3 years following substantial completion of the Work.

F.1.5.1 Continuing CGL insurance shall be written on ISO occurrence form CG 00 01 (or substitute form providing equivalent coverage) and shall, at minimum, cover liability arising from products-completed operations and liability assumed under an insured contract.

F.1.5.2 Continuing CGL insurance shall have a products-completed operations aggregate of at least two times its each occurrence limit or provide aggregate limits per location/project.

F.1.5.3 Continuing commercial umbrella coverage, if any, shall include liability coverage for damage to the insured's completed Work equivalent to that provided under ISO form CG 00 01.

F.2 OWNERS AND CONTRACTORS PROTECTIVE LIABILITY INSURANCE

At the Owners request, the Contractor shall maintain Owners and Contractors Protective Liability (OCP) insurance on behalf of Owner, as named insured, with a limit of \$2,000,000.

F.3 SPECIAL RAILROAD INSURANCE, CSX TRANSPORTATION

F.3.1 In addition to those insurances described above, all Contractors and subcontractors involved on work on Railroad property shall provide special Railroad Protective Liability Insurance for the CSX Transportation.

F.3.2 Any agency, contractor or outside party performing work on or about CSXT's property shall procure and maintain appropriate insurance policies to protect CSXT against the exposure to liability.

- A. Commercial General Liability coverage at their sole cost and expense with limits of not less than \$5,000,000 in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured.
- B. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than \$1,000,000. The insurance must contain a waiver of subrogation against CSXT and its affiliates.
- C. Commercial automobile liability insurance with limits on not less than \$500,000 combined single limit for bodily injury and/or property damage per occurrence. Such policies shall designate CSXT as an additional named insured.
- D. Railroad protective liability insurance with limits of not less than \$5,000,000 combined single limit for bodily injury and/or property damage per occurrence and an aggregate annual limit of \$10,000,000. The insurance shall satisfy the following additional requirements:
  - 1. The insurer must be financially stable and rated B+ or better in Best's Insurance Reports.
  - 2. The Railroad Protective Insurance Policy must be on the ISO/RIMA Form of Railroad

Protective Insurance-Insurance Services  
Office (ISO) Form CG 00 35.

3. CSX Transportation must be the named insured on the Railroad Protective Insurance Policy.  
CSX Transportation  
500 Water Street, C907  
Jacksonville, FL 32202
  4. Name and address of contractor and agency must be shown on the Declarations page.
  5. Description of operations and location of work to be performed must appear on the Declarations page and must match the project description, including project or contract identifications numbers.
  6. Authorized endorsements must include the Pollution Exclusion Amendment CG 28 31- unless using form CG 00 35 version 96 and later.
  7. Authorized endorsements may include:
    - a. Broad Form Nuclear Exclusion-IL 00 21
    - b. 30-day Advance Notice of non-renewal or cancellation
    - c. Required State Cancellation Endorsement
    - d. Quick Reference or Index - CL/IL 240
  8. Authorized endorsements may not include:
    - a. A Pollution Exclusion Endorsement except CG 28 31
    - b. A Punitive or Exemplary Damages Exclusion
    - c. A "Common Policy Conditions" Endorsement
    - d. Any endorsement that is not named in Section D, 6 or 7 above
    - e. Policies that contain any type of deductible
- E. Any such additional or different insurance as CSXT may require.

## B. Additional Terms

CONTRACTOR must submit its original insurance policies and two copies and all notices and correspondence regarding the insurance policies.

CONTRACTOR may not begin work on the project until it has received CSTX's written approval of the required insurance policies.

### F.4 BUSINESS AUTO AND UMBRELLA LIABILITY

Contractor shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit of not less than \$2,000,000 each accident.

F.4.1. Such insurance shall cover liability arising out of any auto (including owned, hired and non-owned autos).

F.4.2 Business auto coverage shall be written on ISO form CA 00 01, CA 00 05, CA 00 12, CA 00 20, or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage equivalent to that provided in the 1990 and later editions of CA 00 01.

F.4.3 If the Contract Documents require Contractor to remove and haul hazardous waste from the Project site, or if the Project involves such similar environmental exposure, pollution liability coverage equivalent to that provided under the ISO Pollution Liability-Broadened Coverage for Covered Autos Endorsement (CA 99 48) shall be provided, and the Motor Carrier Act Endorsement (MCS 90) shall be attached.

F.4.4 Waiver of Subrogation. Contractor waives all rights against Owner and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the business auto liability or commercial umbrella liability insurance obtained by Contractor pursuant to Paragraph F.4 of this Agreement or under any applicable auto physical damage coverage.

### F.5 WORKERS COMPENSATION INSURANCE

Contractor shall maintain workers compensation and employers liability insurance.



F.5.1 The employers liability, and if necessary commercial umbrella, limits shall not be less than \$2,000,000 each accident for bodily injury by accident or \$2,000,000 each employee for bodily injury by disease.

F.5.2 Where applicable, U.S. Longshore and Harborworkers compensation Act Endorsement shall be attached to the policy.

F.5.3 Where applicable, Outer Continental Shelf Lands Act Endorsement shall be attached to the policy.

F.5.4 Where applicable, Maritime Coverage Endorsement shall be attached to the policy.

#### F.6 PROPERTY INSURANCE

F.6.1 Contractor shall purchase and maintain in force property insurance for the entire Work. Such insurance shall be written in an amount at least equal to the initial contract sum as well as subsequent modifications of that sum. The insurance shall apply on a replacement cost basis. If the insurance obtained in compliance with this Paragraph F.6 is builders risk insurance, coverage shall be written on a completed value form.

F.6.2 The insurance as required in Subparagraph F.6.1 shall include the interests of the Owner, Contractor, and all subcontractors and sub-subcontractors on the Project. The insurance policy shall contain a provision that the insurance will not be canceled or allowed to expire until at least 30 days prior written notice has been given to Owner.

F.6.3 The insurance as required in Subparagraph F.6.1 shall cover the entire Work at the site identified in this Agreement, and shall also cover portions of the Work located away from the site but intended for use at the site, and shall also cover portions of the Work in transit. The policy shall include as insured property scaffolding, false work, and temporary buildings located at the site. The policy shall cover the cost of removing debris, including demolition as may be made legally necessary by the operation of any law, ordinance, or regulation.

F.6.4 Contractor shall purchase and maintain boiler and machinery insurance if such equipment is part of the Work identified in this Agreement required by the contract

documents or by law, covering insured objects during installation and until final acceptance by Owner. This insurance shall include the interests of the Owner. Contractor and all subcontractors and sub-subcontractors in the Work.

F.6.5 The insurance as required by paragraph F.6 shall be written to cover all risks of physical loss except those specifically excluded in the policy, and shall inure at least against the perils of fire, lightning, explosion, windstorm or hail, smoke, aircraft or vehicles, riot or civil commotion, theft, vandalism, malicious mischief, and collapse.

F.6.6 Any deductible applicable to the insurance purchased in compliance with this Paragraph 6.6 shall be paid by Contractor.

F.6.7 The insurance as required by this Paragraph F.6 shall be maintained in effect, unless otherwise provided for in the contract documents, until the earliest of the following dates:

(a) the date on which all persons or organizations who are insureds under the policy agree that it shall be terminated;

(b) the date on which final payment, as provided for in this Agreement, has been made;

(c) The date on which the insurable interests in the property of all insureds other than Contractor have ceased.

F.6.8 Before the commencement of Work, Contractor shall provide to Owner a copy of the insurance policy obtained in compliance with this Paragraph F.6.

F.6.9 Before the commencement of Work, Owner may declare to Contractor any decision on its part that the Owner will obtain any or all of the insurance coverage as required in this Paragraph F.6. Upon such declaration, Owner shall then have the right to obtain insurance equivalent in coverage to that required in this Paragraph F.6 and by appropriate change order, charge the cost of such insurance to Contractor.

F.6.10 Waiver of Subrogation. Owner and Contractor waive all rights against each other and each of their subcontractors, sub-subcontractors, officers, directors, agents, and employees for recovery for damages caused by

fire and other perils to the extent covered by builders risk or property insurance applicable to the Work.

F.6.11 Partial occupancy or use of the Work shall not commence until the insurance company or companies providing insurance as required in this Paragraph F.6 have consented to such partial occupancy or use. Owner and Contractor shall take reasonable steps to obtain consent of the insurance company or companies, and agree to take no action, other than upon mutual written consent, with respect to occupancy or use of the Work that could lead to cancellation, lapse, or reduction of insurance.

#### F.7 EVIDENCE OF INSURANCE

Prior to commencing the Work, Contractor shall furnish Owner with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, setting out compliance with the insurance requirements set forth above.

F.7.1 All certificates shall evidence the addition by endorsement of Owner and KLH Engineers, Inc. as "Additional Insured with respect to any claims and/or liability arising from, or in any way related to, the work performed by the insured, regardless of any alleged or actual apportionment of negligence or liability."

F.7.2 All certificates shall provide for 30 days written notice to Owner prior to the cancellation or material change of any insurance referred to therein.

F.7.3 The words "endeavor to" and "but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives" shall be deleted from the cancellation provision of all certificates provided by Contractor.

F.7.4 Failure of Owner to demand such certificate or other evidence of full compliance with these insurance requirements or failure of Owner to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

F.7.5 Owner shall have the right, but not the obligation, to prohibit Contractor or any subcontractor from entering the Project site until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by Owner.

F.7.6 Failure to maintain the insurance as specified shall constitute an event of default pursuant to the terms of this Agreement and shall allow Owner to terminate this Agreement at Owner's option. If Contractor fails to maintain the insurance as set forth herein, Owner shall have the right, but not the obligation, to purchase said insurance at Contractor's expense.

F.7.7 With respect to insurance maintained after final payment in compliance with a requirement above, an additional certificate(s) evidencing such coverage shall be promptly provided to Owner when requested.

F.7.8 Contractor shall provide certified copies of all insurance policies required above with 10 days of Owner's written request for said copies.

#### F.8 GENERAL INSURANCE PROVISIONS

F.8.1 No Representation of Coverage Adequacy. By requiring the insurance as set out in F. Insurance, Owner does not represent that coverage and limits will necessarily be adequate to protect Contractor, and such coverage and limits shall not be deemed a limitation on Contractor's liability under the indemnities provided to Owner in this Agreement, or any other provision of the Contract Documents.

F8.2 Cross-Liability Coverage. If Contractor's liability policies do not contain the standard ISO separation of insureds provision, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.

F8.3 The insurance requirements set out in this specification are independent from all other obligations of Contractor under this Agreement and apply whether or not required by any other provision of this Agreement.

F8.4 Subcontractor's Insurance. Contractor shall cause each subcontractor employed by Contractor to purchase and maintain insurance of the type specified. When requested by Owner, Contractor shall furnish to Owner copies of certificates of insurance evidencing coverage for each subcontractor.

## F.9 REGIONAL TRAIL CORPORATION INSURANCE REQUIREMENTS

- A. Before commencing work, CONTRACTOR shall provide and maintain the following insurance, in form and amount and with the companies satisfactory to, and as approved by, Regional Trail Corporation, P.O. Box 95, West Newton, PA 15089.
1. Statutory Workers' Compensation and Employer's Liability insurance.
  2. Automobile Liability in an amount not less than One Million (\$1,000,000) Dollars combined single limit.

All insurance provided must be primary and shall not be reduced or limited by any insurance procured by Licensor.

### **F2 Photographs**

Pre-construction and post construction video (DVD) records are required and are essential to completion of this project. Pre-construction 35 mm photographs (Bound in book format with accompanying CD) and video (DVD) shall be submitted with the shop drawing submittals. No payment shall be made until all preconstruction photographs and video(DVD) are provided to the OWNER. All photographs shall be submitted bound in DVD and/or CD format.

CONTRACTOR shall take all still photographs of areas prior to, during, and at completion of project. Photographs are to be, identified and cataloged with a site plan indicating where the photograph was taken and which direction it was shot with a date and time stamp. Any notes the CONTRACTOR deems necessary should also be included on the photograph or on the photograph log.

CONTRACTOR shall video work area prior to, and at completion of the project. Videotapes shall be color DVD format. Videotapes shall be submitted labeled (typewritten) as to their location, date and time of information filmed. All DVD's shall be numbered referenced to contract drawings identifying location and contract drawing number and shall include close inspection of all equipment, structures and improved areas to be disturbed by construction activities, especially streets, roads, lanes, driveways, bridges, streams, improved scrubbed/planting bed, and lawns. Improved lawns are areas regularly maintained by a property owner regardless of the number of tress. Pre-construction video tapes of all construction through unimproved areas are required and shall be submitted prior to work commencing through those areas, and shall include video along

the alignment of the construction stake out and identify topographic features/wooded areas to be disturbed.

All videos and photographs taken during or post construction shall be submitted at the conclusion of the project to the OWNER and will become the property of the OWNER.

**F3 Construction Inspection**

The day-to-day inspection work on this project will be performed by a Project Representative directly employed by the OWNER and/or the ENGINEER. Each contractor's superintendent shall coordinate all construction activities with that individual who shall refer such matters as he deems necessary to the OWNER and the ENGINEER, or others, as circumstances may be required.

**F4 Progress Meetings on the Job Site**

Periodic job progress meetings will be scheduled on at least a monthly basis for the purpose of coordinating the work of all contractors, reconciling construction problems and/or discussing any other project related matters. The ENGINEER will call those meetings with advance notification of several days. CONTRACTOR's superintendents and/or other authorized administrative personnel will be expected to be present.

**F5 Prevailing Minimum Wage Predetermination**

The Pennsylvania State Department of Labor and Industry has made a minimum wage determination applicable to all construction work performed under this project. The "Decision of the Secretary"; the Contractor's or Subcontractor's Weekly Payroll Certification for Public Works Projects" form (which will be required to be properly sworn and submitted weekly to the OWNER during the Progress of the work); and the "Prevailing Minimum Wage Predetermination" dated December 16, 2010 follows on Pages F-28 thru F-34.

**F6 Pennsylvania Department of Transportation Highway Occupancy**

Although the OWNER has obtained a Highway Occupancy Permit and Traffic Control Plan approval, the CONTRACTOR shall be required to conduct all work in accordance with the Rules and Regulations of The Pennsylvania Department of Transportation and in accordance with the laws, rules and/ or regulations of all other authorities having jurisdiction over the required construction work. The CONTRACTOR shall be required to provide PennDOT with a Maintenance Bond and Certificate of Insurance in accordance with forms provided in Section F, pages F-24 and F-27. The value of the maintenance bond has been determined by PennDOT to be **\$4,372,000**. In addition the CONTRACTOR shall also provide Penn DOT with photo/video documentation of the pre-construction

condition of the pavement and shoulders and should display curbs, guiderail, and other highway appurtenances such as bridge approaches and signs. Photo/video documentation shall also include the approved Traffic Control Plan Detour Route. Documentation shall not be made more than 15 days prior to the commencement of construction activities nor shall construction commence before documentation is received by Penn DOT.

**F7 Requirements of Liberty Borough**

The CONTRACTOR shall obtain a permit for work in Liberty Borough Roads. The work shall be in accordance with the requirements of Liberty Borough. CONTRACTOR shall be responsible for road opening permit fees and all subsequent restoration bonding requirements. The CONTRACTOR shall provide Liberty Borough with a maintenance bond having a two year term. Value of the maintenance bond shall be determined by Liberty Borough.

**F8 Requirements of Port Vue Borough**

The CONTRACTOR shall obtain a permit for work in Port Vue Borough Roads. The work shall be in accordance with the requirements of Port Vue Borough. CONTRACTOR shall be responsible for road opening permit fees and all subsequent restoration bonding requirements. The CONTRACTOR shall provide Port Vue Borough with a maintenance bond having a two year term. Value of the maintenance bond shall be determined by Port Vue Borough.

**F9 Requirements of City of McKeesport**

The CONTRACTOR shall obtain and be responsible for all permit fees for work in City streets and roads. The work shall be in accordance with the requirements of the City of McKeesport. The CONTRACTOR shall provide City of McKeesport with a maintenance bond having a two year term. Value of the maintenance bond shall be determined by City of McKeesport.

**F10 Local Taxes and Permits**

The Contract Documents require the successful CONTRACTORS to comply with all federal, state, and local laws, ordinances, rules and regulations; obtain and pay for any and all construction permits and licenses; and pay all taxes. This will include, but shall not be limited to, the City of McKeesport's:

- Business Privilege Tax (0.008 of Gross Contract Amount)
- Business Privilege Registration (\$10.00)
- Business License Fee Tax (\$100.00)

All City of McKeesport Taxes and Permit Fees shall be satisfied prior to construction commencing.

**F11 NPDES Permit for Discharge of Stormwater from Construction Activities**

The CONTRACTOR shall be required to sign the NPDES Permit for Discharge of Stormwater from Construction Activities as Transferee with the OWNER. Complete implementation of the Erosion and Sediment Pollution Control Plan by the CONTRACTOR will satisfy the terms of the noted NPDES Permit Application. The transferee application and instructions follow on Page F-21 through F-23.

**F12 Contract Close-out Documents**

Upon completion of the contract, the CONTRACTOR and/or Contractor's surety shall be required to complete the following documents appended on Pages F-15 thru F-19:

Affidavit of Payment and Release of Liens  
Acceptance of Final Payment and General Release  
Consent of Surety Company to Final Payment

**F13 Claims for Damages**

Under this Contract, the CONTRACTOR shall not be entitled to seek additional compensation for delays, loss of anticipatory profits, or consequential damages.

**F14 OWNER's Right of Audit**

If a claim arises by the CONTRACTOR against the OWNER, the OWNER shall have access to all of the CONTRACTOR's books and records for auditing. The CONTRACTOR shall be required to maintain accurate books and records regardless of whether any claims arise.

**F15 Substantial Completion**

The CONTRACTOR is hereby notified and alerted the Contract Technical Specifications are specific to construction of the work specified herein and to that end, the interpretation for Substantial Completion for this Contract is specified in Section 01800.

**F16 Notice-to-Proceed**

Due to the funding package being utilized to finance this project, the OWNER reserves the right to hold the notice-to-proceed on the construction for a period of up to ninety (90) days from date of execution of the Agreement.



**F17 Coordination and Interfaces**

The individual Contractors shall not unload or store material where it will interfere with the progress of the Project to cause delays or to prevent other Contractors from proceeding with their work.

Work Interferences: Each CONTRACTOR shall construct its Systems, and install the specified products of its Contract in a manner not to delay or interfere with other operations of work of other Contracts in the Project.

1. Prior to making Product installations, coordinate such locations with other operations of work, especially in congested areas.
2. In the event that interferences develop, the ENGINEER's decision will be final and no additional compensation will be allowed for relocation of the affected CONTRACTOR's Products.

Contract Interface:

1. Work Interfacing With Other Contracts: Each CONTRACTOR is responsible for performing the interface Work of its Contract in cooperation with Work of other Contracts.

**End of Section F**

**Supplemental General Conditions**

**AFFIDAVIT OF PAYMENT**

**AND**

**RELEASE OF LIENS**

TO:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I hereby certify that, to the best of my knowledge, all outstanding claims and indebtedness of any nature resulting from the performance of my contract have been fully paid, except for the following:

I hereby deliver to the OWNER, a complete release of all liens arising out of this Contract for unpaid material and labor, or other costs.

ATTEST:

\_\_\_\_\_  
\_\_\_\_\_

CONTRACTOR:

\_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

Commonwealth of Pennsylvania)

) SS:

County of \_\_\_\_\_ )

Before me a Notary Public in and for said County and Commonwealth, personally agreed \_\_\_\_\_ who, being duly sworn according to law, deposes and says that the facts set forth in the foregoing Affidavit and Release are true and correct to the best of his/her knowledge, information and belief.

\_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_\_ day and \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_

Notary Public

My Commission Expires:

Commonwealth of Pennsylvania)

) SS:

County of \_\_\_\_\_ )

\_\_\_\_\_, being duly sworn according to law, deposes and says that he/she is the \_\_\_\_\_ of

\_\_\_\_\_

a Pennsylvania Corporation, and that he/she makes this Affidavit on its behalf, being authorized to do so; and that the facts set forth in the foregoing Affidavit and Release are true and correct to the best of his/her information, knowledge and belief.

\_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_

Notary Public

My Commission Expires:

**ACCEPTANCE OF FINAL PAYMENT**

**AND**

**GENERAL RELEASE**

KNOW ALL MEN BY THESE PRESENTS, THAT \_\_\_\_\_  
 Contractor, of \_\_\_\_\_ Pennsylvania,  
 by its acceptance of Final Payment of \_\_\_\_\_ Dollars  
 (\$ \_\_\_\_\_), to it in hand paid by \_\_\_\_\_  
 the receipt of which is hereby acknowledged, has remised,  
 released, quit-claimed, and forever discharged, and by these  
 presents for it, its successors and assigns, does remise,  
 release, quit-claim and forever discharge, the said  
 \_\_\_\_\_ its successors and assigns, from all  
 action and all manner of action, cause and causes of action,  
 suits, debts, duties, sum or sums of money, variances, damages,  
 claims and demands whatsoever, in law or equity or otherwise,  
 which against \_\_\_\_\_ it ever had, now  
 has, or which it, its successors or assigns, hereafter can,  
 shall, or may have, for or by reason of a certain contract  
 between \_\_\_\_\_ and \_\_\_\_\_  
 \_\_\_\_\_ dated \_\_\_\_\_,  
 designated as Contract \_\_\_\_\_,

No payment, however, final or otherwise shall operate to release  
 \_\_\_\_\_, or its sureties from  
 any obligation under said contract or under the Performance,  
 Payment, and Maintenance Bonds furnished to the OWNER by it,  
 under said contract.

ATTEST:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 (SEAL)

CONTRACTOR:  
 \_\_\_\_\_  
 By \_\_\_\_\_  
 Title

Commonwealth of Pennsylvania)

) SS:

County of )

Before me a Notary Public in and for said County and Commonwealth, personally agreed \_\_\_\_\_ who, being duly sworn according to law, deposes and says that the facts set forth in the foregoing Affidavit and Release are true and correct to the best of his/her knowledge, information and belief.

\_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_\_ day and \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_

Notary Public

My Commission Expires:

Commonwealth of Pennsylvania)

) SS:

County of )

\_\_\_\_\_, being duly sworn according to law, deposes and says that he/she is the \_\_\_\_\_ of \_\_\_\_\_, a Pennsylvania Corporation, and that he/she makes this Affidavit on its behalf, being authorized to do so; and that the facts set forth in the foregoing Affidavit and Release are true and correct to the best of his/her information, knowledge and belief.

\_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_

Notary Public

My Commission Expires:

CONSENT OF SURETY COMPANY TO FINAL PAYMENT

Bond No. \_\_\_\_\_

Project \_\_\_\_\_  
\_\_\_\_\_

OWNER: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

In accordance with the provisions of the Contract between the OWNER and CONTRACTOR as indicated above, the

(insert name and address of Surety Company)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_, Surety Company, on bond of

(insert name and address of Contractor)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_, CONTRACTOR, hereby approves of the final payment to the CONTRACTOR, and agrees that final payment to the CONTRACTOR shall not relieve the Surety Company of any of its obligations to:

(insert name and address of OWNER)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_, OWNER, as set forth in the said Surety Company's Bond.

IN WITNESS WHEREOF,  
the Surety Company has hereunto set its hand this \_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_.

\_\_\_\_\_  
Surety Company

\_\_\_\_\_  
Signature of Authorized Representative

ATTEST:

(SEAL) \_\_\_\_\_ Title

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COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATERSHED MANAGEMENT

OFFICIAL USE ONLY  
PA \_\_\_\_\_

**TRANSFeree/CO-PERMITTEE APPLICATION FOR A GENERAL OR INDIVIDUAL NPDES PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

TYPE OR PRINT IN BLOCK LETTERS

<b>A. PERMIT INFORMATION</b>				
<input type="checkbox"/> Check here if applying for permit transfer.		<input type="checkbox"/> Check here if applying to be added as a co-permittee.		
GENERAL OR INDIVIDUAL NPDES PERMIT FOR DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES FOR WHICH APPLYING AS TRANSFEREE/CO-PERMITTEE.				
PERMIT NO.: _____		DATE ISSUED: _____		
<b>B. CURRENT PERMITTEE INFORMATION</b>				
DEP Client ID# (if known)		Applicant Type / Code (if known)		
Organization Name or Registered Fictitious Name		Employer ID# (EIN)	Contact Person	
Individual Last Name	First Name	MI	Suffix	SSN
Additional Individual Last Name	First Name	MI	Suffix	SSN
Mailing Address Street				
City	State	ZIP+4	County	Phone
<b>C. SITE INFORMATION</b>				
DEP Site ID# (if known)		Site Name		
DEVELOPMENT NAME (IF APPLICABLE):				
SITE ADDRESS/LOCATION:				
COUNTY: _____		MUNICIPALITY: _____		
DATE OF TRANSFER OF PERMIT RESPONSIBILITY, COVERAGE AND LIABILITY: _____, 20____				
<p><b>CO-PERMITTEE/TRANSFEREE AGREEMENT:</b> Attach a written agreement signed by all parties involved with the change of operational control. The letter should provide a specific date (not less than 30 days after the date this application is submitted) for the transfer or sharing of permit responsibility, coverage, and liability between the current and new permittee/co-permittee. A SAMPLE Co-Permittee Agreement letter and a SAMPLE Transferee Agreement letter are attached for reference.</p>				



D. TRANSFEREE/GO-PERMITTEE INFORMATION					
DEP Client ID# (if known)			Applicant Type / Code (if known)		
Organization Name or Registered Fictitious Name		Employer ID# (EIN)	Contact Person		
Individual Last Name	First Name	MI	Suffix	SSN	
Additional Individual Last Name	First Name	MI	Suffix	SSN	
Mailing Address Street					
City	State	ZIP+4	County	Phone	

E. COMPLIANCE REVIEW		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Does the applicant (owner and/or operator) have or require other environmental permits issued by the Department for this project? If yes, list each permit and the compliance history of the permitted facility or operation.
Permit Program: _____		
Permit Number: _____		
Brief Description: _____		
Compliance History: _____		
<p>If the applicant is not in compliance with any environmental law or regulation, or Department permit, order or schedule of compliance, or has failed and continues to fail to comply, or has shown a lack of ability or intent to comply with environmental laws or regulations or any Department permit, order, or schedule of compliance, as indicated by past or continuing violations, provide a narrative description of how the applicant will achieve compliance including the appropriate milestones.</p>		

**F. CERTIFICATION AND SIGNATURE OF APPLICANT**

Applicant Certification

I certify under penalty of law that this application and all related attachments were prepared by me or under my direction or supervision by qualified personnel to properly gather and evaluate the information submitted. Based on my own knowledge and on inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. The responsible official's signature also verifies that the activity is eligible to participate in the General or Individual NPDES Permit, and BMP's and other controls are or will be implemented to ensure that water quality standards and effluent limits are attained. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment or both for knowing violations.

\_\_\_\_\_  
Print Name and Title of Person Signing

( ) \_\_\_\_\_  
Telephone Number of Person Signing

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date of Application Signed

Notarization:  
Sworn to and Subscribed to Before Me This  
\_\_\_\_\_ Day of \_\_\_\_\_, 20\_\_\_\_\_

**NOTARY  
SEAL**

Commonwealth of Pennsylvania  
County of \_\_\_\_\_

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

## INSTRUCTIONS FOR THE TRANSFeree / CO-PERMITTEE APPLICATION FORM FOR A GENERAL OR INDIVIDUAL NPDES PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

**Who may file the Transferee/Co-Permittee Application Form:** This form may be used by an applicant seeking to apply for either complete or partial operational control of earth disturbance activities at a site which are already authorized by either an Individual or General NPDES Permit. Federal NPDES Regulations at 40 C.F.R. §122.21(b) require that Operator(s) must become a permittee. An operator is a person who meets either of the following criteria: 1.) You have operational control of construction project plans and specifications, including the ability to make modifications to those plans and specifications; OR 2.) You have day-to-day operational control (supervision) of those activities at the project that are necessary to ensure compliance with the Erosion and Sediment Control Plan for the site or ensure compliance with other permit conditions, i.e., General Contractors. Subcontractors generally do not have supervisory control over earth disturbance activities and therefore usually **should not** become a permittee or co-permittee. If prior to construction activities, there is no operator, the owner must apply for the permit. Once the operator has been selected, the operator must use this application either to be made a co-permittee or to have the permit transferred to the contractor. **Failure of the operator to be added to the permit is a violation of federal and state law and regulation.**

**Where to file the Transferee/Co-Permittee Application Form:** Send this form to the reviewing entity, either to the local county conservation district that is participating as the reviewing entity or, if the Department is the reviewing entity, to the appropriate DEP Regional Office, Permitting and Technical Services Section.

**When to file the Application:** This application must be filed at least 30 days prior to the proposed change of ownership and/or operational control which will result in the transfer of permit responsibility, coverage and liability.

**Completing the Application: TYPE OR PRINT IN BLOCK LETTERS IN THE APPROPRIATE SPACES**

**Section A. Permit Information** - Check the appropriate box and enter the Permit Number and date of issuance of the existing Individual or General NPDES Permit assigned to the construction activity at the site identified in Section C below.

**Section B. Current Permittee Information** - Enter the full name, address and telephone number of the individual or organization and contact person that is the current permittee. The Regional Office can supply the Client ID # and Applicant Code, if known.

**Section C. Site Information** - Enter the DEP Site ID#, site name, site address/location, county and municipality of the site where the construction activity authorized by the NPDES Permit is located. Include the date on which the transfer of Permit responsibility, coverage and liability will occur. The Regional Office can supply the Site ID #.

**Section D. Transferee/Co-Permittee Information** - Enter the full name, address and telephone number of the individual or organization and contact person that is applying to assume operational control of construction activities at the site. The Regional Office can supply the Client ID # and Applicant Code, if known.

**Section E. Compliance Review** - The individual or organization referenced in Section D must indicate if any other environmental permits have been received or are pending from DEP as well as their past compliance history and if they are currently in compliance with environmental laws, rules and regulations, permits, orders and schedules of compliance.

**Section F. Certification and Signature of Applicant** - The new Transferee/Co-Permittee Applicant (named in Section D) must complete the required certification that the information contained in this application is true, accurate, and complete; the BMPs are or will be designed and fully implemented in accordance with the NPDES Permit requirements and will meet the applicable standards and limitations of the permit; and further that the applicant has read, understands and agrees to abide by the terms and conditions of the permit. The application shall be signed as follows:

- a. **For a corporation** -- By a responsible corporate officer, which means: (1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (2) The manager of one or more manufacturing, production or operating facilities if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
- b. **For a partnership or sole proprietorship** -- By a general partner or the proprietor, respectively; or
- c. **For a municipality, State, Federal or other public agency** -- by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (1) the chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

**The application shall be notarized in the space provided.**

AGREEMENT NO. \_\_\_\_\_  
 Individual -- (Assigned by District Office)  
Application No. \_\_\_\_\_  
 Blanket -- \$500,000 Minimum (Assigned by Central Office)

**HIGHWAY RESTORATION AND MAINTENANCE BOND**

FEDERAL I.D. NO. \_\_\_\_\_  
BOND NO. \_\_\_\_\_  
EFFECTIVE DATE \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, That we \_\_\_\_\_

\_\_\_\_\_  
(Name of Principal - Permittee)  
of \_\_\_\_\_  
(Mailing Address of Principal - Permittee)  
as PRINCIPAL\*, and \_\_\_\_\_  
(Name of Surety)  
of \_\_\_\_\_  
(Mailing Address of Surety)

as SURETY, are held and firmly bound unto the Commonwealth of Pennsylvania, Department of Transportation, as OBLIGEE, in the full and just sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), lawful money of the United States of America, to be paid to the said Commonwealth of Pennsylvania, or its assigns, to which payment will and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the PRINCIPAL has applied, is about to apply or may in future from time to time apply to the OBLIGEE for one or more Highway Occupancy Permits (referred to herein as the "Permits") which require a bond to secure proper restoration of the highway pursuant to 67 Pa. Code Chapter 459.5(b), because a substantial amount of work may be performed for or by the PRINCIPAL under such Permits.

NOW, THEREFORE, The condition of this obligation is such that, if the above bounden PRINCIPAL shall in all respects comply with and faithfully perform the terms and conditions of each Permit and all applicable provisions of 67 PA. Code Chapter 459, and shall save and hold harmless the OBLIGEE from any damages or losses from any cause growing out of work to be performed under such Permits of the State Highway(s) then this obligation shall be void and of no effect; but otherwise is to be and remain in full force and effect.

PROVIDED, that any alterations which may be made in the terms of any Permit(s) or in the payment of costs due under it, or the giving by the OBLIGEE of any extension of time for the performance of work or any other forbearance on the part of either the OBLIGEE or the PRINCIPAL to the other, shall not in any way release the PRINCIPAL and the SURETY or SURETIES or either or any of them, their heirs, executors, administrators, successors and assigns, from their liability hereunder, notice to the SURETY or SURETIES of any such alteration, extension or forbearance being hereby waived.

PROVIDED, that with respect to each Highway Occupancy Permit, and any supplements thereto, issued by the OBLIGEE to the PRINCIPAL, the duration of the obligation under this Bond shall be for the period during which work is performed and for two years after the Department's acknowledgment of completion of all work authorized by such Highway Occupancy Permit(s), and any supplements thereto.

PROVIDED, the SURETY may terminate its future liability under this Bond ninety (90) days after furnishing written notice of such intention to terminate, delivered in person or by registered or certified mail, to the Department at its appropriate District Permit Office and the Central Permit Office, located at 400 North Street, Harrisburg, Pennsylvania 17120-0041. This termination shall not affect the liability of the SURETY and the PRINCIPAL for any liability incurred by the PRINCIPAL under the Agreement prior to the effective date of such termination, but the liability of the PRINCIPAL and the SURETY for any liability incurred by the PRINCIPAL under the Agreement prior to the date of such termination, but the liability of the PRINCIPAL and the SURETY for any liability incurred by the PRINCIPAL under the Agreement prior to the effective date of termination shall continue beyond the date of termination until such time the PRINCIPAL(S) liability is totally discharged and satisfied.

\*If Permittee's contractor is also listed as PRINCIPAL, collectively identified as PRINCIPAL for the purposes of this Bond only.

PROVIDED, that in case of default of the PRINCIPAL, in any respect, action on this Bond may be begun forthwith, and the PRINCIPAL and SURETY, jointly and severally, do hereby authorize and empower any attorney of any court of record in Pennsylvania or elsewhere, to appear for and to enter judgment against them, jointly and severally, for the cost of proper restoration of the State Highway(s) affected by the permitted work, not to exceed the aforementioned sum, with or without defalcation, with costs of suit, with release of errors, without stay of execution and with ten percent (10%) attorney's fees added for collection; and waiving inquisition on any real estate and exemption of any property whatsoever, authorizing condemnation of same and immediate issuance of a Writ of Execution, and releasing and waiving relief from any and all appraisal, stay of execution, or exemption laws of any state, now in force or hereinafter to be passed.

PROVIDED, FURTHER, that in the absence of default, this Bond shall remain in full force and effect and may not be cancelled by the SURETY without the written permission of the OBLIGEE'S Permit Office.

Time limitations set forth in this Bond shall not be deemed to relieve the PRINCIPAL of liability for items exceeding the time limitations set forth in 67 Pa. Code Chapter 459.

EXECUTED ON \_\_\_\_\_ with the intention to be legally bound hereby.  
(DATE)

ATTEST:

\_\_\_\_\_  
 Secretary                       Assistant Secretary  
 Treasurer                       Assistant Treasurer  
 Other: \_\_\_\_\_ \*\*

BY \_\_\_\_\_  
PRINCIPAL – PERMITTEE  
 President                       Vice-President  
 Other \_\_\_\_\_ \*\*

(SEAL)

ATTEST:

\_\_\_\_\_  
 Secretary                       Assistant Secretary  
 Treasurer                       Assistant Treasurer  
 Other: \_\_\_\_\_ \*\*

BY \_\_\_\_\_  
PRINCIPAL – PERMITTEE  
 President                       Vice-President  
 Other \_\_\_\_\_ \*\*

(SEAL)

WITNESS:

\_\_\_\_\_  
Title:

BY \_\_\_\_\_  
Title: \_\_\_\_\_ SURETY \*\*\*

(SEAL)

\_\_\_\_\_  
\*\*\*  
Pennsylvania Resident Agent-When Required

APPROVED AS TO LEGALITY AND FORM

BY \_\_\_\_\_  
Chief Counsel

\*\*If PRINCIPAL is a Government Unit, or if signature is other than a president, vice president, sole proprietor and owner, or managing partner, a Resolution authorizing signature must be attached.

\*\*\*Power of Attorney, properly executed and dated, must be attached. Power of Attorney must have the same date as the Bond (effective or executed date).



CERTIFICATE OF INSURANCE

(Single Permit Only)

Utility Facility Occupancy

67 Pa. Code, Chapter 459 "Occupancy of State Highways by Utilities"

Insured\* : \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Insurer: \_\_\_\_\_

Insurance Agency: \_\_\_\_\_

\_\_\_\_\_

Additional Insured: Commonwealth of Pennsylvania, Department of Transportation

*This is to certify that:*

(a) The occurrence-based Commercial General Liability (CGL) policy(-ies) of insurance listed below have been issued to the Insured named above and are in force at this time.

(b) The following coverage is provided by the policy(-ies) of insurance listed below. Initial in the space provided as certification of the insurance coverage provided (**all blocks must be initialed**):

\_\_\_\_\_ (producer's initials) The Commonwealth of Pennsylvania, Department of Transportation is an additional insured for at least \$250,000 per person and \$1,000,000 per occurrence.

\_\_\_\_\_ (producer's initials) Contractual liability

\_\_\_\_\_ (producer's initials) Care, custody, and control

\_\_\_\_\_ (producer's initials) XCU - explosion (X), collapse (C), and underground (U) hazards

\* Insured may attach Exhibit A to include subsidiary entities.

(c) The CGL policy(-ies) of insurance (occurrence-based or claims made with a two (2) year extended reporting period) listed below shall not be cancelled unless sixty (60) days (ten (10) days in the case of non-payment of premium) advance written notice of such intention to cancel delivered to the Department at the Bureau of Highway Safety and Traffic Engineering, 400 North Street, Harrisburg, PA 17120, Attention Central Office Permit Manager.

(d) The CGL policy(-ies) of insurance listed below are without deductibles or the Insured has provided the Department with a pre-approved plan of self-insurance for the amount of the deductible.

Policy Number(s): \_\_\_\_\_

\_\_\_\_\_

Policy Expiration Date(s): \_\_\_\_\_

\_\_\_\_\_

We certify that the foregoing is true and correct and this Certificate of Insurance is made subject to the penalties provided in 18 Pa.C.S. § 4904 for purpose of obtaining a highway occupancy permit pursuant to 67 Pa. Code, Chapter 459.

\_\_\_\_\_  
Permittee/Permittee's Contractor

- President
- Vice-President
- Sole Proprietor
- Managing Partner
- Other

Date: \_\_\_\_\_

\_\_\_\_\_  
Insurance Producer

Date: \_\_\_\_\_

**PREVAILING WAGES PROJECT RATES**

**Project Name:** Contract 2010-14: East Shore Sanitary Sewer Construction

**Awarding Agency:** The Municipal Authority of the City of McKeesport

**Contract Award Date:** 4/1/2011

**Serial Number:** 10-07681

**Project Classification:** Heavy/Highway

**Determination Date:** 12/15/2010

**Assigned Field Office:** Pittsburgh

**Field Office Phone Number:** 412-565-5300

**Toll Free Phone Number:** 877-504-8354

**Allegheny County**

<b>Building</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Asbestos & Insulation Workers	8/1/2010		\$31.87	\$20.04	\$51.91
Asbestos & Insulation Workers	8/1/2011		\$33.27	\$20.04	\$53.31
Asbestos & Insulation Workers	8/1/2012		\$34.67	\$20.04	\$54.71
Boilermakers	6/1/2008		\$33.90	\$20.06	\$53.96
Boilermakers	8/1/2010		\$37.52	\$22.49	\$60.01
Bricklayer	6/1/2010		\$28.65	\$16.13	\$44.78
Bricklayer	12/1/2010		\$28.87	\$16.71	\$45.58
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2010		\$28.11	\$11.91	\$40.02
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	1/1/2011		\$28.39	\$12.02	\$40.41
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2011		\$28.77	\$13.05	\$41.82
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2012		\$29.53	\$13.68	\$43.21
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2013		\$30.28	\$14.33	\$44.61
Cement Finishers	6/1/2010		\$26.79	\$12.27	\$39.06
Cement Finishers	12/1/2010		\$26.79	\$12.77	\$39.56

**PREVAILING WAGES PROJECT RATES**

<b>Building</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Dockbuilder/Pile Driver Divers	1/1/2010		\$29.95	\$12.25	\$42.20
Drywall Finisher	6/1/2010		\$24.55	\$14.49	\$39.04
Drywall Finisher	6/1/2011		\$25.30	\$14.74	\$40.04
Drywall Finisher	6/1/2012		\$26.05	\$14.99	\$41.04
Electric Lineman	5/31/2010		\$38.00	\$17.73	\$55.73
Electric Lineman	5/30/2011		\$38.88	\$17.96	\$56.84
Electric Lineman	11/28/2011		\$39.78	\$18.20	\$57.98
Electric Lineman	5/28/2012		\$40.70	\$18.45	\$59.15
Electric Lineman	11/26/2012		\$41.63	\$18.70	\$60.33
Electricians & Telecommunications Installation Technician	12/25/2009		\$35.61	\$17.13	\$52.74
Electricians & Telecommunications Installation Technician	12/24/2010		\$38.01	\$17.13	\$55.14
Elevator Constructor	1/1/2011		\$41.13	\$21.99	\$63.12
Glazier	9/1/2010		\$27.54	\$18.31	\$45.85
Glazier	9/1/2011		\$28.04	\$19.06	\$47.10
Glazier	9/1/2012		\$28.54	\$19.81	\$48.35
Glazier	9/1/2013		\$29.04	\$20.31	\$49.35
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	6/1/2010		\$30.03	\$22.71	\$52.74
Laborers (Class 01 - See notes)	12/1/2009		\$20.92	\$9.72	\$30.64
Laborers (Class 01 - See notes)	6/1/2010		\$20.92	\$9.72	\$30.64
Laborers (Class 01 - See notes)	1/1/2011		\$21.17	\$10.52	\$31.69
Laborers (Class 01 - See notes)	1/1/2012		\$21.42	\$11.32	\$32.74
Laborers (Class 01 - See notes)	1/1/2013		\$21.67	\$12.12	\$33.79
Laborers (Class 01 - See notes)	1/1/2014		\$21.92	\$12.92	\$34.84
Laborers (Class 01 - See notes)	1/1/2015		\$22.17	\$13.72	\$35.89
Laborers (Class 02 - See notes)	12/1/2009		\$21.07	\$9.72	\$30.79
Laborers (Class 02 - See notes)	6/1/2010		\$21.07	\$9.72	\$30.79
Laborers (Class 02 - See notes)	1/1/2011		\$21.32	\$10.52	\$31.84
Laborers (Class 02 - See notes)	1/1/2012		\$21.57	\$11.32	\$32.89
Laborers (Class 02 - See notes)	1/1/2013		\$21.82	\$12.12	\$33.94
Laborers (Class 02 - See notes)	1/1/2014		\$22.07	\$12.92	\$34.99



**PREVAILING WAGES PROJECT RATES**

<b>Building</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Laborers (Class 02 - See notes)	1/1/2015		\$22.32	\$13.72	\$36.04
Laborers (Class 03 - See notes)	12/1/2009		\$21.20	\$9.72	\$30.92
Laborers (Class 03 - See notes)	6/1/2010		\$21.20	\$9.72	\$30.92
Laborers (Class 03 - See notes)	1/1/2011		\$21.45	\$10.52	\$31.97
Laborers (Class 03 - See notes)	1/1/2012		\$21.70	\$11.32	\$33.02
Laborers (Class 03 - See notes)	1/1/2013		\$21.95	\$12.12	\$34.07
Laborers (Class 03 - See notes)	1/1/2014		\$22.20	\$12.92	\$35.12
Laborers (Class 03 - See notes)	1/1/2015		\$22.45	\$13.72	\$36.17
Laborers (Class 04 - See notes)	12/1/2009		\$21.67	\$9.72	\$31.39
Laborers (Class 04 - See notes)	6/1/2010		\$21.67	\$9.72	\$31.39
Laborers (Class 04 - See notes)	1/1/2011		\$21.92	\$10.52	\$32.44
Laborers (Class 04 - See notes)	1/1/2012		\$22.17	\$11.32	\$33.49
Laborers (Class 04 - See notes)	1/1/2013		\$22.42	\$12.12	\$34.54
Laborers (Class 04 - See notes)	1/1/2014		\$22.67	\$12.92	\$35.59
Laborers (Class 04 - See notes)	1/1/2015		\$22.92	\$13.72	\$36.64
Landscape Laborer	7/1/2010		\$18.25	\$9.90	\$28.15
Landscape Laborer (Skilled)	7/1/2010		\$18.67	\$9.90	\$28.57
Landscape Laborer (Tractor Operator)	7/1/2010		\$18.97	\$9.90	\$28.87
Marble Finisher	6/1/2010		\$19.52	\$11.70	\$31.22
Marble Mason	6/1/2010		\$19.42	\$9.41	\$28.83
Millwright	6/1/2008		\$32.71	\$14.29	\$47.00
Millwright	6/1/2011		\$34.42	\$15.08	\$49.50
Operators (Class 01 - see notes)	6/1/2010		\$30.22	\$15.32	\$45.54
Operators (Class 01 - see notes)	6/1/2011		\$31.45	\$15.40	\$46.85
Operators (Class 02 -see notes)	6/1/2010		\$26.78	\$15.32	\$42.10
Operators (Class 02 -see notes)	6/1/2011		\$27.76	\$15.40	\$43.16
Operators (Class 03 - see notes)	6/1/2010		\$25.06	\$15.32	\$40.38
Operators (Class 03 - see notes)	6/1/2011		\$26.04	\$15.40	\$41.44
Painters Class 6 (see notes)	6/1/2010		\$25.28	\$13.53	\$38.81
Painters Class 6 (see notes)	6/1/2010		\$25.28	\$14.78	\$40.06

**PREVAILING WAGES PROJECT RATES**

<b>Building</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Pile Driver Diver Tender (Building, Heavy, Highway)	1/1/2010		\$29.95	\$12.25	\$42.20
Pile Driver Divers (Building, Heavy, Highway)	1/1/2010		\$44.39	\$12.25	\$56.64
Pile Driver Divers (Building, Heavy, Highway)	1/1/2010		\$44.39	\$12.25	\$56.64
Plasterers	6/1/2010		\$26.13	\$12.15	\$38.28
Plasterers	6/1/2011		\$26.58	\$12.15	\$38.73
Plasterers	6/1/2012		\$27.03	\$12.15	\$39.18
Plumbers	6/1/2010		\$34.75	\$17.92	\$52.67
Pointers, Caulkers, Cleaners	6/1/2010		\$25.98	\$14.33	\$40.31
Pointers, Caulkers, Cleaners	12/1/2010		\$26.36	\$14.53	\$40.89
Roofers	6/1/2009		\$26.00	\$11.69	\$37.69
Roofers	6/1/2010		\$27.50	\$11.69	\$39.19
Roofers	12/1/2010		\$26.87	\$12.32	\$39.19
Sheet Metal Workers	7/1/2010		\$31.46	\$20.81	\$52.27
Sprinklerfitters	7/1/2010		\$30.99	\$17.45	\$48.44
Sprinklerfitters	1/1/2011		\$31.04	\$17.95	\$48.99
Steamfitters (Building, Heavy, Highway)	6/1/2009		\$33.43	\$17.19	\$50.62
Steamfitters (Building, Heavy, Highway)	6/1/2010		\$34.93	\$17.99	\$52.92
Stone Masons	6/1/2009		\$28.50	\$14.62	\$43.12
Stone Masons	12/1/2009		\$28.92	\$15.20	\$44.12
Stone Masons	6/1/2010		\$29.32	\$15.85	\$45.17
Stone Masons	12/1/2010		\$29.75	\$16.22	\$45.97
Terrazzo Finisher	12/1/2009		\$25.76	\$12.54	\$38.30
Terrazzo Finisher	12/1/2010		\$26.36	\$13.19	\$39.55
Terrazzo Setter	6/1/2009		\$26.15	\$13.05	\$39.20
Terrazzo Setter	12/1/2009		\$26.30	\$13.55	\$39.85
Terrazzo Setter	6/1/2010		\$26.90	\$14.20	\$41.10
Terrazzo Setter	12/1/2010		\$26.90	\$14.20	\$41.10
Tile Finisher	6/1/2009		\$20.77	\$10.55	\$31.32
Tile Finisher	12/1/2009		\$20.92	\$11.05	\$31.97
Tile Finisher	6/1/2010		\$21.12	\$11.70	\$32.82

**PREVAILING WAGES PROJECT RATES**

<b>Building</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Tile Setter	6/1/2009		\$26.85	\$13.45	\$40.30
Tile Setter	12/1/2009		\$27.10	\$13.95	\$41.05
Tile Setter	6/1/2010		\$27.40	\$14.60	\$42.00
Truckdriver class 1(see notes)	1/1/2009		\$24.23	\$11.44	\$35.67
Truckdriver class 1(see notes)	1/1/2010		\$24.98	\$12.04	\$37.02
Truckdriver class 2 (see notes)	1/1/2009		\$24.38	\$11.51	\$35.89
Truckdriver class 2 (see notes)	1/1/2010		\$25.13	\$12.11	\$37.24
Truckdriver class 3 (see notes)	1/1/2009		\$24.91	\$11.75	\$36.66
Truckdriver class 3 (see notes)	1/1/2010		\$25.64	\$12.37	\$38.01

**PREVAILING WAGES PROJECT RATES**

<b>Heavy/Highway</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Carpenter Welder	1/1/2009		\$28.23	\$12.16	\$40.39
Carpenter Welder	1/1/2010		\$29.18	\$12.56	\$41.74
Carpenters	1/1/2009		\$27.53	\$12.16	\$39.69
Carpenters	1/1/2010		\$28.48	\$12.56	\$41.04
Cement Finishers	1/1/2009		\$26.72	\$12.97	\$39.69
Cement Finishers	1/1/2010		\$27.62	\$13.42	\$41.04
Iron Workers	6/1/2009		\$29.43	\$21.41	\$50.84
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	6/1/2010		\$30.03	\$22.71	\$52.74
Laborers (Class 01 - See notes)	1/1/2009		\$23.30	\$12.65	\$35.95
Laborers (Class 01 - See notes)	1/1/2010		\$23.75	\$13.55	\$37.30
Laborers (Class 02 - See notes)	1/1/2009		\$23.46	\$12.65	\$36.11
Laborers (Class 02 - See notes)	1/1/2010		\$23.91	\$13.55	\$37.46
Laborers (Class 03 - See notes)	1/1/2009		\$23.85	\$12.65	\$36.50
Laborers (Class 03 - See notes)	1/1/2010		\$24.30	\$13.55	\$37.85
Laborers (Class 04 - See notes)	1/1/2009		\$24.30	\$12.65	\$36.95
Laborers (Class 04 - See notes)	1/1/2010		\$24.75	\$13.55	\$38.30
Laborers (Class 05 - See notes)	1/1/2009		\$24.71	\$12.65	\$37.36
Laborers (Class 05 - See notes)	1/1/2010		\$25.16	\$13.55	\$38.71
Laborers (Class 06 - See notes)	1/1/2009		\$21.55	\$12.65	\$34.20
Laborers (Class 06 - See notes)	1/1/2010		\$22.00	\$13.55	\$35.55
Laborers (Class 07 - See notes)	1/1/2009		\$24.20	\$12.65	\$36.85
Laborers (Class 07 - See notes)	1/1/2010		\$24.65	\$13.55	\$38.20
Laborers (Class 08 - See notes)	1/1/2009		\$25.70	\$12.65	\$38.35
Laborers (Class 08 - See notes)	1/1/2010		\$26.15	\$13.55	\$39.70
Operators (Class 01 - see notes)	1/1/2009		\$26.38	\$14.44	\$40.82
Operators (Class 01 - see notes)	1/1/2010		\$27.18	\$14.99	\$42.17
Operators (Class 02 -see notes)	1/1/2009		\$26.12	\$14.44	\$40.56
Operators (Class 02 -see notes)	1/1/2010		\$26.92	\$14.99	\$41.91
Operators (Class 03 - See notes)	1/1/2009		\$22.47	\$14.44	\$36.91
Operators (Class 03 - See notes)	1/1/2010		\$23.27	\$14.99	\$38.26

**PREVAILING WAGES PROJECT RATES**

<b>Heavy/Highway</b>	<b>Effective Date</b>	<b>Expiration Date</b>	<b>Hourly Rate</b>	<b>Fringe Benefits</b>	<b>Total</b>
Operators (Class 04 - See notes)	1/1/2009		\$22.01	\$14.44	\$36.45
Operators (Class 04 - See notes)	1/1/2010		\$22.81	\$14.99	\$37.80
Operators (Class 05 - See notes)	1/1/2009		\$21.76	\$14.44	\$36.20
Operators (Class 05 - See notes)	1/1/2010		\$22.56	\$14.99	\$37.55
Painters Class 1 (see notes)	6/1/2009		\$27.24	\$12.81	\$40.05
Painters Class 1 (see notes)	6/1/2010		\$27.84	\$13.53	\$41.37
Painters Class 1 (see notes)	6/1/2010		\$27.84	\$15.03	\$42.87
Painters Class 2 (see notes)	6/1/2009		\$27.77	\$12.81	\$40.58
Painters Class 2 (see notes)	6/1/2010		\$28.38	\$13.53	\$41.91
Painters Class 2 (see notes)	6/1/2010		\$28.38	\$15.03	\$43.41
Painters Class 3 (see notes)	6/1/2009		\$29.81	\$12.81	\$42.62
Painters Class 3 (see notes)	6/1/2010		\$30.48	\$13.53	\$44.01
Painters Class 3 (see notes)	6/1/2010		\$30.48	\$15.28	\$45.76
Painters Class 4 (see notes)	6/1/2009		\$23.79	\$12.81	\$36.60
Painters Class 4 (see notes)	6/1/2010		\$24.38	\$13.53	\$37.91
Painters Class 4 (see notes)	6/1/2010		\$24.38	\$14.93	\$39.31
Painters Class 5 (see notes)	6/1/2009		\$19.28	\$12.81	\$32.09
Painters Class 5 (see notes)	6/1/2010		\$19.81	\$13.53	\$33.34
Painters Class 5 (see notes)	6/1/2010		\$19.81	\$14.67	\$34.48
Piledrivers	1/1/2009		\$28.85	\$12.00	\$40.85
Piledrivers	1/1/2010		\$29.95	\$12.25	\$42.20
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2010		\$30.27	\$26.09	\$56.36

## Section H

### **Contract No. 2010-14 Sanitary Sewers and Appurtenances Measurement and Payment**

#### **H1 General**

Payment for all completed work performed under these contracts shall be made in the respective unit prices and lump sum amounts appearing on the Bid Forms, as may be amended in accordance with the General Conditions. The cost of performing all work shown on the drawings and/or described in the specifications shall be included within the amounts bid.

#### **H2 Applications for Payment**

Applications for Payment during construction progress shall be jointly developed each month by authorized representatives of the CONTRACTOR, OWNER and ENGINEER.

Progress payments shall be developed by use of the respective unit prices, lump sums and total prices submitted on the Bid Form indicating accepted construction quantities and respective unit prices aggregating the total.

The CONTRACTOR shall then have the Application for Payment form typed, reproduced in the number of copies directed by the ENGINEER and filed with the ENGINEER on or before the first day of the month. All applications for payment shall include an updated construction schedule. Said Application shall also be accompanied by all documentation as may be reasonably required, such as copies of invoices of materials properly stored on the site, but not incorporated in the work. Materials stored on the site will not be paid for without evidence of the actual purchase price and will not be eligible for payment unless it is properly stored on the site of the Work, or at some other location and under such conditions as the OWNER may require.

The amount of the progress payment shall be 90% of the value of the completed construction work.

The sum or sums withheld by the OWNER from the CONTRACTOR after the contract is 50% completed shall not exceed 5% of the value of completed work based on monthly progress payment request: provided, however, that in the event a dispute arises between the OWNER and any CONTRACTOR which dispute is based upon increased costs claimed by one CONTRACTOR, additional retainage in the sum of one and one-half times the amount of any possible liability may be withheld until such time as a final resolution is agreed to by all parties directly or indirectly involved, unless the CONTRACTOR causing the

additional claim furnishes a bond satisfactory to the OWNER to indemnify OWNER against the claim. However, all such moneys retained by the OWNER may be withheld from the CONTRACTOR until substantial completion of the contract.

The Applications for Payment shall be required to include such evidence of payment to suppliers and subcontractors by the CONTRACTOR, as the OWNER may require, and shall also be accompanied by such lien or other releases as requested by the OWNER.

Progress payments based upon information developed on the Applications for Payment and supporting documentation, if approved by the ENGINEER, shall be made within 45 days following proper submission of the necessary papers to the ENGINEER. Any payments which are not made by the OWNER on that schedule will bear interest computed at the rate determined by the Secretary of Revenue for interest payments on overdue taxes or the refund of taxes as provided in sections 806, 806.1 of the act of April 9, 1929 (P.L. 343, No. 176) known as "The Fiscal Code" and any subsequent amendments to those sections.

### **H3 Final Payment**

The making and acceptance of final payment shall constitute:

- A waiver of all claims by OWNER against CONTRACTOR, except those claims arising from unsettled liens, from defective work appearing after final inspection, or from failure to comply with terms of the contract documents; and
- A waiver of all claims by CONTRACTOR against OWNER other than those previously submitted in writing and still unsettled.

### **H4 Description of Work to be Included in the Unit Prices, Lump Sums and Total Prices Submitted on the Bid Forms**

The Prices bid for those Items listed on the Bid Form which have the item designation with the Suffix "A", shall include all work required for construction of all 30" gravity ductile iron sewer pipe. Depths of sewers, and the payments therefore, will be based upon vertical measurements between the elevation of the surface of the ground along the center line of the pipes (prior to construction) and the invert elevation of the constructed sewer (not the bottom of the trench). Said price shall include all required excavation, pipe zone materials (bedding) and removal of excess excavation materials. Lengths of sewers, and the payments therefore, will be based upon horizontal measurements of the constructed sewer, including service connection fittings, but not

including that five feet distance occupied by the interior of manholes. In addition, those prices bid for items with the suffix "A" designation shall include all costs of all labor, materials, plant, equipment and service required for the complete construction of the respective Contracts (as specified and/or required by the bidding documents), which costs are not included in the prices bid for all other Bid Items with the "B" thru "ZZ" suffix. Said prices shall include the cost for surface restoration work not identified as a payment item herein. In addition to the retainage described in Section H2 an amount equivalent to 10% of the installed sewer pipe price shall be withheld until all surface restoration included in this unit price item is completed. When the surface restoration is complete and accepted this 10% of the unit price for sewer installation will be released. This money is held for restoration work not completed and is unrelated to retainage withheld from the CONTRACTOR during the progress of the work described in Paragraph H2. Payment for Item A shall be applied for upon successful air test of each sewer run. All associated cost for performing the air test shall be included in item "A".

The cost of performing the pre-construction and post construction video taping of the project area shall be included in the unit price for work designated with the Suffix "A".

The steel casing pipe borings, Bid Item with the Suffix "B", shall include all costs of installation of the respective steel casing pipe diameters, casing pipe spacers, the ductile iron carrier pipes installed within the casings, the portals, and the required restoration work. Payment shall be made on the basis of the horizontal measurement of the in-place steel casing pipes.

The unit and total prices bid for the Wye service connections, those Bid Items with the Suffix "C" shall cover the cost of installation of wyes and 45° bends required to make 6" diameter service connections directly to the respective diameter collecting sewers. No payment will be made for those six inch service sewers which are connected into manholes; the cost of doing that work shall be included in the manhole prices.

The prices bid for those items with the Suffix "D" service sewer reinstatement shall include all work required to locate existing service lines and construct the 6" diameter service connections between the interceptor and the respective existing service sewer lines. The fittings required to make the actual connection to the collector sewer pipes will be paid for as described in the previous paragraph. Said price shall include all required excavation, pipe zone materials (bedding) and removal of excess excavation materials. Lengths of 6" service sewers and payments therefore, will be based upon the horizontal measurements of the constructed 6" service lines. This price shall include all plant, labor and



materials for the observation ports as specified herein and the required respective fitting for connection to the existing service sewer. Said prices shall include the cost for surface restoration work not identified as a payment item herein. In addition to the retainage described in Section H2 an amount equivalent to 10% of the installed sewer pipe price shall be withheld until all surface restoration included in this unit price item is completed. When the surface restoration is complete and accepted this 10% of the unit price for sewer installation will be released. This money is held for restoration work not completed and is unrelated to retainage withheld from the CONTRACTOR during the progress of the work described in Paragraph H2. Payment for Item "D" shall be applied for upon reinstatement of each sewer run.

The price bid for Item "E" shall include all plant, labor, material, utilities, and services required for the complete installation of the sixteen (16) inch and twenty (20) inch PVC pressure sewer. Said price shall include all required excavation, pipe zone material (bedding) and removal of excess excavation material. Lengths of pressure sewers and the payments therefore will be based upon horizontal measurements of the constructed pressure sewer including fittings. Where ductile iron pipe is specified in the Contract Documents for pressure sewer, there shall be no substitutions or extra payment, and payment shall be at the PVC pipe price, do not unbalance your bid. Said prices shall include the cost for surface restoration work not identified as a payment item herein. In addition to the retainage described in Section H2 an amount equivalent to 10% of the installed pressure sewer pipe price shall be withheld until all surface restoration included in this unit price item is completed. When the surface restoration is complete and accepted this 10% of the unit price for pressure sewer installation will be released. This money is held for restoration work not completed and is unrelated to retainage withheld from the CONTRACTOR during the progress of the work described in Paragraph H2. Payment for Item "E" shall be 50% applied for after installation of the pressure sewer pipe and 50% applied for upon successful test of the pressure sewer.

The price for Item "F" shall include all plant, labor and material for the air release valve and manhole vault as specified and shown in the Standard Detail Drawings SD-2-040 and SD-2-041.

Those items with the Suffix "G" shall cover payment for construction of the manholes on the gravity sewers in accordance with the specifications. The bid price shall be for one vertical foot for a five (5) ft. diameter manhole. Measurement and payments shall be based upon the manholes full depth extending from the manhole base to top of the manhole cone, and shall include manhole base, ladder bars, sealants, flexible connections, concrete inverts, anchor bolts for the frames, watertight manhole frame and

cover, exterior surface coating and all other appurtenances, inclusive of setting the frame and cover on the cone and sealing between the frame and manhole, bolting to cone section, grouting and vacuum test as required. Payment for manholes shall be requested upon the successful vacuum test of the structure.

The unit price bid for Item "H" shall include the cost to furnish and install the specified air and vacuum relief valve complete with isolation valves, discharge line, brass saddle and all other appurtenances as described in the technical specifications and contract drawings and shown in Standard Detail Drawings SD-2-040, inclusive of vent and drain pipes at manhole vaults A8 and A9.

Those items with the Suffix "L" shall cover payment for select backfill as required by location (2A Limestone, 2RC, modified 2A Limestone) and shall include the furnishing, placement and compaction of that material where it is specified. At those locations that material will be required between the top of the pipe zone backfill and the sub-grade of the berm surface. The payment width shall be the maximum of four feet or the pipe diameter plus 2 feet.

Payment for bid Item with the Suffix "M" shall include all plant, labor and materials for straw bale barrier/filter fabric fence erosion protection as identified in the contract documents. Unit price shall include cost for complete installation and removal from the site to the contractors dump site per lineal feet of straw bale barrier/filter fabric fence. Payment for all plant, labor and material for installation will be fifty percent (50%) of the unit price bid. Payment for all plant, labor, and material required for removal and disposal of straw bale barrier/filter fabric fence shall be fifty (50) percent of the unit price bid. Payment for installation and removal of straw bale barrier/filter fabric fence utilized solely for dewatering purposes is not included in this payment item and is included in payment with pipe installation under Suffix "A".

Payment for Bid Item with the suffix "N" shall include all plant, labor and materials for the complete installation of clay trench plugs at stream crossings as described in the contract documents at locations shown on the Erosion and Sediment Pollution Control Plan drawings and or at locations identified by the OWNERS representative. Trench plug shall be 24" deep and shall extend the full trench depth and width of the excavated trench. There will be no additional payment for trench plugs at locations where the CONTRACTOR over cuts the trench.

Payment for pipe concrete encasements, Item with Suffix "P", shall be made on the basis of the horizontal in-place encasement, regardless of trench width. Concrete shall be placed 6" below the bottom and 6" above the top of the pipes.

Those items with the Suffix "R" shall include furnishing all materials, labor and equipment necessary to install the concrete pipe anchors as shown on the Contract Drawings and Standard Detail SD-2-092. Concrete anchors shall extend to an elevation six inches below the ground surface.

The unit price bid for Item "S" Asphalt Driveway Restoration and Item "V" City of McKeesport Road Restoration and shall include all plant, labor, material, equipment and utility required for the construction of the asphalt paving in pipe trenches. Measurement and Payment therefore, will be based upon the length of installed paving as measured along the centerline of the installed sewer multiplied by the width of the installed paving. Under no circumstances, will payment widths be greater than 6'-0" unless removal and replacement of existing pavement is directed by the OWNER's Representative.

The item with the Suffix "T" shall include all work required for the construction of concrete driveway paving. Measurement and Payment therefore will be based upon the actual installed square yards of concrete paving in conformance with the Technical Specifications.

The Bid Item "U" - Stone Driveway Restoration covers the replacement of stone/slag driveways, which are damaged and/or destroyed as a result of construction activities. Said restoration shall be as outlined in the Technical Specifications for Construction of Sanitary Sewers and Appurtenances. Payment for stone driveway restoration shall be made on the basis of the number of lineal feet replaced. The maximum width of disturbed stone driveway to be paid by the OWNER shall be 12' wide. Required restoration exceeding this width shall be at the CONTRACTORS expense.

Payment for Item "X" State Highway Berm Restoration shall include all plant, labor, material, and utilities required for complete restoration to a condition equivalent to the existing pre-construction condition and in accordance with PA DOT Publication 408.

Payment for Item "Y" Exploratory Investigation shall include all plant, labor, material, equipment and utilities to conduct open cut exploratory excavation or Vacuum Excavation at the request or approval of the OWNER's Representative. Exploratory excavation and Vacuum Excavation shall be 10 feet long by 8 feet deep by two feet wide. Excavations of lesser areas shall be considered a partial excavation and payment therefore will be prorated based upon the square foot area of excavation.

Payment for Bid Item "AA" Force Main Testing shall include all plant, labor, materials, and utilities, for the successful testing of force mains sewers in accordance with the specified requirements described in item titled Testing of Force Mains. Measurement and Payment for testing shall be based upon the horizontal measured length of force main pipe tested.

Those items with the Suffix "FF" shall cover payment for construction of the manhole on the gravity sewers having a PVC Liner in accordance with the specifications. The bid price shall be for one vertical foot for a 6 ft. diameter manhole with PVC liner. Measurement and payments shall be based upon the manholes full depth test of the structure from the manhole base to the manhole top, and shall include manhole base, ladder bars, sealants, flexible connections, concrete inverts, anchor bolts for the frames, watertight frame and cover, exterior surface coating and all other appurtenances, inclusive of setting the manhole frame and cover on the top section and sealing between the frame and manhole, bolting to top section, grouting and vacuum test as required. Payment for manholes shall be requested upon the successful vacuum test.

The price bid for Item "RR", ductile iron M.J. pipe fittings, shall include all bends, and fittings, required for the construction of the buried pressure sewer. The work under this item shall include furnishing and installing all ductile fittings necessary to complete the work and shall include all mechanical joint material, stainless steel bolts, stainless steel nuts, follower ring and rubber gasket furnished with the fitting. The price for this item shall also include polyethylene encasement and concrete thrust blocking and concrete anchors as shown on Standard Detail SD-2-045 and SD-2-046. Restraining harness where called for on the Contract Drawings and required to complete the work shall be included under this item. Excavation is included as a part of the pipe item. Payment shall be per ductile iron fitting installed.

The price bid for Item "JJ" State Highway Paving, shall include all plant, labor, material, equipment and utility required for the construction of the asphalt paving in pipe trenches as specified in the Contract Documents. Measurement and Payment therefore, will be based upon the square yards of installed paving as measured along the installed paving length multiplied by the width of the installed paving. Cost for keyways, milling, etc. to complete the paving, shall be included in this item.

The unit price for Item "XX" Mis-Marked or Unmarked Utility Resolution shall include all labor, material, and equipment required to repair and resolve mis-marked and/or unmarked utility disputes including exploratory excavation, delays in construction and repair costs for the utility types and sizes identified or encountered during construction. Work under this item also includes backfill and restoration not identified for payment under a separate unit price. As a part of this pay item the CONTRACTOR shall be responsible for providing temporary service and reinstating permanent service which may have been interrupted during construction. This item shall apply to all unmarked facilities and marked facilities beyond the tolerance zone as defined by the Pennsylvania One Call Act. Duct banks and clusters of similar facilities shall be considered one payment unit. This item shall be in lieu of the force amount payment provisions specified in the Pennsylvania One Call Act, Section 5, Item 14, and shall be considered as payment in full for this item.

Mobilization/Demobilization, Bid Items with the suffix "ZZ", may be any lump sum amount up to a maximum of 3% of the Total Price Bid for the respective contracts. One half of the amount so bid for those items, however, shall be withheld (in addition to the stipulated retainage) until the issuance of the final Payment to the CONTRACTOR.

Payment for Item "A", Item "D" and Item "E", covering construction of the gravity sewers and pressure sewers shall be adjusted for work performed, to reflect a ten (10) percent withholding until restoration of lawns, and other areas not identified as a payment item are completed. Such withheld amount shall be in addition to the retainage described in the Paragraph H2 and J4 of the Contract Document specifications.

In accordance with the requirements of the respective Paragraphs in Section 02220 for "Bedding Material and Certain Special Backfill Material" and "Restoration of Street and Driveway Surfaces" all PVC force mains are to be bedded and encapsulated on special stone backfill material. The cost of obtaining and placing that material in the trench, below a horizontal plane located twelve-inches above the tops of the PVC pipes shall be included in the Bid Items for construction of the respective pipe lines (Item "E"). In addition, all ductile iron sewer pipes shall be bedded on special stone backfill material. The cost of obtaining and placing that material below a horizontal plane located at the pipe springline (centerline) of the respective pipe shall be included in the Bid Items for the construction of the respective pipe lines (Item A, and Item D). That material obtained and placed above that horizontal plane (in trenches located in State Highway, Municipal Roads paving and berms), and driveways shall be paid for under the Item for "Select Backfill". Regardless of the actual configuration of the excavated

trenches, or the diameter of the pipes, the quantities of Special Backfill for which payments will be made shall be based upon the maximum of four feet trench width or the pipe diameter plus 2 feet.

**End of Measurement and Payment  
Sanitary Sewers and Appurtenances**

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Section J

**AGREEMENT - CONTRACT NO. 2010-14**

**THIS AGREEMENT** is dated as of the \_\_\_\_\_ day of \_\_\_\_\_  
in the year of 20\_\_ by and between \_\_\_\_\_  
hereinafter  
called OWNER and \_\_\_\_\_ hereinafter called CONTRACTOR.

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

**J1 WORK**

J1.1 CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

\_\_\_\_\_

\_\_\_\_\_

**J2 CONTRACT TIME**

J2.1 The Work will be completed within five Hundred forty (540) calendar days after the date when the Contract Time commences as provided in the General Conditions.

J2.2 Liquidated Damages OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not complete within the time specified in paragraph J2.1 above, plus any extensions thereof allowed in accordance with the General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by OWNER if the Work is not complete on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER Six Hundred Fifty Dollars (\$650.00) for each day that expires after the time specified in paragraph J2.1 for completion until the Work is substantially complete.

**J3 CONTRACT PRICE**

J3.1 OWNER shall pay CONTRACTOR for performance of the Work in accordance with the Contract Documents in the following lump sum amount:

\_\_\_\_\_

\_\_\_\_\_



#### **J4 PAYMENT PROCEDURES**

J4.1 CONTRACTOR shall submit Applications for Payment in accordance with Section H of the Contract Documents.

J4.2 Progress Payments. OWNER shall make progress payments on the Contract Price on the basis of CONTRACTOR's Application for Payment. All payments will be on the basis of the progress of the Work measured by the schedule of values provided for in the Contract Documents.

J4.3 Prior to 50% completion of the Work, progress payments will be in an amount equal to:

- 90% of the Work completed, and
- 100% of materials and equipment not incorporated in the Work but delivered and suitably stored, less in each case, the aggregate of payments previously made.

J4.4 After the work is at least 50% complete, and subject to satisfactory progress and compliance with the provisions of the Contract Documents, the OWNER may, at its discretion, elect to reduce the retainage to an amount equal to 5% of the completed work value.

J4.5 Final Payment. Upon final completion and acceptance of the Work, OWNER shall pay the remainder of the Contract Price not previously paid.

#### **J5 INTEREST**

J5.1 All moneys not paid when due hereunder shall bear interest at the rate defined in Paragraph H2.

#### **J6 CONTRACTOR'S REPRESENTATIONS**

J6.1 CONTRACTOR represents that he has familiarized himself with the nature and extent of the Contract Documents, Work, locale and with all local conditions; federal, state and other laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the Work; and, has made or caused to be made such examinations, investigations (including subsurface explorations) and tests and studies of such reports and related data as he deems necessary for the performance of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents; and no additional examinations, investigations, tests, reports or similar data are or will be required by CONTRACTOR for such purposes, and that he shall be responsible

to fully perform all work within the contract time and for the contract price(s) stated herein, regardless of the conditions actually encountered. All risks assumed hereunder have been included in the contract price.

J6.2 CONTRACTOR has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the Contract Documents.

**J7 CONTRACT DOCUMENTS**

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR are attached to this Agreement, made a part hereof and consists of the following:

<b>Section</b>	<b>Identification</b>	<b>Page No.</b>
J	Agreement	J-1 to J-4
	Exhibits attached to this agreement	_____ (if any)
K	Surety Bonds/Insurance Certificates	K-1 to K-7
E	General Conditions	E-1 to E-27
F	Supplemental General Conditions	F-1 to F-34
G	Technical Specifications	01000-1 to 09954-1
H	Measurement and Payment	H-1 to H-9
I	Standard Detail Drawings	I-1 to I-32
	Drawings 24" x 36" - Bound Separately from this Book (Are identified in Section 01010)	
L	Addenda	L-1 to L-____ (if any)
C	Contractor's Bid	C-1 to C-5
	Change Orders duly issued with or after the effective date of this Agreement	_____ (if any)

There are no Contract Documents other than those listed above in this Agreement, Section J. The Contract Documents may only be altered, modified, amended or repealed by appropriate execution of a Change Order.

**J8 MISCELLANEOUS**

J8.1 Terms used in this Agreement are defined in the General Conditions and shall have the meanings indicated in the General Conditions.

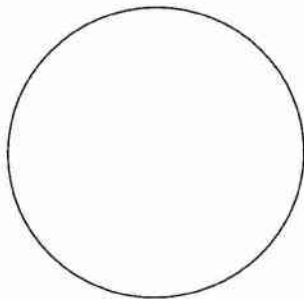
J8.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law) and unless specifically stated to the contrary in any written consent to an assignment

no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

J8.3 OWNER and CONTRACTOR each binds himself, his partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

**IN WITNESS WHEREOF**, the parties hereto have signed this Agreement in \_\_\_\_\_ (\_\_) copies. One counterpart each has been delivered to OWNER and the CONTRACTOR. All portions of the contract Documents have been signed or identified by OWNER and CONTRACTOR.

This Agreement will be effective on \_\_\_\_\_  
20\_\_\_\_.



**(CORPORATE SEAL)**

**OWNER**

\_\_\_\_\_

by \_\_\_\_\_

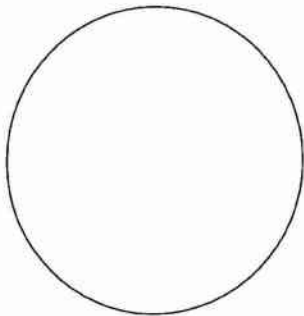
**ATTEST** \_\_\_\_\_

**Title** \_\_\_\_\_

**Address for Giving Notice**

\_\_\_\_\_  
\_\_\_\_\_

\*\*\*\*\*



**(CORPORATE SEAL)**

**CONTRACTOR**

\_\_\_\_\_

by \_\_\_\_\_

**ATTEST** \_\_\_\_\_

**Title** \_\_\_\_\_

**Address for Giving Notice**

\_\_\_\_\_  
\_\_\_\_\_

Section K

PAYMENT BOND

CONTRACT NO. 2010-14

KNOW ALL MEN BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_, hereinafter called Principal,  
(Corporation, Partnership, Individual)

and \_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto \_\_\_\_\_

\_\_\_\_\_  
(Name of Owner)

\_\_\_\_\_  
(Address of Owner)

hereinafter called Owner, in the penal sum of \_\_\_\_\_  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
in lawful money of the United States, for the payment of which sum  
well and truly to be made, we bind ourselves, our heirs, executors,  
administrators and successors, jointly and severally, firmly by  
these presents.

**THE CONDITION OF THIS OBLIGATION** is such that Whereas, the Prin-  
cipal entered into a certain contract with the Owner, dated the  
\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, a copy of which is hereto  
attached and made a part hereof for the construction of:

\_\_\_\_\_  
\_\_\_\_\_

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

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

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

**IN WITNESS WHEREOF,** this instrument is executed in \_\_\_\_\_ counterparts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
(Address) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(Principal)  
**by** \_\_\_\_\_  
(ATTEST)

\_\_\_\_\_  
(Witness to Principal) \_\_\_\_\_  
\_\_\_\_\_  
(Address) \_\_\_\_\_  
\_\_\_\_\_  
(Principal) **(Secretary)**  
(SEAL)

\*\*\*\*\*

\_\_\_\_\_  
(Address) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(Surety)  
(ATTEST)  
\_\_\_\_\_  
(Surety) **(Secretary)**  
(SEAL)  
\_\_\_\_\_  
(Witness to Surety)

\*\*\*\*\*

by: \_\_\_\_\_  
(Attorney in Fact)  
\_\_\_\_\_  
(Address)  
\_\_\_\_\_

**NOTE:** Date of Bond must be the same as the date of Agreement. If Contractor is Partnership, all partners should execute bond.

**IMPORTANT:** Surety companies executing bonds must appear on the U. S. Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

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Section K

PERFORMANCE AND MAINTENANCE BOND

CONTRACT NO. 2010-14

KNOW ALL MEN BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_, hereinafter called Principal,  
(Corporation, Partnership, Individual)

and \_\_\_\_\_

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto \_\_\_\_\_

\_\_\_\_\_  
(Name of Owner)

\_\_\_\_\_  
(Address of Owner)

hereinafter called Owner, in the penal sum of \_\_\_\_\_  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
in lawful money of the United States, for the payment of which sum  
well and truly to be made, we bind ourselves, our heirs, executors,  
administrators and successors, jointly and severally, firmly by  
these presents.

**THE CONDITION OF THIS OBLIGATION** is such that Whereas, the Prin-  
cipal entered into a certain contract with the Owner, dated the  
\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, a copy of which is hereto  
attached and made a part hereof for the construction of:

\_\_\_\_\_  
\_\_\_\_\_  
**NOW, THEREFORE**, if the Principal shall well, truly and faithfully  
perform its duties, all the undertakings, covenants, terms, con-  
ditions 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 if he shall  
satisfy all claims and demands incurred under such contract, and  
shall remedy in accordance with the terms of the Contract any  
defects which may develop during a period of eighteen (18) months  
from the date of completion of the work performed under said



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. Whenever CONTRACTOR shall be declared by OWNER to be in default under the Contract, the Surety shall promptly remedy the default. If the OWNER terminates the Contract for such default, the following shall govern the liability of the CONTRACTOR and the Surety hereunder. In the event of such termination, the CONTRACTOR and Surety shall remain fully liable to the OWNER for the CONTRACTOR's failure to timely complete the Contract, any additional costs incurred by the OWNER in completing the Contract, and liquidated damages from the required completion date to the date of the actual completion of the work by the OWNER. In the event of such termination, the Surety may elect to take over and complete performance of the Contract by giving written notice to the OWNER of such election within seven (7) days of the OWNER's mailing of notice of termination to the Surety and actually commencing completion within fourteen (14) days of the OWNER's notice to the Surety, time being of the essence. The Surety shall fully complete the work by the originally scheduled date of completion and the CONTRACTOR and the Surety shall remain liable to the OWNER for all damages.

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

**PROVIDED, FURTHER,** any suit under this bond may be instituted until the expiration of two years from the date on which final payment under the Contract falls due or before the expiration of one year from the end of the maintenance and guarantee obligation under the Contract, which ever is later, notwithstanding any statute of limitations setting forth a shorter limitation period.

IN WITNESS WHEREOF, this instrument is executed in \_\_\_\_\_  
counterparts, each one of which shall be deemed an original, this  
the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Principal  
by \_\_\_\_\_

\_\_\_\_\_  
Address  
\_\_\_\_\_

ATTEST

\_\_\_\_\_  
(Witness to Principal)

\_\_\_\_\_  
Principal (**Secretary**)  
(SEAL)

\_\_\_\_\_  
(Address)

\*\*\*\*\*

\_\_\_\_\_  
Address  
\_\_\_\_\_

\_\_\_\_\_  
Surety  
ATTEST

\_\_\_\_\_  
Surety (**Secretary**)  
(SEAL)

\_\_\_\_\_  
(Witness to Surety)

\*\*\*\*\*

by: \_\_\_\_\_  
(Attorney in Fact)

\_\_\_\_\_  
(Address)  
\_\_\_\_\_

**NOTE:** Date of Bond must be the same as the date of Agreement. If Contractor is Partnership, all partners should execute bond.

**IMPORTANT:** Surety companies executing bonds must appear on the U. S. Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

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**CERTIFICATE OF INSURANCE**

This Certificate shall be required to be properly completed by the Contractor and his Insurance Agent at the time that the construction contract is executed. It is informational and does not amend, extend or alter the coverage afforded by the policies listed below.

Name and Address of Insurance Agency	<b>COMPANIES AFFORDING COVERAGES</b>	
	Company Letter	<b>A</b>
Name and Address of Insured Contractor	Company Letter	<b>B</b>
	Company Letter	<b>C</b>
Name(s) of Additionally Insured Party  KLH Engineers, Inc Municipal Authority of the City of McKeesport	Company Letter	<b>D</b>

This is to certify that policies of insurance listed below have been issued to the insured named above and are in force at this time and that the insurance afforded by the policies is subject to all the terms, exclusions and conditions of such policies.

Company Letter	Type of Insurance	Policy Number	Policy Expiration Date	Limits of Liability in Thousands (000)		
					Each Occurrence	Aggregate
	<b>General Liability</b> <input type="checkbox"/> Comprehensive Form <input type="checkbox"/> Premise-Operations <input type="checkbox"/> Explosion and Collapse Hazard <input type="checkbox"/> Underground Hazard <input type="checkbox"/> Products/Completed Operation Hazard <input type="checkbox"/> Contractual Insurance <input type="checkbox"/> Broad Form Property Damage <input type="checkbox"/> Independent Contractors <input type="checkbox"/> Personal Injury			Bodily Injury	\$	\$
				Property Damage	\$	\$
				Bodily Injury and Property Damage Combined	\$	
				Personal Injury		\$
	<b>Automotive Liability</b> <input type="checkbox"/> Comprehensive Form <input type="checkbox"/> Owned <input type="checkbox"/> Hired <input type="checkbox"/> Non-Owned			Bodily Injury (Each Person)	\$	
				Bodily Injury (Each Person)	\$	
				Property Damage	\$	
	<b>Excess Liability</b> <input type="checkbox"/> Umbrella Form <input type="checkbox"/> Other than Umbrella Form			Bodily Injury and Property Damage Combined	\$	
	<input type="checkbox"/> <b>Workers' Compensation and Employers' Liability</b>			Statutory		
	<input type="checkbox"/> <b>Builder's Risk</b>					
	<input type="checkbox"/> <b>Other</b>					

The coverage issued in the above listed policies will not be cancelled, materially changed, or renewal refused until at least ten (10) days prior written notice has been given to the named owner and certificate holder at the address listed below.

Construction Contract Identification Contract No. 2010-14 East Shore Sanitary Sewer Construction	Name and Address of Owner and Certificate Holder Municipal Authority of the City of McKeesport 100 Atlantic Avenue McKeesport, PA 15132	Date this certificate issued: _____ Issuing Agency: _____ _____ (Signature of Authorized Representative)
--	--	---

THIS FORM CANNOT BE SUBSTITUTED.

Section C

**BID FORM - CONTRACT NO. 2010-14**

**Project Identification:** East Shore Sanitary Sewer Construction

**Contract Identification and Number:** Sanitary Sewer Construction  
Contract No. 2010-14

**This Bid is Submitted to:** Municipal Authority of the City of McKeesport  
100 Atlantic Avenue  
McKeesport, PA 15132

**C1** The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an Agreement with OWNER in the form included in Section J of the Contract Documents and, to complete all Work as Specified and within the Contract Time indicated in this Bid, in accordance with the Contract Documents.

**C2** BIDDER accepts all of the terms and conditions of the Instructions to Bidders and other components of the Contract Documents. This Bid may not be withdrawn for ninety (90) days after the day of Bid opening. BIDDER will sign the Agreement and submit the Contract Security and other documents required by the Contract Documents within fifteen days after the date of OWNER's Notice of Award.

**C3** In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:

C3.1 Bidder has examined copies of all Contract Documents including Sections A through K and all Drawings, and the following Addenda designated as Section L (if any):

**Date of Issuance**

**Addenda Number**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

receipt of all which is hereby acknowledged.

C3.2 BIDDER has examined the site and locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules and regulations) and the conditions affecting cost, progress or performance of the

work and has made such independent investigations as BIDDER deems necessary. BIDDER has satisfied itself as to the conditions to be encountered both overhead and on the surface of the ground and/or within existing structures and of the character, quality and quantities of work to be done, materials to be furnished, services required and all other terms of the Technical Specifications and other Contract Documents. BIDDER assumes all risks inherent in performing the work and arising from any deficiencies in the Drawings or Specifications or other Contract Documents and will make no claim against the OWNER or the ENGINEER because of any such alleged deficiency.

C3.3 This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation, BIDDER has not directly or indirectly induced any person, firm or a corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for himself any advantage over any other Bidder or over OWNER.

**C4** BIDDER will complete the Work under Contract No. 2010-14, in accordance with the terms and conditions of the bidding and contract documents, for the following unit and lump sum Prices:

**Contract No. 2010-14**

	BID ITEM	QUANTITY/ UNIT	UNIT PRICE	TOTAL PRICE
<b>A.</b>	<b>30" Ductile Iron Gravity Sewer Pipe</b>			
	12' to 16' deep	581 LF	/LF	
	16'+ deep	28 LF	/LF	
<b>B.</b>	<b>Steel Casing Pipe</b>			
	30" Diameter	440 LF	/LF	
	36" Diameter	285 LF	/LF	
<b>C.</b>	<b>Wye Service Connection</b>			
	30" x 6"	3 EA	/EA	
<b>D.</b>	<b>6 Inch Service Sewer/ Reinstatement</b>	75 LF	/LF	
<b>E.</b>	<b>Pressure Sewer (Force Main)</b>			
	16" PVC Pipe	6,250 LF	/LF	
	20" PVC Pipe	175 LF	/LF	
<b>F.</b>	<b>Air &amp; Vacuum Valve with Vault</b>			
	16" Force Main	6 EA	/EA	
	20" Force Main	1 EA	/EA	
<b>G.</b>	<b>Gravity Sewer Manhole (5 ft Diameter)</b>	26 VF	/VF	
<b>H.</b>	<b>Air &amp; Vacuum Valve at Existing Vault</b>	2 EA	/EA	
<b>L.</b>	<b>Select Backfill</b>	2,600 CY	/CY	
<b>M.</b>	<b>Straw Bale Barrier. Filter Fence</b>	8,350 LF	/LF	
<b>N.</b>	<b>Trench Plugs</b>	8 EA	/EA	
<b>P.</b>	<b>Concrete Encasement</b>	200 LF	/LF	
<b>R.</b>	<b>Concrete Pipe Anchors</b>	5 EA	/EA	
<b>S.</b>	<b>Asphalt Driveway</b>	710 LF	/LF	
<b>T.</b>	<b>Concrete Driveway/Walk</b>	45 SY	/SY	
<b>U.</b>	<b>Stone Driveway</b>	990 LF	/LF	
<b>V.</b>	<b>City of McKeesport Road Restoration</b>	22 LF	/LF	
<b>X.</b>	<b>State Highway Berm Restoration</b>	20 LF	/LF	
<b>Y.</b>	<b>Exploratory Excavation Investigation</b>	5 EA	/EA	
<b>AA.</b>	<b>Force Main Testing</b>	7,150 LF	/LF	
<b>FF.</b>	<b>Manhole with PVC Liner (MH 157A)</b>	16 VF	/VF	
<b>JJ.</b>	<b>State Highway Paving</b>	112 SY	/SY	
<b>RR</b>	<b>Pressure Sewer Ductile Iron Fittings</b>			
	16" 11 1/4° Bend	12 EA	/EA	
	16" 22 1/2° Bend	21 EA	/EA	
	16" 45° Bend	30 EA	/EA	
	16" 90° Bend	3 EA	/EA	
	16" Plug	2 EA	/EA	
	20" Plug	2 EA	/EA	
	20" 11 1/4° Bend	3 EA	/EA	
	20" 22 1/2° Bend	1 EA	/EA	
	20" 45° Bend	3 EA	/EA	
	20" 90° Bend	1 EA	/EA	
<b>XX</b>	<b>MisMarked or Unmarked Utility Resolution</b>			
	Natural Gas - 1/2" - 8"	15/EA	/EA	
	Electric - Any Size or Voltage	5/EA	/EA	
	Telephone - Any Size	5/EA	/EA	
	Waterline - Any Size	15 EA	/EA	
<b>SS</b>	<b>Meter Vault Construction</b>	Lump Sum	Lump Sum	
<b>ZZ.</b>	<b>Mobilization/Demobilization</b>	Lump Sum	Lump Sum	

**TOTAL PRICE BID FOR  
CONSTRUCTION OF  
CONTRACT NO. 2010-14  
EAST SHORE SS CONSTRUCTION**

\_\_\_\_\_  
(IN FIGURES)

\$ \_\_\_\_\_  
(IN WORDS)

**C5** BIDDER agrees that the Work will be completed within five Hundred forty (540) Calendar days after the date when the Contract Time commences.

**C6** BIDDER understands and agrees to coordinate his construction activities with those of the OWNER, the ENGINEER and the other CONTRACTORS.

**C7** BIDDER accepts the provisions set forth in the Agreement in Section J of the Contract Documents as to liquidated damages in the event of failure to complete the Work on time.

**C8** BIDDER recognizes the problem in identifying exact locations of reputed underground utility pipe lines, structures, and/or appurtenances and in classifying, during the bidding period, the subsurface conditions which will be encountered during construction and, in submitting this bid, has included any and all costs in connection therewith and shall not seek any extra compensation for performing the work because of those actual prevailing conditions.

**C9** The required Bid Security set forth in Paragraphs B7 of the Instructions to Bidders in the form of a certified bank check, or a Bid Bond, the form for which is included as Section D of the Contract Documents, is in the amount of 10% of the Amount of the Bid.

**C10** Communications concerning this Bid shall be addressed to the BIDDER at the address stated on the following page.

**C11** The terms used in this Bid which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents have the meanings assigned to them in the General Conditions.

**Submitted on** \_\_\_\_\_ 20\_\_.

(Execute the Bid Form on the following page)





Contract 2010-14 Section I - Standard Details

SD-2-001 TRENCH PIPE ZONE DETAIL.

SD-2-002 TRENCH DETAILS.

SD-2-003 DESIRED DISTANCES BETWEEN WATER AND SEWER PIPES.

SD-2-005 STEEL CASING AND D.I. OR PVC CARRIER PIPES INSTALLED BY BORING.

SD-2-005a GROUTING VOID SPACE OUTSIDE OF STEEL CASING PIPES 30" OR GREATER.

SD-2-007 MANHOLE FOR SEWERS FOR DEPTHS GREATER THAN 5 FEET.

SD-2-008 OUTSIDE MANHOLE DROP CONNECTION.

SD-2-011 PRECAST CONCRETE MANHOLE (60" DIAMETER) (PIPE DIAMETER 21" TO 30").

SD-2-018 CONNECTIONS OF FORCE MAIN TO GRAVITY MANHOLE WITH PVC LINER.

SD-2-019 STANDARD CAST IRON MANHOLE FRAME AND COVER.

SD-2-020 WATERTIGHT MANHOLE (WT) FRAME AND COVER.

SD-2-021 MANHOLE INFLOW PROTECTOR.

SD-2-022 POLYPROPYLENE PLASTIC MANHOLE STEP.

SD-2-023 PRECAST MANHOLE BASE DETAIL.

SD-2-028 TYPICAL SEWER SERVICE LATERAL CONNECTIONS.

SD-2-029 SEWER SERVICE CONNECTIONS.

SD-2-033 SEWER SERVICE LINE OBSERVATION PORT.

SD-2-034 SEWER CLEANOUT AND OBSERVATION PORT TAMPER RESISTANT CAP.

SD-2-040 SEWAGE AIR AND VACUUM RELEASE VALVE AND MANHOLE.

SD-2-041 PRECAST CONCRETE MANHOLE VAULT.

SD-2-045 CONCRETE THRUST BLOCKING.

SD-2-046 CONCRETE ANCHORS AND METHODS OF LAYING MAINS UNDER OBSTRUCTIONS.

SD-2-069 TRENCH BACKFILL WITHIN ROADWAY OR STREET BERMS.

SD 2-070 TYPICAL TRENCH DETAIL WITHIN 3 FEET OF SHOULDER AREA WITHIN RIGHT-OF-WAY

SD 2-071 TYPICAL TRENCH DETAIL MINIMUM 3 FEET OUT OF SHOULDER AREA WITHIN RIGHT-OF-WAY.

SD-2-077 ASPHALT WEDGE CURB RESTORATION.

SD-2-078 PLAIN CEMENT CONCRETE CURB AND GUTTER.

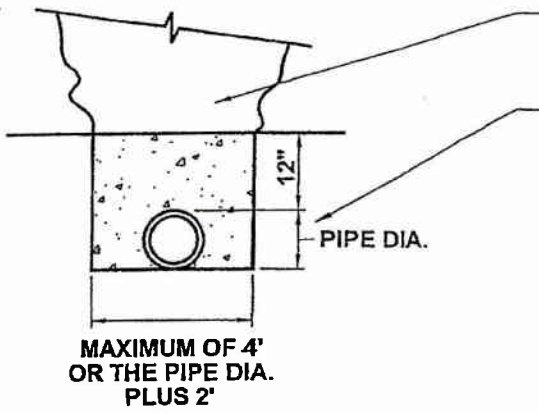
SD-2-079 CURB AND SIDEWALK DETAIL.

SD-2-080 CONCRETE WALKWAY.

SD-2-092 CONCRETE ANCHORS FOR PIPELINES.

SD-2-104 TRENCH BACKFILL AND PAVEMENT REPLACEMENT REQUIREMENTS.

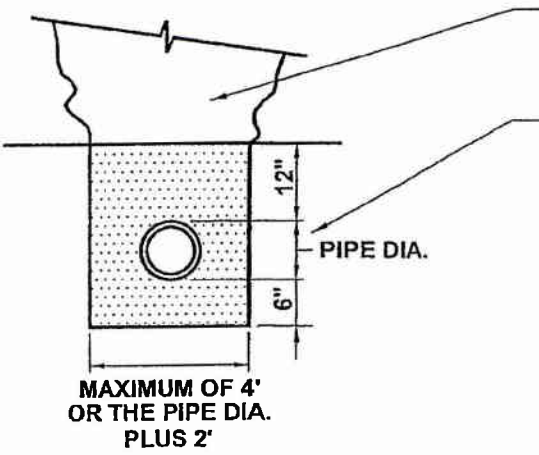
SD-2-105 REQUIRED SURFACE RESTORATION IN UNPAVED LOCATIONS.



MECHANICALLY COMPACTED BACKFILL MATERIAL IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS

DUCTILE IRON AND REINFORCED CONCRETE CULVERT PIPE ON NON-ROCK TRENCH BOTTOMS BELL HOLES SHALL BE EXCAVATED TO ASSURE CONTINUOUS PIPE BARREL SUPPORT FOR FULL LENGTH OF PIPE SECTIONS. UNLESS DIRECTED OTHERWISE BY THE CONTRACT SPECIFICATIONS. TRENCH SIDEWALLS SHALL BE PLUMB WITHIN PIPE ZONE.

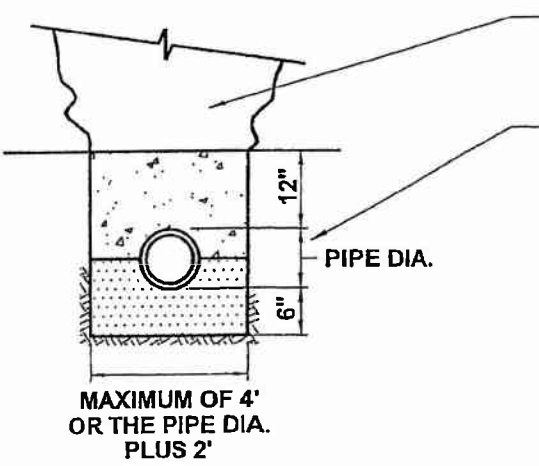
**DETAIL 2-001A**



MECHANICALLY COMPACTED BACKFILL MATERIAL IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS

PVC PIPE AT ALL LOCATIONS. TRENCH SIDEWALLS SHALL BE PLUMB WITHIN PIPE ZONE


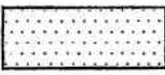
**DETAIL 2-001 B**



MECHANICALLY COMPACTED BACKFILL MATERIAL IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS

DUCTILE IRON PIPE AND REINFORCED CONCRETE CULVERT PIPE ON ROCK TRENCH BOTTOM AND DUCTILE IRON PIPE WITH RESTRAINED JOINTS. TRENCH SIDEWALLS SHALL BE PLUMB WITHIN PIPE ZONE.

**DETAIL 2-001 C**

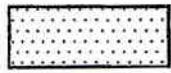
-  SELECTED EXCAVATED MATERIAL MECHANICALLY COMPACTED MAXIMUM SIZE ROCKS-3"
-  2B CRUSHED STONE OR CRUSHED GRAVEL. 1B CRUSHED STONE OR CRUSHED GRAVEL WITH APPROVAL BY THE OWNERS REPRESENTATIVE.


<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>TRENCH PIPE ZONE DETAIL</b>	
Not to scale	January 2006	I-1	Standard Detail SD-2-001

**NOTE:**

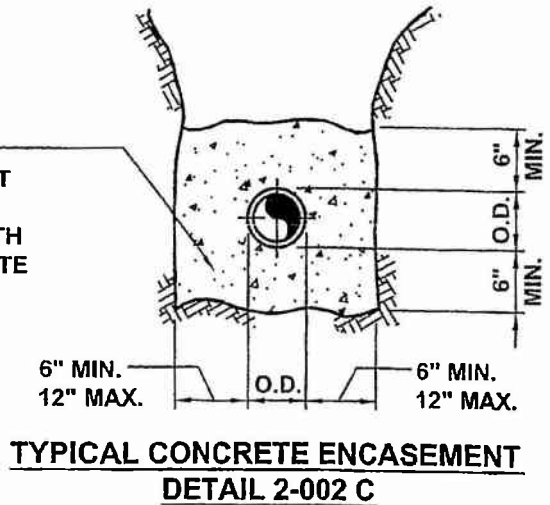
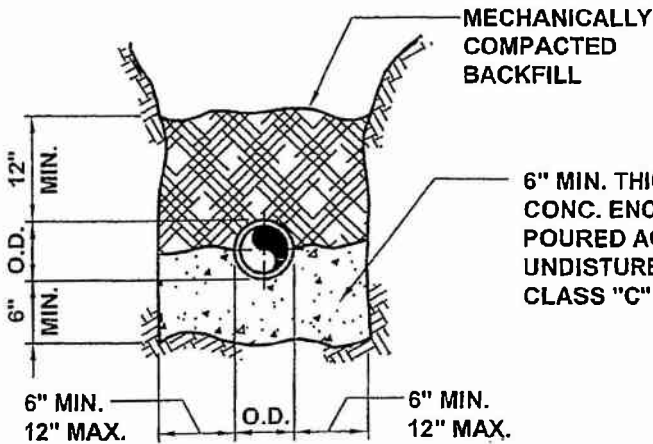
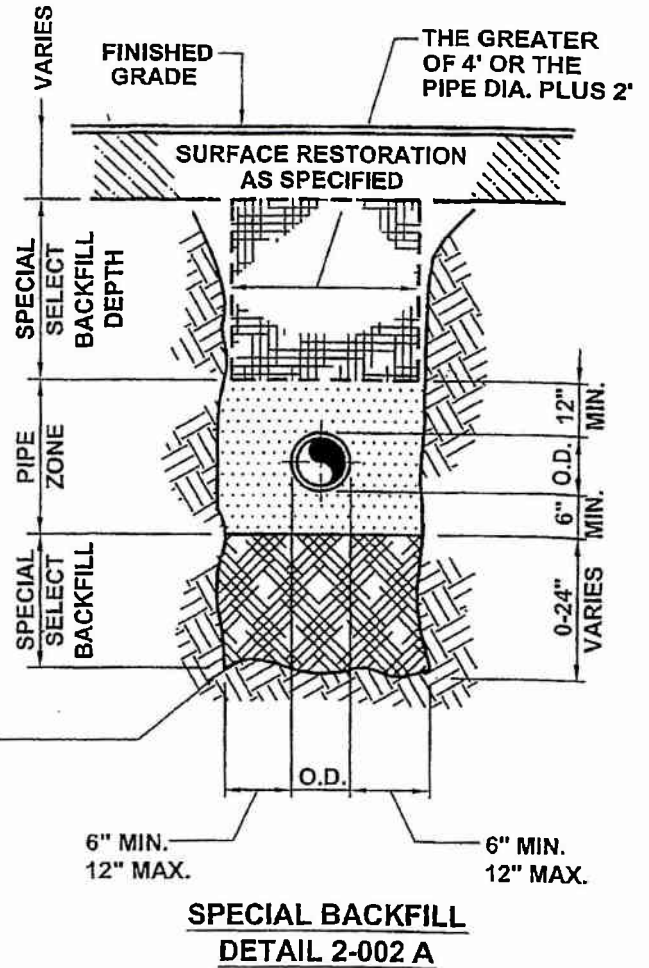
WHERE SPECIAL SELECT BACKFILL IS REQUIRED BETWEEN THE PIPE ZONE AND THE SURFACE MATERIAL, THE PIPE ZONE SHALL EXTEND 12" ABOVE THE PIPE REGARDLESS OF PIPE MATERIAL

 SELECTED EXCAVATED MATERIAL MECHANICALLY COMPACTED MAXIMUM SIZE ROCKS-3"

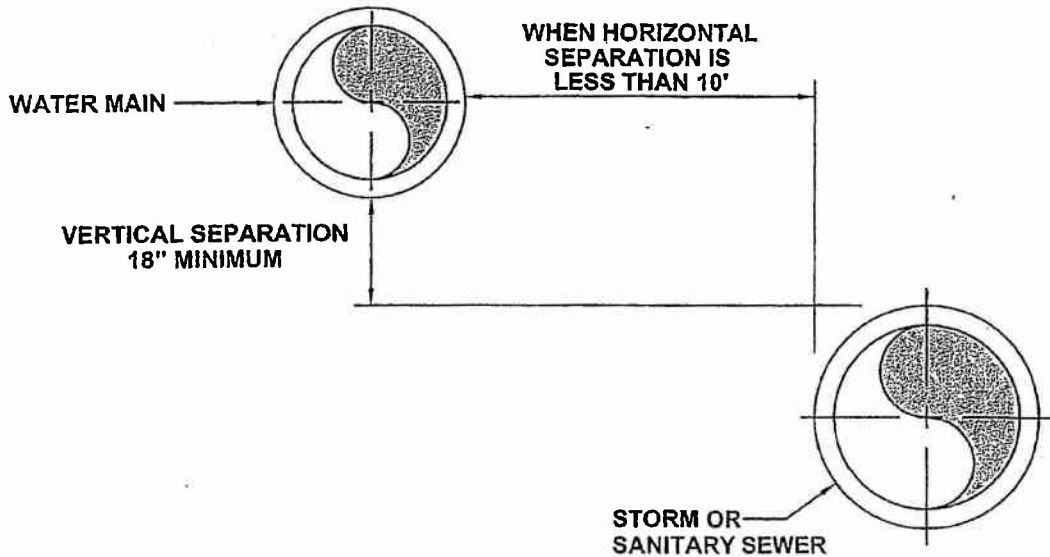
 2B CRUSHED STONE OR CRUSHED GRAVEL.  
1B CRUSHED STONE OR CRUSHED GRAVEL WITH APPROVAL BY THE OWNERS REPRESENTATIVE.

 CLASS "C" CONCRETE

WHERE EXCAVATION EXPOSES THE BOTTOM OF PROPOSED TRENCHES WHERE VERY SOFT OR OTHER UNSTABLE PIPE FOUNDATION MATERIALS EXIST, THE CONTRACTOR WILL BE DIRECTED TO OVERCUT OR STABILIZE / OVERCUT AND THE CONTRACTOR SHALL BE COMPENSATED FOR THE ADDITIONAL EXCAVATION IN ACCORDANCE WITH THE PROVISIONS SPECIFIED IN THE GENERAL CONDITIONS.



<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>TRENCH DETAILS</b>	
Not to scale	April 2010	I-2	Standard Detail SD-2-002



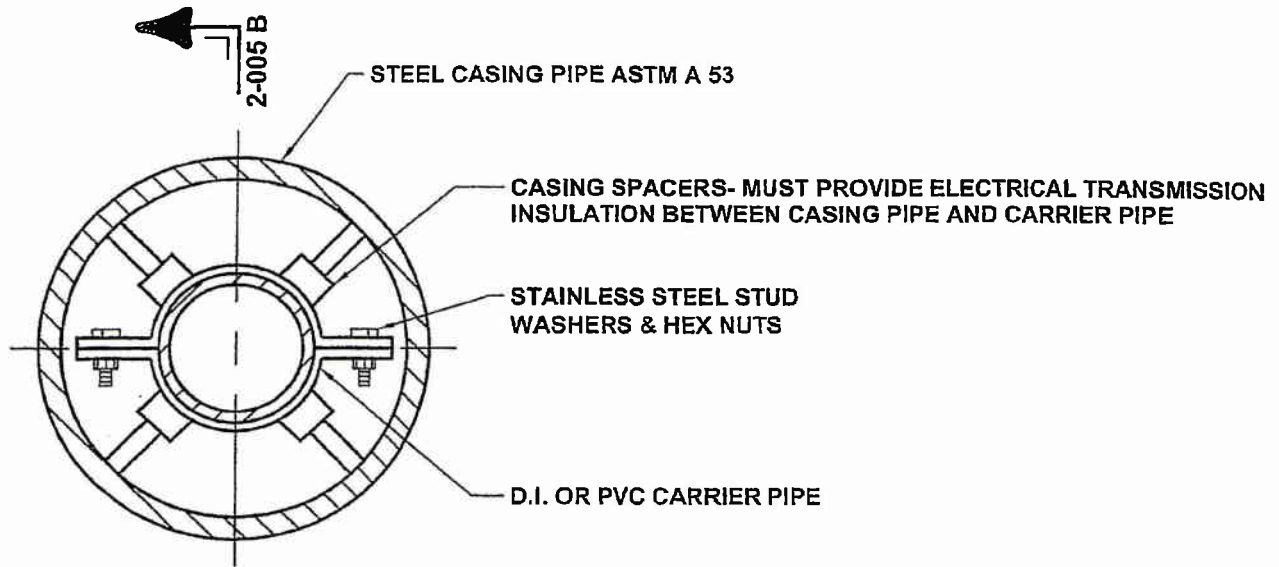
**NOTES:**

**1. WHEN THE HORIZONTAL SEPARATION OF THE WATER MAIN AND SEWER LINE IS LESS THAN 10', THE VERTICAL SEPARATION BETWEEN THE TOP (CROWN) OF THE SEWER LINE AND THE BOTTOM (INVERT) OF THE WATER MAIN SHALL BE AT LEAST 18". SEWER LINE SHALL BE ENCASED IN CONCRETE FOR 10' ON EITHER SIDE OF THE WATER MAIN WHERE SEWER / WATER LINE CROSSINGS OCCUR AND WHERE CONDITIONS PREVENT AN 18" VERTICAL SEPARATION.**

**2. THERE SHALL BE AT LEAST A 10' HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER FORCE MAINS. FORCE MAINS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18" BETWEEN THE OUTSIDE OF THE FORCE MAIN AND THE OUTSIDE OF THE WATER MAIN.**

<b>KLH ENGINEERS, INC.</b> <b>5173 Campbells Run Road</b> <b>Pittsburgh, PA 15205</b>		<b>DESIRED DISTANCES</b> <b>BETWEEN</b> <b>WATER AND SEWER PIPES</b>	
Not to scale	April 2010	I-3	Standard Detail SD-2-003

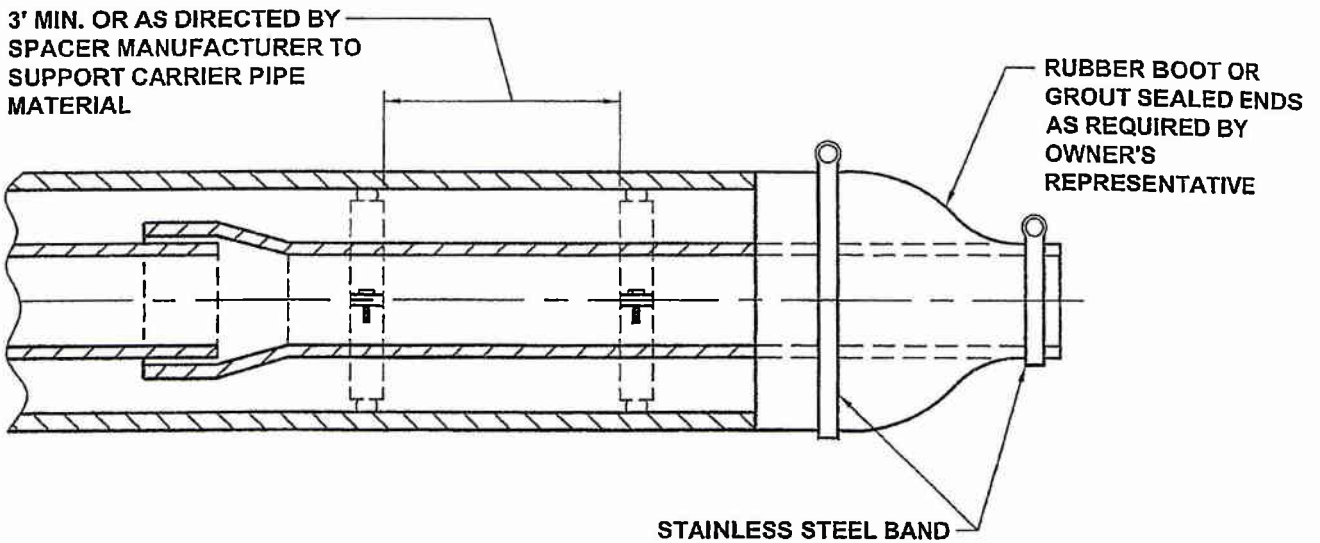




**SECTIONAL PLAN 2-005 A**

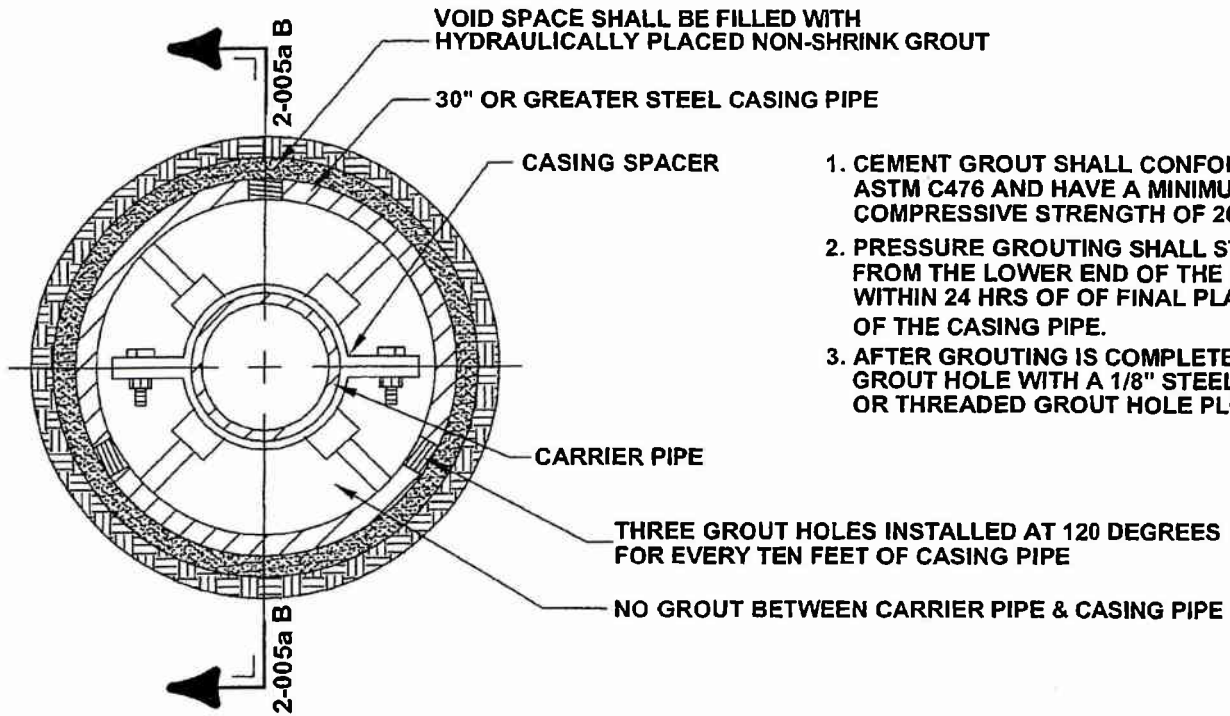
**WALL THICKNESS OF CASING PIPE**

<u>DIAMETER (IN.)</u>	<u>THICKNESS (IN.)</u>
24" OR LESS	1/4"
28" AND 32"	3/8"
42" AND LARGER	1/2"



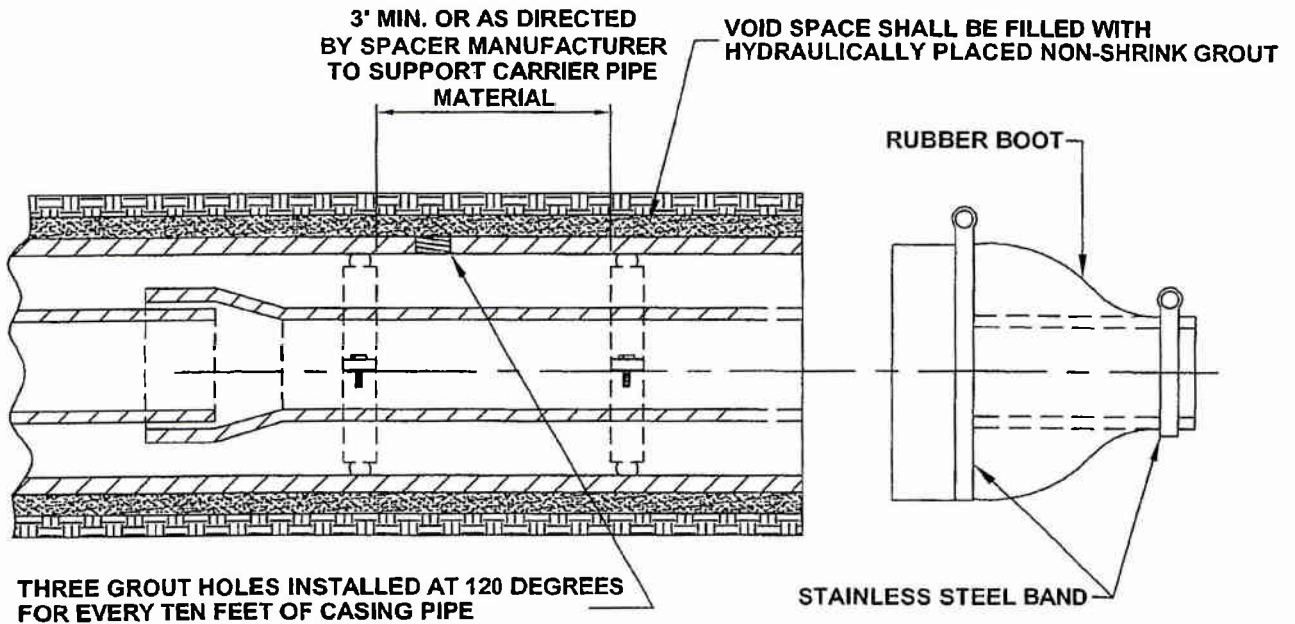
**SECTION 2-005 B**

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>STEEL CASING AND          D.I. OR PVC CARRIER PIPES          INSTALLED BY BORING</b>
Not to scale	April 2010	Standard Detail SD-2-005



1. CEMENT GROUT SHALL CONFORM TO ASTM C476 AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 200 PSI.
2. PRESSURE GROUTING SHALL START FROM THE LOWER END OF THE BORE WITHIN 24 HRS OF OF FINAL PLACEMENT OF THE CASING PIPE.
3. AFTER GROUTING IS COMPLETED SEAL GROUT HOLE WITH A 1/8" STEEL PLATE OR THREADED GROUT HOLE PLUG

**SECTIONAL PLAN 2-005a A**



**SECTION 2-005a B**

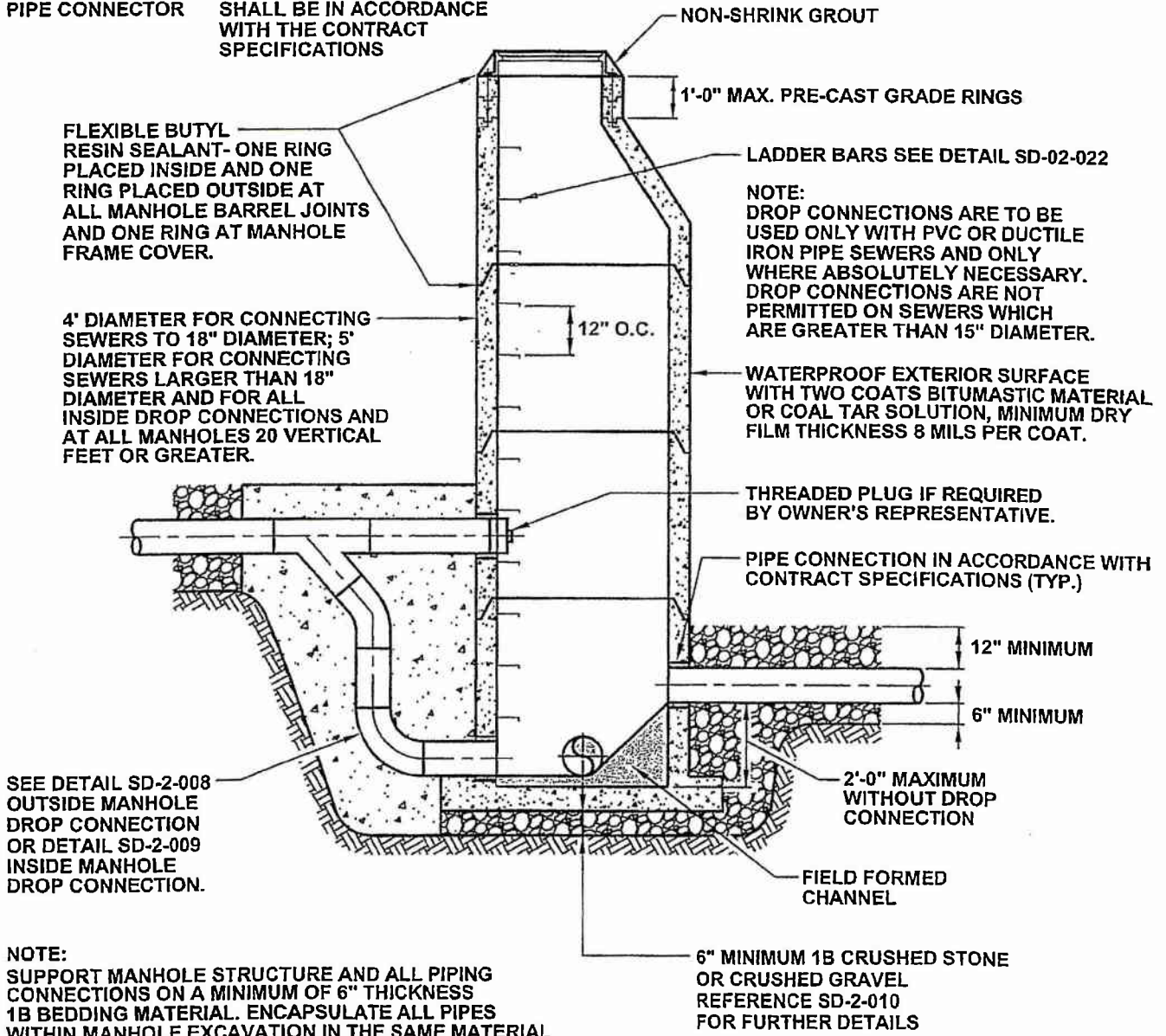
<p><b>KLH ENGINEERS, INC.</b>          5173 Campbells Run Road          Pittsburgh, PA 15205</p>		<p><b>GROUTING VOID SPACE          OUTSIDE OF BORED          STEEL CASING PIPES 30" or GREATER</b></p>
<p>Not to scale</p>	<p>December 2009</p>	<p>Standard Detail SD-2-005a</p>



MANHOLE BARREL SHALL BE PRE-CAST CONCRETE ASTM C478 OR GLASS FIBER REINFORCED ASTM D3753. FOR CONNECTING PIPES 18" DIAMETER OR LESS, THE MANHOLE BARREL SHALL BE 4' DIAMETER; WHERE THERE ARE LARGER CONNECTING PIPES OR INSIDE DROP CONNECTIONS, THE DIAMETER SHALL BE 5'.

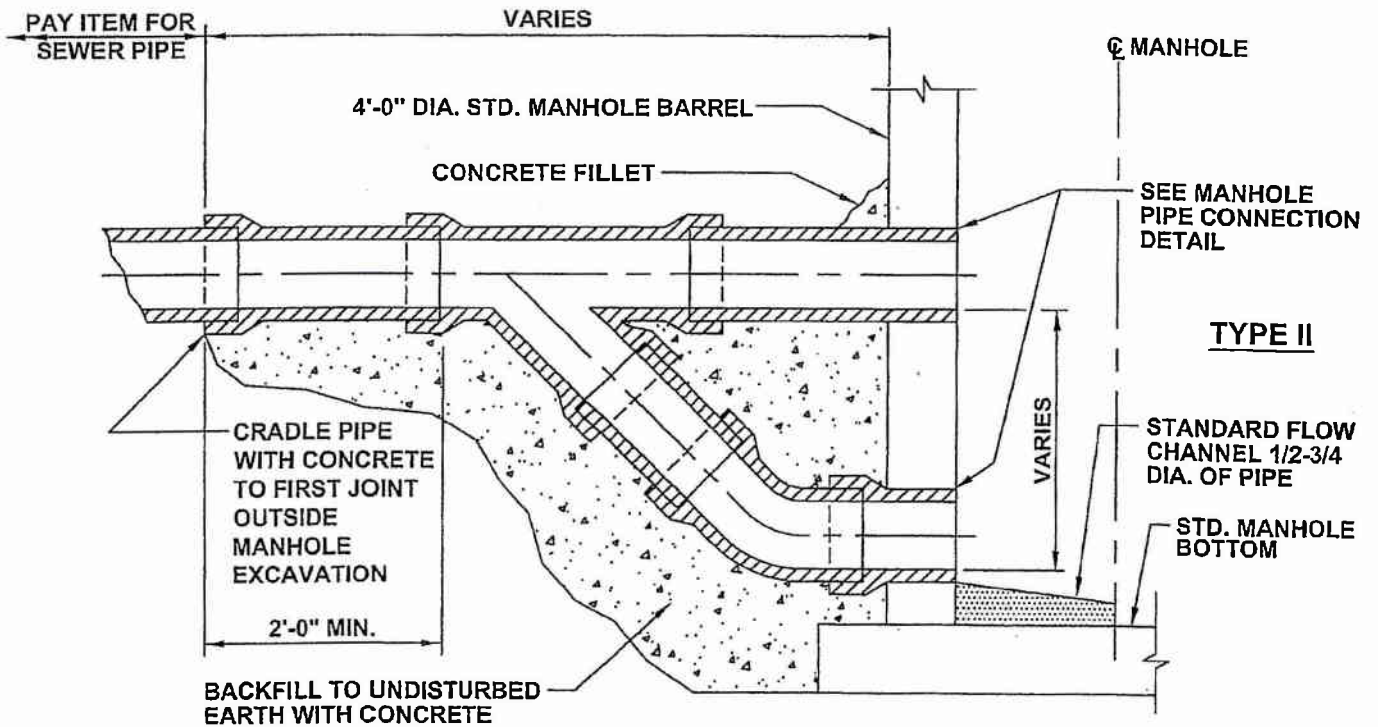
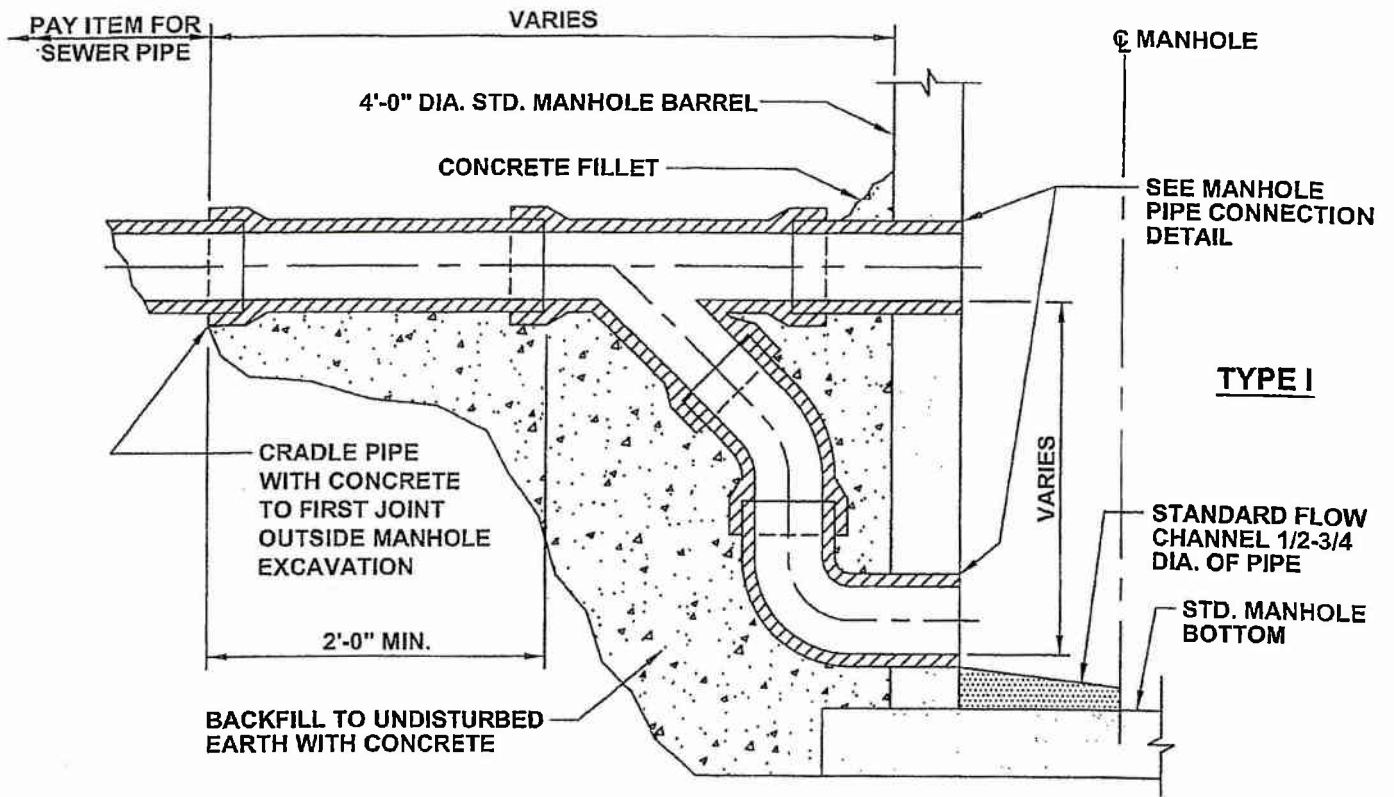
**REFERENCE DETAILS**

- TOP OF MANHOLE SD-2-010
- MANHOLE FRAME & COVER SD-2-019 OR SD-2-020
- INFLOW PROTECTOR SD-2-021
- STEPS SD-2-022
- PIPE CONNECTOR SHALL BE IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS

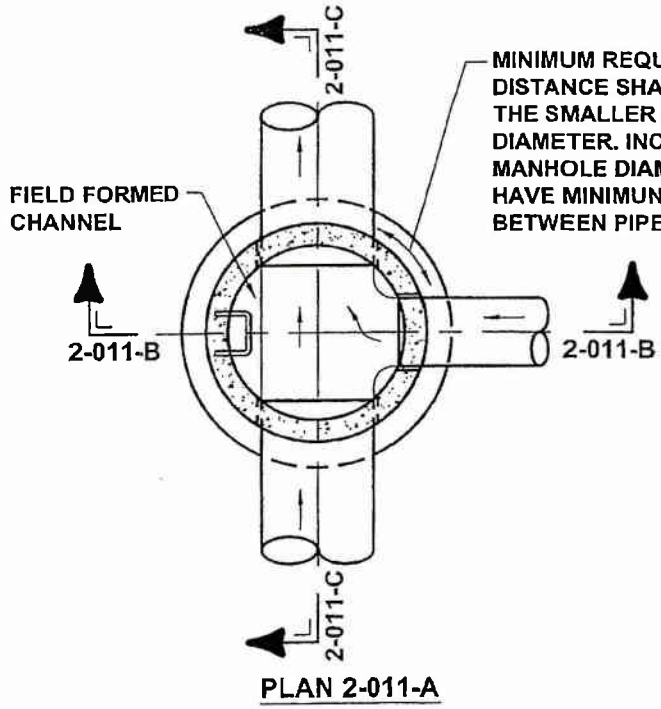
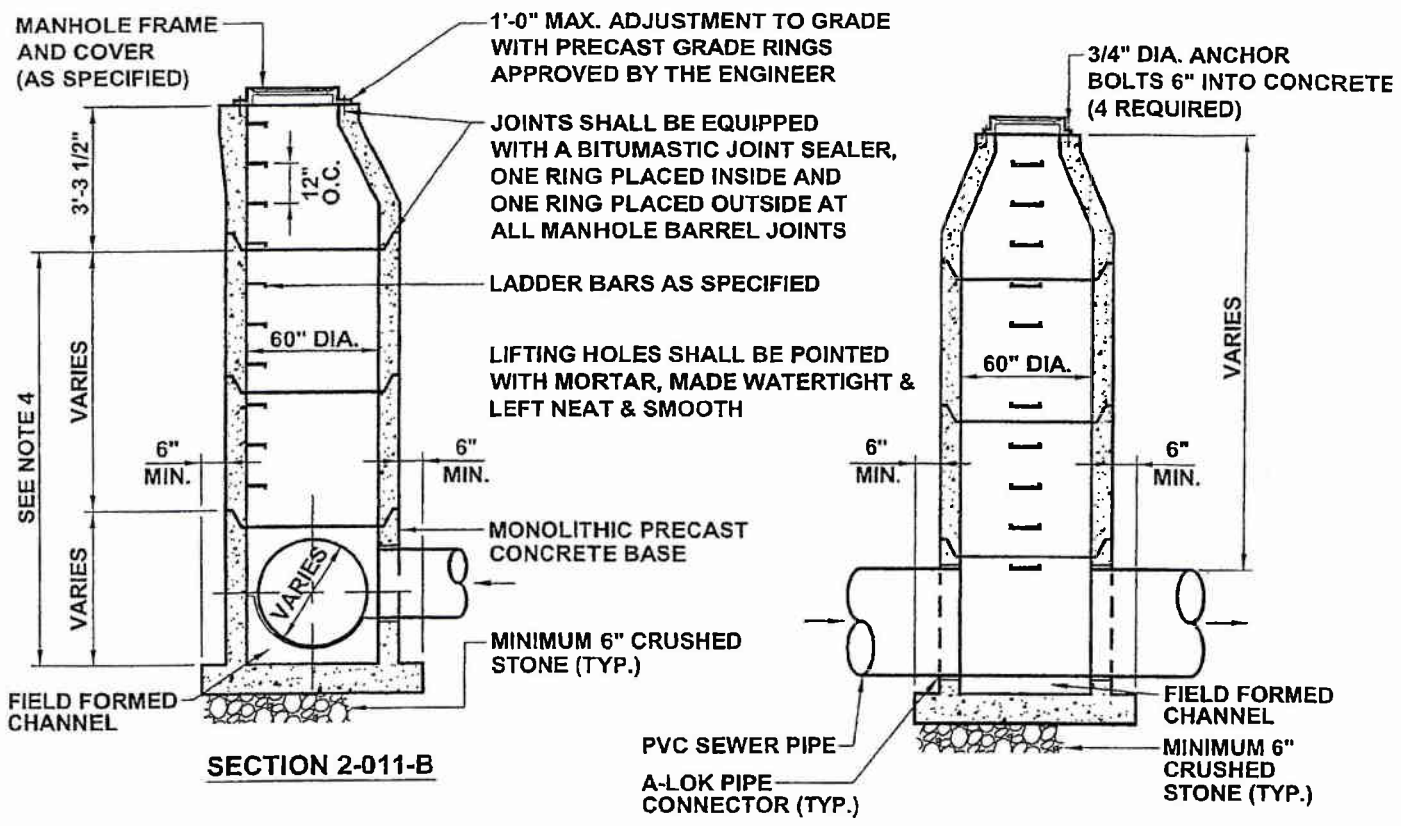


**NOTE:**  
SUPPORT MANHOLE STRUCTURE AND ALL PIPING CONNECTIONS ON A MINIMUM OF 6" THICKNESS 1B BEDDING MATERIAL. ENCAPSULATE ALL PIPES WITHIN MANHOLE EXCAVATION IN THE SAME MATERIAL TO AN ELEVATION OF 12" ABOVE THE TOP OF PIPES. OUTSIDE MANHOLE DROP CONNECTION SHALL BE ENCASED WITH CONCRETE.

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>MANHOLE FOR SEWERS          FOR DEPTHS GREATER          THAN 5 FEET</b>
Not to scale	April 2010	Standard Detail SD-2-007



<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>OUTSIDE MANHOLE          DROP CONNECTION</b>
Not to scale	April 2010	Standard Detail SD-2-008

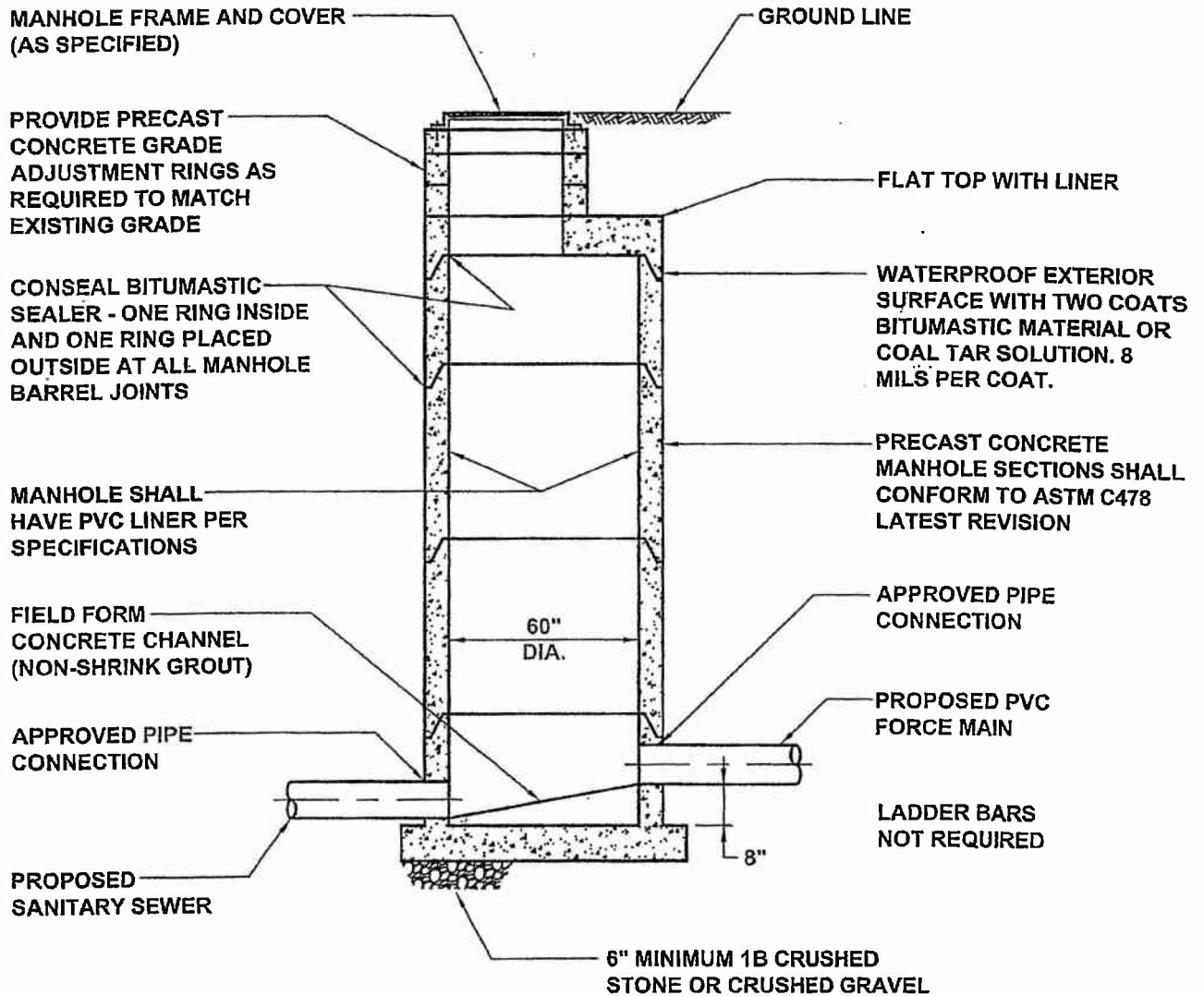


MINIMUM REQUIRED DISTANCE SHALL BE 1/2 OF THE SMALLER PIPE DIAMETER. INCREASE MANHOLE DIAMETER TO HAVE MINIMUM DISTANCE BETWEEN PIPES

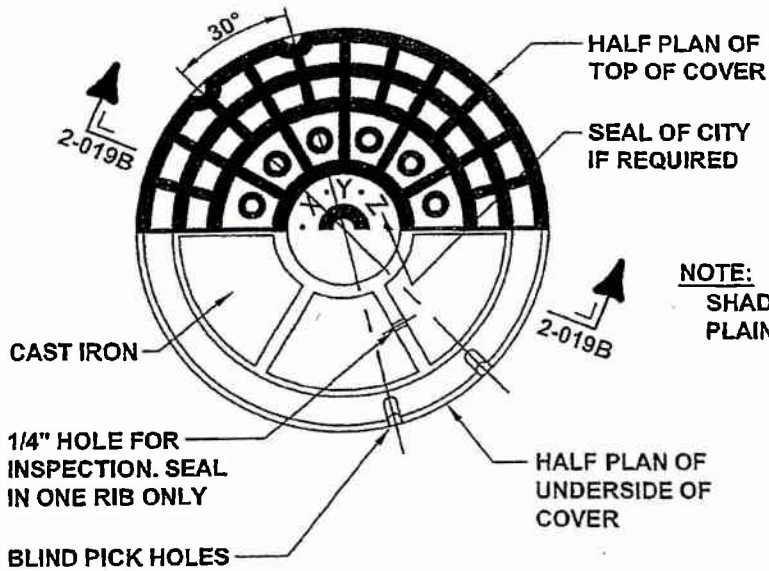
- NOTES:
1. PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM C-478, LATEST REVISION,
  2. WHERE MANHOLE FOUNDATION IS IN ROCK, REINFORCEMENT WILL NOT BE REQUIRED.
  3. WATERPROOF EXTERIOR SURFACE WITH TWO COATS BITUMASTIC MATERIAL OR COAL TAR SOLUTION. 8 MILS PER COAT.
  4. FOR DEPTHS LESS THAN 5'-0", INSTALL PRECAST CONCRETE SLAB TOP DESIGNED TO MEET LOAD CONDITIONS. MANHOLE TO BE 60" DIA. FULL DEPTH.

KLH ENGINEERS, INC. 5173 Campbells Run Road Pittsburgh, PA 15205		PRECAST CONCRETE MANHOLE (60 INCH DIAMETER) (PIPE DIAMETER- 21" TO 30")
Not to scale	January 2006	Standard Detail SD-2-011





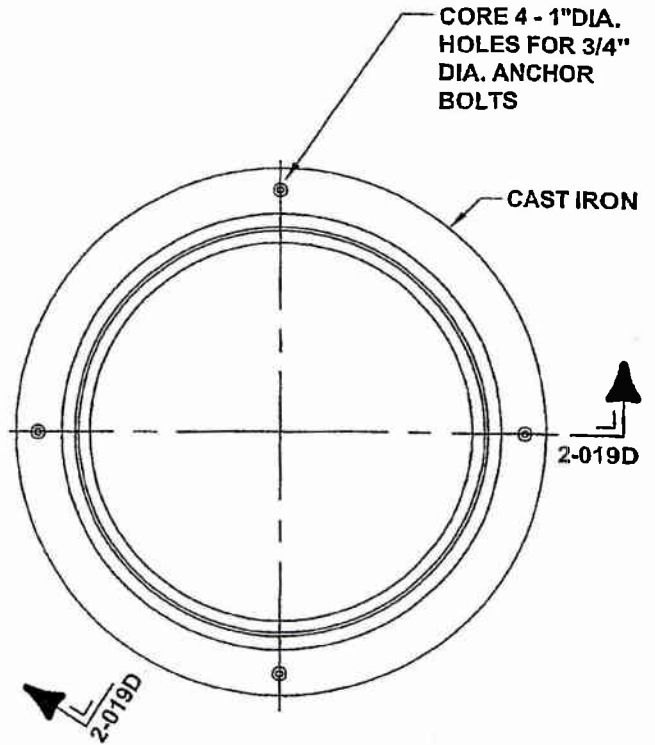
<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>CONNECTIONS OF FORCE MAIN          TO GRAVITY MANHOLE          WITH PVC LINER</b>
Not to scale	April 2010	Standard Detail SD-2-018



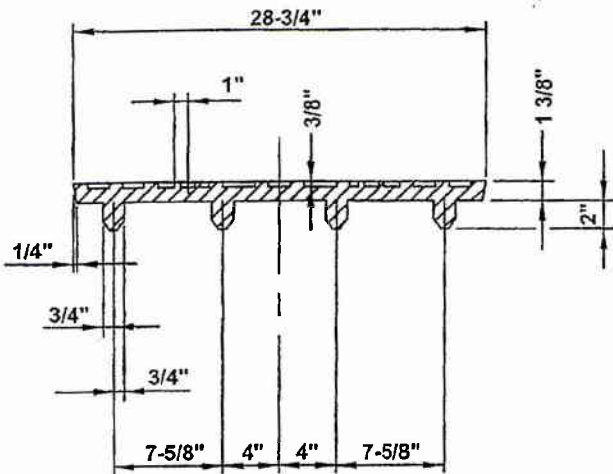
**COVER PLAN 2-019A**

**NOTE:**  
 NAMES, LETTERS OR IDENTIFICATION MARK OF USER TO BE CAST IN CIRCLE IN CENTER OF COVER AS ORDERED. LETTERS X, Y, AND Z USED AS ILLUSTRATION ONLY.

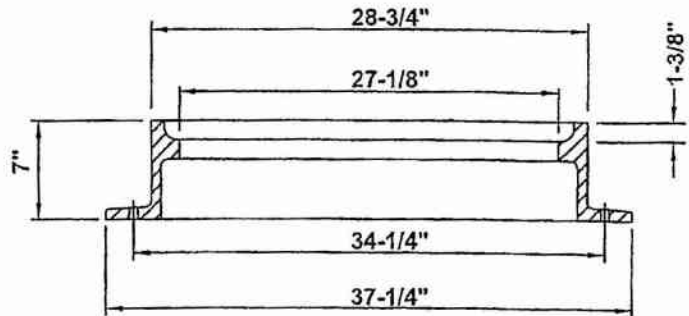
**NOTE:**  
 SHADED PORTION - HIGH  
 PLAIN PORTION - LOW



**FRAME PLAN 2-019C**



**SECTION 2-019B**



**BOTTOM FLANGE - SECTION 2-019D**

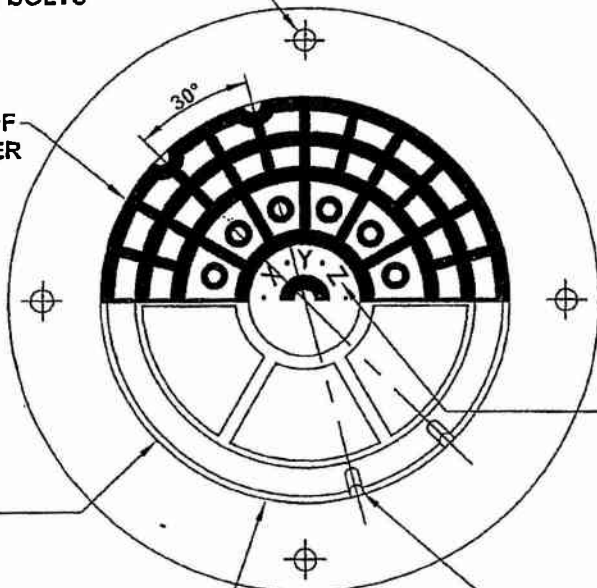
<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>STANDARD</b> <b>CAST IRON MANHOLE</b> <b>FRAME AND COVER</b>
Not to scale	April 2010	Standard Detail SD-2-019

FOUR 1" DIA.  
HOLES FOR 3/4"  
DIA. ANCHOR BOLTS

**NOTE:**  
SHADED PORTION - HIGH  
UNSHADED PORTION - LOW

HALF PLAN OF  
TOP OF COVER

2-020B



2-020B

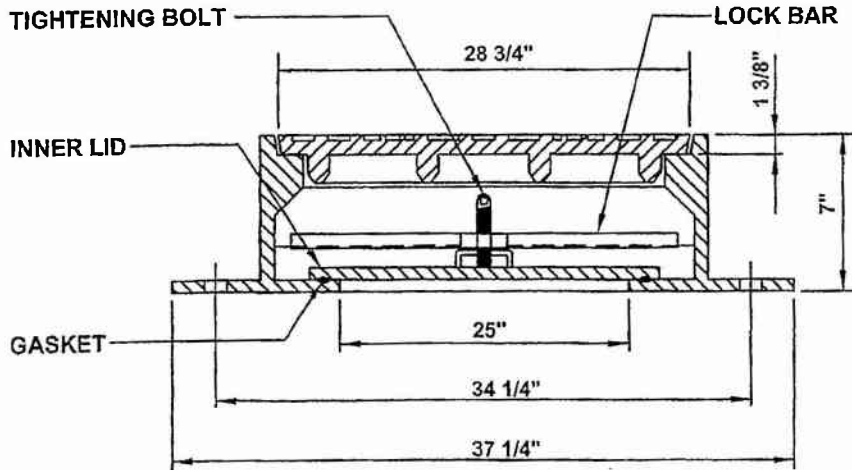
CAST IRON

NAMES, LETTERS OR  
IDENTIFICATION MARK OF USER  
TO BE CAST IN CIRCLE IN CENTER  
OF COVER AS ORDERED. LETTERS  
X, Y, AND Z USED AS ILLUSTRATION  
ONLY.

HALF PLAN OF  
UNDERSIDE OF  
COVER

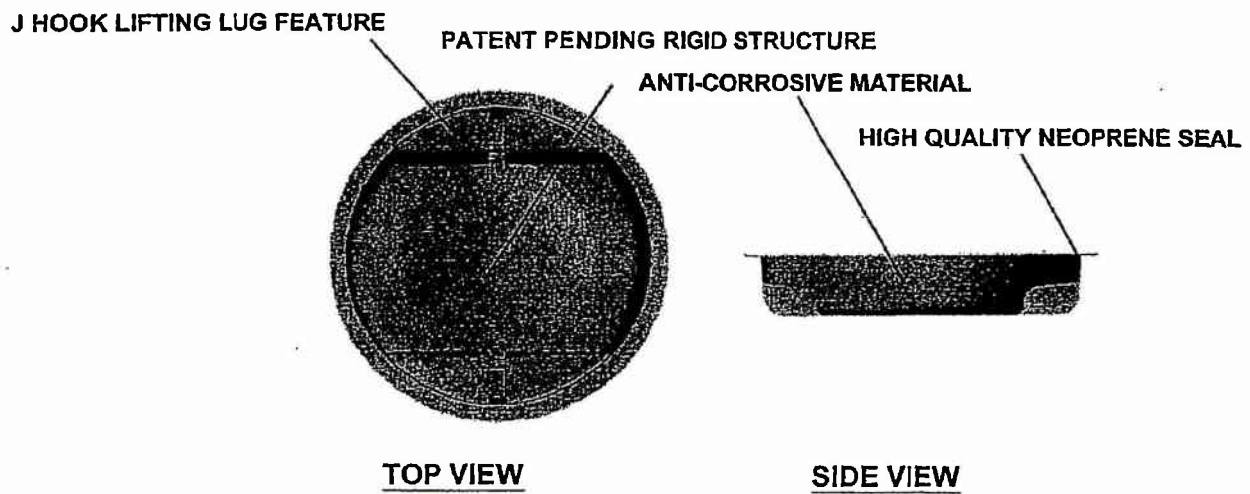
BLIND PICK HOLES

**PLAN 2-020A**



**SECTION 2-020B**

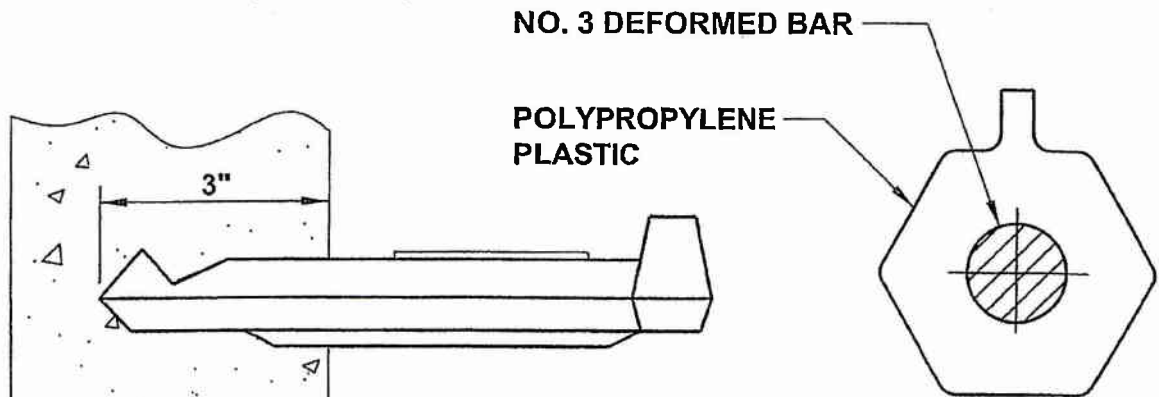
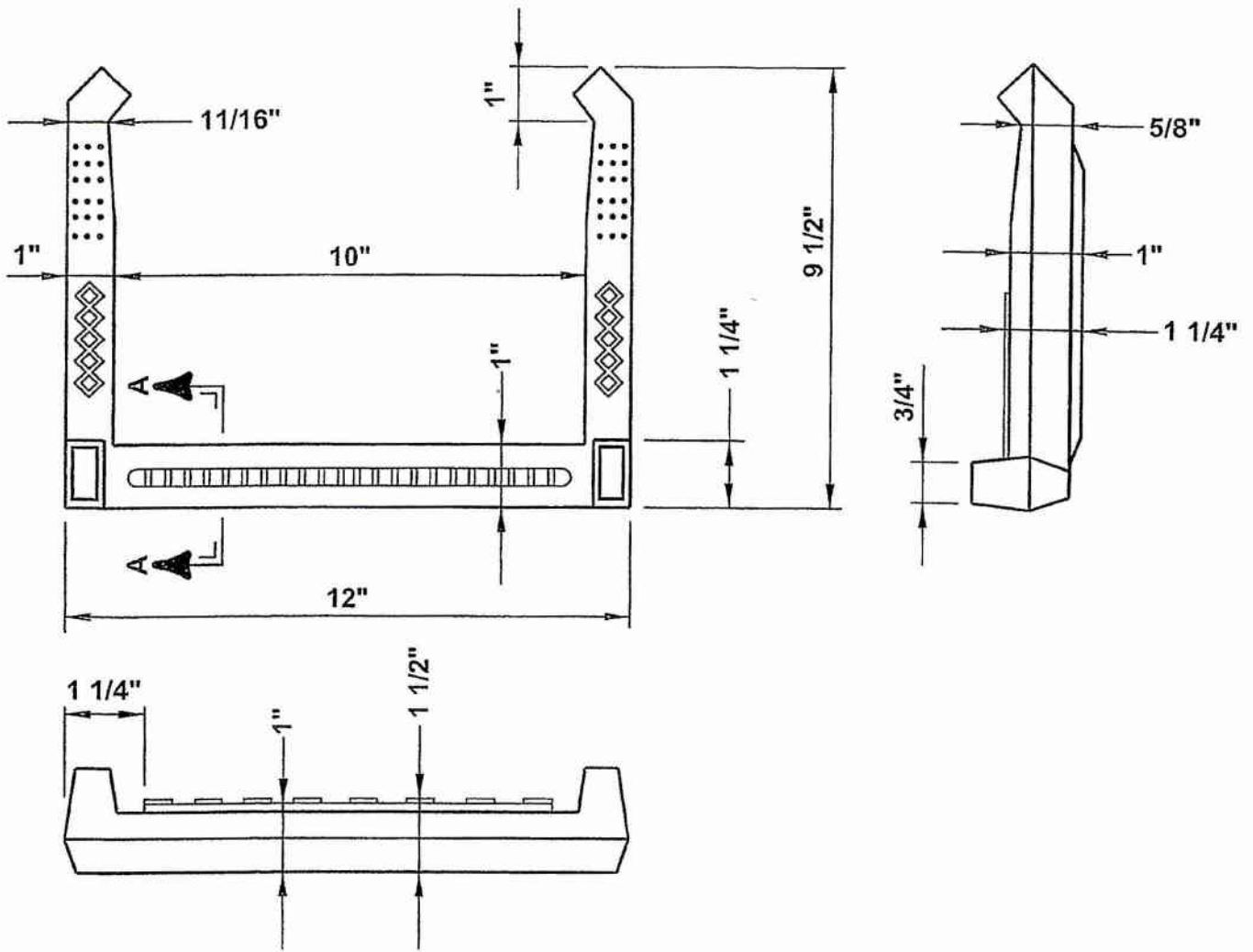
<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>WATERTIGHT MANHOLE (WT)          FRAME AND COVER</b>
Not to scale	April 2010	Standard Detail SD-2-020



**NOTES:**

1. ABS INFLOW PROTECTOR SHALL BE MAN-PAN OR APPROVED EQUAL AND SHALL BE INSTALLED WITH ALL NON-WATER TIGHT MANHOLE COVERS.
2. ALL INFLOW PROTECTORS SHALL BE INSTALLED WITH VENTS AND SHALL HAVE A GAS RELIEF VALVE

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>MANHOLE INFLOW          PROTECTOR</b>	
Not to scale	January 2006	-12	Standard Detail SD-2-021

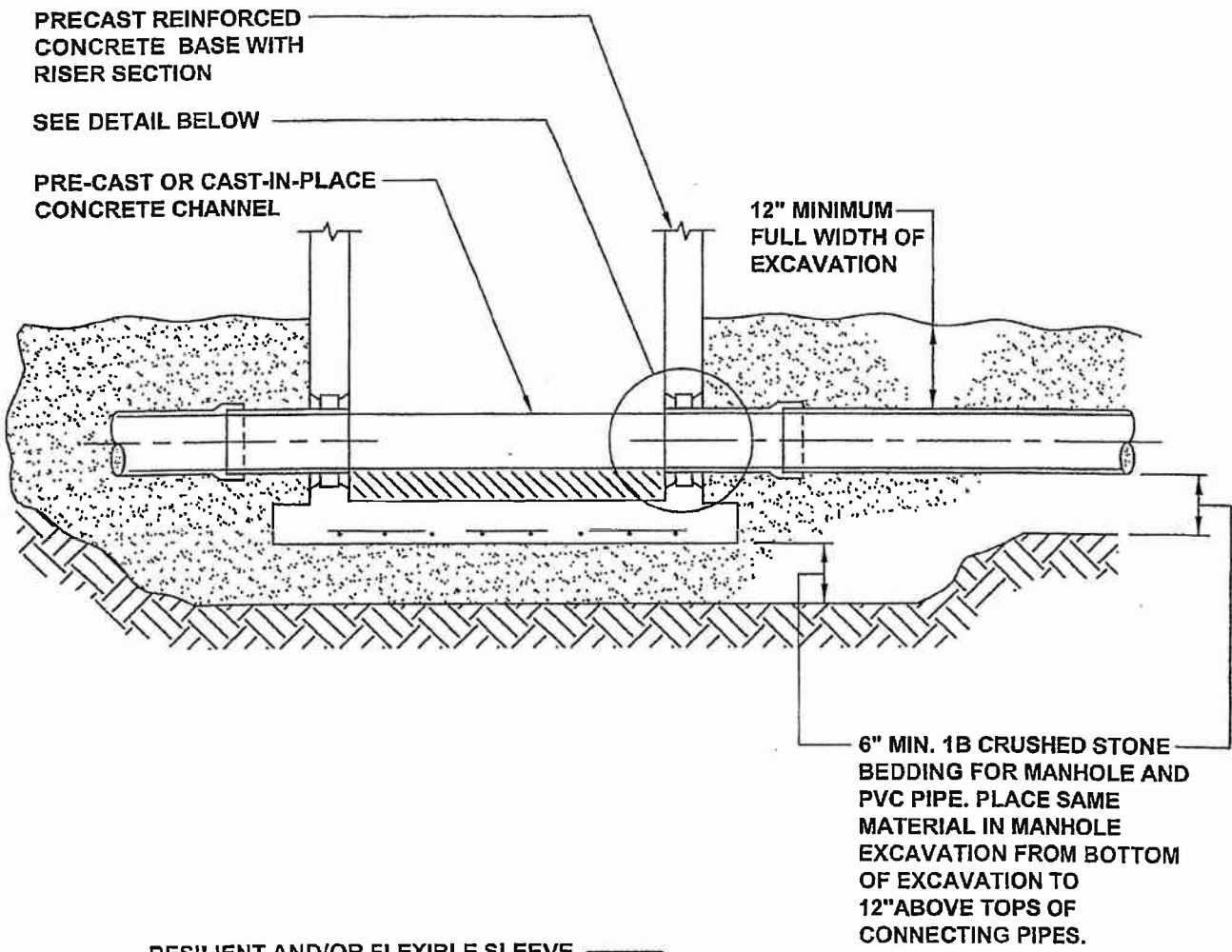


- NOTES:**
1. STEPS GROUTED IN PLACE
  2. INSTALL STEPS ON 12" C:C

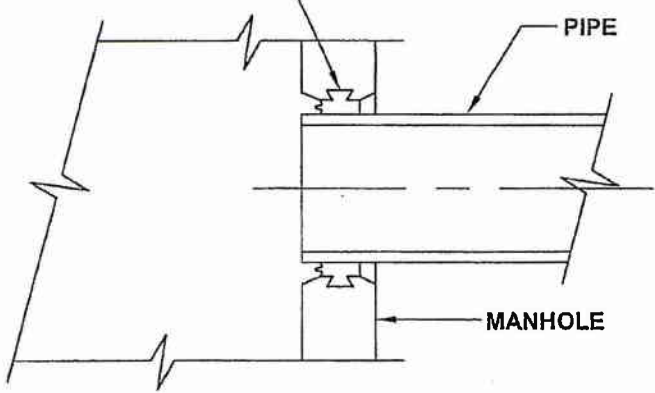
**SECTION A**

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>POLYPROPYLENE PLASTIC</b> <b>MANHOLE STEP</b>
Not to scale	April 2010	Standard Detail SD-2-022

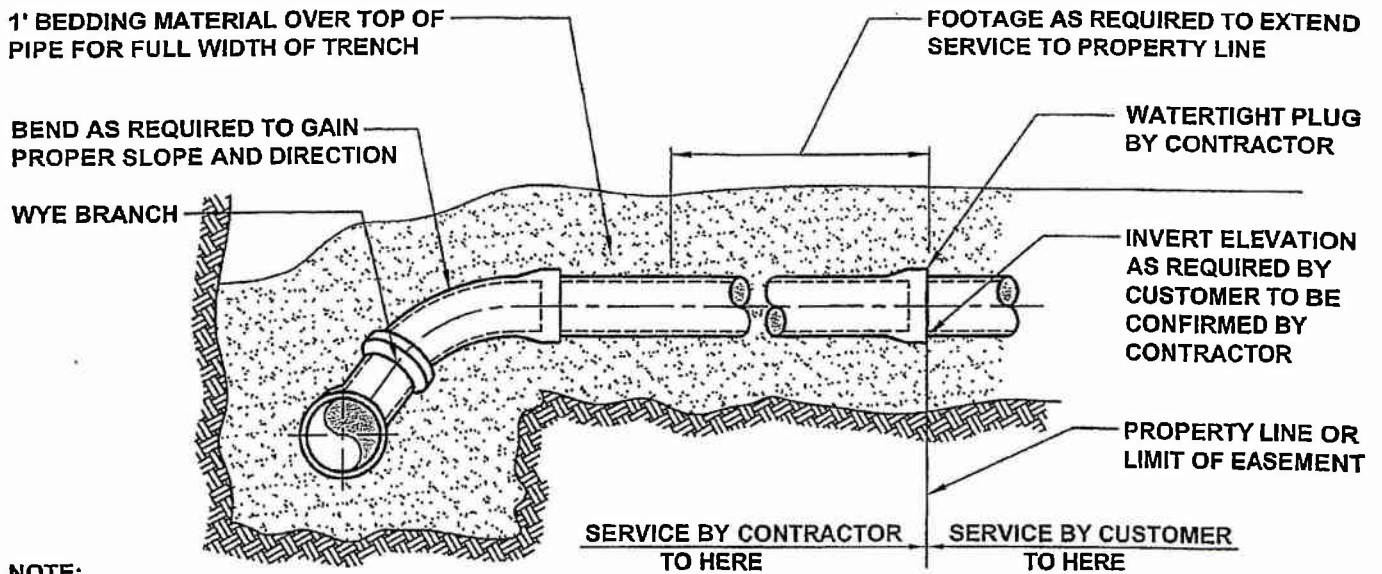




RESILIENT AND/OR FLEXIBLE SLEEVE  
 (WITH ADJUSTABLE STAINLESS STEEL STRAPS)  
 MANHOLE TO PIPE CONNECTOR

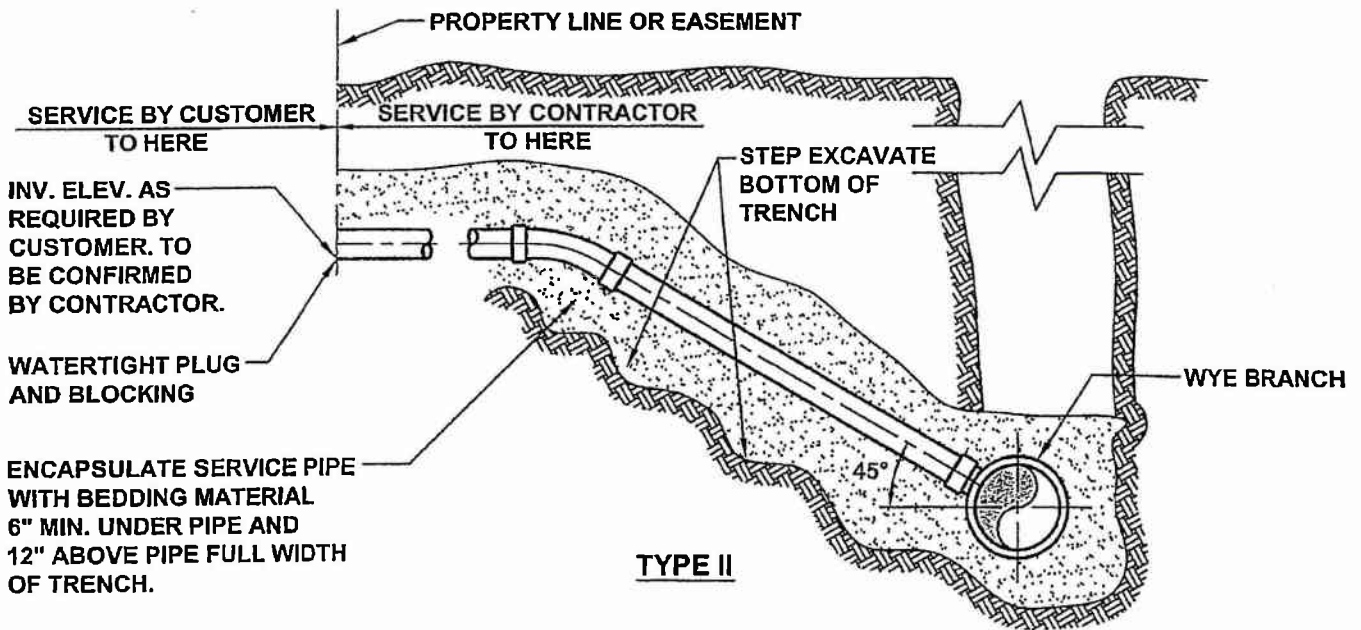


<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>PRECAST MANHOLE          BASE DETAIL</b>
Not to scale	April 2010	Standard Detail SD-2-023



**NOTE:**  
 WHERE MAIN SEWER IS IN PRIVATE PROPERTY, FOOTAGE OF LATERAL PIPE WILL EXTEND TO THE EDGE OF SEWER RIGHT-OF-WAY.

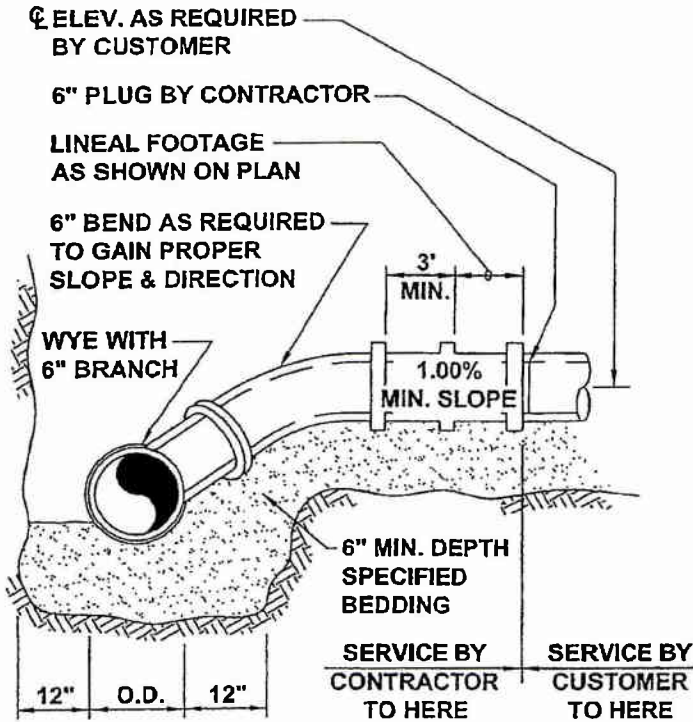
**TYPE I**



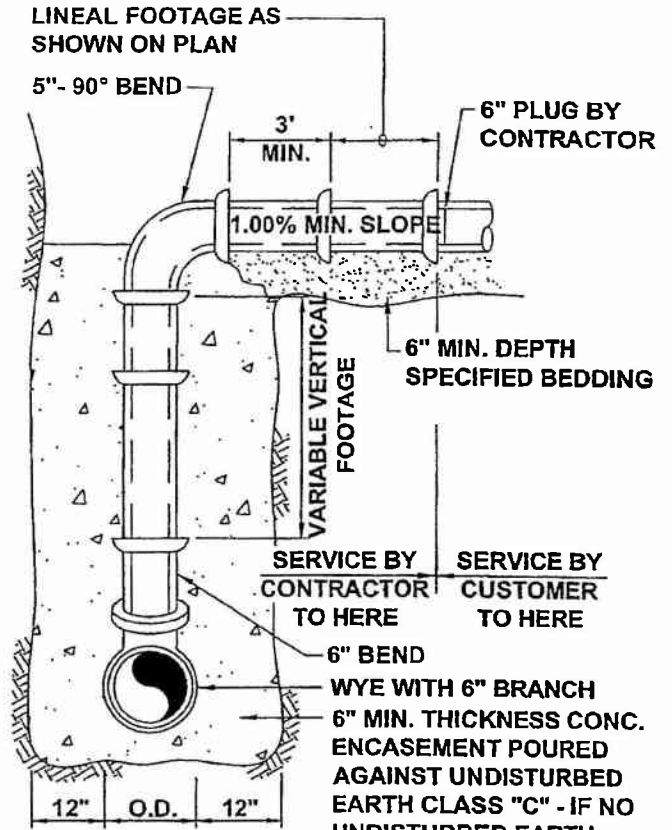
**TYPE II**

**NOTE:**  
 ALL SERVICE SEWERS SHALL BE 6" DIAMETER AND SHALL BE PVC PIPE. CHANGES IN ALIGNMENT AND CONNECTIONS TO MAIN SEWER SHALL BE ACCOMPLISHED WITH PREFABRICATED FITTINGS.

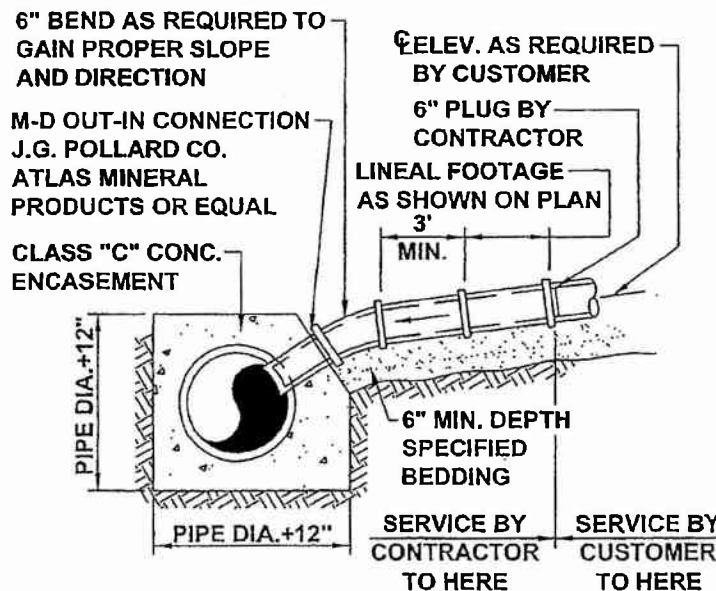
<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>TYPICAL SEWER SERVICE LATERAL CONNECTIONS</b>
Not to scale	April 2010	Standard Detail SD-2-028



**TYPE I**

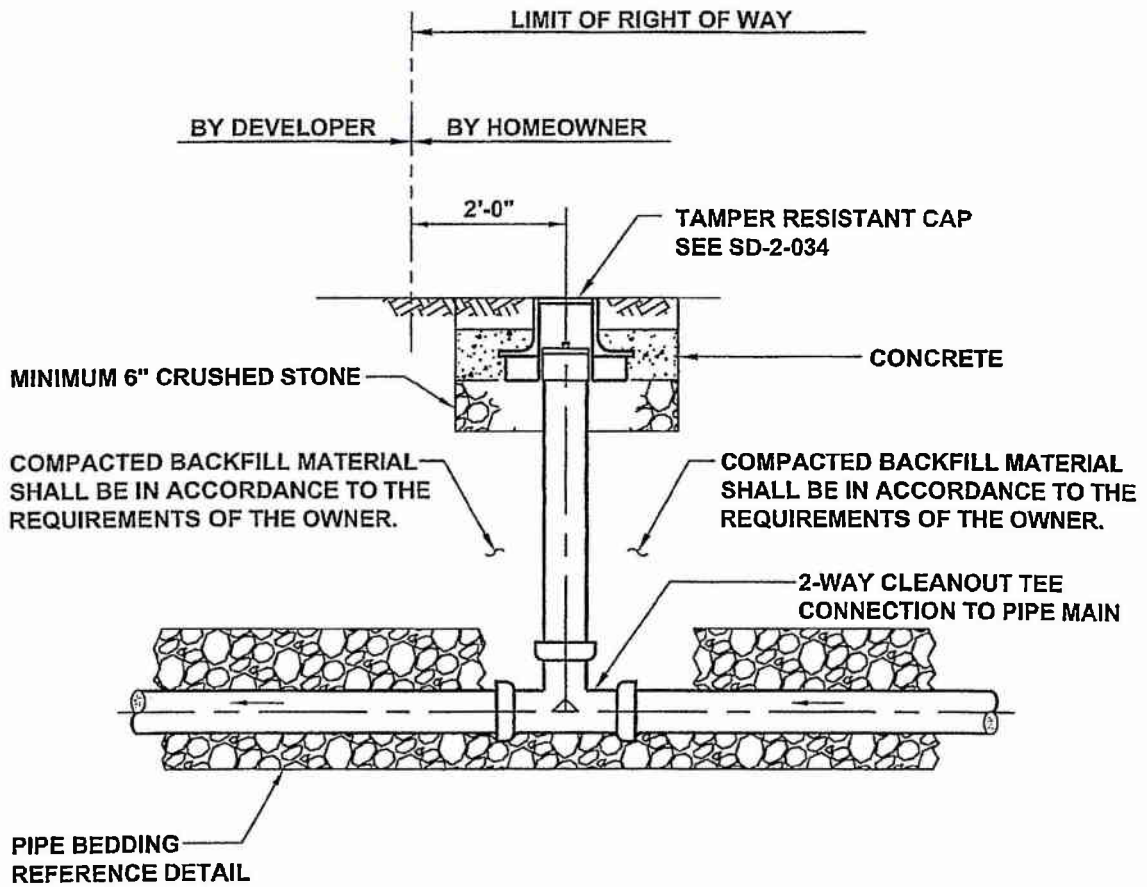


**TYPE II**



**TYPE III**

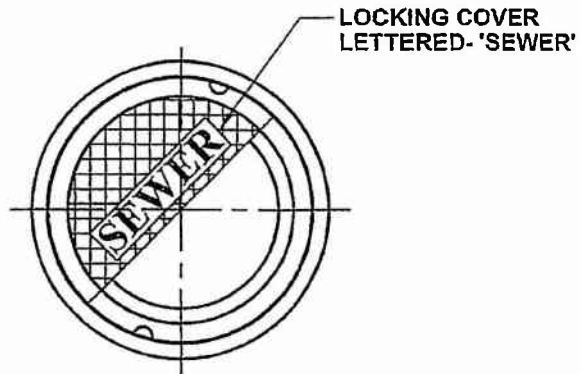
KLH ENGINEERS, INC. 5173 Campbells Run Road Pittsburgh, PA 15205		SEWER SERVICE CONNECTIONS	
Not to scale	January 2006	16	Standard Detail SD-2-029



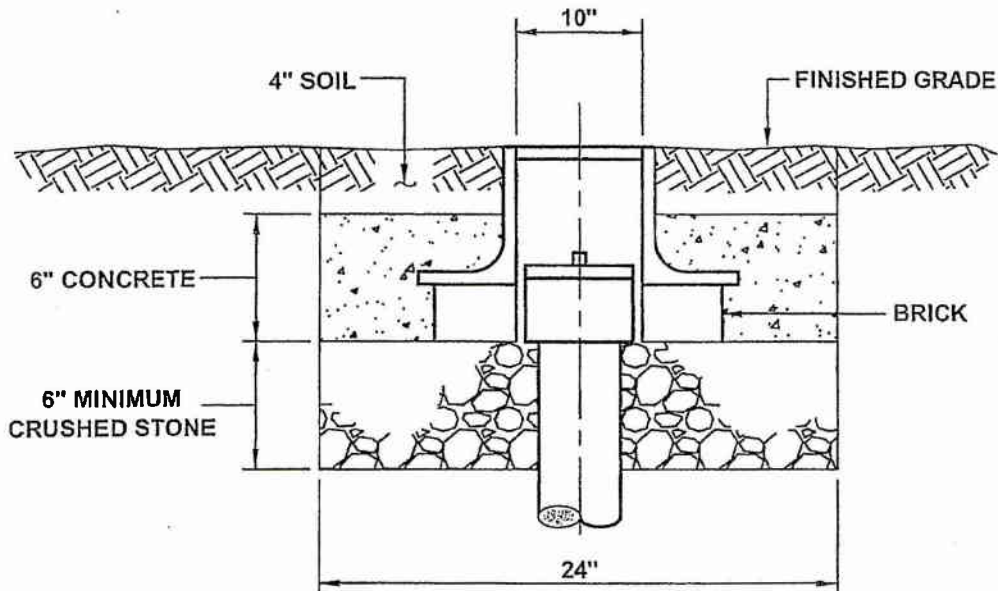
**OBSERVATION PORT DETAIL 2-033-A**

<b>KLH ENGINEERS, INC.</b> <b>5173 Campbells Run Road</b> <b>Pittsburgh, PA 15205</b>		<b>SEWER SERVICE LINE</b> <b>OBSERVATION PORT</b>
<b>Not to scale</b>	<b>April 2010</b>	<b>Standard Detail SD-2-033</b>



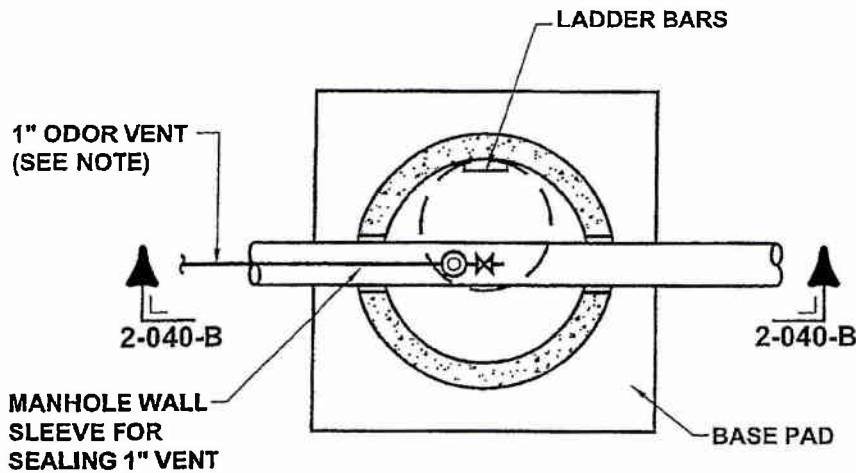


**CAP COVER**



**CAP SECTION**

<b>KLH ENGINEERS, INC.</b> <b>5173 Campbells Run Road</b> <b>Pittsburgh, PA 15205</b>		<b>SEWER CLEAN OUT AND</b> <b>OBSERVATION PORT</b> <b>TAMPER RESISTANT CAP</b>
<b>Not to scale</b>	<b>April 2010</b>	<b>Standard Detail SD-2-034</b>

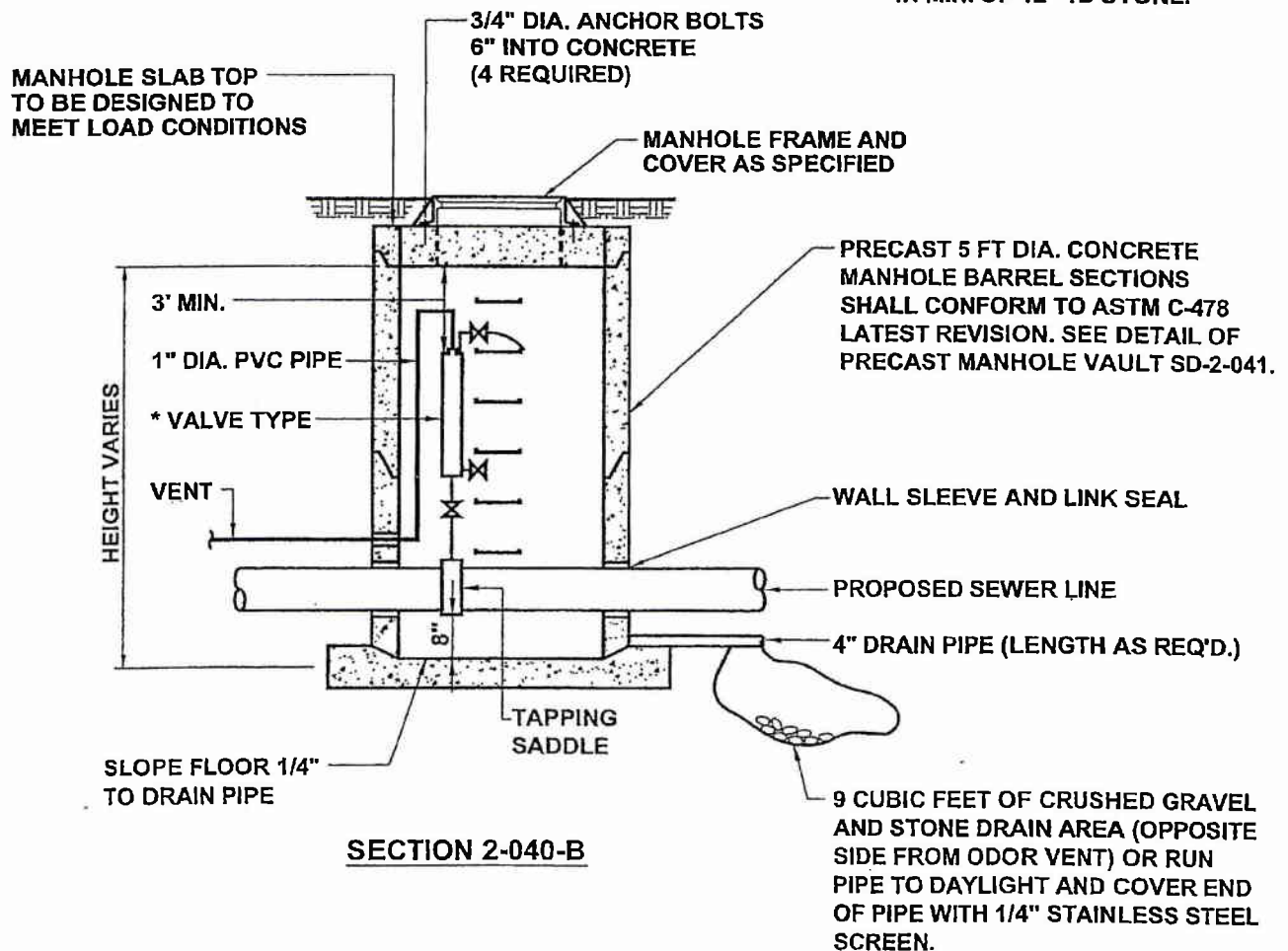


**PLAN 2-040-A**

\* TYPE OF VALVE INSTALLED IN THE MANHOLE AS REQUIRED BY THE ENGINEER

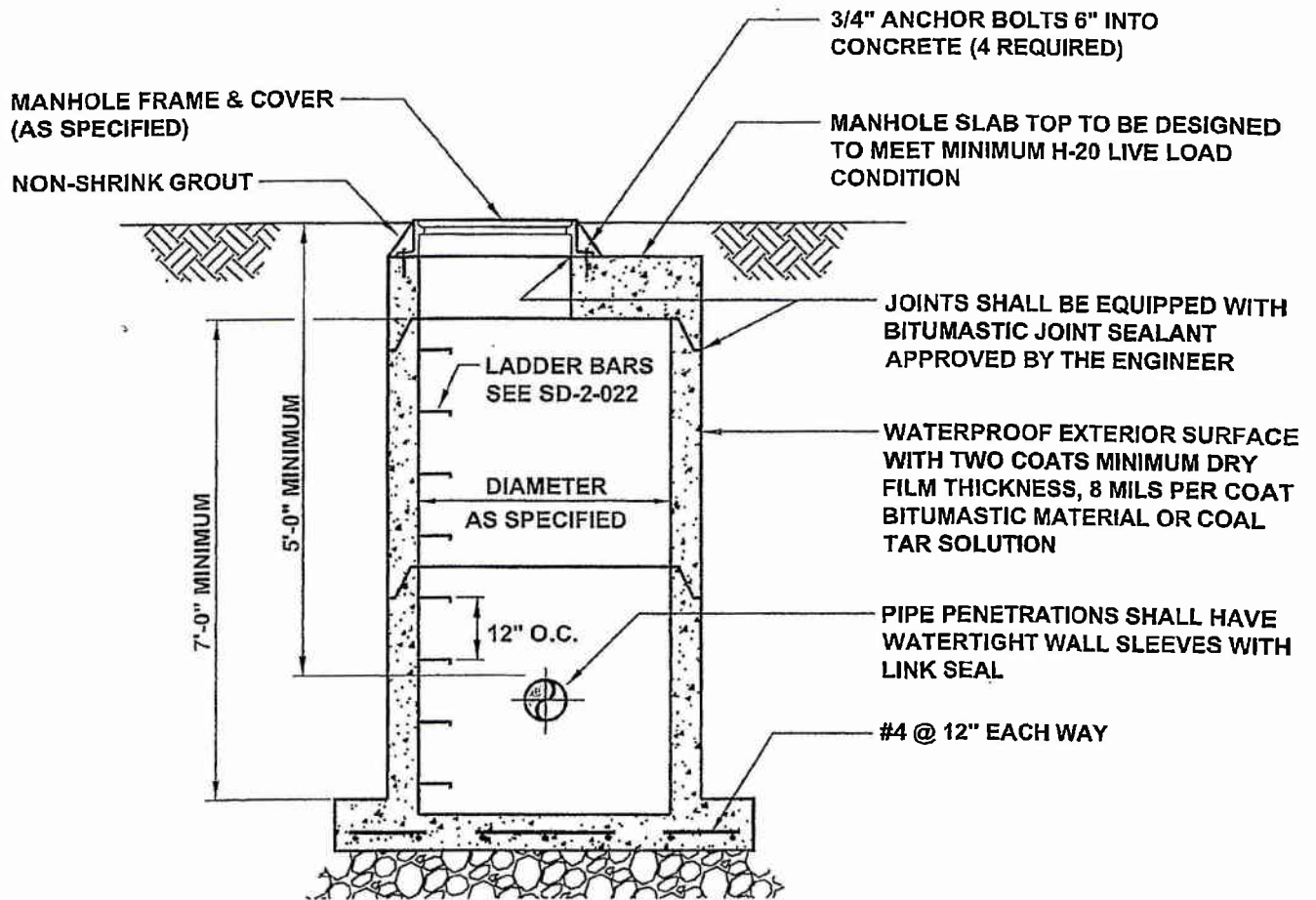
- 1) AIR RELEASE VALVE
- 2) AIR VACUUM VALVE
- 3) COMBINATION AIR VALVE AS SPECIFIED

**NOTE:**  
ODOR VENT FROM AIR VALVE TO BE RUN INTO TRENCH WITH 20' PERFORATED PIPE ENCASED IN MIN. OF 12" 1B STONE.



**SECTION 2-040-B**

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>SEWAGE AIR AND VACUUM          RELEASE VALVE AND MANHOLE</b>	
Not to scale	January 2006	119	Standard Detail SD-2-040

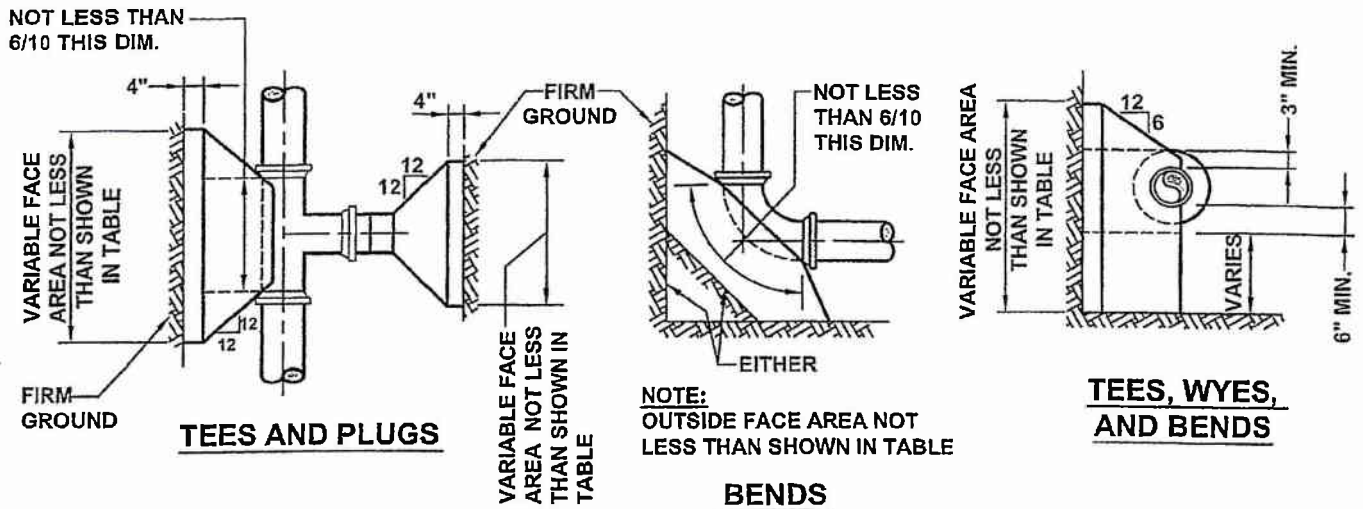


**SECTION A-A**

**NOTES:**

1. PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM-C478, LATEST REVISION.
2. WHERE MANHOLE FOUNDATION IS IN ROCK, REINFORCEMENT WILL NOT BE REQUIRED.
3. LIFTING HOLES SHALL BE PAINTED WITH MORTAR, MADE WATERTIGHT AND LEFT NEAT & SMOOTH.
4. SUPPORT MANHOLE STRUCTURE AND ALL PIPING CONNECTIONS ON A MINIMUM OF 6" THICKNESS 1B BEDDING MATERIAL. ENCAPSILATE ALL PIPES WITHIN MANHOLE EXCAVATION IN THE SAME MATERIAL TO AN ELEVATION OF 12" ABOVE THE TOPS OF PIPES.

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>PRECAST CONCRETE          MANHOLE VAULT</b>
Not to scale	April 2010	Standard Detail SD-2-041



**NOTES:**

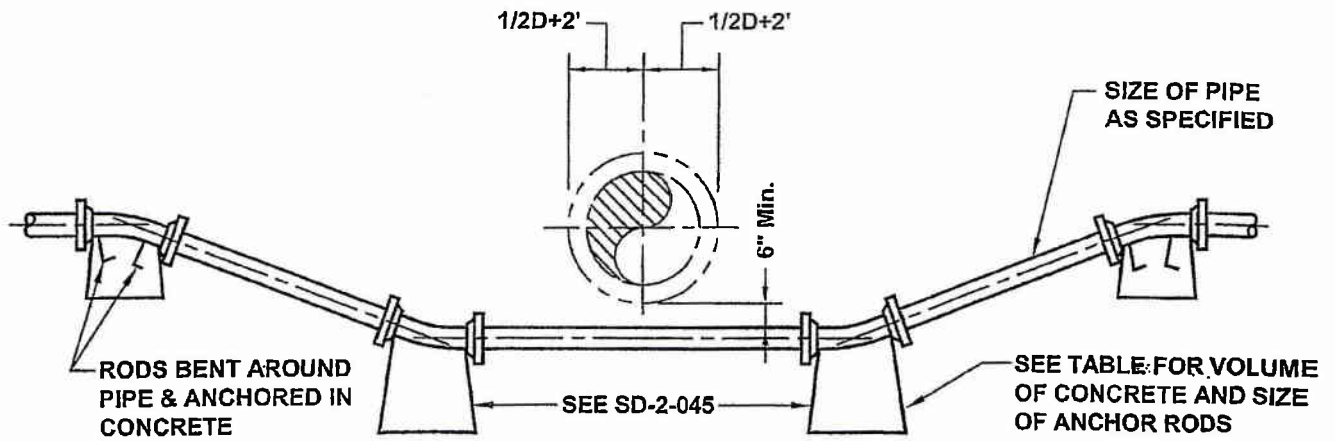
1. ALL TEES, WYES, CROSSES, PLUGS AND BENDS OF 10° OR MORE SHALL BE BLOCKED AGAINST FIRM EARTH WITH CONCRETE.
2. EARTH PRESSURE FIGURED AT 4000 PSF. IF EARTH ENCOUNTERED WILL NOT WITHSTAND THIS PRESSURE, THE AREA OF THE BLOCK MUST BE INCREASED PROPORTIONATELY.
3. ALL FITTINGS SHALL BE WRAPPED IN PLASTIC PRIOR TO POURING CONCRETE BLOCKING.

PIPE SIZE (in)	AREA* (sq in)	TOTAL FORCE (lbs)	AREA OF BLOCK IN SQUARE FEET				
			TEES & PLUGS	90 DEGREE BENDS	45 DEGREE BENDS	22 1/2 DEGREE BENDS	11 1/4 DEGREE BENDS
4	19	4,275	1.1	1.5	1.0	1.0	1.0
6	38	8,550	2.2	3.0	1.6	1.0	1.0
8	65	14,625	3.7	5.2	2.8	1.4	1.0
10	97	21,825	5.5	7.7	4.2	2.1	1.1
12	137	30,825	7.7	10.9	5.9	3.0	1.5
14	184	41,400	10.4	14.6	7.9	4.0	2.1
16	238	53,550	13.4	18.9	10.3	5.2	2.7
18	299	67,275	16.8	23.8	12.9	6.6	3.4
20	367	82,575	20.7	29.2	15.8	8.1	4.1
24	523	117,675	29.4	41.6	22.5	11.5	5.9
30	805	96,600	24.2	34.2	18.5	9.4	4.8
36	1152	138,240	34.6	48.9	26.5	13.5	6.9

CALCULATIONS ARE BASED ON 225 PSI PRESSURE OR 150 PSI WORKING PRESSURE PLUS 50% INCREASE FOR WATER HAMMER FOR SIZES 4" TO 24" INCLUSIVE. FOR SIZES 30" & 36" THE TABLE IS BASED ON 120 PSI PRESSURE OR 75 PSI WORKING PRESSURE PLUS 50 % WATER HAMMER.

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>CONCRETE THRUST BLOCKING</b>
Not to scale	April 2010	Standard Detail SD-2-045



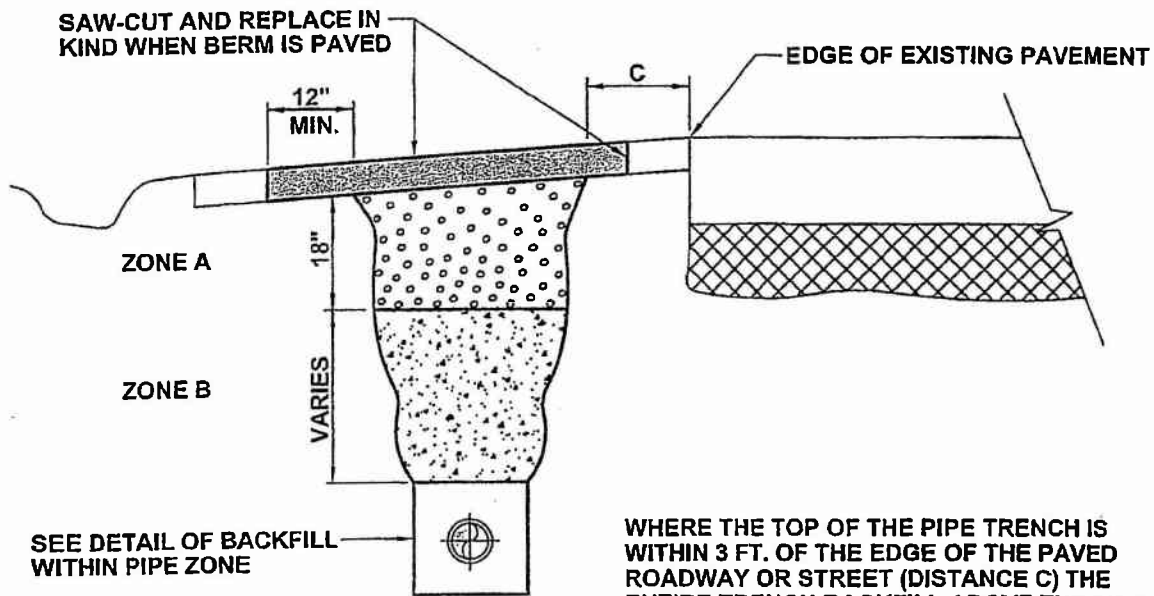


**NOTE:**  
 THE TABLE IS BASED ON 225 PSI TEST PRESSURE. ALL BLOCKS HAVING LENGTH OF 3'-0" OR MORE TO BE REINFORCED WITH #4 @ 6" PLACED 3" FROM TOP OF BLOCK.

**NOTE:**  
 ALL FITTINGS SHALL BE WRAPPED IN PLASTIC PRIOR TO POURING CONCRETE ANCHORS.

PIPE SIZE	TOTAL FORCE (lbs)	VOLUME IN CUBIC FEET			SIZE AND NO. OF ANCHOR RODS		
		45 DEGREE BENDS	22 1/2 DEGREE BENDS	11 1/4 DEGREE BENDS	45 DEGREE BENDS	22 1/2 DEGREE BENDS	11 1/4 DEGREE BENDS
4	4275	22.7	11.6	5.9	1-#4	1-#4	1-#4
6	8550	45.5	23.3	11.9	2-#4	1-#4	1-#4
8	14625	77.8	39.6	20.3	2-#4	2-#4	1-#4
10	21825	116.1	59.1	30.3	2-#4	2-#4	2-#4
12	30825	164.0	83.5	42.8	2-#5	2-#4	2-#4
14	41400	220.2	112.1	57.5	2-#6	2-#4	2-#4
16	53550	284.9	145.0	73.4	2-#7	2-#5	2-#4
18	67275	357.9	182.2	93.4	2-#7	2-#5	2-#4
20	82575	439.2	223.6	114.7	2-#8	2-#6	2-#4
24	117675	626.0	318.7	183.4	2-#9	2-#7	2-#5

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>CONCRETE ANCHORS AND METHOD OF LAYING MAINS UNDER OBSTRUCTIONS</b>
Not to scale	April 2010	Standard Detail SD-2-046

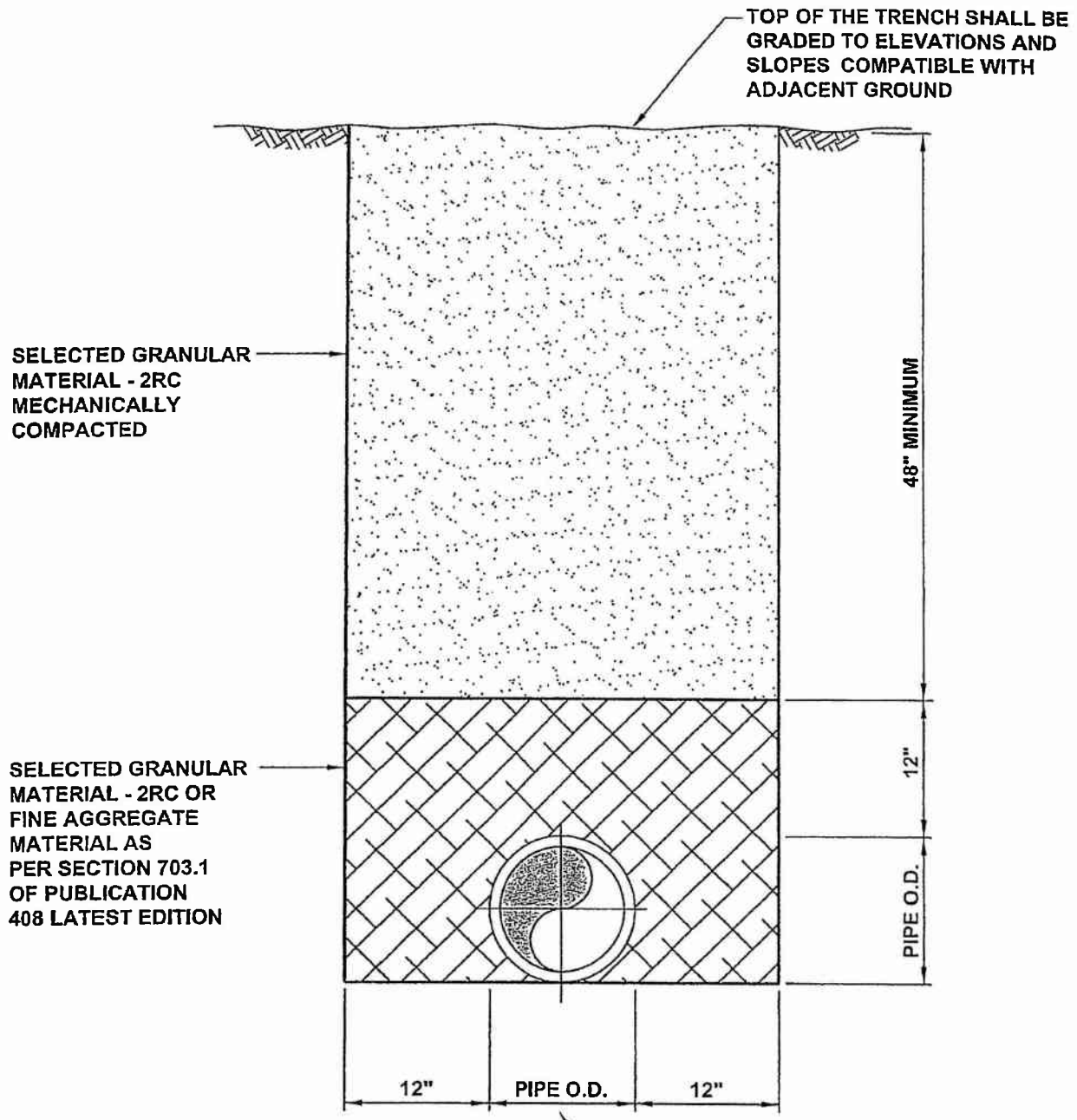


WHERE THE TOP OF THE PIPE TRENCH IS WITHIN 3 FT. OF THE EDGE OF THE PAVED ROADWAY OR STREET (DISTANCE C) THE ENTIRE TRENCH BACKFILL ABOVE THE PIPE ZONE, THAT IS THE BACKFILL PLACED IN ZONES A AND B SHALL CONSIST OF 2-A LIMESTONE MATERIAL MECHANICALLY COMPACTED IN 6" LAYERS.

WHERE THE TOP OF THE PIPE TRENCH IS GREATER THAN 3 FT. FROM THE EDGE OF THE PAVED ROADWAY (DISTANCE C) BACKFILL PLACED IN ZONE B SHALL BE EXCAVATED MATERIAL FROM THE TRENCH, FREE OF ROCKS LARGER THAN 3" AND MECHANICALLY COMPACTED IN 6" LAYERS. BACKFILL MATERIAL PLACED IN ZONE A (THE TOP 18" OF THE TRENCH) SHALL BE 2-A LIMESTONE MATERIAL MECHANICALLY COMPACTED IN 6" LAYERS.

WHERE THE BERM IS NOT PLANTED OR PAVED IT SHALL BE RESTORED FOR ITS ENTIRE WIDTH BY APPLICATION OF RT-2W BITUMINOUS MATERIAL AT A RATE OF 0.2 TO 0.5 GALLONS PER SQUARE YARD DEPENDING UPON LOCATION AND PREVAILING TEMPERATURES AT TIME OF APPLICATION.

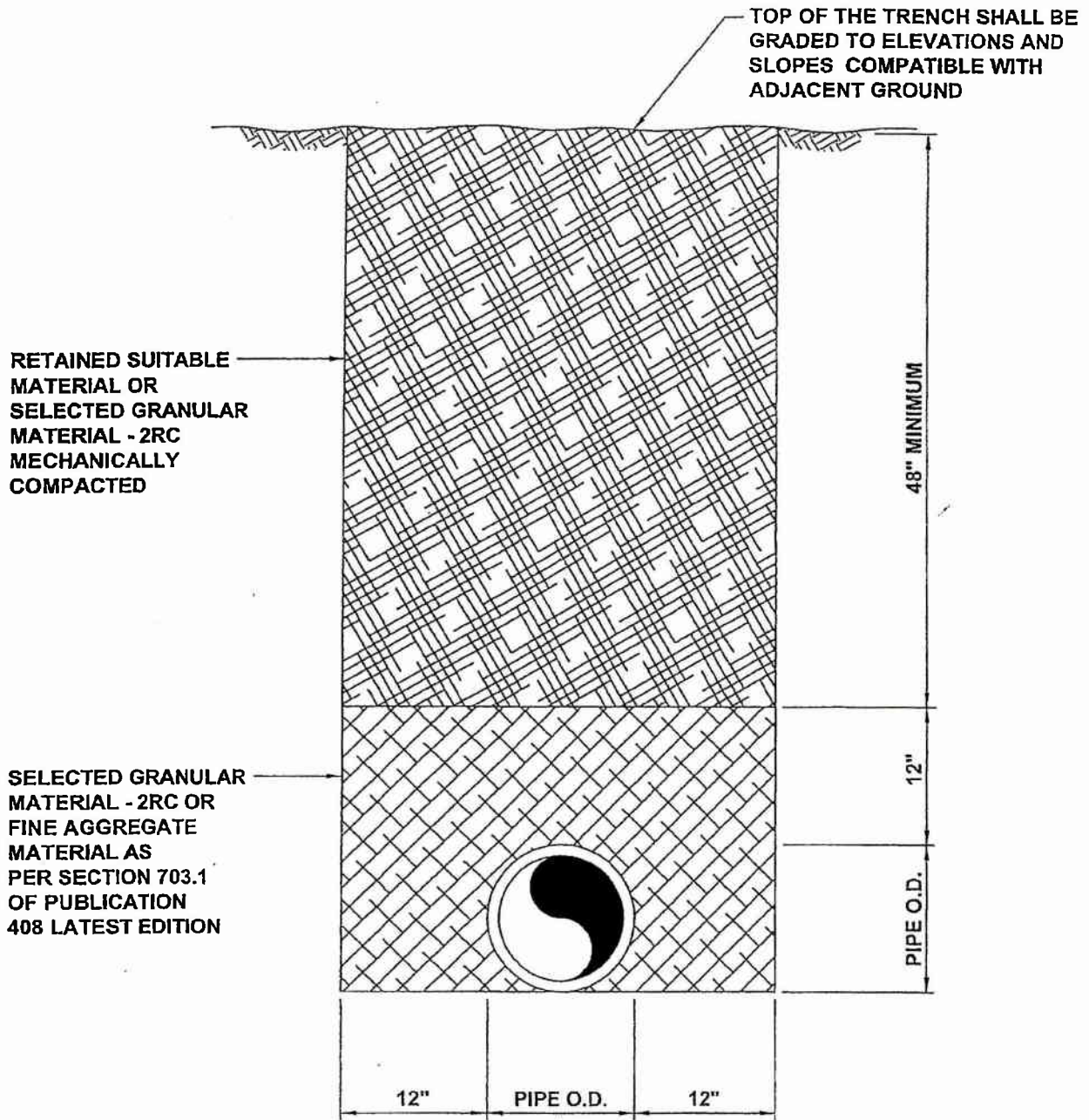
<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>TRENCH BACKFILL          WITHIN ROADWAY          OR STREET BERMS</b>	
Not to scale	April 2010	I-23	Standard Detail SD-2-069



BELL HOLES SHALL BE EXCAVATED TO ASSURE CONTINUOUS PIPE BARREL SUPPORT FOR FULL LENGTH OF PIPE SECTIONS. TRENCH SIDEWALLS SHALL BE PLUMB WITHIN PIPE ZONE.

DUCTILE IRON AND REINFORCED CONCRETE PIPE ON NON-ROCK TRENCH BOTTOMS

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>TYPICAL TRENCH DETAIL</b> <b>WITHIN 3 FEET</b> <b>OF SHOULDER AREA</b> <b>WITHIN RIGHT-OF-WAY</b>
Not to scale	April 2010	Standard Detail SD-2-070



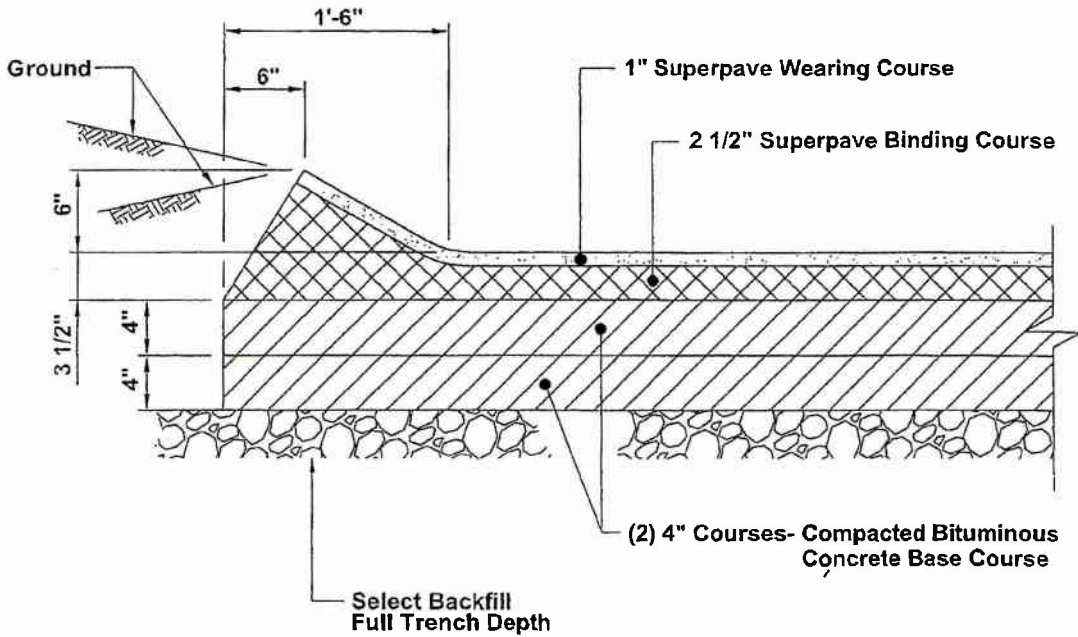
BELL HOLES SHALL BE EXCAVATED TO ASSURE CONTINUOUS PIPE BARREL SUPPORT FOR FULL LENGTH OF PIPE SECTIONS. TRENCH SIDEWALLS SHALL BE PLUMB WITHIN PIPE ZONE.

DUCTILE IRON AND REINFORCED CONCRETE PIPE ON NON-ROCK TRENCH BOTTOMS

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>TYPICAL TRENCH DETAIL</b> <b>MINIMUM 3 FEET</b> <b>OUT OF SHOULDER AREA</b> <b>WITHIN STATE RIGHT-OF-WAY</b>	
Not to scale	January 2006	25	Standard Detail SD-2-071

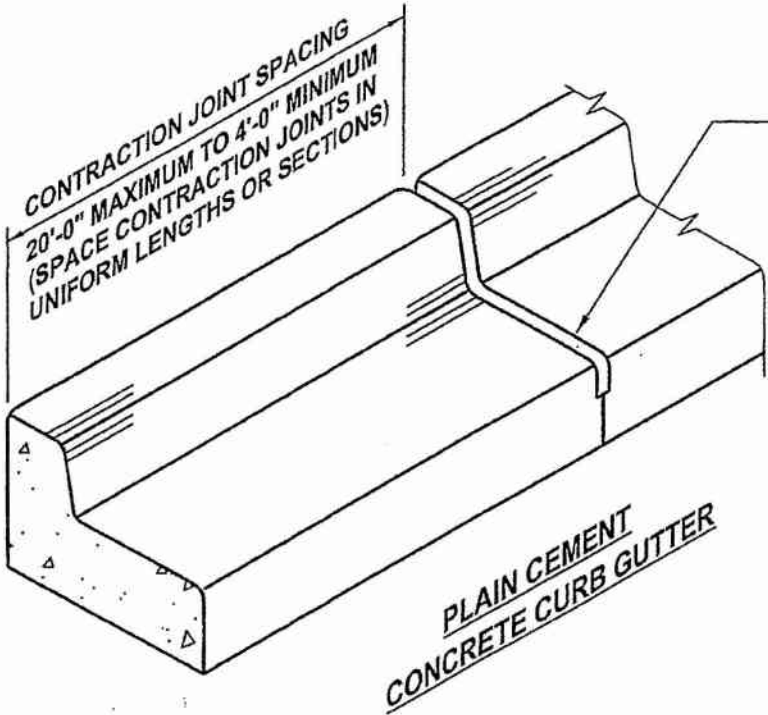


**Note:**  
**All Materials Shall Meet the Requirements**  
**of PA DOT Publication 408**

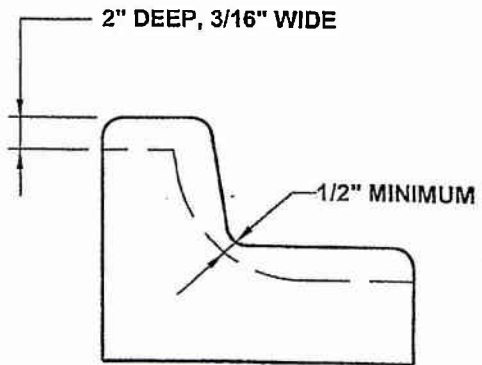


REVISED APRIL 2008

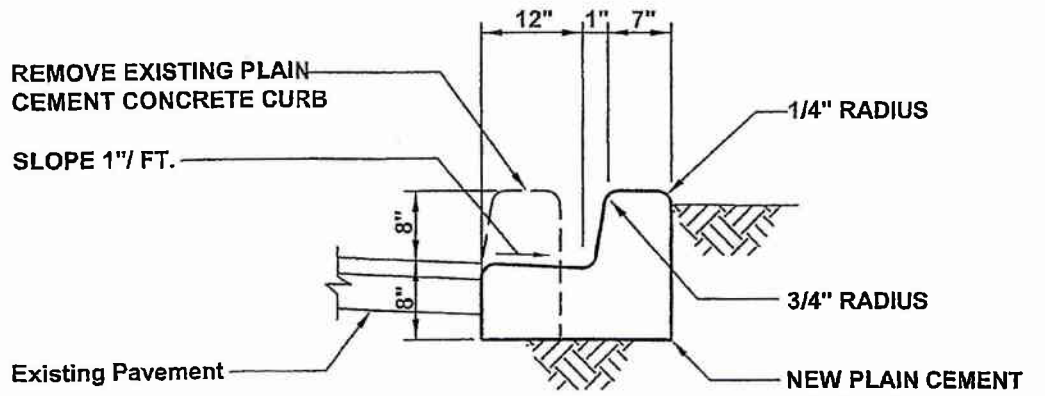
<b>KLH ENGINEERS, INC.</b> <b>5173 Campbells Run Road</b> <b>Pittsburgh, PA 15205</b>		<b>ASPHALT WEDGE CURB</b> <b>RESTORATION</b>
<b>Not to scale</b>	<b>January 2006</b>	<b>Standard Detail SD-2-077</b>



SEE CONTRACTION JOINT DETAIL THIS DRAWING.

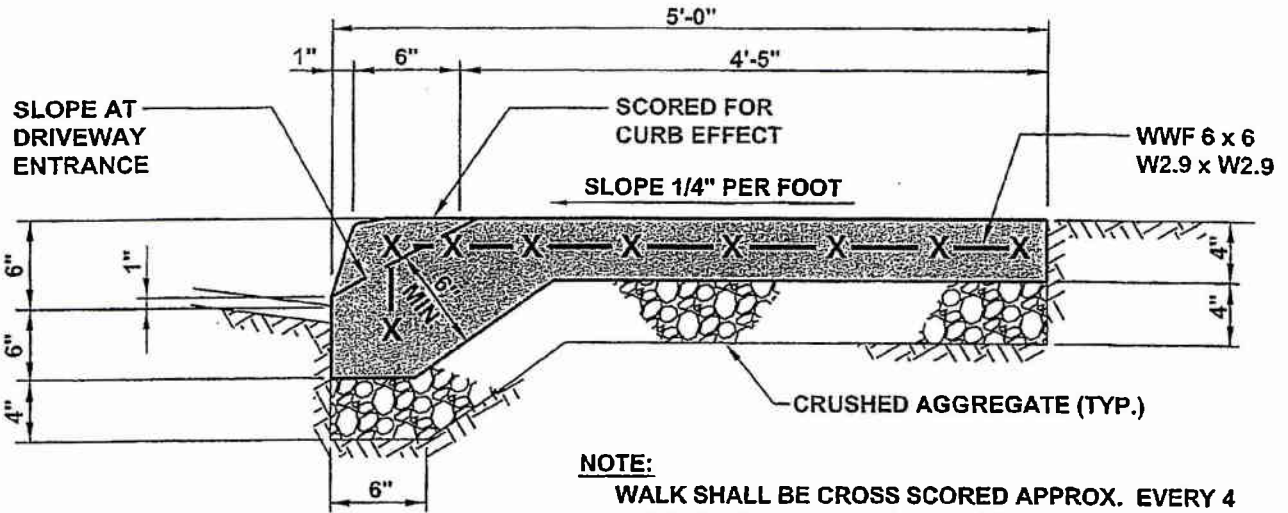


CONTRACTION JOINT DETAIL

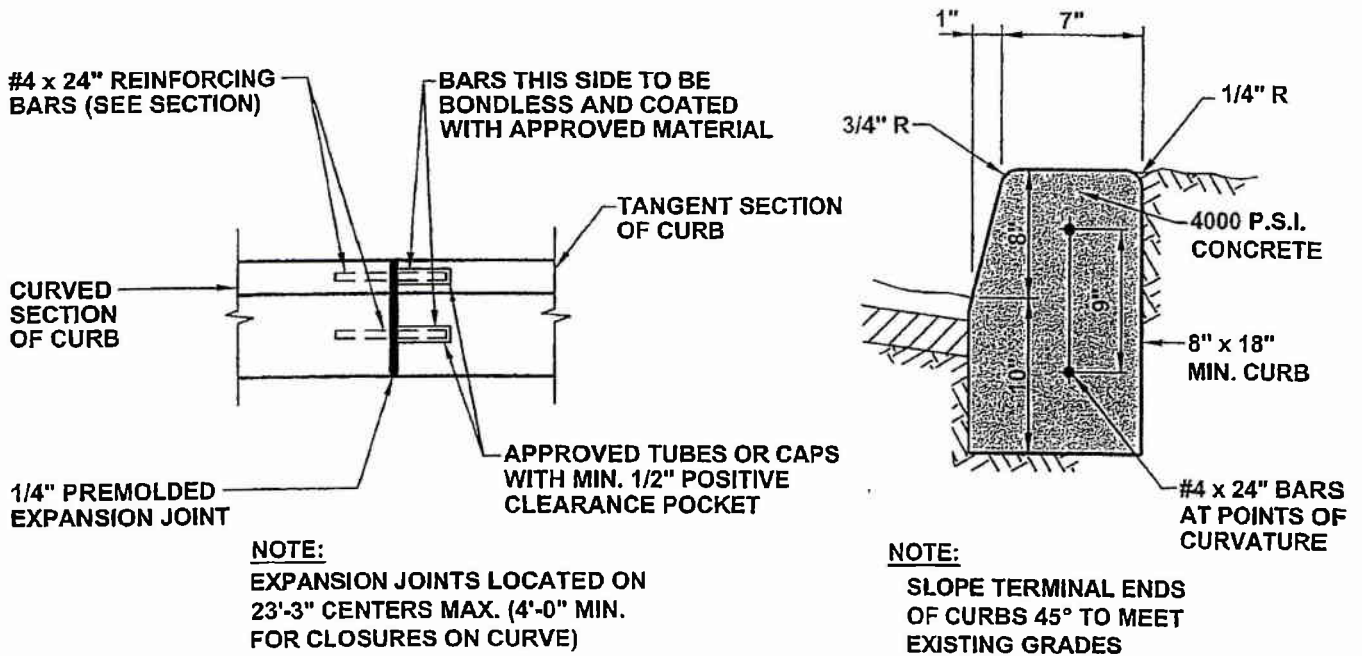


INSTALLATION OF CURB AND GUTTER

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>PLAIN CEMENT CONCRETE CURB AND GUTTER</b>
Not to scale	April 2010	Standard Detail SD-2-078



**TYPICAL CURB AND SIDEWALK DETAIL**

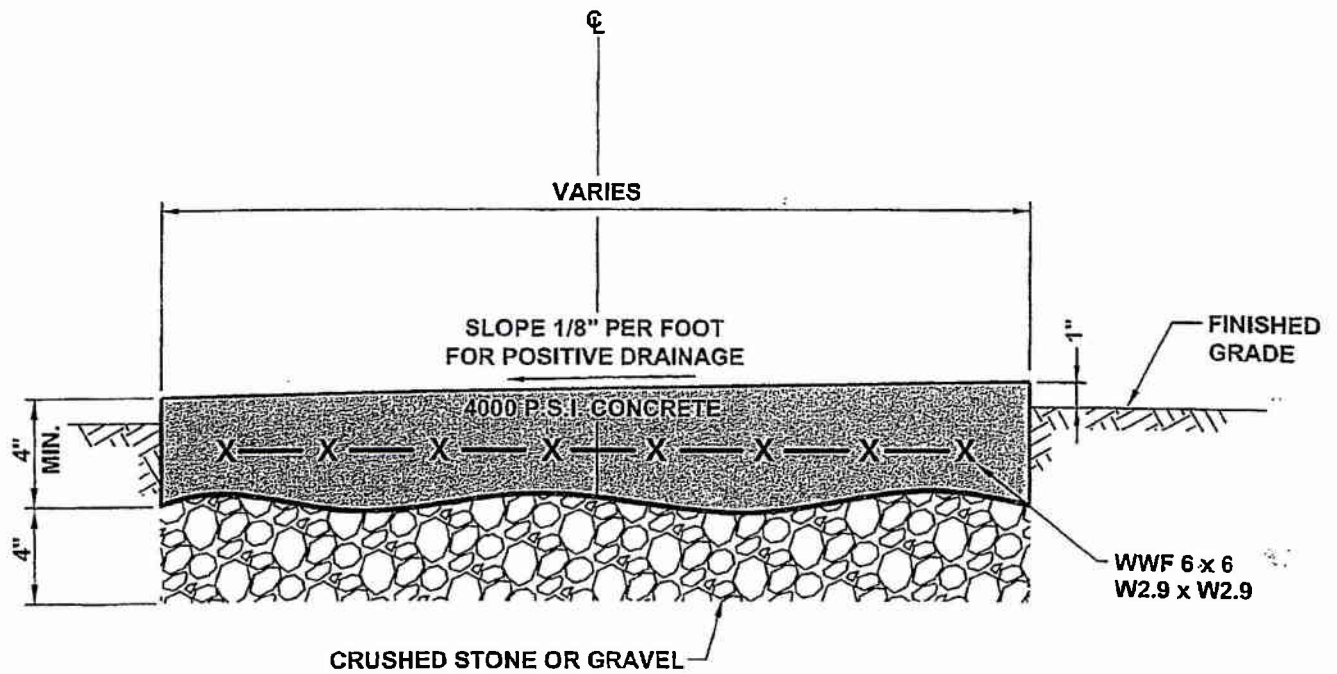


**POINTS OF CURVATURE**

**SECTION**

**TYPICAL CURB DETAILS**

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>CURB AND SIDEWALK DETAIL</b>
Not to scale	April 2010	Standard Detail SD-2-079

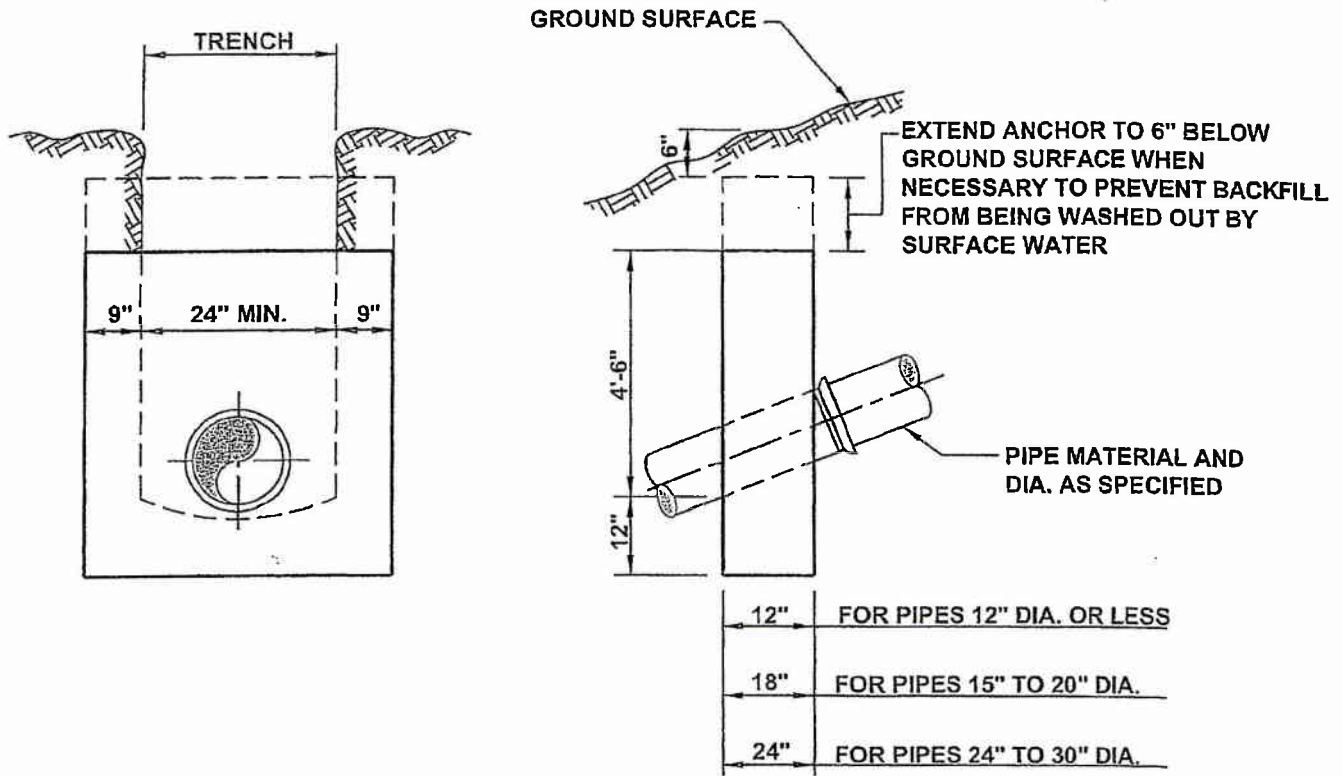


**NOTES:**

1. SAME THICKNESS OF CONCRETE, BASE AND WEARING SURFACE SLOPE TO BE MAINTAINED FOR WIDER OR NARROWER WALK.
2. WALK SHALL BE CROSS SCORED APPROXIMATELY EVERY 4 FEET 1/2" PRE-FORMED EXPANSION JOINTS EVERY 24 FEET.

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>CONCRETE WALKWAY</b>
Not to scale	April 2010	Standard Detail SD-2-080





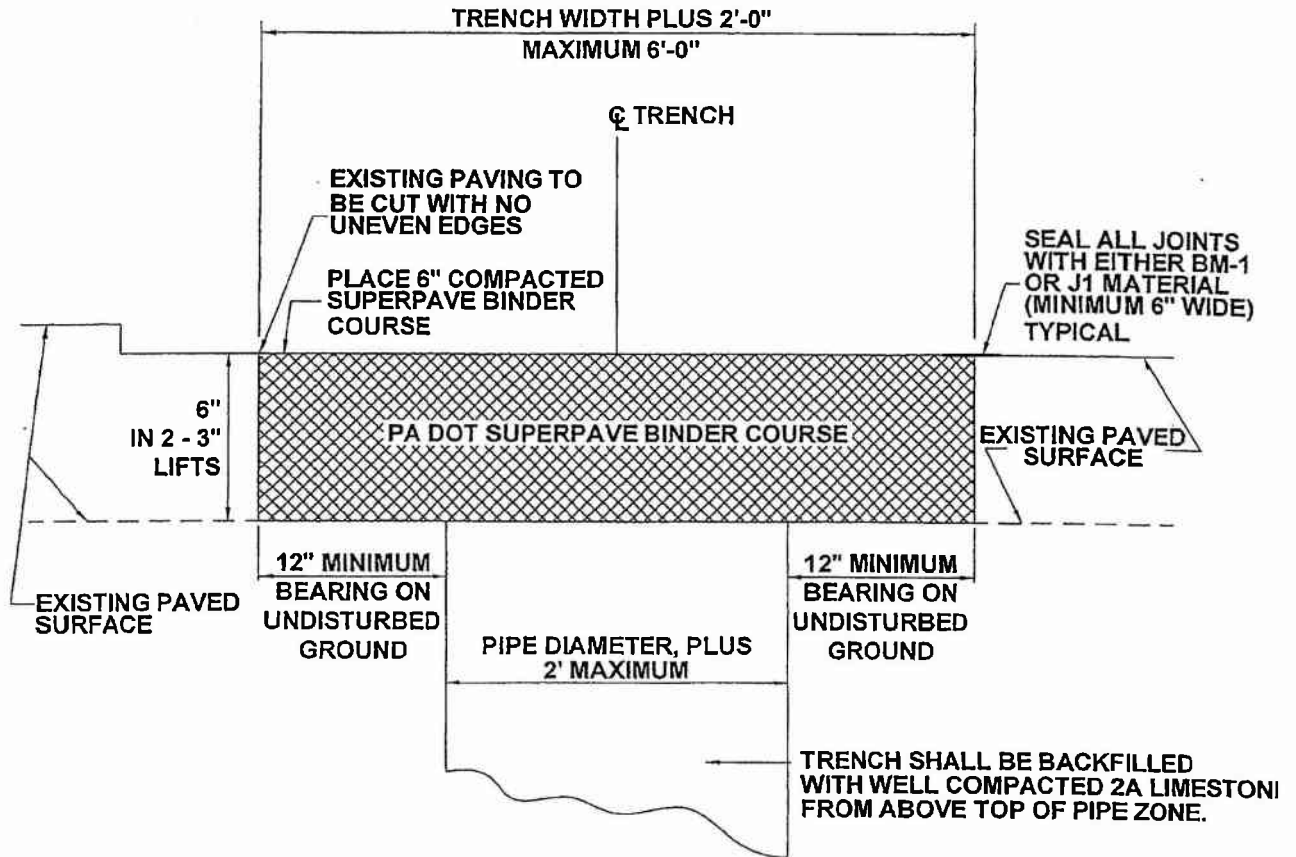
**CONCRETE ANCHORS FOR PIPES ON STEEP GRADES**

PROVIDE NO ANCHORS ON GRADES LESS THAN 20% UNLESS NOTED  
 PROVIDE ANCHORS 36' C-C ON GRADES BETWEEN 20% AND 34%  
 PROVIDE ANCHORS 24' C-C ON GRADES BETWEEN 34% AND 50%  
 PROVIDE ANCHORS 16' C-C ON GRADES BETWEEN 50% AND 70%

**NOTE:**

FOR CONDITIONS OTHER THAN SHOWN HEREON ANCHORS SHALL BE PROVIDED AS REQUIRED BY THE CONTRACT PLANS OR ORDERED IN THE FIELD BY THE OWNER'S REPRESENTATIVE.

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>CONCRETE ANCHORS          FOR PIPELINES</b>
Not to scale	April 2010	Standard Detail SD-2-092



NOTE: TEMPORARY TRENCH RESTORATION, THAT TIME PERIOD FROM BACKFILLING OF TRENCH UNTIL PERMANENT TRENCH RESTORATION, THE TRENCH SHALL BE BACKFILLED WITH SELECT MATERIAL TO AN ELEVATION WITHIN 3" OF THE ROAD SURFACE. THE TRENCH SHALL THEN BE SURFACED WITH A TEMPORARY PATCH OF COLD PATCH MATERIAL. FOR PERMANENT RESTORATION, THE CONTRACTOR SHALL REMOVE THE COLD PATCH MATERIAL AND SAW-CUT THE REQUIRED BENCHES, EXCAVATE TO PROVIDE PROPER DEPTH OF ASPHALT AND THE SUPERPAVE MATERIAL SHALL THEN BE PLACED AND SEALED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE ON THE TEMPORARY PATCH AND SHALL KEEP A SMOOTH RIDING SURFACE ON THE STREET.

\* FOR CONCRETE SURFACED ROADWAYS, THE REQUIREMENTS OF PADOT PUBLICATION 408 ARE REQUIRED.

<b>KLH ENGINEERS, INC.</b> 5173 Campbells Run Road Pittsburgh, PA 15205		<b>TRENCH BACKFILL AND                  PAVEMENT REPLACEMENT                  REQUIREMENTS</b>	
Not to scale	February 2008	I-3	Standard Detail SD-2-104

**RESTORATION CONDITION**

**SEED MIX & SOWING RATE**  
**(% BY WEIGHT)**

**ROADSIDE; NON-MOWED**

**80% KENTUCKY 31, FESCUE  
20% PENNLAWN RED FESCUE  
SOW 21 lbs. per 1000 sq. yds.  
MAR. thru MAY / AUG. thru SEPT.**

**ROADSIDE; MOWED**

**50% KENTUCKY BLUEGRASS  
30% PENNLAWN RED FESCUE  
20% PERENNIAL RYEGRASS  
SOW 21 lbs. per 1000 sq. yds.  
MAR. thru MAY / AUG. thru SEPT.**

**BANK AREAS**

**45% CROWNVETCH  
55% ANNUAL RYEGRASS  
SOW 9 lbs. per 1000 sq. yds.  
ANYTIME EXCEPT SEPT. OR OCT.**

**LAWNS**

**50% KENTUCKY BLUEGRASS  
30% PENNLAWN RED FESCUE  
20% PERENNIAL RYEGRASS  
SOW 21 lbs. per 1000 sq. yds.  
MAR. thru MAY / AUG. thru SEPT.**

**OPEN FIELDS; NON-CULTIVATED PASTURE**

**100% TIMOTHY  
SOW 9 lbs. per 1000 sq. yds.  
MAR. thru MAY / AUG. thru SEPT.**

**OPEN FIELDS; CULTIVATED**

**100% ANNUAL RYEGRASS  
SOW 9 lbs. per 1000 sq. yds.  
MAR. thru MAY / AUG. thru SEPT.**

**WOODS; SPARSE**

**100% RED FESCUE  
SOW 36 lbs. per 1000 sq. yds.  
MAR. thru MAY / AUG. thru SEPT.**

**SOIL CONDITIONERS REQUIRED FOR RESTORATION:**

**RAW FINELY GROUND LIMESTONE @ 100 lbs. per 1000 sq. ft. APPLIED ONE WEEK BEFORE SEEDING**

**FERTILIZER- COMPLETE COMMERCIAL FERTILIZER WITH 5-10-5 ANALYSIS @ 50 lbs. per 1000 sq. ft.**

**OWNER IS RESPONSIBLE FOR WATERING.**

<b>KLH ENGINEERS, INC. 5173 Campbells Run Road Pittsburgh, PA 15205</b>		<b>REQUIRED SURFACE RESTORATION IN UNPAVED LOCATIONS</b>
<b>Not to scale</b>	<b>April 2010</b>	<b>Standard Detail SD-2-105</b>

**DIVISION I - GENERAL REQUIREMENTS**

**SECTION 01000**

**SCOPE**

**PART 1: GENERAL**

1.01 The work under Contract No. 2010-14 covers the furnishing of all labor, material, plant, utilities required for the construction of sanitary sewage interceptor sewers and sanitary sewage pressure sewers (forcemains) and appurtenances east of the Youghiogheny River. The project is located in the City of McKeesport, Allegheny County. Included in this work is construction of the 16 inch diameter Ripple Road Pressure Sewer which begins at the Authority's proposed Ripple Road Pump Station, constructed by others under a separate contract and, located at the intersection of Ripple Road at Long Run Road, S.R. 0048. The pressure sewer construction extends along Long Run Creek, Long Run Road, S.R. 0048, Old Long Run Road and across Walnut Street where it connects into a new 30 inch diameter interceptor sewer. The new interceptor sewer will extend to and terminate at the Municipal Authority's Long Run Pump Station located at the intersection of Will Street at Walnut Street. Also included in this project is construction of a portion of the 20 inch diameter Long Run Pressure Sewer between the Long Run Pump Station and the east shore of the Youghiogheny River. In addition, this Contract includes demolition of certain sanitary sewage structures and interceptor sewer mains with reconnection of service sewers along the interceptor sewer construction.

**PART 2: PRODUCTS**

A. Not used.

**PART 3: EXECUTION**

A. Not used.

**End of Section**

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SECTION 01010

DRAWINGS INDEX

PART 1: GENERAL

1.01 DRAWINGS

- A. The following drawings prepared by the KLH Engineers, Inc. accompany these specifications and are a part thereof. The drawings are the property of the ENGINEER and shall not be used for any purpose other than that intended by the specifications. The CONTRACTOR shall be responsible for purchasing all sets of drawings and specifications to be used in the progress of the work. Specification documents will be available for purchase from Accu-Copy Reprographics at the address shown on the Advertisement for the cost of reproduction. Unauthorized reproduction of the drawings or the specifications by the CONTRACTOR shall not be permitted.

<u>Sheet</u>	<u>Drawing No.</u>	<u>Title</u>
1 of 31	220-LRS9	Title Sheet
2 of 31	220-LRS10	Index Map
3 of 31	220-LRS11	Plan and Profile
4 of 31	220-LRS12	Plan and Profile
5 of 31	220-LRS13	Plan and Profile
6 of 31	220-LRS14	Plan and Profile
7 of 31	220-LRS15	Plan and Profile
8 of 31	220-LRS16	Plan and Profile
9 of 31	220-LRS17	Plan and Profile
10 of 31	220-LRS18	Plan and Profile
11 of 31	220-LRS19	Plan and Profile
12 of 31	220-LRS20 AB	Plan and Profile (Record Drawing)
13 of 31	220-LRS21 AB	Plan and Profile (Record Drawing)
14 of 31	220-LRS22 AB	Plan and Profile (Record Drawing)
15 of 31	220-LRS23	Plan and Profile
16 of 31	220-LRS24	Manhole No. 155 Demolition Sections and Photographs
17 of 31	220-LRS1	Erosion Sediment Pollution Control Plan
18 of 31	220-LRS2	Erosion Sediment Pollution Control Plan
19 of 31	220-LRS3	Erosion Sediment Pollution Control Plan
20 of 31	220-LRS4	Erosion Sediment Pollution Control

21 of 31	220-LRS5	Plan Erosion Sediment Pollution Control Plan
22 of 31	220-LRS6	Erosion Sediment Pollution Control Plan
23 of 31	220-LRS7	Erosion Sediment Pollution Control Plan
24 of 31	220-LRS8	Erosion Sediment Pollution Control Plan
25 of 31	220-WSS7	Erosion Sediment Pollution Control Plan
26 of 31	220-WSS8	Erosion Sediment Pollution Control Plan
27 of 31	220-WSS9	Erosion Sediment Pollution Control Plan
28 of 31	220-LRS25	Right Of Way Plats
29 of 31	220-LRS26	Right Of Way Plats
30 of 31	220-LRS27	Right Of Way Plats
31 of 31	220-LRS28	Right Of Way Plats

PART 2: PRODUCTS

A. Not used.

PART 3: EXECUTION

A. Not used.

**End of Section**

SECTION 01021

SUMMARY OF UTILITY WORK

PART 1: GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and the General and Supplementary Conditions and other Division 1 Specifications Sections, apply to this section.

1.02 PROJECT IDENTIFICATION

- A. The project consists of Construction of Sanitary Sewers and Appurtenances. The work is shown on the Contract Documents prepared by KLH Engineers, Inc.

PART 2: PRODUCTS

- A. Not used.

PART 3: EXECUTION

3.01 SCOPE OF WORK

- A. All work shall be performed in accordance with the requirements of the Contract Documents. All materials and equipment furnished shall conform to the descriptions and requirements and all work shall be constructed complete in order to provide the OWNER with an operable installation which is ready for service.
- B. Work under Contract No. 2010-14 includes work shown on the Drawings and described in these Technical Specifications in: Division 1, Summary of Work; Division 2, Site Work; Division 3, Concrete, Division 9 Finishes. This CONTRACTOR is designated as the "coordinating contractor" and is responsible for overall scheduling, expediting, site supervision and all other duties required to maintain orderly construction.



C. The CONTRACTOR shall make his own arrangements concerning requirements for field offices; utilities; tool, equipment and material storage; and toilet facilities.

**End of Section**

SECTION 01040

COORDINATION

PART 1: GENERAL

1.01 WORK INCLUDED

- A. The CONTRACTOR will conduct his work in such manner as not to prevent the operation of the OWNER'S facilities.
  
- B. The CONTRACTOR will be required to coordinate his work, to phase the construction operations, and provide, install and maintain any temporary connections necessary to permit the operation of the OWNER'S facilities. Any construction work requiring the shut-down of facilities must be scheduled and performed only at such times as shall be authorized by the OWNER'S representative. Such work must be completed during the specific periods authorized by the OWNER'S representative. It is anticipated that most work may be performed with regular time; however, it may be necessary that work will be performed during several shut-down periods and/or during periods of premium time payment to accomplish the desired construction. All costs to perform the CONTRACTOR'S work, including premium time payments, shall be borne by the CONTRACTOR and are to be included in the contract price.

PART 2: PRODUCTS

- A. Not used.

PART 3: EXECUTION

- A. Not used.

**End of Section**

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SECTION 01042

SUPPLEMENTAL CONSTRUCTION CONDITIONS

PART 1: GENERAL

1.01 WORK INCLUDED

A. Field Measurements

1. The CONTRACTOR prior to ordering materials or starting construction shall verify existing elevations, building lines, pipe size and material, equipment connections, etc. All dimensions and clearances affecting the installation of work shall be verified in the field in relation to established datum, to building openings and to the work of other trades.
2. Should interferences occur which will necessitate deviations from layout or dimensions shown on the Drawings, the OWNER shall be notified and any changes approved before proceeding with the work.

B. Lifting Attachments

1. All material requiring hoisting for installation and/or demolition shall be provided with suitable lifting attachments as provided by the Manufacturer or the CONTRACTOR.

C. Protection and Storage Of Material

1. The CONTRACTORS shall assume full responsibility for all materials received by them and shall provide adequate protection against exposure to the elements in accordance with the manufacturers recommendations. The means of protection shall be subject to the OWNER's approval.

D. Nameplates

1. All materials shall have factory applied permanent identifications indicating the manufacturer's name, model and serial numbers, temperature and pressure design and any other

data necessary to conform with specified requirements.

E. Night Work

1. Work after dark will not be permitted except under extreme emergency, or only under special directions, or if stated in the Special Requirements. The placing of concrete shall be started early enough in the daylight hours to insure completion of the section under construction before dark.
2. Whenever the CONTRACTOR finds it necessary or expedient to do work at night, such night work shall be performed by the CONTRACTOR without additional or extra cost to the OWNER, and only with the OWNER's approval. The CONTRACTOR shall provide all lights required for the proper and expeditious carrying on of any work.

F. Weather Conditions

1. No work shall be done when the weather is unsuitable. The CONTRACTORS shall take necessary precautions (in the event of impending storms) to protect all work, materials or equipment from damage or deterioration due to floods, driving rain, or wind and snow storms. The OWNER reserves the right to order that additional protective measures over and beyond those proposed by the CONTRACTORS be taken to safeguard all components of the project. The CONTRACTORS shall not claim any compensation for such precautionary measures so ordered, nor claim any compensation from the OWNER for damage to the work from weather elements.

G. Periodic Clean Up; Basic Site Restoration

1. During construction the CONTRACTORS shall regularly remove from the site of the work all accumulated debris and surplus materials of any kind which result from their operations. Unused equipment and tools shall be reasonably stored.

2. Where the work involves installation of sewers, drains, water lines, manholes, underground structures, or other disturbance of existing features in or across access roadways, the CONTRACTOR shall (as the work progresses) promptly backfill, compact, grade and otherwise restore the disturbed area to a basic condition which will permit resumption of vehicular traffic and any other critical activity or function consistent with the original use of the roadways. Unsightly mounds of earth, large stones, boulders and debris shall be removed so that the site presents a neat appearance.
3. The CONTRACTOR shall perform the clean up work on a regular basis and as frequently as ordered by the ENGINEER. Basic site restoration in a particular area shall be accomplished immediately following the installation or completion of the required facilities in that area. Furthermore, such work shall also be accomplished, when ordered by the ENGINEER, if partially completed facilities must remain incomplete for some time period due to unforeseen circumstances.
4. Upon failure of the CONTRACTOR to perform periodic clean up and basic restoration of the site to the ENGINEER's satisfaction, the CONTRACTOR shall be alerted and warned, the OWNER may, without prejudice to any other rights or remedies of the OWNER, cause such work for which the CONTRACTOR is responsible to be accomplished to the extent deemed necessary by the ENGINEER, and all costs resulting therefrom shall be charged to the CONTRACTOR and deducted from the amounts of money that may be due him.

#### H. Use of Facilities Before Completion

1. The OWNER reserves the right to enter and use certain portions of the constructed facilities before final completion of the whole work to be done under these contracts. However, only those portions of the facilities which have been completed to the ENGINEER's satisfaction shall be placed in service.

2. Consistent with the approved progress schedule, CONTRACTOR shall cooperate with the OWNER, his agents and the ENGINEER to accelerate completion of those facilities, or portions thereof, which have been designated for early use by the OWNER.

I. Codes and Ordinances

1. In addition to observing limitations of the easements and rights of way, the CONTRACTOR shall confine apparatus, storage of material and construction operations to the limits prescribed by ordinances or permits, or as may be directed by the OWNER and shall not encumber the job site.
2. The CONTRACTOR agrees to conform to, comply with and abide by, any and all laws, ordinances, rules and regulations of the Federal Government, State or local government which pertain to or in any way effect the work to be done by the CONTRACTOR, any and all instructions and regulations of the OWNER pertaining thereto, including any laws, ordinances, rules, regulations and instructions regarding signs, advertising, fire and/or smoking.

J. Safety Regulations

1. The CONTRACTOR shall comply with the requirements and standards of all Federal, State and local laws, ordinances, codes, rules and regulations governing safety and health. Protection shall be afforded to all persons having access to the job site.
2. Nothing in any paragraphs of these Contract Documents shall be construed as relieving the CONTRACTOR from full responsibility for safe prosecution of the work at all times.

K. Hazardous Materials at Job Site

1. In accordance with the intent of the Federal Occupational Safety and Health Administration Standard Section 29CFR-1910.12, Hazard Communication with effective date of May 25, 1986, the OWNER hereby notifies the CONTRACTOR

that the OWNER has no knowledge of hazardous materials existing at the site where work is to be performed.

2. The OWNER, CONTRACTOR and any subcontractors will each provide or make available to the others and any of them any written hazard communication program required to be maintained with respect to the site and any material safety data sheet and other hazard communication information required to be provided in accordance with Laws and applicable Regulations. CONTRACTOR shall be responsible for coordinating any such required exchange of documents or information between or among OWNER, CONTRACTOR and any subcontractors, or any of them. CONTRACTOR shall include the provisions of this paragraph in any subcontract for any part of the work at the site.

L. Potential of Exposure to Raw Wastewater

1. The construction activities required to be performed in conduct of the work will necessitate the interconnection, interception, of existing manhole, sewer pipes and appurtenances. Said manhole, sewer pipes and appurtenances are conveying all wastes and runoff discharged to the public sewer system within the area served, which wastes may contain and/or generate toxic, noxious, oxygen depleting or other liquid or gaseous substances harmful to human beings. The CONTRACTOR shall, therefore, thoroughly instruct all of his personnel and those of any subcontractor or materialsman involved in such work so that appropriate and complete safety work practices are observed at all times. He shall also provide all personnel with all tools, clothing and other devices necessary for such safe practice, including appropriate waterproof clothing, respirators, protective glasses, mechanical air blowing equipment to pre-ventilate manholes and other chambers, explosive atmosphere detectors, ladders, safety harnesses, etc. No work shall be performed under any unsafe conditions and if same is detected at any time, the CONTRACTOR shall suspend operations immediately, and not resume his activities until



remedial measures have been taken or until the unsafe situation has otherwise been completely overcome.

M. Protection From Hazardous Substances And Contaminating Materials

1. CONTRACTOR shall take all measures to prevent the release, spillage or improper disposal of any hazardous substance or construction or waste materials which may contaminate the wastewater and/or water treatment process, equipment, tanks or piping, and the OWNER's or adjacent properties or the environment or substantially endanger human health. The transportation, handling, storage and use of gasoline, oils, paints, residual cleaning solvents and other hazardous substances or contaminating materials by CONTRACTOR or any subcontractor shall be in such a manner to prevent release, spillage or improper disposal. Should any such hazardous substances or contaminating materials be released, spilled or improperly disposed of by the CONTRACTOR or any subcontractors, the CONTRACTOR shall immediately notify the OWNER, notify any applicable environmental agency as required by law, and immediately remedy or remove such substances or materials, and clean and restore the affected areas to a safe condition and to the satisfaction of the OWNER and any applicable environmental agency. The CONTRACTOR shall pay all costs for the remedy or removal of contaminated materials and the proper disposal of them at an approved and permitted site and the restoration of the affected area. The CONTRACTOR shall also be responsible for the payments of and shall indemnify, hold harmless and defend the OWNER, ENGINEER and ENGINEER's Consultants from all penalties, fines and damage claims resulting from the release, spillage or improper disposal by CONTRACTOR or any subcontractor of any such hazardous substances or contaminating material.

PART 2: PRODUCTS

- A. Not used.

PART 3: EXECUTION

A. Not used.

**End of Section**

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SECTION 01090

REFERENCES

PART 1: GENERAL

1.01 WORK INCLUDED

- A. Where reference is made in these documents to Government Specifications or to those of recognized organizations such as ASTM, ASME, etc., the latest editions shall be used.

PART 2: PRODUCTS

- A. Not used.

PART 3: EXECUTION

- A. Not used.

**End of Section**

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SECTION 01170

SURVEYS

PART 1: GENERAL

1.01 Benchmarks are available in the general vicinity of the project location. The OWNER's Project Representative will locate the alignment position of all proposed manholes in the field. The CONTRACTOR shall furnish a competent survey crew, under the direction of a PA Licensed Surveyor, for the purpose of performing all necessary surveys required to place off-set stakes, determine elevations, prepare cut sheets, operate laser equipment or to perform similar work required to assure construction at the lines and grades shown on the Drawings, or as required in the field. In addition it shall be the responsibility of the survey crew to replace property corners and property line pins disturbed by construction activities.

1.02 Construction of sewer lines by the use of laser beams shall not negate the field surveying which will still be required to be performed prior to excavation. The CONTRACTOR shall also make the survey crew available to the ENGINEER for checking grades and/or alignments when the ENGINEER deems it necessary to have such assistance.

PART 2: PRODUCT

A. Not used.

PART 3: EXECUTION

A. Not used.

**End of Section**

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SECTION 01200

PROJECT MEETINGS

PART 1: GENERAL

1.01 PROGRESS MEETINGS

- A. Purpose: Regular monthly meetings are for the purpose of modifying work schedules and to arrive at an orderly sequence of operations agreeable to the parties of the Contract. Meetings shall serve to resolve conflicts, adjust work arrangements, etc., so that work stoppages and delays may be avoided.
- B. Scheduling Additional Meetings: In addition to regularly scheduled meetings, the ENGINEER may schedule a meeting when required by any party to the Contract. The ENGINEER will give to each party written notice of the time and place, and agenda of each such scheduled meeting.
- C. Meeting Representation: Each party to the Contract shall be represented at such meetings by a person or persons vested with the authority to make necessary decisions on their behalf, and such decisions shall commit that party to the agreed procedures, sequence of operations and time schedules.
- D. Where procedures, sequence of operations, time schedules and other matters have been agreed upon by each party concerned, it shall become binding upon each party to follow and comply with said procedures, sequence of operations, time schedules, and other matters, both as to time performance, and no claim of delay or damages by the CONTRACTOR if he fails to comply therewith will be entertained by the OWNER.

PART 2: PRODUCTS

- A. Not used.

PART 3: EXECUTION

- A. Not used.

**End of Section**



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SECTION 01301

SUBMITTALS

PART 1: GENERAL

1.01 WORK INCLUDED

A. Shop Drawings

1. Each CONTRACTOR shall submit to the ENGINEER a minimum of six (6) copies of all Shop Drawings and information required for the work. Four (4) copies shall be retained for distribution to the OWNER, ENGINEER AND OWNER'S REPRESENTATIVE. All Drawings and information shall contain sufficient data to ascertain compliance with the Contract Documents. Incomplete, inadequate or unidentified submittals will be rejected. The ENGINEER will examine submittals only after they have been properly identified, as described later in this clause, and signed by the CONTRACTOR to indicate that he has reviewed and endorsed them.
2. The ENGINEER will review submittals only for conformance with the design concept of the project and with the information given in the Contract Documents. Review of submittals shall not relieve the CONTRACTOR from responsibility for deviation from the Contract Documents unless specifically noted in the submittal and no exception is taken by the ENGINEER. The CONTRACTOR is responsible for confirming and correlating all quantities, dimensions, fabrication details and techniques, installation methods and performance of the work. The CONTRACTOR shall check and verify all field measurements.
3. All submittals must be complete, accurate and provide sufficient detail to indicate item by item compliance with the Contract Documents. The ENGINEER will receive any submittal that the CONTRACTOR cares to present.
4. When shop drawings include wiring diagrams, piping, equipment or other data which must be

coordinated with the work of other CONTRACTORS, additional copies of the submittal shall be furnished for review and for distribution by the ENGINEER.

5. To facilitate review, the CONTRACTOR shall number consecutively each submittal. This numbering system should be in order of submittal. Any resubmittal required shall have the same number as the original submittal, followed by notation signifying that it is a second (or third, etc.) submittal, e.g. #14 (2nd sub.). In addition, all submittals shall have the following information placed on them by the CONTRACTOR, and review of a particular submittal will be undertaken only if such information is provided:

Shop Submittal Number \_\_\_\_\_  
Deviations:None \_\_\_\_\_ : As Listed: \_\_\_\_\_  
Reference Specification Number \_\_\_\_\_  
Reference Drawing Number \_\_\_\_\_  
Space Requirement: As Designed \_\_\_\_\_  
Different, as Listed \_\_\_\_\_  
Contractor has reviewed and submitted for review  
Signature \_\_\_\_\_  
Date \_\_\_\_\_

6. Make the corrections indicated on the returned shop drawings and resubmit six (6) corrected copies for final approval, furnishing such other copies that may be needed. No work shown on shop drawings shall be started until same has been returned approved.

B. Independent Commercial Testing Laboratory Services

1. When a proposed project or series of projects involves installation of more than a total of 3000 lineal feet of polyvinyl chloride sewer pipe (regardless that different diameter pipe may aggregate that amount) the CONTRACTOR shall furnish, during pipe delivery and construction, reports of an independent commercial testing laboratory.
2. Said reports shall set forth critical pipe characteristics such as materials tests;

hydrostatic tests (infiltration); pipe dimensions; gasket testing; deflection (PVC); absorption (RC) and such other test results which will confirm conformance with these and the referenced ASTM, AWWA and other standards contained herein. One pipe section of every 200 sections manufactured and delivered, regardless of length of each pipe, shall be selected at random by the testing laboratory representative and transported to the commercial lab for such purposes.

C. Record Drawings

1. The CONTRACTOR is responsible for maintaining two (2) sets of Record Drawings. One set of the Record Drawings shall be left with the OWNER at the completion of the project, while the other set shall be delivered to the ENGINEER before application for final payment.
2. All records shall be kept by the CONTRACTOR for all deviations in location or elevation of any installation from that shown on the Contract Drawings. Record Drawings shall include but not be limited to the following: structural locations, piping locations, equipment locations, revisions to schematic diagrams, etc. Records shall also be kept of any significant changes from approved shop drawings or Contract Drawings. Records shall consist of marked shop or Contract Drawings and shall be submitted to the OWNER at any time upon request.
3. Each record drawing shall be certified by the CONTRACTOR as an accurate representation of the completed work.

D. Photographs/Video Tape (Optional)

1. The CONTRACTOR shall photograph and video tape all work areas of the project. The project representative is to designate areas to be photographed and video taped. The photographs and video tape shall be dated (month/day/year/time). The video shall be VHS format, color and voice narrated to indicate the activity and/or

facilities being constructed. Two (2) copies of the photographs and video tape shall be submitted monthly to the ENGINEER and will become the property of the OWNER.

PART 2: PRODUCTS

2.01 BUY AMERICA

- A. In accordance with federal regulations and guidelines the CONTRACTOR agrees that preference will be given to domestic construction materials by the CONTRACTOR, subcontractors, materials and suppliers in the performance of this contract.

2.02 STEEL PRODUCTS

- A. Each CONTRACTOR, equipment and material supplier on these contracts is notified that materials utilized under these contracts must comply with the provisions of the Act of March 3, 1978 (P.L.G. No. 3) known as the "Steel Products Procurement Act". The CONTRACTOR is required to submit Form SP) (Page B-7) with each initial shop drawing submittal.

PART 3: EXECUTION

3.01 SCOPE OF WORK

- A. The CONTRACTORS shall furnish but are not limited to the following submittals:
1. Schedule of Values
  2. Construction Schedule
  3. Material Data

**End of Section**

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1: PGENERAL

1.01 TEMPORARY SERVICES

- A. GENERAL: Provide temporary services at the site of the Work throughout the entire period of construction and until the Work of the Contract is completed and the new facilities are placed in operation by the Authority's personnel.
- B. Temporary Water Control:
1. At all times during the construction of work of this Contract maintain the flow of storm water, naturally occurring water and wastewater in existing facilities and channels affected by the Work.
  2. Particular attention is directed to the above requirement in regard to the maintenance of flow in existing sewer service connections during removal and replacement of the sewer main.
  3. CONTRACTOR assumes risk from floods or other causes, and any damages done to the work in progress or to work completed under Contract. Make repairs and replacements to the satisfaction of the ENGINEER.
  4. CONTRACTOR assumes responsibility for damages to property caused by flooding or backflooding of property due to blocking or restriction of storm water passages, natural waterways and wastewater facilities capacity during normal or excessive periods of water flow.
  5. At any time do not permit wastewater flow from existing sewers to flow into nearby waterways or to flow on surface areas. Furthermore, should an accidental discharge occur, notify the Department of Environmental Protection immediately.

6. The means and methods the CONTRACTOR employs to meet above requirements are at his discretion but will be subject to the ENGINEER's approval.

PART 2: PRODUCTS

- A. Not used.

PART 3: EXECUTION

3.01 REMOVAL

- A. CONTRACTOR shall dismantle (if required) and remove such temporary facilities as required during construction of the project.

**End of Section**

SECTION 01501

CONSTRUCTION FACILITIES

PART 1: GENERAL

1.01 Immediately after the Contract has been formally executed by the OWNER, the CONTRACTOR shall furnish a separate field office trailer with minimum dimensions of 30' x 8' for the use of the OWNER's Representatives during the period of construction (Contract Time). The office shall be properly lighted, heated and air conditioned and shall be equipped with a telephone and fax machine (two phone lines) for the use of the OWNER's Representatives. It shall also be provided with suitable sanitary facilities and equipped with potable water. The costs of all utility services and all service and toll telephone charges shall be paid by the CONTRACTOR. It shall be provided with a plain paper photocopier, a locked, four drawer filing cabinet and each of the following items: desk and chair, drafting table and stool, plan rack (hanging type), table, bookcase and bulletin board. The office shall not be vacated or moved from the construction site until the Contract time expires or approval of the final estimate by the OWNER's Representative, should the CONTRACTOR not complete the work in the Contract time. The trailer shall be located adjacent to the CONTRACTOR's office.

1.02 The CONTRACTOR shall provide and make his own arrangements for his field office facilities, change trailers, tool, equipment, material storage and toilet facilities. The CONTRACTOR's office facilities shall be separate from the OWNER's Field office facilities.

PART 2: PRODUCT

A. Not used.

PART 3: EXECUTION

A. Not used.

**End of Section**



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SECTION 01550

TRAFFIC CONTROL

PART 1: GENERAL

- 1.01 Whenever in the ENGINEER's judgment it is reasonably possible to do so, a minimum of one lane of traffic shall be maintained on all streets, roadways and other traveled ways at all times during construction of this project in order to accommodate the residents of the area as well as emergency fire, ambulance and similar vehicular traffic. Suitable and adequate barricades shall be erected and properly maintained by the CONTRACTOR at all times during the course of construction work to clearly and properly caution and protect traffic and pedestrians from open excavations. An adequate number of flagmen shall be utilized to guide traffic along all areas where work is being performed or where hazardous driving conditions prevail. Advance notice to the general public, the School District (for bus routing) and the Municipal Office and shall be given by the CONTRACTOR before actual excavation in any particular area is commenced.
- 1.02 Where pipe lines and/or other facilities are constructed along State Highways, Municipal streets, and where construction activities may otherwise impede normal vehicular traffic patterns on said streets, the control of traffic shall be accomplished in accordance with the details set forth in Publication 213 of the Pennsylvania Department of Transportation, the title of which is "Traffic Control Guidelines".
- 1.03 The position of work zone signs, erection of signs, sizes of signs, details and configuration of signs, traffic channelizing, tapered lengths/spacing, cones, drums, vertical panels, lighting devices, arrow boards and all flagging conduct and activities shall conform to the details described therein. The location and configuration of traffic control methods shall conform to those graphically illustrated on the appertaining Table 5 and Figures 5 through 23 shown in the publication. The CONTRACTOR shall submit a traffic control plan and procedure (conforming to the above referenced Publication 213) to the OWNER and to the Pennsylvania Department of Transportation for approval, prior to commencing with field construction.

PART 2: PRODUCTS

2.01 The CONTRACTOR shall be responsible to furnish all required flags, cones, signs etc. and all items shall meet the requirements of the PA Department of Transportation.

PART 3: EXECUTION

A. Reference Section 01551 Barriers and Enclosures.

**End of Section**

SECTION 01551

BARRIERS AND ENCLOSURES

PART 1: GENERAL

1.01 CONTRACTOR shall provide all required warning signs, lights and barricades during the course of construction and said facilities shall be maintained by the CONTRACTOR at all times during the course of the construction work to clearly caution and protect traffic and pedestrians from open excavations, unstable filled areas, obstructions and other hazards directly or indirectly resulting from construction activities. Warning signs, barricades and hand rails shall be erected and a sufficient number of high intensity warning lights shall be appropriately located for use at night and at times when visibility is poor.

1.02 Trenches at any and all locations where pedestrian or vehicular traffic hazards would result, shall not be left open during non construction hours, unless they are suitably covered with a steel plate which is adequately anchored and reinforced to sustain traffic loads which may be imposed. All excavations within road rights of way shall be closed overnight and over weekends and marked with a flashing traffic marker to warn motorists and pedestrians. Except in cases of emergencies, no roadways streets, alley or driveways shall be left impassable overnight.

PART 2: PRODUCTS

A. Not used.

PART 3: EXECUTION

A. Not used.

**End of Section**

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SECTION 01570

TEMPORARY EROSION AND SEDIMENT CONTROL

PART 1: GENERAL

1.01 DESCRIPTION

- A. The CONTRACTOR shall conduct their activities and shall program trenching and restoration operations in such a manner as to minimize pollution of the creeks from erosion of the freshly excavated and/or backfilled materials during periods of excavation and surface water runoff. CONTRACTORS shall reduce the area and duration of exposure of all erodible soils by the greatest extent practicable and to that end, hydromulching, reseeding and other specified surface restoration shall be required to closely follow backfilling operations. The type of seeding/restoration required for the various job locations is listed on the E&S Control Plan Drawing. Where the Erosion and Sedimentation Control Plan calls for runoff devices or the OWNER's Project Representative so directs in the field, sediment traps, hay bales and/or other means to retard runoff rates shall be installed. Similar holding basins or other sediment trap arrangements shall be installed. Similar holding basins or other sediment trap arrangements shall also be required to be installed at the discharge of dewatering pumps. Discretion shall be exercised in selecting the number and location for encroachments during the construction both in and along the creeks such that a minimum of stream disturbance and erosion pollution results. The Soil Erosion and Sediment Pollution Controls approved by the County Soils Conservation Service, and the Pennsylvania Department of Environmental Protection are identified in the contract drawings. The CONTRACTOR shall be responsible for all fines, fees, penalties, etc. imposed upon the OWNER as a result of the CONTRACTORS construction activities, methods/ procedures and or lack of construction activities methods/procedures.

1.02 APPROVED PLAN

- A. The Contract Drawings contain the approved Erosion Sediment Control Requirements pertaining to the project construction.
- B. The CONTRACTOR shall implement and maintain sediment control Best Management Practice(BMP) devices.
- C. The CONTRACTOR shall have available at the project site at all times a copy of the approved plan.
- D. The CONTRACTOR is advised to become thoroughly familiar with the provisions of the Appendix 64, Erosion Control Rules and Regulations, Title 25, Part 1, Department of Environmental Protection, Subpart C, Protection of Natural Resources, Article III, Water Resources, Chapter 102, Erosion Control.
- E. CONTRACTOR shall secure approved Erosion Sedimentation Control Plans for work outside indicated rights of ways, construction strips, CONTRACTOR dump sites, etc or other environmental permits.

PART 2: PRODUCTS

2.01 SEED AND SOD

- A. Seed, sod, mulches, fertilizer, topsoil, soil conditioner, and other materials shall be as specified herein these Contract Document and or the Erosion Sediment Control Plan Drawings.

2.02 MATERIAL FOR EROSION AND SEDIMENT CONTROL DEVICES

- A. Geotextiles, silt fence sediment control geotextile, surge stone, rip rap, filter bags, straw bale dike, silt fence post, straw bale stakes, chain link fence for super silt fence shall be in accordance with requirements of Chapter 102 Erosion Protection.

PART 3: EXECUTION

3.01 GENERAL REQUIREMENTS

- A. Clear only areas designated on drawings within limits of rights of ways, easements or work limits and as specified herein and as directed by the OWNER's Representative.
- B. Protect excavated material and disturbed areas from erosion into waters or onto adjacent land. Stockpile excavated material on high side of trench.
- C. Install sediment control BMP devices following Drawings or as directed by the OWNERS Representative during initial clearing and grubbing operations.
- D. Maintain erosion and sediment control measures and devices until final restabilization and restoration are complete, unless otherwise directed by the OWNERS Representative.
- E. The CONTRACTOR shall assure that the approved erosion and sediment control plan is properly and completely implemented.
- F. Until the site achieves final stabilization, the CONTRACTOR shall assure that the best management practices are implemented, operated, and maintained properly and completely. Maintenance shall include inspections of all best management practice facilities. The CONTRACTOR shall maintain and make available to local Conservation District complete, written inspection logs of all those inspections. All maintenance work, including cleaning, repair, replacement, regarding, and restabilization shall be performed immediately.
- G. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the CONTRACTOR shall implement appropriate best management practices to eliminate potential for accelerated erosion and/or sediment pollution
- H. Before initiating any revisions to the approved erosion and sediment control plan or revisions to



other plans which may affect the effectiveness of the approved E&S Control Plan, the operator must receive approval of the revisions from the local Conservation District. All pumping of sediment laden water shall be through a sediment control BMP, such as a pumped water filter bag discharged over non-disturbed areas.

- I. Erosion and sediment BMP's must be constructed, stabilized, and functional before site disturbance begins within the tributary areas of those BMP's
- J. After final site stabilization has been achieved, temporary erosion and sediment BMP controls must be removed. Area disturbed during removal of the BMP's must be stabilized immediately.
- K. Immediately after earth disturbance activities cease, the CONTRACTOR shall stabilize any areas disturbed by the activities. During non-germinating periods, mulch must be applied at the specified rates. Disturbed areas which are not at finished grade and which will be redisturbed within 1 year must be stabilized in accordance with the permanent vegetative stabilization specifications.
- L. An area shall be considered to have achieved final stabilization when it has a minimum uniform 70% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist sliding and other movements.
- M. Sediment must be removed from the storm water inlet protection after each runoff event.
- N. At stream crossings, 50' buffer areas should be maintained. On buffers, clearing, sod disturbances, excavation, and equipment traffic should be minimized. Activities such as stacking logs, burning cleared brush, discharging rainwater from trenches, welding pipe sections, refueling and maintaining equipment should be accomplished outside of buffers.
- O. Hay or straw mulch must be applied at 3.0 tons per acre.

- P. Mulch with mulch control netting or erosion control blankets must be installed on all slopes 3:1 and steeper.
- Q. Straw mulch shall be applied in long strands, not chopped or finely broke.
- R. Until the site is stabilized, all erosion and sediment BMP's must be maintained properly. Maintenance must include inspections of all erosion and sediment control BMP's after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, regarding, reseeding, remulching, and renetting, must be performed immediately. If erosion and sediment control BMP's fail to perform as expected, replacement BMP's or modifications of those installed will be required.
- S. Sediment removed from BMP's shall be disposed of in landscaped areas outside of steep slopes, wetlands, floodplains or drainage swales and immediately stabilized, or place in topsoil stockpiles.
- T. The CONTRACTOR shall remove from the site, recycled, or dispose of all building materials and waste in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., 271.1 et seq. The CONTRACTOR shall not illegally bury, dump, or discharge and building material or waste at the site.

### 3.02 STABILIZATION OF DISTURBED AREAS

- A. Following initial disturbance, complete permanent or temporary stabilization.
- B. Stabilization:
  - 1. Temporary: Consisting of vegetation, anchored straw mulch, mulch netting, jute, excelsior blankets, wood chips, surge stone or stone mulch.
  - 2. Permanent: Following restoration schedule on Drawings.

### 3.03 EROSION AND SEDIMENT CONTROL DEVICES

- A. Install BMP devices shown on Drawings, or at OWNERS Representative direction, and following Standard Details. Maintain sediment control devices to contain surface drainage and prevent sediment from leaving confines of work site.
  
- B. Silt Fence
  - 1. Definition: Temporary continuous barrier constructed of sediment control geotextile supported by posts used to trap sediment but allow surface runoff to filter through.
  
  - 2. Construction: See Erosion Sediment Pollution Control Plan Drawings.
  
  - 3. Maintenance: Remove sediment deposits as required.
    - a. Areas where construction activities have changed natural contour and drainage runoff: Review daily silt fence locations to ensure effectiveness.
      - 1). Where deficiencies exist, install additional silt fences under ESC Inspector's direction.
      - 2). Promptly repair or replace damaged or otherwise ineffective silt fence.
  
    - b. Areas where construction activities have not changed natural contour and drainage runoff: Periodically, inspect and repair damage to silt fence to ensure effectiveness
  
  - 4. Removal upon notice by OWNER's Representative restoration is complete and acceptable. Fill depressions and restore area following restoration schedule.

C. Super Silt Fence

1. Definition: Temporary continuous barrier of sediment control geotextile placed over chain link fencing used to intercept sediment.
2. Construction: See Erosion Sediment Pollution Control Plan Drawings.
3. Maintenance: See silt fence specification.
4. Removal and Restoration: Follow silt fence specification and replace with silt fence when directed by OWNERS Representative.

D. Rip Rap Stream Bank Protection at Utility Stream Crossing.

1. Definition: Placement of ungrouted riprap on stream banks for permanent stabilization at each utility stream crossing.
2. Construction: Follow Standard Detail and as specified below.
  - a. Install stream diversion when flow is impacted by excavation or fill.
  - b. Riprap as specified in Section 02370.
3. Restoration: Within 7 days after utility is installed crossing stream, restore banks of stream with riprap following Drawings and Standard Details.

E. Control Turf Reinforcement Mat at Utility Stream Crossings.

1. Definition: Placement of a rolled erosion control product manufactured of natural fibers mechanically formed and/or bonded into the synthetic nettings to produce a permanent three dimensional structure.
2. Construction and restoration shall be in accordance with the Erosion Sedimentation Control

Plan and the provisions of Chapter 102 Erosion and Sediment Control.

F. Stone Outlet Sediment Trap

1. Definition: Temporary basin formed by excavating a depression in ground or by building earth embankment or dike that collects runoff and traps sediment allowing filtered runoff to leave site through stone outlet.
2. Construction and maintenance shall be in accordance with the Erosion Control Plan and the provisions of Chapter 102 Erosion and Sediment Control.

G. Stone Outlet Structure

1. Definition: Stone berm used in conjunction with earth or straw bale dike to provide sediment filtering device for runoff and discharge onto well stabilized area.
2. Construction and maintenance shall be in accordance with the Erosion Control Plan and the provisions of Chapter 102 Erosion and Sediment Control.

H. Straw Bale Dike

1. Temporary continuous barrier construction of straw or hay bales placed and anchored together, used to trap sediment but allow rainfall runoff to filter through.
2. Construction and maintenance shall be in accordance with the Erosion Control Plan and the provisions of Chapter 102 Erosion and Sediment Control.

I. Inlet Protection

1. Definition: Device used to prevent sediment from entering existing storm drains.
2. Construction and maintenance shall be in accordance with the Erosion Control Plan and the

provisions of Chapter 102 Erosion and Sediment Control.

J. Stream Crossing

1. At locations shown on the construction drawing, the proposed pipe lines will cross a stream. Said crossings shall be accomplished by installing the sewer pipe (as shown on the Contract Drawings) to the specified grade and depth. The sewer pipe shall then be encased in concrete with a minimum thickness of 6" of concrete surrounding the pipe. The concrete encasement of the sewer pipe shall extend between the tops of the stream banks or, where such banks are not evident, a minimum distance of 10 feet beyond the normal stream channel. Concrete encasement is not required at locations where ductile iron pipe is installed across the stream.
2. It is important that the stream crossing be constructed quickly to minimize disturbance in the stream. Where practical, each stream crossing shall be constructed within a single 24-hour period.
3. All stream crossings shall be constructed according to the procedure outlined on the Erosion and Sediment Pollution Control Plan. Dewatering of trenches shall be done in accordance with the requirements set forth in these specifications and the Erosion and Sediment Pollution Control Plan narrative. Backfill shall consist of the excavated material unless the same is deemed unsuitable by the OWNERS engineers at the time of excavation. A temporary sedimentation control device as shown on the E&S Plan drawing shall also be utilized in the stream during installation of said sewer line crossings.
4. Permanent erosion and sedimentation control devices shall be required along those portions of stream banks disturbed by the installation of the sewer line crossings. Within 10 days following installation of each of the pipe line stream crossings, control turf reinforcement mat shall

be placed along the banks of the streams shown on the Contract Drawings.

- a. The erosion control turf reinforcement mat shall be North American Green P-300 or approved equal, having consistent thickness with synthetic fibers evenly distributed over the entire area of the mat. The matting shall be covered on the top with black heavyweight UV stabilized polypropylene netting having ultraviolet additives to prevent breakdown and an approximate 0.50 x 0.50 inch (1.27 x 1.27 cm) mesh size. The bottom net shall also be UV stabilized polypropylene, with a 0.625 x 0.625 inch (1.57 x 1.57 cm) mesh size. The matting shall be sewn together on 1.50 inch (3.81 cm) centers with UV stabilized polypropylene thread.

#### 3.04 CONSTRUCTION OPERATIONS

- A. Do not begin construction operations until required erosion and sediment control devices are in place and functioning.
- B. Do not violate requirements of Erosion and Sediment Control Permit during construction operations.
- C. Pennsylvania Department of Environmental Protection must approve changes to approved Sediment Control Plan.

#### 3.05 FIELD CONDITIONS

- A. Immediately notify ENGINEER if conditions arise in field that renders Drawings, these specifications, or requirement of the approved Erosion and Sediment Control Plan inappropriate or inadequate. ENGINEER will furnish additional Drawings or modifications, when required, which will become part and condition of Erosion and Sediment Control Plan.

**End of Section**

SECTION 01651

PIPE LINE/COMMISSIONING

PART 1: GENERAL

1.01 WORK INCLUDED

- A. The CONTRACTOR shall provide, complete and ready for use, all of the pipe line system and appurtenances and shall perform such operations and tests, all as specified herein and as indicated on the drawings.
- B. All pipe lines shall be installed by skilled mechanical erection labor in accordance with manufacturer's instructions.

PART 2: PRODUCTS

- A. Not used.

PART 3: EXECUTION

3.01 INSTALLATION

- A. Inspection and Tests
  - 1. Tests shall be performed on all piping, equipment and complete systems. The CONTRACTOR shall provide labor, materials, tools, air, water, power and supplies of any kind required for testing and adjusting of equipment and systems. Each CONTRACTOR is responsible for testing systems which he has furnished.
  - 2. Material and/or equipment damaged or shown to be defective shall be repaired or replaced to the satisfaction of the OWNER.
  - 3. All tests shall be made only after notification to and in the presence of the OWNER.
  - 4. Records shall be kept for each test showing the date, system and/or equipment was tested, method of test, test results and approval signature of the OWNER. Three copies of the test records, along with any certificates of final inspection



or approval issued by the authorities having jurisdiction, shall be furnished to the OWNER at the successful completion of each test.

B. Commissioning

1. Pipe lines shall be put in operation upon successful testing and upon authorization by the OWNER's Representative.

C. Final Clean Up; Site Rehabilitation

1. Before finally leaving the site, the CONTRACTOR shall wash and clean all exposed surfaces which have become soiled or marked. CONTRACTOR shall remove from the site of the work all accumulated debris and surplus materials of any kind which result from his operations, including construction equipment, tools, sheds, sanitary enclosures, etc. CONTRACTOR shall leave all equipment, fixtures and work, which he has installed, in a clean condition. The completed project shall be turned over to the OWNER in a neat and orderly condition.
2. The site of the work shall be rehabilitated or developed in accordance with other Sections of the specifications and the Drawings. In the absence of any portion of these requirements, CONTRACTOR shall completely rehabilitate the site to a condition and appearance equal or superior to that which existed just prior to construction, except for those items whose permanent removal or relocation was required in the Contract Documents or ordered by the OWNER.

D. Final Inspection

1. Final cleaning and repairing shall be so arranged as to be finished upon completion of the construction work.
2. The ENGINEER will make his final inspection of the work during the progress of final cleaning and repairing, and any portion of the work finally inspected and accepted by the ENGINEER shall be kept clean by the CONTRACTORS, until the final acceptance of the entire work.

3. When the CONTRACTORS have finally cleaned and repaired the whole, or any portion of the work, they shall notify the ENGINEER that they are ready for final inspection of the whole or a portion of the work, and the ENGINEER will thereupon inspect the work. If the work is not found satisfactory, the ENGINEER will order further cleaning, repairs or replacement.
4. When such further cleaning or repairing is completed, the ENGINEER, upon further notice, will again inspect the work. The "Final Payments" will not be processed until the CONTRACTOR has complied with the requirements set forth and the ENGINEER has made his final inspection of the entire work and is satisfied that the entire work is properly and satisfactorily constructed in accordance with the requirements of the Contract Documents.

**End of Section**

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SECTION 01700

RIGHTS OF WAY

PART 1: GENERAL

1.01 The proposed construction activities and appurtenances shall be installed along rights of way under the jurisdiction of the OWNER, PA Department of Transportation, CSX Railroad, City of McKeesport, and the Boroughs of Liberty and Port Vue. The OWNER has, or will have, a acquired the necessary rights of way for construction of the proposed facilities, however, if the CONTRACTOR desires ingress or egress to the construction site over private properties or land for which the OWNER obtained no such rights of way, the CONTRACTOR shall make all necessary arrangements. Information regarding rights of way obtained from private property owners is available from the OWNER. Identification of property owners and the location of the respective property lines were obtained from various sources as noted on the plans, and may not be accurately or currently represented. The OWNER has acquired, in most cases, a temporary construction easement suitable for construction of the proposed facilities and a 20' wide permanent easement. The CONTRACTOR is cautioned to work only within the granted easements and to minimize the area of disturbance of his activities. A copy of all individual easement exhibits is available for the contractors so that they have knowledge of all easements and how they affect the work area.

1.02 The proposed construction activities may also encroach upon rights of way owned and occupied by the utility companies listed on the plans. Existing utility lines are indicated on the Drawings at locations which have been determined from either field markers or from records on file in the respective utility offices. CONTRACTORS shall conduct the construction work very carefully to avoid disturbance of those utility lines and shall advise his personnel (and those of any subcontractor) the hazards inherent in working near underground gas lines and/or overhead high voltage electric lines. Any and all damages caused to existing utility lines, or resulting from the exposure of, and contact with said lines or from other construction activities, shall be rectified by that CONTRACTOR which is responsible for same.

PART 2: PRODUCTS

A. Not used.

PART 3: EXECUTION

A. Not used.

**End of Section**

SECTION 01740

CLEAN UP OF WORK SITE

PART 1: GENERAL

1.01 Immediately after all construction operations have been completed on any section, the CONTRACTOR shall thoroughly clean the area of all excess materials, debris, plant and equipment for which he is responsible. The OWNER's Project Representative will designate and fix the limits of each "section" of construction area in the field, under each contract for clean-up purposes. While it is intended to cooperate with the CONTRACTOR in establishing such section limits, it shall be required that clean-up activities reasonably progress with construction progress. The determination of what is reasonable shall be made by the ENGINEER. The CONTRACTOR shall also restore to its original condition and to the satisfaction of the OWNER's Project Representative, all grounds, fences, lawns, driveways, streets, roadways, banks, ditches, and all other areas and shall leave the premises in a neat and operable condition.

1.02 All sewer lines and manholes shall be thoroughly flushed and cleaned and all dirt, construction materials, sediment and other materials shall be completely removed from the system prior to connection of all services and operation of the sewers.

PART 2: PRODUCTS

Not used.

PART 3: EXECUTION

Not used.

**End of Section**

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SECTION 01741

DUST AND MUD CONTROL

PART 1: GENERAL

- 1.01 Dust control palliatives shall be utilized where and when necessary to satisfactorily maintain roads, streets, alleys, berms and other traveled ways for vehicular traffic. In addition, the accumulation of mud and/or dirt from the excavation, backfill and trenching operations shall be cleaned off the surfaces of traveled ways by machines and/or hand labor as frequently as is necessary to properly maintain the roadways and minimize construction nuisance and traffic safety problems.

PART 2: PRODUCTS

- A. Not used.

PART 3: EXECUTION

- A. Not used.

**End of Section**



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SECTION 01800

SUBSTANTIAL COMPLETION

PART 1: GENERAL

1.01 The CONTRACTOR is hereby notified and alerted the Contract Technical Specifications are specific to construction of work specified herein, with site restoration throughout the whole of the work area, and to that end, the interpretation for Substantial Completion for this Contract is a point where the whole of the work for all items specified in Division 1 through Division 16 inclusive, herein, of all restoration and punch list items are completed to the satisfaction of the OWNER.

PART 2: PRODUCTS

A. Not used.

PART 3: EXECUTION

A. Not used.

**End of Section**

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PART 2:

**DIVISION 2 - SITE WORK**

**SECTION 02000**

**SITE WORK**

**PART 1: GENERAL**

- A. Under this Division the CONTRACTOR shall furnish complete all materials, labor, plant, utilities and equipment necessary to perform work related to clearing, excavation, backfill, site drainage, and site restoration work, all as shown on the drawings or specified.

**1.02 WORK INCLUDED**

- A. All work shall be performed in accordance with the requirements of the Contract Documents and the General Conditions of the specifications and all materials and equipment furnished shall conform to those descriptions and requirements. All work shall be constructed complete.
- B. The CONTRACTOR shall be responsible and liable for all property damage and bodily injury that may result from his damaging or disturbing any structures, facilities, utility or process pipe lines, electric conduits, sewers, etc., and for all damages incurred as a result of his construction activities. He shall restore same to their original condition as soon as is reasonably possible after such damage is incurred.

**PART 2: PRODUCTS**

- A. Not used.

**PART 3: EXECUTION**

- A. Not used.

**End of Section**

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SECTION 02040

SITE PREPARATION

PART 1: GENERAL

- A. The CONTRACTOR shall clear the site and otherwise prepare the site for the construction shown on the drawings and specified herein. The CONTRACTOR shall make such alternative arrangements as may be necessary for the removal and disposition of the various brush, trees and other debris as are necessary. No such materials shall be included with any placement of fill and/or backfill, and all such materials shall be cleaned up, transported and removed from the site.
  
- B. Before general excavation, all topsoil over the sites of excavation and/or backfill, shall be stripped and stored in a manner to minimize soil erosion until construction is completed. CONTRACTOR shall protect the surrounding site areas from soil erosion by installing fabric fence or straw bales at the perimeter of the area disturbed. Installation of straw bales and fabric fence and other erosion and sedimentation pollution control measures shall be in accordance with the requirement of the County Soil Conservation Service.

PART 2: PRODUCT

- A. Not used.

PART 3: EXECUTION

- A. Not used.

**End of Section**

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SECTION 02080

BYPASSING SEWAGE

PART 1: GENERAL

- 1.01 The CONTRACTOR shall provide all plant, supervision, labor and materials to bypass sewage around the existing manhole section that the new sewer line connects into. Pumps and bypass lines shall be of adequate capacity to handle the sewage flow plus additional flow that may occur during a rainstorm. The CONTRACTOR is cautioned that the estimated flows do not include contributions from any infiltration or inflow that may exist at the time of the work. The existing flows include those from upstream collection components that contribute to the subject sanitary sewer mains or manhole facilities.
- 1.02 By-pass pumping shall consist of flow diversion as necessary to prevent back-ups creating damage or nuisance and where the testing and/or sewer replacement is in progress. By-pass shall be performed by pumping the existing flow from upstream to downstream of the stretch of sanitary sewer involved in the particular operation, after obtaining approval from the ENGINEER. The CONTRACTOR shall provide and operate all pumps, hoses, and other conduits of adequate capacity which are necessary to prevent back-up. By-pass pumping, when required, shall continue until the particular item or work which is being performed in the section of Sewer involved has been completed.
- 1.03 In no case will by-pass pumping be permitted at times other than and during hours of investigation and rehabilitation.
- 1.04 Raw sewage spillage caused by equipment malfunction shall be cleaned and disinfected by the CONTRACTOR using disinfectants approved by the ENGINEER. Under no circumstances shall the CONTRACTOR allow the discharge of sewage into existing storm drain system or onto the ground.



1.05 The CONTRACTOR shall be liable for all damages which result from sewage flows not properly maintained during the progress of the work, including all damages to private property which occur as a direct or indirect result of inadequate control of the sewage flow while the bypass operation is ongoing.

PART 2: PRODUCT

A. Not used.

PART 3: EXECUTION

A. Not used.

**End of Section**

SECTION 02140

DEWATERING

PART 1: GENERAL

1.01 WORK INCLUDED

- A. The CONTRACTOR shall provide and maintain in operation suitable and adequate pumping and/or well point equipment for completely dewatering any and all excavations in such a manner as to permit the successful installation of the proposed improvements. No improvement shall be permitted to be constructed or installed in an excavation in which water flows or is pooled.

PART 2: PRODUCTS

- A. Not used.

PART 3: EXECUTION

- A. Not used.

**End of Section**

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SECTION 02150

SHORING

PART 1: GENERAL

1.01 WORK INCLUDED

- A. The CONTRACTOR shall be responsible for the adequate sheeting, shoring, and/or bracing of any excavation required for the completion of his work.
  
- B. Shoring, sheeting and bracing shall be according to all OSHA Standards and be designed by a registered professional engineer to withstand all loads superimposed thereon to protect existing or proposed structures, pipelines, or other facilities, or where required to prevent injury to personnel working in the excavation. All excavations which present a hazard to personnel working in the trench because of embankments, stockpiling of excavated materials along the top of the trench, etc., shall be provided with adequate sheeting, shoring and bracing.

PART 2: PRODUCTS

- A. Not used.

PART 3: EXECUTION

- A. Not used.

**End of Section**

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SECTION 02151

ANCHORING AND BLOCKING

PART 1: GENERAL

- A. All Pressure Pipe Lines shall be adequately blocked and anchored to prevent the pipeline from pulling apart under pressure.
- B. All bends in excess of 10 degrees, plugs, caps, tees, wye branches shall be blocked or anchored. Concrete blocking shall conform to the standards shown in the Standard Details SD-2-045 and SD-2-046.
- C. Lugged fittings and tie rods, clamps, collars, restrained joints and anchoring fittings may be substituted in lieu of concrete blocking when specified in the Contract Drawing.

PART 2: PRODUCTS

- A. See Concrete Section 03300.

PART 3: EXECUTION

- A. Not used.

**End of Section**

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SECTION 02210

SUBSURFACE EXPLORATION

PART 1: GENERAL

1.01 SITE CONDITIONS

A. Limitations of Subsurface Information Indicated on Drawings:

1. Certain information regarding the reputed presence, size, character and location of existing underground structures, pipe lines and electrical and signal facilities has been indicated on the Drawings for the benefit of the OWNER. There is no certainty of the accuracy of this information, and the location of underground structures indicated may be inaccurate, and other obstructions than those indicated may be encountered.
2. The CONTRACTOR hereby distinctly agrees:
  - a. That neither OWNER nor the ENGINEER is responsible for the correctness or sufficiency of the information given;
  - b. That in no event is this information to be considered as a part of the Contract;
  - c. That the CONTRACTOR shall have no claim for delay or extra compensation or damage against the OWNER or the ENGINEER on account of incorrectness of information given; or on account of insufficiency or absence of information regarding obstruction either revealed or not revealed by the Drawings; and
  - d. That the CONTRACTOR shall have no claim for relief from any obligation or responsibility under the Contract, in case the location, size or character of any pipe, electrical or signal facility or other underground structure is not as indicated on the Drawings, or in case any pipe, electrical or



signal facility or other underground structure is encountered that is not indicated on the Drawings.

B. Digging Test Pits:

1. In locations where required by the ENGINEER, or indicated on the Drawings, dig test pits to determine the location and elevation of existing subsurface utility pipelines, electrical facilities or structures. Dig such test pits in the presence of an authorized representative of the OWNER of the subsurface utility pipelines, electrical facilities or structures. The CONTRACTOR is further advised that no excavation, pipe laying or other work is permitted at above referenced locations without the presence or approval of an authorized representative of the OWNER of the subsurface utility.
2. Digging test pits in locations required by the ENGINEER or indicated on the Drawings will be classified as Miscellaneous Unclassified Excavations and Backfill.
3. Test pits or other miscellaneous excavation dug to obtain information on subsurface conditions or underground obstructions without written requirement of the ENGINEER will be at the CONTRACTOR's expense.
4. Each test pit excavation shall be assumed to be 10 feet long by 8 feet deep by 2 feet wide minimum.

C. Air/Vacuum Test Hole Subsurface Utility Location

1. In locations required by the ENGINEER or indicated on the drawings, the CONTRACTOR shall locate buried utilities by means of non destructive digging equipment insuring the integrity of subsurface utility lines as no hammers, blades or heavy mechanical equipment shall come in contact with the utility is uncovered and the location and elevation is determined.

2. Each Air/Vacuum Excavation shall be assumed to be 10 feet long, 5 feet deep by 2 feet wide.
3. Required by the ENGINEER or indicated on the Drawings will be classified as Miscellaneous Unclassified Excavations and Backfill.
4. Excavations to obtain information on subsurface conditions or underground obstructions without written requirement of the ENGINEER will be at the CONTRACTOR's expense.

PART 2: PRODUCTS

- A. Not used.

PART 3: EXECUTION

- A. Not used.

**End of Section**

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SECTION 02220

EXCAVATING, BACKFILLING, AND COMPACTING

PART 1: GENERAL

1.01 WORK INCLUDED

- A. The CONTRACTOR shall make personal examination of the site in which the improvements are to be installed and determine for himself the extent and character of any work that may be encountered. All excavations shall be unclassified and no extra payment will be made for hand excavation or for rock, shale, masonry, etc., encountered in construction. There shall be no blasting on this project.
- B. The CONTRACTOR shall provide adequate and suitable means of shoring and/or bracing to prevent failure of any excavation wall and to protect his personnel working in the excavation.
- C. All open excavation which presents a hazard to personnel or equipment on the construction area shall be adequately barricaded and posted with battery operated warning lights, signs, etc., as required by any local, state or federal regulations governing same, or by any published company policy or regulation of the OWNER.
- D. Should the CONTRACTOR's operations impair foundations for new or existing structures, he shall provide Class C concrete underpinning piers or supports for such structures at no additional cost to the OWNER.
- E. No frozen or excessively wet material will be permitted to be used as backfill. Suitable or selected backfill material shall be kept separated from the unsuitable types. If the CONTRACTOR allows suitable backfill material from his excavation to become frozen or excessively wet or mixed with unsuitable material, he shall not be allowed to use it as backfill material and he will be required to bring in material from an outside source at no additional cost to the OWNER.