RULES AND REGULATIONS
GOVERNING APPLICATIONS TO
THE LOWER TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY

FOR THE CONSTRUCTION OF COMPREHENSIVE

SANITARY SEWER SYSTEMS

IN THE TOWNSHIP OF LOWER

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June 3, 2009
The Lower Township Municipal Utilities Authority
2900 Bayshore Road
Villas, New Jersey 08251

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LIST OF EXHIBITS

I INTRODUCTION AND PURPOSE

These Rules and Regulations have been established to facilitate the review of applications to the Lower Township Municipal Utilities Authority for the construction of sanitary sewer systems.

It shall be the duty of the Lower Township Municipal Utilities Authority to promote the collection, treatment and purification or disposal of sewage or other waste. It is in the public interest that the Lower Township Municipal Utilities Authority foster and promote the proper installation of comprehensive sanitary sewer systems, appurtenances and/or treatment plants. It is in the public interest that the Lower Township Municipal Utilities Authority foster and promote all reasonable means providing for the collection, treatment, and disposal of sanitary sewage that are considered environmentally safe.

II DEFINITIONS

As used in these Rules and Regulations, unless a different meaning clearly appears from the context, the following words shall have the following meaning:

Authority	Means the Lower Township Municipal Utilities Authority, in the County of Cape May, State of New Jersey.
Applicant	Means property owner or property owners, or if owned by a company, a proper official of said company; or an authorized agent of the owner, certified to the Authority as such; making application to the Authority for review and approval of plans and specifications for a comprehensive sanitary sewer collection system and/or connection to the sanitary sewer collection system.
As Built	Means a record of the plans and details of the facilities as constructed.
Attorney	Means the Attorney appointed by the Authority to handle legal affairs associated with the Authority.
Authority Engineer	Means a licensed professional engineer retained or employed by the Authority.
Building Lateral	Shall be defined as the pipe and appurtenances between the building and the cleanout located at or near the street curb or near the property line.
Easement	The right to use the land of another for a specific purpose not inconsistent with the general property rights of the owner.
Individual Septic System	Means a system for disposal of sanitary sewage into the ground where solids are retained in a septic tank and liquid is discharged to a disposal field.
Industrial Waste	Means such waste as so defined by the NJDEP.
Major Subdivision	Means any subdivision classified as such in all municipal ordinances.
Minor Subdivision	Means any subdivision classified as such in all municipal ordinances.
Multi-Family Structure	Means any residence designed and intended for occupancy by or occupied by two or more families.
Non-Residential Structure	Means any building designed or intended for use or occupancy for any purpose other than residential.
Plumbing Subcode Inspector	Means the person duly designated by the Township as the subcode official administering the "State Uniform

Construction Code Act."

Pump Station	Means a permanent facility constructed to convey sewage by pumping rather then by gravity.
Sanitary Sewer System	Means all sewer mains or lines, service connections and all appurtenances necessary and incidental to the collection of sanitary sewer, owned by the Authority.
Service Connection	LTMUA responsibility shall be defined as the pipe and appurtenances between the Authority's street main and the Authority's cleanout or near the street curb or near the property line. The property owner shall be responsible from the cleanout to the structure.
Sewer Main	Means a sanitary sewer in a public street or easement other than a service connection.
Sewer Master Plan	Means the plan for the sanitary sewer system facilities of the Authority together with any supplements, amendments, alterations or additions thereto or hereafter in existence as approved by the Authority.

III GENERAL RULES OF APPLICABILITY

1. No unauthorized persons shall uncover, make any connection with, or opening into, use, alter or disturb any Authority sewer or appurtenance thereof without first obtaining written authorization from the Authority.

2. All costs and expenses required for the installation and connection of a service connection or building lateral shall be borne by the property owner. The property owner shall be liable to the Authority for any loss or damage that may directly or indirectly be occasioned by the installation of any service connection or building lateral, or any other cause.

3. Each separate and independent residential and commercial unit shall be provided with an individual and separate service connection or building lateral.

4. No person shall make connection of roof downspouts, sump pumps, exterior foundation drains, or any other sources of surface runoff, groundwater, uncontaminated cooling water or unpolluted industrial process waters to a service connection or building lateral which in turn is connected directly or indirectly to the Authority's sanitary sewer system.

5. The installation of a service connection or building lateral to the Authority's sanitary sewer system shall conform to the requirements of the building and plumbing codes of the Township. All such connections shall, in general, be gas tight and watertight. No deviation from the prescribed procedures and materials will be allowed unless prior approval is obtained from the Authority.

6. The property owner is responsible for maintaining the service connection or building lateral in a safe or watertight condition from the building to the property line or easement line.

7. All bills for sewer usage shall be payable to the Lower Township Municipal Utilities Authority.

8. Any person who shall destroy or injure any of the works or property of the Authority, or who shall commit any act which shall injuriously affect or tend to affect the sanitary sewer system of said Authority, shall be prosecuted to the full extent of the law.

9. The property owner shall maintain clear access to all cleanouts, which shall be free of any obstructions such as trees, shrubs, landscaping or other objects.

10. The property owner is responsible for maintaining and cleaning the building lateral from the building to the sanitary sewer cleanout located at the property line.

11 In the event that the grade of any roadway or easement is altered, the Township's manhole covers are to be set flush with the finish grade in accordance with the following procedures:

    a. Vertical grade adjustments must be completed by adjusting the complete frame and cover through the use of concrete grade rings or concrete brick and mortar. The inside and outside of the adjusted area must be grouted smooth and the outside area must be waterproofed with a bituminous waterproofing material.

    b. The use of steel riser rings is prohibited in adjusting watertight or bolted frames and covers. Steel riser rings may be used to adjust standard frames and covers

provided the ring diameter matches the existing frame, that a single ring is used and that the vertical adjustment is in the range of one (1) to three (3) inches.

IV CONDITIONS REQUIRING INSTALLATION OF AND CONNECTION TO SANITARY SEWER SYSTEMS

Any major subdivision or any multi-family structure regardless of volume of flow, and all non-residential development shall be required to install a sanitary sewer collection system and to connect to the nearest operational sanitary sewer main in the Township in accordance with the provisions of the Ordinances of Lower Township and of these rules and regulations, except as herein provided.

Whenever a sanitary sewer collection system shall be operational in any given area of Lower Township, the owner of any property which abuts or is adjacent to any operational sewer main within the said sanitary sewer collection system shall, prior to, or as a condition of continued occupancy, be required to tie into said system, make use thereof and be subject to such costs and charges as shall be promulgated from time to time by the Authority pursuant to statutory authorization.

In areas where lands are deemed by the Authority to be too remote from an operating sewer main, the Authority shall decide as to whether a "dry" sanitary sewer system shall be required in accordance with the Authority 's Sewer Master Plan. The Authority may also, at its discretion, and if requested by an Applicant, accept a sum of monies equal to the cost of the "dry" sanitary sewer system, engineering costs and restoration, if such payment is deemed to be in the Authority 's best interest. Such amount shall be unqualified and shall not be deemed to be a performance guarantee. The Authority will indicate the proposed location of the sewer mains to be included under the Authority's Sewer Master Plan as well as the size of each main to be included. The Sewer Master Plan for the Authority's sanitary sewer system facilities shall govern the location and size of all major sewer mains.

V APPLICATIONS TO THE AUTHORITY

General

Prior to consideration, applications shall be filed with the Authority together with the required fees.

Capacity Feasibility Application

The Applicant shall first complete and submit to the Authority a Capacity Feasibility Application a copy of which is included herewith as Exhibit A. The Authority shall review the application within sixty (60) days and notify the applicant if sewer service and capacity is available and if the applicant should proceed with a connection permit or a Preliminary Application. This letter of approval is not a capacity commitment; it is merely an acknowledgment that water is available in the area in question.

The Applicant shall receive written notification from the Authority as to whether:

1. Individual septic systems will be permitted.

2. Individual septic systems will be permitted together with the installation of comprehensive system of "Dry Lines".

3. An active comprehensive sanitary collection system shall be required.

Connection Permit

The Authority shall issue a Connection Permit to the applicant at time of Final approval a copy of which is included herewith as Exhibit B. The Connection charges plus costs equal to the Authority's costs of the labor and materials involved with the installation shall be made and shall be payable in advance to the Authority. The amount of the Connection Permit fee shall be set annually by the Authority. The permit shall be valid for a period of one (1) year from date of issue. If the Applicant submits a written request for a permit extension ninety (90) days prior to the expiration of the permit, the Executive Director may extend the permit for an additional one (1) year. Permit fees are non-refundable and shall be null and void upon the expiration date. The Applicant shall be charged the appropriate user charges at the time of completion, issuance of a Township Certificate of Occupancy, or date of Final construction inspection whichever date is earlier.

Applicants making application for a Connection Permit to an existing structure shall be charged the appropriate user charges sixty (60) days from the date of issuance of the connection permit whether the connection to the system is or is not completed.

All application, review and inspection fees shall be paid by certified check or in cash as hereinafter provided. If the cost to the Authority of review or inspection exceeds the amount set forth herein, the Authority shall within 120 days of incurring such excess cost provide the Applicant with evidence of the amount of such excess cost. The Applicant shall remit by certified check or cash to the Authority the amount of any excess cost within 15 days after receipt of a true copy of evidence of such cost. In no event shall the amount charged by the Authority to the Applicant exceed the actual cost to the Authority.

All preliminary and final applications must be submitted at least 45 days before a regular scheduled meeting of the given body. All applications are to be signed by the Owner or by a duly authorized agent or representative and if signed by an authorized agent, shall be accompanied by proof of authorization by affidavit of the property owner.

Application for Preliminary Approval

The Applicant shall submit a preliminary application, in duplicate, on a form provided by the Authority, a copy of which is included herewith as Exhibit C. The application shall state whether:

1. Installation of individual septic system is proposed.

2. Installation of individual septic systems together with a comprehensive system of "Dry Lines" are proposed.

3. An active comprehensive sanitary sewer collection system is proposed.

4. The Authority shall have ninety (90) days to review the Preliminary Application and plans for approval.

Instructions for Application for Preliminary Approval

An application fee of $200.00 and a review fee of 1½% of the estimated cost of construction as determined by the Applicant's Engineer, subject to review and approval by the Authority's Engineer, and Attorney review fees of $500.00 shall be submitted with the application. The minimum Engineer review fee shall be $500.00.

Proposed individual septic systems shall be constructed in accordance with New Jersey Statutes, County Ordinances and all state and county regulations.

Should the Authority determine that a comprehensive system of "Dry Lines" or active comprehensive sanitary sewer system shall be required; the Applicant must submit a tentative application in duplicate, on a form provided by the Authority, a copy of which is included herewith as Exhibit C.

If the project is located outside the limits of the approved sewer service area, the Applicant shall submit an application to the New Jersey Department of Environmental Protection to amend the Water Quality Management Plan prior to submittal of the tentative application.

The application shall be accompanied by the following supporting data (three (3) copies each):

1. Engineer's Report.

2. General Map of the entire project.

3. Plans of all proposed sanitary sewer mains including service connections.

4. General plan for sewage pumping stations, and treatment plants.

5. Construction Cost Estimate.

Data shall contain information described below:

1. Engineer's Report

   A complete engineer's report, setting forth the basis of design shall be submitted to the Authority for each project.

   All sanitary sewers shall be designed to carry four (4) times the average flow, estimated 25 years in advance for the contributory area. Average daily flows shall be as per N.J.A.C. 5:21-6 (Residential Site Improvement Standards).

   Sewers shall be designed to flow with a minimum velocity of two (2') feet per second and a maximum velocity of ten (10) feet per second at full flow based on Kutter's Formula with a roughness coefficient (n) of 0.01

   The Authority will establish flow standards for any construction not included in the above.

   Material specifications and construction details shall be set forth and shall comply with those specified under "Detailed Information on Design and Construction of Sanitary Sewer Systems."

2. General Map of the Entire Project

A general map of the entire project shall be furnished to show the sanitary sewer collection system and pumping stations for the project at a scale appropriate for a 24" x 36" sheet and a key map at a scale of 1" = 1000'.

3. Plans of all Proposed Sanitary Sewer Collection Systems

Properly entitled plans shall be of uniform size, 24" x 36" with a ½" border on top, bottom, and right side and a two (2") inch border on the left side. Plans shall be drawn to a scale no smaller then 1" = 50'. Three (3) sets of plans shall be submitted and shall show the following:

a. General Information

The cover shall show the proposed development name, identifying title, block and lot numbers, name and address of the owner of the tract, name and address of the developer, if other then the property owner, and name address and professional seal of the person preparing the plans.

b. Details

Plans shall show all existing and proposed improvements, shall give a complete picture of the systems proposed and are primarily intended in order to facilitate review. The Engineer for the Applicant shall show all design information on the overall plan. The detailed drawings shall be legible and shall be at a scale not less than 1" = 50' horizontal. The drawings shall show roads, curbs, sidewalks, underground utilities, water mains, water services, sewer mains, sewer services, storm drains, lot lines, boundary lines, block and lot numbers in addition to all the items listed below, including details of any unusual conditions to be encountered in the construction of the collection system. A title and index sheet shall accompany the plan and detailed drawings and shall include a key map of the subdivision and its relationship to the surrounding area. All drawings with the exception of the overall plans shall be of uniform size, 24" x 36" with a two (2) inch border on the left side and a ½" border on all other sides. The plans shall show the location of the pump stations, manholes, collection lines, and first floor elevation of any proposed buildings. The present and future extent of the collection system shall be clearly delineated, and the size, type, and class of pipe proposed shall be given. The drawings shall also show any permanent benchmarks, as well as existing and proposed ground contours at one (1') foot intervals, referenced to N.J. Coast and Geodetic Survey datum. All sheets shall be numbered and bound and shall show the true and magnetic meridian, title, date, and scale including topographical symbols. Conventions and elevations shall be the same as or based upon those used by the U.S. Coast and Geodetic Survey.

c. Symbols

Sanitary mains to be built, as indicated by this application, shall be shown by solid lines, existing sanitary mains to be shown by gray-scaled lines. All topographical

symbols and conventions shall be the same as those of the U.S. Geological Survey.

d. Elevations

All permanent benchmarks of New Jersey Coast and Geodetic Survey shall be shown. Elevations of street surfaces shall be placed outside the street lines. The elevations of sewer inverts (storm and sanitary), shown at street intersections, ends of lines, and at changes of grades shall be written parallel with the sewer lines and between the street lines. The elevations of street surfaces shall be shown to the nearest 0.1-foot; sewer inverts shall be shown to the nearest 0.01 foot. Sufficient benchmarks shall be permanently established for the area.

e. Distances, Grades and Sizes

The distance and stationing between manholes, grades in decimal, sewer sizes, and strength class and material of the proposed pipes shall be shown on the plans. Arrows shall show the direction of the flow. All manholes shall be numbered. All drop manholes, watertight and locking covers shall be labeled.

4. General Plans for Sanitary Sewer Facilities

The plans for the pumping/treatment facilities shall include a general site plan showing boundaries, contours, proposed pumping stations, with capacities, underground piping, underground or overhead wires.

5. Cost Estimate

The cost estimate shall consist of the Applicant's Engineer's cost estimate which shall be subject to the approval of the Authority's Engineer.

The cost estimate shall be in the form as provided in Exhibit F. Cost estimates will not be approved with unit prices that are less than the minimum unit prices provided.

The following will govern the approximate sizes and locations of sewer mains and places of discharge:

Sewage received into the facilities of the Authority shall not impair or exceed the hydraulic capacity of existing facilities as determined by the Authority or the Authority's Engineer.

If the size of any sewer main, as shown by the application to be installed by the Applicant is inconsistent with the requirements of the area, the Applicant shall install mains, as required by the Authority. The Authority shall pay the Applicant the difference in the material, labor and excavation costs as determined by the Authority or its Engineer.

In the event the Applicant requests the substitution of a pumping station and a force main in place of a gravity sewer main from the Applicant's land to any operational sewer main, and the Authority agrees to the substitution, the Applicant shall pay to the Authority in addition to all other fees, the cost of power, labor and maintenance of the pumping station capitalized at five (5%) percent for 40 years. Power costs shall be calculated by using the flow, lift and power unit costs. Labor and

maintenance will be established at $2,500.00 per year for each 100 gallons of sewage per minute (gpm) pumped by the largest pump.

If the Authority requires the installation of a pumping station of greater capacity and/or depth than that capacity determined by the Authority as necessary to serve the Applicant, the Authority shall pay said Applicant the difference between the cost of the facilities necessary to serve the Applicant and the facilities required by the Authority.

The Authority will not assess the increased cost, if any, of the Engineer's review and inspection fee when the increased cost of such review and inspection to provide facilities in excess of those necessary to serve the Applicant results from an order of the Authority.

Individual service connections for each property will be furnished by the Applicant.

Preliminary approval shall expire three (3) years from the date on which the resolution of Preliminary approval is adopted. The Applicant may submit for final approval on or before the expiration date of Preliminary approval the whole or a section or sections of the project. The Applicant may apply for and the Authority may grant extensions to such tentative approval for additional periods of one (1) year each but not to exceed a total extension of two (2) years, provided that if the design standards have been revised by the rules and regulations, such revised standards shall govern.
In the case of a project of 50 acres or more, the Authority may grant an approval longer than three (3) years as shall reasonably be determined by the Authority. The Applicant may apply for and the Authority may grant extensions to such preliminary approval for such additional period of time as shall reasonably be determined by the Authority, provided that if the design standards have been revised by the rules and regulations, such revised standards shall govern.

Whenever the Authority grants an extension of preliminary approval and preliminary approval has expired before the date on which the extension is granted, the extension shall begin on what would otherwise be the expiration date. The Applicant may apply for an extension either before or after what would otherwise be the expiration date.

Application for Final Approval

Upon notification by the Authority that preliminary approval has been granted, an application for final approval may be filed in duplicate on a form provided by the Authority, a copy of which is included herewith as Exhibit D.

Instructions for Application for Final Approval

An application fee of $200.00 an engineering review fee of 2½% of the estimated costs of construction as determined by the Applicant's Engineer, subject to review and approval by the Engineer, and an Attorney review fee of $500.00 shall be submitted with the application. The minimum engineering review fee shall be $500.00. All drawings submitted for final approval shall be identified as "FINAL UTILITY PLAN."

The application shall be accompanied by the following supporting data (three (3) copies):

1. Plans of all proposed sewer mains.

2. Profiles of all proposed sewer mains.

3. Detailed of construction of manholes, siphons, connections and other sewer appurtenances.

4. Detailed plans for grease interceptors, sewage pumping stations and treatment plants.

5. Specifications for the construction of proposed sanitary sewer collection system and appurtenances including pumping stations and/or treatment plants.

6. Detailed estimate of entire construction cost. If project is divided into phases, a cost for each phase is to be submitted.

7. Engineer's report, together with other data furnished with the application for preliminary approval, such as hydraulic analyses of existing downstream sewerage facilities, if requested by the Authority.

8. A New Jersey Dept of Environmental Protection Treatment Works Approval Permit application form, filled out in the name of the Authority, with applicable fee, if required by the NJDEP.

9. The Authority shall have ninety (90) days to review the Final Application and plans for approval.

Submittals shall contain information described below:

1. Plans of Construction and Distribution System and Appurtenances

   Plans shall conform to the standards set forth under the instructions for Application for Preliminary Approval. Plans shall reflect modifications necessary to comply with comments provided by the Authority's Engineer on the Preliminary plan submission.

2. Profiles

   Profiles shall be provided on sheets of the same size with similar borders and title block as the plans sheets.

   The horizontal scale of the profile details shall match the scale shown on the plan sheets and therefore shall be no smaller than 1" = 50'. The vertical scale shall be ten (10) times the horizontal scale, e.g. with horizontal scale of 1" = 50'; the vertical scale shall be 1" = 5'.

   Profiles shall show proposed manholes, gravity sewers, force mains, air release valves, etc. Additionally, all other utilities shall be shown.

3. Details of Construction of Manholes, etc.

   Details of manholes, siphons, laterals, pipe bedding, etc., shall accompany the plans. Details shall be drawn to standard scales to show clearly the nature of design and shall conform to the Authority's details.

4. Detailed Plans of Wells, Pumping Stations and/or Treatment Works

   The plans for the pumping stations shall include a general site plan showing boundaries, streams, contours, proposed pumping stations, underground piping, underground or

overhead wires. The plans shall show the general arrangement of mechanical and electrical equipment, piping, valves, fittings, etc., within the various structures. The plans shall conform to the size required for applications for Preliminary review. Pumping station details shall conform in all respects to the industry standards. The plans shall conform to the size specified under "Preliminary Approval".

5. Specifications

Complete specifications for the construction of the proposed sanitary sewer collection system and appurtenances, including pumping stations and/or treatment plants shall accompany the plans. Specifications shall be complete and suitable for construction and shall conform to the standards set forth in the details appended to the Authority's Rules and Regulations. Specifications may be omitted for gravity extensions, provided specifications for the sanitary systems are already filed and reference is made to them in the application. In addition, the requirements of all governmental regulatory agencies must be satisfied by the submitted specifications.

6. Costs Estimate

An itemized list of improvements to be constructed shall be furnished and shall include, but not be limited to, cost of rights of way and easements as may be required and cost of record drawing preparation. The estimate of costs will be subject to review and approval of the Authority Engineer. The estimate must make use of the latest copy of the approved "Standard Unit Price Schedule" for sanitary facilities. Cost estimates will not be approved with unit prices that are less than minimum unit prices provided in the schedule.

7. Engineer's Report

The engineer's report shall include but not be limited to, all information required by the New Jersey Department of Environmental Protection and the Authority together with other data furnished with the application for Preliminary approval, if requested by the Authority

8. Application to the New Jersey Department of Environmental Protection

The Applicant shall as a condition to receipt of final approval from the Authority, prepare and submit to the New Jersey Department of Environmental Protection, all required plans and specifications, Engineer's Report and the NJDEP form in duplicate. The Applicant (not the Authority) shall also be responsible to pay any and all related application/permit fees. The Applicant shall prepare and submit the entire exhibit to the New Jersey Department of Environmental Protection in the name of the Authority.

9. Application to the New Jersey Department of Transportation

If a project or any portion thereof requires a permit or permits from the New Jersey Department of Transportation, the Authority will sign the NJDOT application as "applicant" for the permit. However, the Applicant (not the Authority) shall be responsible to prepare all documentation and submit the application for the permit. The Applicant (not the Authority) shall also be responsible to pay any and all related application/permit fees and to pay the escrow deposit as may be required by the NJDOT.

10. Application to the Cape May County Department of Transportation

If a project or any portion thereof requires a permit or permits from the Cape May County Department of Transportation, the Authority will sign the application as "applicant" for the Cape May County Department of Transportation's permit. However, the Applicant (not the Authority) shall be responsible to prepare all documentation and submit the application for the permit. The Applicant (not the Authority) shall also be responsible to pay any and all related application/permit fees and to pay the escrow deposit as may be required by the Cape May County Department of Transportation.

11. Easements and Parcel Maps

Easements in a form approved by the Authority's Engineer and Attorney and executed by the property owner and/or other parties in interest will be required for all sanitary sewer lines (excluding service connections or building mains) which are not within a public right-of-way.

All required easements to be deeded to the Authority shall be clearly indicated on the drawings. Easements shall be unrestricted and shall be a minimum of twenty (20') feet wide unless the depth of pipe, soil conditions, or additional utilities require a wider easement. Where sanitary sewer lines are to be installed in streets that will not be dedicated to the Authority, County or State of New Jersey, the width of the easement(s) shall be the entire width between the curb lines.

Within sixty (60) days from the date of the Resolution of Final Approval, the Applicant shall submit to the Authority a complete Grant of Easement document and a parcel map with a description of the utility easements, which are to be dedicated to the Authority. The easement description shall consist of a metes and bounds survey. The easements shall be dedicated at no cost to the Authority.

Final approval is considered to be the milestone in which the Applicant has satisfied all of the requirements in the final Engineer's Report.

Final approval shall expire two (2) years from the date on which the resolution of final approval is adopted. The Applicant may apply for and the Authority may grant extensions to such final approval for additional periods of one (1) year, but not to exceed three (3) extensions.

In the case of a subdivision or site plan for a planned development of 50 acres or more, conventional subdivision or site plan 150 acres or more, or site plan for development of a nonresidential floor area of 200,000 square feet or more, the Authority may grant extensions to such final approval for such additional period of time as shall reasonably be determined by the Authority.

Whenever the Authority grants an extension of final approval and final approval has expired before the date on which the extension is granted, the extension shall begin on what would otherwise be the expiration date. The Applicant may apply for the extension either before or after what would otherwise be the expiration date.

The Authority shall grant an extension of final approval for a period determined by the Authority, but not exceeding one (1) year from what would otherwise be the expiration date, if the Applicant proves to the reasonable satisfaction of the Authority that the Applicant was barred or prevented, directly or indirectly, from proceeding with the project because of delays in obtaining legally required approvals

from other governmental agencies and that the Applicant applied promptly for and diligently pursued these approvals. An Applicant shall apply for the extension before (1) the expiration date of final approval or (2) the 91st day after the Applicant receives the last legally required approval from other governmental agencies, whichever occurs later.

No Applicant shall commence construction of any kind until the Authority issues a Construction Permit (letter issued by the Authority). The Authority shall not issue a Construction Permit until the Applicant has complied with all conditions of the application and the resolution of final approval, if applicable, and all required fees have been paid. The Construction Permit shall be in a form designated by the Authority and shall be issued at the Executive Director's office of the Authority during regular business hours. The Authority shall direct the Building Inspector that no building permit shall be issued from his department until proof of the issuance of a Construction Permit or a letter of no interest from the Authority is presented. A copy of each Construction Permit or letter of no interest shall be forwarded to the Building Inspector by the Authority at the time of issuance.

Application for a construction permit for the improvements shall be made not later than forty-five (45) days prior to the expiration of final approval. All construction of the said improvements shall be completed within three (3) years from the date of the issuance of the construction permit.

Revised Application

Whenever there is substantial change in the configuration of the system and/or revision of the road pattern, and/or any off-site change related to the project or section is proposed, a revised application for the previous stage of approval is required.

Performance/Maintenance Guarantees Required: Surety, Release

The Authority requires the following as per N.J.S.A. section of the Municipal and County Utilities Authority law, which states:

40:14B-17. Maintenance, performance guarantee; cash requirement

> A municipal authority shall not require that a maintenance guarantee required pursuant to Section 11 of P.L. 1999, c.11 (C.40:14B-73) be in cash of that more than 10% of a performance guarantee pursuant to that section be in cash. A developer may, however, provide at his option some or all of a maintenance guarantee in cash, or more than 10% of a performance guarantee in cash.
>
> The Authority requires that ninety percent (90%) of the performance guarantee be in the form of a bond or letter of credit and the remaining ten percent (10%) be in the form of cash (or check) deposited into an escrow account set up by the Authority specifically for each project.

A Performance Bond or Surety Documents, satisfactory in form to the Authority, shall be submitted to the Authority prior to Authority approval of the application. The Bond or Letter of Credit shall guarantee complete construction within the time period specified by the Authority and shall further guarantee that said construction shall be in accordance with the final plans and specifications approved by the Authority and by the NJDEP and any other applicable regulatory agency.

The Bond or Letter of Credit shall either contain no expiration date and indicate that it remains in effect until acceptance by the Authority of the improvement or shall contain language indicating that

the Bond or Letter of Credit shall not expire or shall contain language indicating that the Bond or Letter of Credit shall not expire unless 45 days prior written notice of such expiration has been provided to the Authority's Executive Director.

In the event that any project which has been approved by the Authority is transferred to another owner or developer, the Performance Bond or Surety Documents shall be also transferred to the new owner, in satisfactory form to the Authority, in accordance with these Rules and Regulations prior to the issuance of any permits.

The Bond Surety Documents shall remain in effect until the sanitary sewer collection system and related appurtenances and/or the water distribution system and related appurtenances are installed, tested and protected by an adequate layer of flexible bituminous paving constructed in accordance with prescribed engineering practices, or approved equal. Subject to the recommendation and approval of the Authority Engineer, the Bond or Surety Documents shall remain in effect until the owner or developer has obtained Form "D" approval from the Authority in accordance with their applicable Rules and Regulations and has posted the necessary two (2) year Maintenance Bond equal to fifteen percent (15%) of the Performance Bond.

The developer shall continue to be completely responsible for this Section of the system until it is legally accepted by Authority Resolution. A Section is typically legally accepted after the completion of the final road surfacing when the sewer and water systems receive final inspection and approval from the Authority Engineer.

Any and all approvals for a project shall cease in the event that any Performance Bond or Surety Document terminates, becomes of no further force and effect or if the Surety enters bankruptcy or receivership. In the event, the Authority may issue a stop work order and revoke any permits and approvals until such time as a proper Performance Bond or Surety Document in accordance with these Rules and Regulations is provided to the Authority.

Prior to filing the final subdivision plat, the Applicant shall provide and the Authority shall accept a performance guarantee for the purpose of assuring the installation and maintenance of improvements. For commercial site plans, the performance guarantee shall be submitted by the Applicant at least thirty (30) days prior to the start of construction.

1. The performance guarantee shall be in an amount equal to 120% of the estimated cost of construction of the required improvements, as determined by the Authority Engineer in accordance with the method of calculation set forth herein.

   The Applicant's Engineer shall prepare, for the Authority Engineer's review, an itemized estimate of cost of the improvements covered by the performance guarantee, which itemized estimate of cost shall be appended to each performance guarantee posted by the obligor.

2. The time allowed for installation of the improvements for which the performance guarantee has been provided may be extended by the Authority by resolution. As a condition of any such extension, the amount of any performance guarantee shall be increased or reduced, as the case may be, to the amount of 120% of the estimated cost of construction determined as herein provided.

3. If the required improvements are not completed or constructed in accordance with the performance guarantee, the Applicant and surety, if any, shall be liable thereon to the

Authority for the reasonable cost of the improvements not completed or constructed and the Authority may, either prior to our after receipt of the proceeds thereof, complete such improvements. Such completion or construction of improvements shall be subject to the provisions of the "Local Public Contracts Law, N.J.S.A. (40A:1101 et seq.).

4. Upon substantial completion of all required improvements (except for the top course of paving) and the connection of same to the Authority system, the Applicant may request of the Authority in writing, by certified mail addressed in care of the Chairman, that the Authority Engineer prepare, in accordance with the itemized estimate of cost appended to the performance guarantee, a list of all uncompleted or unsatisfactory completed improvements. If such a request is made, the Applicant shall send a copy of the request to the Authority Engineer. The request shall indicate which improvements have been completed and which improvements remain uncompleted in the judgment of the Applicant. Thereupon the Authority Engineer shall inspect all improvements covered by the Applicant's request and shall file a detailed list and report, in writing, with the Authority, and shall simultaneously send a copy thereof to the Applicant not later than 45 days after receipt of the Applicant's request.

   The list prepared by the Authority Engineer shall state, in detail, with respect to each improvement determined to be incomplete or unsatisfactory, the nature and extent of the incompleteness of each improvement or the nature and extent of, and remedy to correct any completed improvement determined to be unsatisfactory. The report prepared by the Authority Engineer shall identify each improvement determined to be complete and satisfactory together with a recommendation as to the amount of reduction to be made in the performance guarantee relating to the completed and satisfactory improvement, in accordance with the itemized estimate of cost appended to the performance guarantee.

5. The Authority, by resolution, shall either approve and accept the improvements determined to be complete and satisfactory by the Authority Engineer, or reject any or all of such improvements for cause expressed in said resolution, and shall approve and authorize the amount of reduction to be made in the performance guarantee relating to the improvements accepted, in accordance with the itemized estimate of cost appended to the performance guarantee. This resolution shall be adopted not later than 45 days after receipt of the list and report prepared by the Authority Engineer. Upon adoption of the resolution by the Authority, the Applicant shall be released from all liability pursuant to its performance guarantee, with respect to those approved and accepted improvements, provided that a percentage of the amount of the performance guarantee shall be retained to ensure completion and acceptability of all improvements.

   The Applicant's request for a reduction in the amount of the performance guarantee shall apply to the Bond or Letter of Credit portion and not the Cash portion and must be accompanied by an affidavit certifying that all of the contractor(s) and supplier(s) have been paid in full as of the date of the request.

   a. The amount of the performance guarantee may be reduced to 30% of the amount of the estimate of cost of construction upon successful completion of the preliminary testing of the system after all of the structures, mains, service connections and appurtenances have been installed. The preliminary testing is optional and not a requirement of the Authority.

b. The amount of the performance guarantee may be reduced to 20% of the amount of the estimate of cost of construction upon successful completion of the final testing of the system. The final testing will not be conducted until all of the underground utilities (water, sanitary sewer, storm sewer, gas, electric, telephone, etc.) and all of the curbs and sidewalks have been completed along with the gravel base course of road restoration have been installed and approved.

c. The amount of the performance guarantee may be reduced to 10% of the amount of the estimate of cost of construction when the as-built plans in a form and content satisfactory to the Authority Engineer have been submitted by the Applicant and when the only remaining punch list work consists of the final adjustments to set the valve box covers and curb shutoffs to final grade (i.e., final pavement overlay has not been completed).

The performance guarantee may be released by the Authority upon the completion of all final punch list items, resolution of all outstanding complaints, submission of all closeout documents and delivery of a maintenance guarantee by the Applicant to the Authority in a form and content satisfactory to the Authority Attorney and upon formal acceptance of the improvements by the Authority.

A maintenance guarantee shall be posted with the Authority shall be for a period of two (2) years after final acceptance of the improvement, in the amount of 10% of the cost of the improvement, which cost shall be determined by the Authority Engineer according to the method of calculation set forth herein.

In the event that the Applicant has made a cash deposit with the Authority as part of the performance guarantee, then any partial reduction granted in the performance guarantee shall be applied to the cash deposit in the same portion as the original cash deposit bears to the full amount of the performance guarantee.

6. If any portion of the required improvements is rejected, the Authority may require the Applicant to complete or correct such improvements and, upon completion or correction, the same procedure of notification, as set forth in this section shall be followed.

7. Nothing herein, however, shall be construed to limit the right of the Applicant to contest by legal proceedings any determination of the Authority or the Authority Engineer.

8. Prior to the filing of the final subdivision plat, the Applicant shall deposit basic inspection fees as set forth herein. For commercial site plans, the basic inspection fees must be deposited at least thirty (30) days prior to the start of construction. The basic inspection fees are intended for the normal and customary service required to inspect the installation of the facilities. The Applicant shall reimburse the Authority for all reasonable inspection fees paid to the Authority Engineer for the inspection of improvements; provided that the Authority shall require of the Applicant a deposit for the inspection fees in the amount not to exceed, except for extraordinary circumstances, the greater of $750.00 or 10% of the cost of improvements. The minimum inspection fee is $750.00. For those projects for which the reasonably anticipated inspection fees are less than $10,000, fees may, at the option of the Applicant, be paid in two (2) installments. The initial amount deposited by an Applicant shall be 50% of the reasonable anticipated fees. When the balance on deposit is reduced to 10% of the reasonably anticipated fees because of payment to the Authority Engineer for

inspection, the Applicant shall deposit the remaining 50% of the anticipated inspection fees. For those projects for which the reasonably anticipated fees are $10,000 or greater, fees may, at the option of the Applicant, be paid in four installments. The initial amount deposited by the Applicant shall be 25% of the reasonably anticipated fees. When the balance on deposit is reduced to ten (10%) percent of the reasonably anticipated fees because of payments to the Authority Engineer for inspection, the Applicant shall make additional deposits of 25% of the reasonably anticipated fees. The Authority Engineer shall not perform any inspection if sufficient funds to pay for those inspections are not on deposit. In addition to the above, the Applicant shall be required to pay additional inspection fees to cover extra work, overtime costs or any extraordinary circumstance as documented by the Authority Engineer. The Applicant shall not be responsible for additional inspection fees related to any additional piping and over sizing as may be required by the Authority.

9. In the event that final approval is by stages or sections of the project, the provisions of this section shall be applied by stage or section.

10. To the extent that any of the improvements have been dedicated to the Authority on the subdivision plat or site plan, the Authority shall be deemed, upon the release of any performance guarantee required pursuant to this section, to have accepted dedication for public use of improvements made thereon according to site plans and subdivision plats approved by the Authority.

Installation of Improvements Prior to Filing Plat

Nothing herein shall prevent an Applicant from installing required improvements prior to the filing of the final subdivision plat provided that final approval has been granted by the Authority, all regulatory construction permits have been secured, and inspection fees are posted with the Authority pursuant to the itemized estimate of cost of construction as approved by the Authority Engineer.

Prior to filing the final subdivision plat, the Applicant shall post a performance guarantee to guarantee the completion of any remaining improvements not yet completed.

Upon completion of required improvements or release of a performance guarantee, a maintenance guarantee shall be posted with the Authority. The amount, terms and conditions of any maintenance guarantee shall be as set forth in this section.

Deposits with Authority; Escrow; Interest

Whenever an amount of money in excess of $5,000.00 shall be deposited by an Applicant with the Authority for professional services employed by the Authority to review Applications for a project, for Authority inspection fees in accordance with this section, the money, until repaid or applied to the purposes for which it is deposited, including the Applicant's portion of the interest earned thereon, except as otherwise provided in this section, shall continue to be the property of the Applicant and shall be held in trust by the Authority. Money deposited shall be held in escrow. The money shall be deposited in a banking institution or savings and loan association in this State insured by an agency of the federal government, or in any other fund or depository approved for such deposits by the State, in an account bearing interest at the minimum rate currently paid by the institution or depository on time or savings deposits. The Authority shall notify the Applicant in writing of the name and address of the institution or depository in which the deposit is made and the amount of the deposit. The entire amount shall belong to the Applicant and shall be refunded to him by the

Authority annually or at the time the deposit is repaid or applied to the purposes for which it was deposited, as the case may be.

The provisions of this section shall apply only to that interest earned and paid on a deposit after the effective date of the adoption of these revised Rules and Regulations.

Escrow Payments for Professional Services

The Authority shall make all of the payments to professionals for services rendered to the Authority for review of applications for development, review and preparation of documents, inspection of improvements or other purposes within these Rules and Regulations. Such fees or charges shall be based upon a schedule established by resolution. The application review and inspection charges shall be limited only to professional charges for review of applications, review and preparation of documents and inspections of developments under construction and review by outside consultants when an application is of a nature beyond the scope of the expertise of the professionals normally utilized by the Authority. The only costs that shall be added to any such charges shall be actual out-of-pocket expenses of any such professionals or consultants including normal and typical expenses incurred in processing applications and inspecting improvements.

If the Authority requires of the developer a deposit toward anticipated Authority expenses for these professional services, the deposit shall be placed in an escrow account pursuant to N.J.S.A. (40:14B-20.1) and these Rules & Regulations. The amount of the deposit required shall be reasonable in regard to the scale and complexity of the development. The amount of the initial deposit required shall be established by the rules and regulations of the Authority or by resolution of the Authority, or both. For review of applications for development proposing a subdivision, the amount of the deposit shall be calculated based on the number of proposed lots.

Each payment charged to the deposit for review of applications, review and preparation of documents and inspection of improvements shall be pursuant to a voucher from the professional, which voucher shall identify the personnel performing the service, and for each date the services were performed, the hours spent to one-quarter hour increments, the hourly rate and the expenses incurred. All professionals shall submit vouchers to the Authority on a monthly basis in accordance with schedules and procedures established by the Authority. If an Authority employee provides the services, the employee shall prepare and submit to the Authority a statement containing the same information as required on a voucher, on a monthly basis. The professional shall send an informational copy of all vouchers or statements submitted to the Authority simultaneously to the applicant. The Authority shall prepare and send to the applicant a statement, which shall include an accounting of funds listing all deposits, interest earnings, disbursements, and the cumulative balance of the escrow account. This information shall be provided on a quarterly basis, if monthly charges are $1,000.00 or less, or on a monthly basis if monthly charges exceed $1,000.00. If an escrow account or deposit contains insufficient funds to enable Authority to perform required application reviews or improvement inspections, the Authority shall provide the applicant with a notice of the insufficient escrow or deposit balance. In order for work to continue on the development or the application, the applicant shall within a reasonable time period post a deposit to the account in an amount to be agreed upon by the Authority and the applicant. In the interim, any required health and safety inspections shall be made and charged back against the replenishment of funds.

The close-out procedure to all deposits and escrow accounts shall commence after the Authority has granted final approval and signed the subdivision plat or site plan, in the case of application review

escrows and deposits, or after the improvements have been approved as provided in section previous sections. The applicant shall send written notice by certified mail to the Authority, and to the relevant Authority professional, that the application or the improvements, as the case may be, are completed. After receipt of such notice, the professional shall render a final bill to the Authority within 30 days, and shall send a copy simultaneously to the applicant. The Authority shall render a written final accounting to the applicant on the uses to which the deposit was put within 45 days of receipt of the final bill. Any balances remaining in the deposit or escrow account, including interest, shall be refunded to the developer along with the final accounting.

Maintenance Guarantees – Limitations

The Authority shall not require that a maintenance guarantee required pursuant to this section be in cash or that more than ten (10%) percent of a performance guarantee be in cash.

Easement Documents

The Applicant shall submit to the Authority within sixty (60) days from the date of final approval, a proposed deed of easements describing by metes and bounds all the lands to be dedicated to the Authority for utility purposes.

When blanket easements are required, the Applicant shall add the following note to the Final Plat:

"The Lower Township Municipal Utilities Authority shall have an easement of access for the purpose of maintaining the on-site comprehensive sanitary sewer system. Said easement is hereby granted to The Lower Township Municipal Utilities Authority over all or any part of Block_____, Lot_____ for said purpose."

Off-Site Sanitary Sewer Facilities

When off-site sanitary sewer facilities are required, said facilities are to be completely constructed, including all pavement restorations, before connecting any on-site facilities to the sanitary sewer system.

Additional Construction Work

The Authority shall reimburse the Applicant for the required additional construction work and the required over-sizing of the sanitary sewer main based on the actual construction cost. The Applicant shall submit to the Authority the contractor's cost proposal for the installation of the additional construction work and the required over sizing of the sanitary sewer main for the Authority Engineer's review no later than thirty (30) days prior to the commencement of construction. Payment shall be made to the Applicant by the Authority Engineer to be complete and the related pavement restoration work has been accepted by the Authority Engineer.

Sanitary Sewer Billing

Billing for sanitary sewer flows shall be as per the Lower Township Municipal Utilities Authority latest rate schedule.

VI DETAILED INFORMATION ON DESIGN AND CONSTRUCTION OF SANITARY SEWER COLLECTION SYSTEMS

All materials to be used on the proposed project that will become the property of the Authority upon conveyance by the Applicant and shall be manufactured in the United States, whenever available. The Applicant is directed to refer to "Chapter 107, Laws 1982" of the State of New Jersey effective date October 3, 1982.

Sanitary Sewer Collection System Design Criteria

General

Materials used in the construction of sewers and force mains shall be as follows: Gravity sewers shall be constructed of polyvinyl chloride (PVC) or ductile iron (DI) pipe or as may be otherwise determined necessary by the Authority or the Engineer.

Sewer service connections and cleanouts shall be constructed of ductile iron (DI) or polyvinyl chloride (PVC) pipe.

Inverted siphons and force mains shall be constructed of ductile iron pipe unless otherwise permitted by the Authority. Inverted siphons shall consist of two (2) pipes with provision for flushing. Flow control gates shall be provided within the chambers. The minimum design flow through the siphon shall be three (3') feet per second (fps).

All standard specifications referred to herein, such as ASA, AWWA, ASTM, ANSI and the like, shall be the latest revision thereof, at the time of Application for Final Approval.

Pipe Materials

Ductile Iron (DI) Gravity Sewer Pipe shall be minimum thickness Class 52 with epoxy or SewPer Coat interior lining and shall be centrifugally cast pipe conforming to the American National Standard Specifications for Iron Pipe for Water or Other Liquids, A21.51 (C151). Fittings shall be compact and shall comply with AWWA C153/A21.53.

Ductile Iron (DI) Force Main Pipe shall be minimum thickness Class 50 and shall be centrifugally cast pipe conforming to the American National Standard Specifications for Iron Pipe for Water or Other Liquids, A21.51 (C151). Fittings shall be compact and shall comply with AWWA C153/A21.53.

Ductile Iron (DI) Pipe and Fittings shall be in accordance with ANSI/AWWA C104/A21.4. All ductile iron pipe shall be installed with Class C ordinary bedding. Under certain unusual soil conditions, the ductile iron pipe might require a poly plastic wrapping to prevent corrosion (AWWA C-105). The Authority reserves the right to require this type of installation if an investigation of soil conditions indicates it is necessary. Additional expenses incurred will be the obligation of the Applicant. All ductile iron pipes shall be installed with a minimum cover of three (3') feet. All Ductile Iron Pipe shall be SewPer Coat as manufactured by Griffin Pipe or equal.

Polyvinyl Chloride (PVC) sewer pipe shall have bell and spigot ends and O-Ring rubber gasket joints. Polyvinyl chloride pipe shall conform to ASTM D3034 with a wall thickness

designation of SDR 35 (minimum). Internal surfaces shall be smooth and free of undulations. Maximum allowable length of pipe sections shall be twenty (20') feet. Maximum allowable length of service connections shall be twelve and one half (12 ½') feet.

The plastic material from which the pipe and fitting are extruded shall be impact types of PVC, unplastized having high mechanical strength and maximum chemical resistance conforming to Type I, Grade 1, of the specification for rigid polyvinyl chloride compounds ASTM D 1784.

Rubber ring gaskets shall be manufactured as per ASTM D 1869, and shall meet physical and chemical test requirements of federal specification ZZ-R-601a. The gasket shall be the sole element dependent upon to make the joint watertight.

The pipe shall be installed as specified in ASTM D-2321. In no case, shall less than a Class III material be used for bedding material. Particular attention should be given to the special requirements for installing pipe in unstable soil or excessive ground water.

All PVC pipe shall be installed with a minimum cover of four (4') feet. No PVC pipe shall be installed with less than four (4') feet of cover without special bedding and the wall thickness of the pipe shall be increased to the designation of SDR 18, or ductile iron pipe shall be used.

Joints

Ductile Iron Rubber Gaskets shall be equal to Tyton and shall comply with AWWA C111/A21.11.

P.V.C. Pipe Elastromeric gasket joint shall be equivalent to Certain-Teed Fluid-Tite, Johns-Manville, Ring-Tite, or Precision Plastic Pipe's E-Z seal and shall comply with ASTM D-3212.

All couplings, connectors and adaptors shall be as manufactured by Smith Blair or approved equal. Fernco type connectors are not permitted for permanent installations, but may be used for temporary repair work.

Pipe Bedding and Trenching

Trench dimensions, maximum depths, and bedding requirements (including cradles and encasement) for sewer mains, etc. shall be in accordance with the manufacturer's recommendations and at a minimum shall conform to the details shown on the Sanitary Sewer Systems Detail Drawings included as part of these Rules and Regulations.

The applicant's application for review by the Authority shall include trenching dimensions and bedding details including reinforcing bar schedules for concrete cradles where applicable.

Manholes

Manholes shall be provided at ends of sewer lines, at intersections and at changes of grade or alignment. The distance between manholes shall not exceed 400 feet. Where sewer mains enter manholes and the difference in crown elevation between the incoming and

outgoing pipes is equal to or greater than two (2') feet, drop pipes shall be provided and drop manholes shall be built. Manholes shall be precast concrete. Manhole foundations shall be constructed of Class C concrete as set forth in the Standard Specifications of the New Jersey Highway Department for Road and Bridge Construction. Walls shall be constructed according to these specifications.

Precast manhole barrels and cones shall be reinforced concrete pipe and fittings formed to ASTM Specification C-478, with round rubber gasketed joints, conforming to ASTM Specification C-361. Maximum absorption shall be eight (8%) percent in accordance with Specification C-76.

Manhole frames and covers shall be of cast iron conforming to Specification ASTM A-48 Class 30 and be suitable for H-20 loading capacity. Standard manhole frames and covers shall be Campbell Foundry Pattern No. 1203B. **Manhole frames and covers shall be locking when installed in easement or unpaved areas. Manhole frames and covers shall be watertight and bolted when installed at an U.S.C.&G.S. elevation of ten (10') feet or less.** Watertight manhole frames and cover shall be Campbell Foundry Pattern 6547. Locking manhole frames and cover shall be Campbell Foundry Pattern 1487. If Bolted manhole frames and covers are required by the Authority they shall be Campbell Foundry Pattern No. 1502. Approved equal covers and frames must be dimensionally interchangeable with the Campbell patterns specified above.

All manholes shall be provided with aluminum bar steps, which shall utilize plastic inserts cast as an integral part of the manhole. Steps shall be 6061-T6 aluminum alloy.

All manholes, which are sixteen (16') feet deep or greater, shall be provided with a precast concrete safety platform. The safety platform shall have a non-skid broom finish, a drain hole, a minimum compressive strength of 4,000 psi, and shall be designed for a concentrated load of 12,000 pounds.

All channels and benches shall be painted with two (2) coats of white epoxy to provide a minimum dry film thickness of 12 mils. The coating on the benches shall receive an additive to provide a non-skid finish. The epoxy coating shall be Pennsbury Coatings Corporation Penn-Chem Coating 54 Series Ponamid H-B Tank Liner Color 54-2-23 White, Con-Lux Coatings Epoxide 34 Ceramic White, or approved equal and shall be applied in accordance with the manufacturer's instructions.

The exterior walls and joints of manholes shall be painted with two (2) coats of coal tar epoxy to provide a minimum dry film thickness of 16 mils. The coal tar epoxy coating shall be Pennsbury Coatings Corporation Bitu-Chem Coating Pennoxy-Tar 32-B-4, Con-Lux Coatings Epolon 22 Block Mastic, or approved equal and shall be applied in accordance with the manufacturer's instructions.

The interior walls and joints of all drop manholes and all manholes where force main connections are made shall be painted with two (2) coats of white epoxy to provide a minimum dry film thickness of 12 mils. The epoxy coating shall be Pennsbury Coatings Corporation Penn-Chem Coating 54 Series Ponamid H-B Tank Liner Color 54-W-23 White, Con-Lux Coatings Epoxide 34 Ceramic White, or approved equal and shall be applied in accordance with the manufacturer's instructions.

All drop manholes shall be outside drops unless otherwise approved by the Authority in the final application phase. In those cases where an inside drop manhole is allowed to accommodate a change in elevations (inverts), the drop may be internal only if the manhole is five (5') feet inside diameter and approved by the Authority.

The inside drop pipe must be the next larger size diameter available. i.e.: An eight (8") inch collection pipe would require a ten (10") inch drop and a ten (10") inch collection pipe would require a 12" drop. The drop pipe must be securely fastened to the manhole wall with stainless steel straps and bolts every three (3') feet. The drop section must terminate in such a fashion that sewage is not splashed about. Entry shall be smooth, and the use of a flared channel and elbow is mandatory. The drop shall not hamper ladder access.

During installation of the gravity sanitary sewer, the contractor shall allow no debris to enter the main and no flushing of the collection system into the existing main will be permitted. A concrete bulkhead is to be temporarily installed in the connecting manhole.

The owner of the manhole shall have the final say as to the approval or disapproval of any work done by the contractor when making the connection.

Any settlement occurring over the connection made to the manhole will be the responsibility of the contractor.

The owner of the manhole is to receive at least 48 hours notice prior to any work done on the connection. If a stub or knockout bulkhead has not been provided at the manhole, the connection must be made with a coring machine and a watertight neoprene gasket suitable for use with sanitary sewage, with stainless steel clamps. The use of pneumatic hammers, chipping guns, sledge hammers, or other means of providing a connection are not acceptable.

Outside drop manholes shall be the typical drop type connection. All elbows and tees are to be made for sanitary sewage use and have a sweep form as opposed to a sharp tee entry. The drop assembly is to be secured with concrete to the manhole assembly so they will settle as a unit.

All manholes located in easements or off the paved right-of-way shall be accessible for servicing by the Authority VAC vehicle. The Applicant is to submit, in writing, for the approval of the Authority Engineer, his procedure and construction details for stabilizing the access way.

Service Connections

The service connection must be made by use of a wye at the sewer main, thence in a horizontal direction to the building lateral. The service connection cleanout is to use a Two Way wye to connect the riser pipe. It is anticipated that most service connection pipe are four (4") inch in diameter; however, a larger size might be required where the four (4") inch diameter pipe will not accommodate the flow.

A minimum pitch of ¼" per foot shall be used on four (4") inch service connections. Pipe material shall be SDR-35 with gasket type push-on coupling. All connections must have an inspection cleanout with a plastic plug placed two (2') feet from the outside face of the curb

in the area between the curb and the sidewalk. If curbs are not in existence, the cleanout shall be placed one (1') foot outside the property line. All service PVC lines shall have magnetic tape laid 12" above the pipe crown. Sewer service laterals shall be installed 12" over and 12" under or a minimum of 36" apart from any water service.

It is the intent that all service laterals be installed perpendicular to the sewer gravity main, from the service connection to the cleanout, accept where approved by the Engineer on the plans. If the service cannot be run perpendicular, the service lateral shall run horizontally straight from the service connection at the main to the cleanout. The location of the cleanout shall be as per the detail and no cleanout shall be located in any driveways, sidewalks or aprons.

Service connections shall be installed along the off-site main to serve all individual properties along the route. The Applicant shall submit to the Authority the contractor's cost proposal for the installation of the off-site service connections for the Engineer's review no later than thirty (30) days prior to commencement of construction. Costs for the installation of said service connections will be reimbursed by the Authority to the Applicant upon certification of the completion of the work by the Engineer and as approved by the Authority.

Inspection and approval of the installation of the building lateral from the curb cleanout to the building is under the jurisdiction of the Township Plumbing Inspector.

Grease Interceptors

All commercial establishments (or establishments directed so by the Authority) shall install a grease interceptor within the limits of their property in order to capture and retain grease prior to its discharge to the Authority's sewer system. The size of the grease interceptor shall depend on the anticipated sewage flow from the establishment; but the general design of the grease interceptor shall be in accordance with the manufacturer's recommendations and at a minimum shall conform to the details shown on the Sanitary Sewer Systems Detail Drawings included as part of these Rules and Regulations

The property owner shall be responsible to own, operate and maintain the grease interceptor facility including compliance with all State regulations as may be promulgated from time to time. Authority personnel shall be granted access for inspection of the condition and operation of the grease interceptor facility. To prevent damage to or impairment of the Authority's sanitary sewer system, the Authority reserves the right to specify certain required operation and maintenance procedures from time to time that the property owner shall be obligated to comply with.

Pump Out Facilities

Prior to construction of pump out facilities for sewage stored in holding tanks on boats, recreation vehicles or otherwise, application shall be made to the Authority for approvals in accordance with the procedures and fee schedules provided by the Authority for any real estate development. Detailed plans and specifications shall be submitted for review and approval in accordance with existing Rules and Regulations.
The user of any such facility shall not introduce any material into the sanitary sewer collection system that may be detrimental to the treatment process or the collection system.

All pump out facilities shall provide pre-treatment of the sewage to eliminate odors or hydrogen sulfide content that exceed the standards. Pre-treatment processes may include aeration, chlorination or the use of chemical oxidants such as hydrogen peroxide, potassium permanganate or ozone.

If the pump out facility requires a pump or lift station to transport the sewage to the Authority's collection system, then the pump or lift station must be separate and independent from the "pump out" facility which shall not be used for the dual purpose of emptying the holding tank and transporting sewage to the collection system.

A meter device or hour run meter totalizer must be installed on the pump for billing purposes. Billing will be based on gallonage at the current sewer rate as established and changed from time to time by the Authority. If applicable, an additional surcharge for suspended solids content in excess of what is allowed may be levied.

All pump out facilities must be inspected and approved by the Township Plumbing and Building Inspection Departments. Backflow prevention devices shall be installed to protect the potable water supply at pump out stations. Safety features must be installed to prevent sewage spills due to pump failure or when disconnecting the pump out hose. A means shall be provided to flush out the entire system after each use.

The Authority shall have the right to terminate service if at any time the sewage quality is not in conformity with its regulations.

The force main connection to the sanitary sewer shall include a curb stop shut off at the point of discharge. The make, model, and a detailed specification of the pump out facility shall be submitted to the Engineer for approval.

The property owner shall be responsible to own, operate and maintain the sewage pump out facility including compliance with all State regulations as may be promulgated from time to time. Authority personnel shall be granted access for inspection of the condition and operation of the sewage pump out facility. To prevent damage to or impairment of the Authority's sanitary sewer system, the Authority reserves the right to specify certain required operation and maintenance procedures from time to time that the property owner shall be obligated to comply with. The Authority shall bill the property owner for the usage of the sewage pump out facility based on the metered flow. These requirements shall be incorporated into the property deed. The Applicant shall submit a copy of the sample deed to the Authority at least thirty (30) days prior to construction. The Applicant shall furnish the Authority with a copy of the filed property deed upon completion of the project.

A separate sewer connection fee will be submitted for each sewage pump out facility. For the purposes of the connection fee, the connection will be rated as a single equivalent unit or any other fee that may be in effect at the time of application.

Grinder Pumps

All grinder pump systems are an integral part of a master sanitary sewer system. Authorized Authority personnel shall be granted unlimited access for inspection purposes. Grinder pumps shall be Environment One GP 2000 series.

All existing grinder pump systems owned by property owners shall be operated, maintained, repaired, and/or replaced at the sole cost of the property owners of record. The grinder pump systems shall be operated in accordance with the standards set forth by the Authority.

Should an Applicant be given an approval permitting the installation of a grinder pump system(s), it shall be owned, operated, maintained, repaired, and/or replaced by the property owner of record. The approval shall be subject to the signing of an agreement between the Authority and the Applicant (property owner), which shall be recorded in the Cape May County Clerk's Office. The agreement shall be a covenant that runs with the land. The cost of recording shall be paid by the Applicant and proof of recording shall be a prerequisite to final connection approval(s).

Pumping Station

All raw sewage shall be screened before pumping. Comminutors may be approved in lieu of screens and shall be provided with an acceptable bypass with gates. At least two (2) pumps or ejectors shall be provided, each capable of handling the total design peak flow. If more than two (2) pumps are used, their capacities shall be such that upon the failure of the larger pump, the other will handle the peak flows. Ejectors will not be permitted for ultimate peak flows exceeding 100 gallons per minute (gpm). All electric motors and equipment installed in subsurface chambers shall be explosion-proof and damp-proof. When ejectors are utilized, two (2) compressor units are required and they shall be so interconnected that the duplicate unit will commence operation in the event of failure of the one in use. Shutoff valves will be provided on suction and discharge piping, which shall be flanged or otherwise removable and check valves shall be provided on all discharges.

A bypass pump manhole shall be installed within ten (10') feet of the wet well. A four (4") inch ductile iron bypass line shall be installed on the discharge pipe with a quick disconnect connection set inside a grade box.

Pumps shall be installed in dry wells deep enough to maintain a suction head at starting. The minimum internal dimensions of the steel dry well shall be ten (10') feet diameter by ten (10') feet high and one-half (1 ½") inch thick. The dry and wet wells shall be completely separate and shall be provided with adequate ventilation, lighting and drainage. Sufficient space shall be provided in the dry well for the repair and removal of pumps and motors. Where operational/maintenance duties are required in confined space, forced ventilation with automatic operation when the access door opens shall be provided with a minimum capacity of 12 air changes per hour. The capacity of the wet well shall not exceed ten (10) minutes when flow is at the average dry weather rate. The floors of the wet well shall slope at least 45° toward the pump suction. The pump suction shall terminate with a 90°flared elbow. The wet well shall be equipped with a complete confined space rescue winch and harness system including a seven (7') foot tripod and a retractable lifeline with stainless steel cable as manufactured by Miller, or equal. The dry well shall be supplied with a telephone company connection, dehumidifier, sump pump, heater, and man lift and transducer system

for flow control. The man lift shall be capable of lifting 400 pounds. All steel pumping stations shall be provided with acceptable cathodic protection and shall include with the shop drawings an Engineer's recommendation for the maintenance of the cathodic protection system.

The developer at his discretion and the approval of the Authority may install a submersible type pump station having a wet well and valve pit made of concrete. The station shall follow the design parameters for the dry well station including controls, superstructure, generator etc.

An auxiliary source of power shall be provided for electrically driven pumps and equipment required for operation. The auxiliary power shall be natural gas operated when available or propane gas when natural gas is not available. The auxiliary source of power shall be housed in a superstructure to conform to the neighborhood architecture and shall be vandal proof. All diesel operated facilities shall be supplied with sufficient storage for a minimum of twenty-four (24) hour operation period. Diesel fuel shall be stored in above ground storage tank conforming to the latest regulations. No below ground storage tanks shall be permitted. The auxiliary power system shall be provided with a separate external receptacle for the Authority's portable auxiliary source of power with a manual transfer switch located within the superstructure.

In pumping stations exceeding capacities of 1,000 gallons per minute, electrical motors and power equipment shall not be installed in subsurface chambers. A solid wall shall be constructed between the wet well and dry well extending to the floor of the superstructure. The superstructure shall conform to the neighborhood architecture and shall be vandal-proof.

Automatic sound alarms shall be installed independent of station power and they shall give warning of high and low water and power failure. These alarms shall be connected to the Authority's master alarm panel via an automatic telephone dialing system by RACO - VERBATIM or approved equal. A panel board shall be provided with indicator lights showing the cause of alarm. The indicator lights shall be connected such that the light indicating cause of alarm remains bright/flashing until manually reset. After reset the indicator lights shall be connected such that the light indicating cause of alarm remains bright until the problem has been corrected. These alarms shall be connected to the "Central Station" as designated by the Authority.

Adequate light, ventilation, air-conditioning, heat and potable water supply with anti-siphon hose outlets shall be provided for all stations. Toilet facilities shall be provided for all stations with superstructure. No connections between fresh water and sewage pumps or pipes are permitted.

Complete repair tools and accessories including pump seals, etc. shall be provided with the pump station and appropriately stored in the superstructure.

Force main velocities shall be at least two (2') feet per second at the normal pumping rate. Properly designed air release valves shall be provided on high points of the force main. The force main shall be provided with acceptable cleanout and air release manholes.

Space must be provided in the superstructure for housing the generator and/or motors and electrical and chemical feed equipment. All piping must be provided. If the time of travel of

the sewage from the most remote point within the sewer system to the Authority's transmission facilities at the rate of two (2') feet per second is equal or greater than two (2) hours, then chemical treatment and equipment must be furnished.

Detailed operational costs of the pumping station must be submitted with the Engineer's estimate.

Each pumping station must be on a full size lot based on the existing zoning ordinance. The Authority reserves the right to increase or decrease said lot size requirements. The plans and specifications must include provision for lawns, shrubbery, paved drive and concrete walk. The entire property must be surrounded by a six (6') foot high chain link fence. Truck and pedestrian gates shall be provided. The paved drive shall have a total thickness of eight (8") inches, consisting of six (6") inches of compacted road gravel and a two (2') inch FABC finished surface. The walk shall be four (4') inch minimum thick Class A concrete.

The Township encourages the use of alternative methods to avoid the installation of pumping stations wherever possible. Where in the opinion of the Engineer, an alternative method is available; a pumping station will not be approved.

Treatment Plant

No general rules can be formulated for the design of treatment plants and each case shall be considered individually, based upon the discharge of effluent. The type and method of treatment must effect at all times a minimum reduction of 95% in biochemical oxygen demand (BOD) of the received sewage at the plant, the BOD of the effluent not to exceed 15 parts per million (15ppm) or as specified in the N.J.P.D.E.S. permit. Treatment plants should be located a minimum of 1,000 feet from the nearest dwelling or other building. Exceptions to this rule may be made depending on the type of treatment to be used, but in no case will a treatment plant structure be permitted less than 250 feet from the boundary line of the treatment plant property.

Treatment plant plans and specifications must include provisions for lawns, shrubbery, paved roads, and sidewalks and the entire property must be surrounded by six (6') foot high chain link fence.

Separate gates must be provided for pedestrian and truck use. Detailed estimates of operating and maintenance costs of the proposed treatment plant must be submitted with the engineer's estimate. Any such treatment plant must conform to all applicable County, State and Federal Regulatory Agency requirements.

As-Built Plans

After construction and before final acceptance by the Authority, the Applicant shall furnish to the Authority one (1) electronic data file, one (1) mylar reproducible drawing, in ink, approved by the Authority Engineer, and three (3) sets of sealed prints of each drawing showing the sanitary sewer system and all facilities as constructed.

The "as-built" plans shall show the exact locations of the sewer mains, sewer service connections and manholes by stationing from the nearest downstream sanitary sewer manhole. The as-built plans must indicate the sanitary sewer pipe inverts, lengths and

corrected slopes. The as-built plans must indicate the station/offset locations of all water and sanitary sewer service laterals measured from the nearest downstream sewer manhole. All main line gate valve locations must be trinagulated and measured from the nearest downstream sanitary sewer manhole. The "as-built" plans must show the locations of the water mains and must show the size and type of all mains (water and sanitary sewer) and all services (water and sanitary sewer). In addition, the "as-built" plan for a dry system must include the elevation of the invert of the end of the service connection, elevation of the top of the curb cleanout and building finished floor elevation.

All "as-built" plans shall be prepared, signed and sealed by a Professional Land Surveyor duly licensed by the State of New Jersey. The vertical and horizontal accuracy shall conform to standard mapping tolerances.

Shop and Working Drawings

Prior to construction, the Contractor shall submit two (2) sets of approved, shop or work drawings of concrete reinforcement, materials fabricated especially for the project and materials for which drawings are specifically requested. Such drawings shall show the principal dimensions and construction details. When it is customary to do so, or when the dimensions are of particular importance, the Developer's Engineer shall approve the drawings.

No material shall be purchased or fabricated for equipment until the Authority or Authority's Engineer has reviewed the shop or work drawings.

Operation and Maintenance Manuals

After construction and before final acceptance, the Applicant shall furnish the Authority with five (5) sets of Operation and Maintenance Manuals for facilities constructed.

VII APPROVAL OF PLANS BY STATE AND OTHER AGENCIES

Approval of plans by the New Jersey Department of Environmental Protection must be obtained and will be a condition of the Authority's final approval. The Applicant shall obtain all permits from the New Jersey Department of Environmental Protection where required. Permits to construct sanitary sewers and/or other structures within the right-of-way limits of State, County, and Municipal roads must be secured and paid for by the Applicant.

VIII INSPECTION DURING CONSTRUCTION

General

The Applicant shall give 72 hours notice to the Authority and the Engineer prior to construction. All construction shall comply with the approved plans and specifications and shall be subject to construction review or inspection by the Authority or its authorized representative. In the event of noncompliance, the Authority or its authorized representative may direct or order discontinuance of construction.

The Applicant shall submit a progress report together with the cost of construction at the end of each month to the Authority.

After the final pavement overlay has been completed, all sanitary sewer facilities must pass a final inspection. All of the manhole covers must be set flush with the final pavement overlay. All of the manhole covers must have the proper LTMUA insignia. The sewer lateral cleanouts must be visible and set flush to grade. No sewer lateral cleanouts are permitted in driveways or sidewalks. Following the final inspection, all final punch list work must be completed within thirty (30) days.

No service connections shall be made to a street main whether pressure tested or not, unless said connection is made under the review and inspection of the Authority's representative. A temporary leak-proof bulkhead type plug shall be installed in the upstream (inlet) side of the manhole furthest downstream in any sewer main or branch under construction and shall remain intact and unloosened until written permission is received from the Authority or its authorized representative, to remove same.

This permission will not be granted until each section of the sewer has been cleaned and flushed in a manner acceptable to the Township or its authorized representative

Leakage and Testing

All sewers shall be subjected to an air pressure test. The sewers shall be tested after all the underground utilities (gas, electric, telephone, etc.) have been completed, the road gravel base has been installed to subgrade and the curbs and sidewalks have been completed. Preliminary tests, which may be performed by the developer, do not preclude the final tests, which are required by the Authority. The tests shall be performed between two (2) manholes or as otherwise directed by the Authority or its authorized representative and shall include all related sanitary sewer collection facilities including the service connections. The Applicant shall furnish all labor, material and equipment necessary for the testing.

In the air test method, the Applicant shall isolate the section of pipe to be tested and install a plug at each end of pipe at the manholes. All laterals and cleanouts shall be plugged at ends and braced securely. The plugs at each end of the pipe at the manholes must have provisions for connecting an air hose. Connect one end of the air hose to the plug, the other to a portable air compressor with pressure regulators and gauges. The pressure regulators are used to control the rate at which air flows to the test section, and to monitor air pressure in the pipe. Supply air to the pipe section, monitoring it so that the pressure inside the pipe does not exceed 5.0 psig.

When pressure reaches 4.0 psig, throttle the air supply so that internal pressure is maintained between 4.0 and 3.5 psig for at least two (2) minutes. This will allow time for the temperature of the air to come to equilibrium with pipe walls.

After temperature has been allowed to stabilize for two (2) minutes, disconnect the air supply and allow pressure to decrease to 3.5 psig. At 3.5 psig start a stop watch to determine the time required for pressure to drop to 2.5 psig. The time required for a loss of 1.0 psig at an average pressure of 3.0 psig can be used to compute the rate of air loss. The following table may be used to determine the maximum allowable time for pressure to drop 1.0 psig for various pipe.

Pipe Size	Minutes	Seconds
6"	2	15
8"	3	57
10"	4	43

Pipe Size	Minutes	Seconds
12"	5	40
15"	7	05
18”	8	30

Any pipe, joint or other part of the sewer constructed found to exceed the permissible limit shall be repaired, or removed and replaced, before proceeding with construction.

When using PVC piping, the allowable deflection shall not exceed five (5%) percent. Measurements shall be made using a "GO-NO-GO" mandrel where necessary in the opinion of the Engineer.

To test force mains, the contractor shall fill the pipe with water in a manner such as to expel all air. If the contractor elects, he may test the pipe as a whole or in convenient sections as approved by the Authority’s Engineer. The pipe shall then be subjected to a pressure test of 150 psi for a two (2) hour period. Any leaks or defective joints shall be satisfactorily repaired in kind or replaced and the test repeated until the line shows no leakage.

To test low-pressure force mains, the contractor shall fill the pipe with water in a manner such as to expel all air. If the contractor elects, he may test the pipe as a whole or in convenient sections as approved by the Authority’s Engineer. The pipe shall then be subjected to a pressure test of 100 psi for a two (2) hour period. Any leaks or defective joints shall be satisfactorily repaired in kind or replaced and the test repeated until the line shows no leakage.

IX USE OF THE SANITARY SEWER SYSTEM

Use of System by the Authority or Township

During construction and before final acceptance, the Township shall have the right to use any completed portion of the system without waiving its right to order correction of any defects.

Illegal Use of System

Use of the system for the discharge of sump pumps, or drainage from cellar drains, leaders, downspouts, drainage tile, cellar pits or septic tanks or septic tank trucks and any other use for which the system was not specifically designed shall be an "Illegal Use of System", and is strictly prohibited. Such use shall be subject to penalty and/or fine as may be prescribed by law.

X ACCEPTANCE OF IMPROVEMENTS BY THE AUTHORITY

After construction of all proposed improvements has been completed the applicant shall:

1. Obtain from the Authority Engineer a certification that the construction has been completed in accordance with the approved plans and specifications.

2. Submit deeds with metes and bounds description to all lands, easements, and improvements not previously transferred, together with title policies.

3. Submit Affidavits of Title for land, easements, and equipment and a recitation thereon that everything conveyed to the Authority has been paid for in full. Submit a

Corporate resolution authorizing said transfers if applicable.

4. Submit copy of filed subdivision plat showing all easements containing the filed plat number and filing date.

5. Submit surveys for sites and easements dedicated to the Authority and sealed by a licensed New Jersey Land Surveyor.

6. Submit Bills of Sale for all equipment and facilities, including warranties from manufacturers of equipment.

7. Submit releases from the general site contractor(s) who furnished and installed the facilities.

8. Furnish one (1) electronic data file, three (3) sets of sealed prints and one (1) mylar reproducible of the as-built plans prepared by a licensed New Jersey Land Surveyor.

9. Post a Surety Maintenance Bond (or irrevocable letter of credit) in a form and content approved by the Authority and to the satisfaction of the Authority Attorney equal to 10% of the Estimate of Cost, guaranteeing the satisfactory performance and functioning of the improvements for a minimum of two (2) years.

10. Provide an affidavit that all submittals are true, accurate and complete and that all conveyances are free from any lien or encumbrances.

XI REGULATIONS GOVERNING WASTES DISCHARGED OR TO BE DISCHARGED INTO SANITARY SEWERS COLLECTION SYSTEM

Applicant shall conform with and abide by the minimum requirements of the Authority as presently enacted and as amended and supplemented from time to time.

Sewage received into the facilities of the Authority shall not;

- Be in such quantity as to impair or exceed the hydraulic capacity of such facilities as determined by the Engineer.
- Contain any amount of solid matter that will prevent self-scouring flow when carried in sewers installed at the minimum design values.
- Be of such a nature as to create explosive conditions.
- Be discharged from tank trucks into manholes of the sanitary sewer collection system.

The Authority herein adopts by reference the NJDEP's rules and regulations as the Township's minimum requirements.

As stated previously, grease interceptors or separation devices (as approved by the State of New Jersey Plumbing Code and local code as promulgated by the Township Board of Health) shall be installed and routinely maintained at those locations such as restaurants, bakeries, etc. that dispose of fat, oil or grease wastes. The Township reserves the right to approve of the installation of said grease interceptor and thereafter routinely inspect the system for proper maintenance.

For industries discharging industrial waste, a written contract with the industry will be required. An industrial discharge control manhole must be installed in accordance with the Authority requirements.

XII REGULATIONS PERTAINING TO CONSOLIDATION OF LOTS

When any individual or developer consolidates a building lot, where previously each lot had its own water and sewer service lateral, the individual or developer shall be required to abandon the service laterals that will not be used. The water service lateral shall be abandoned at the corporation stop (shut-off-valve) at the water main. The individual or developer shall be required to excavate and locate the connection and close the corporation stop. The individual or developer shall then be required to cut the lateral leaving a short pig tail and crimp the end of the said pipe. The sewer service lateral shall be abandoned by removing the clean-out riser, and then permanently capping the lateral just behind the curb. This procedure shall apply to the consolidation of lots which resulted in the residual property being "unbuildable" under current Authority requirements.

Policy Regarding "Flag" or "Panhandle" Lots

This policy is intended to guide and advise applicants concerning water and sewer service to lots with minimal or no frontage on a public right-of-way.

For lots that have been created by a valid subdivision and which are located one or two lots back or away from the public right-of-way, the Authority jurisdiction will stop near the right-of-way line, as with a lot with normal frontage.

For those lots and situations where there are more than two (2) lots with minimal frontage or where this situation could occur if other development takes place, the Authority would consider providing service to the lots via a water and/or sewer main, located in the common access driveway/easement area. In this case, the applicant shall provide an easement to the Authority with a minimum width of 20' for water and sewer mains.

The construction of the main lines or requirement of a pro-rata share for future construction will be decided by the Authority as if the lots fronted on a public right-of-way. Each will be decided on a case by case basis and the decision will be based on factors including but not limited to: proximity to existing active mains, length of the extension, number of lots in the application, development patterns in the area and other factors deemed to be relevant by the Director and the Engineer.

XIII COMPLIANCE WITH RULES AND REGULATIONS

The Applicant shall comply with all of the Rules and Regulations as set forth herein. Failure to do so will result in a "stop work order" by the Authority. These Rules and Regulations are minimum requirements, and are not intended to replace detailed specifications, which are the responsibility of the Applicant. They are intended to apply to usual and not exceptional conditions. These Rules and Regulations are subject to amendments by the Lower Township Municipal Utilities Authority. The Authority reserves the right to specify additional requirements.

XIV RULES & REGULATIONS IN EFFECT

These Rules and Regulations shall take effect immediately, and a copy shall at all times be kept on file at the principal office of the Authority and shall at all reasonable times be open to public

inspection.

All resolutions, rules or regulations inconsistent herewith are hereby rescinded.

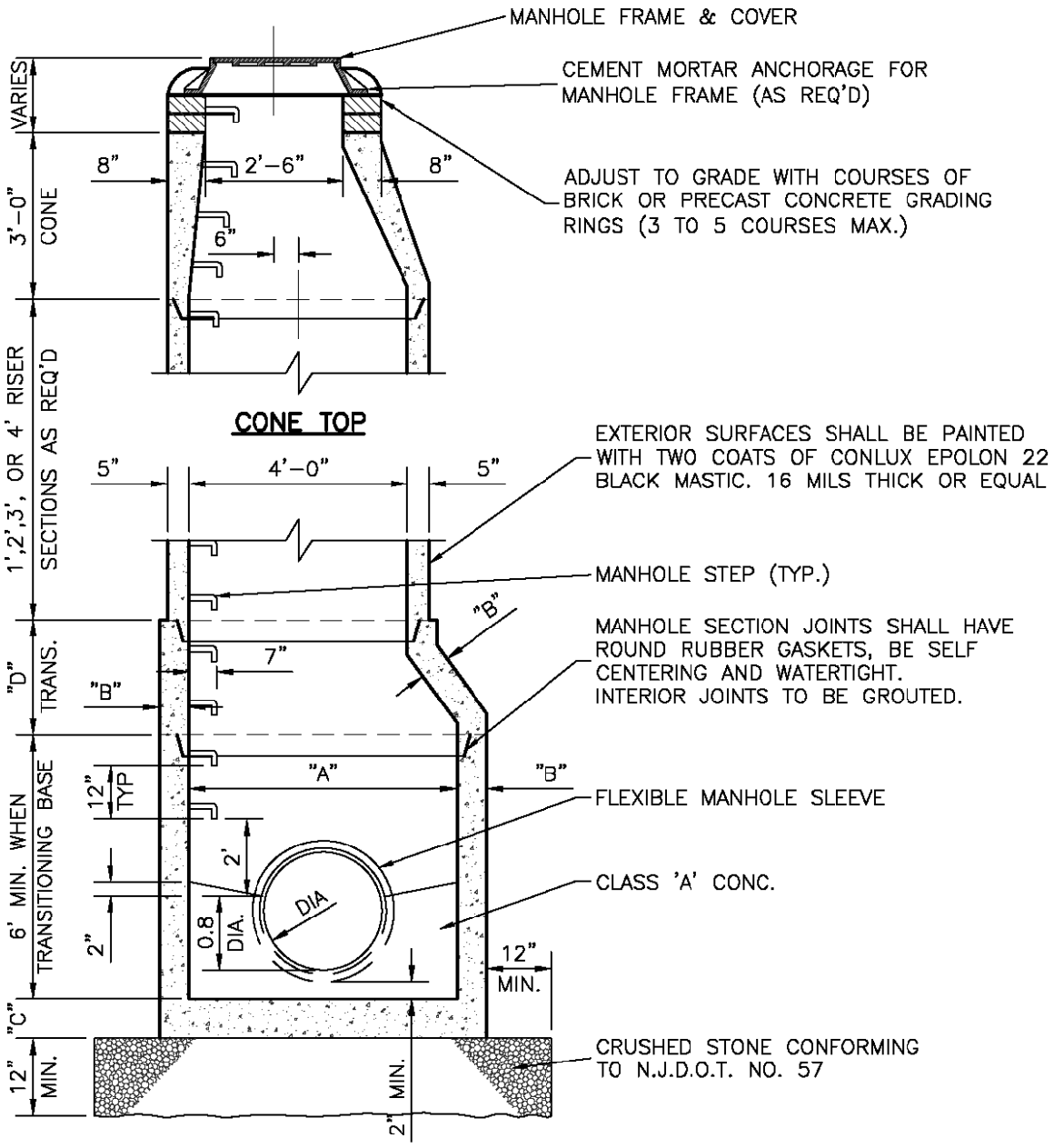
DRAWINGS

RULES AND REGULATIONS

Governing Applications To

THE LOWER TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

PIPE DIA.	DIMENSIONS			
	"A"	"B"	"C"	"D"
UNDER 24"	4'-0"	5"	6"	--
24" TO 33"	5'-0"	6"	8"	24"



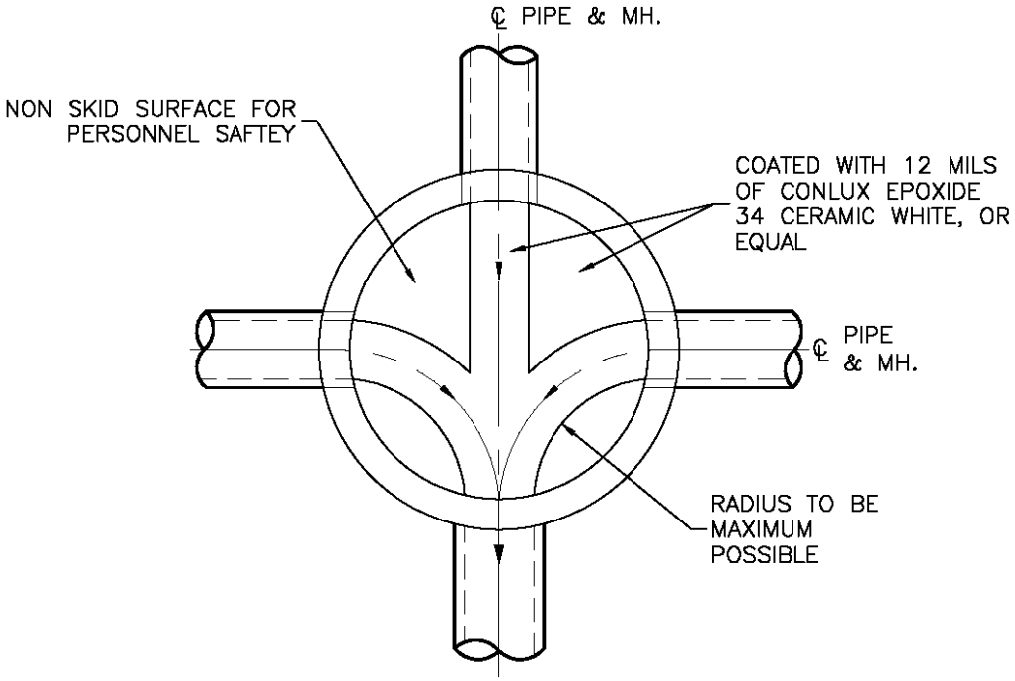
PRECAST REINFORCED CONCRETE MANHOLE

N.T.S.

Lower Township MUA

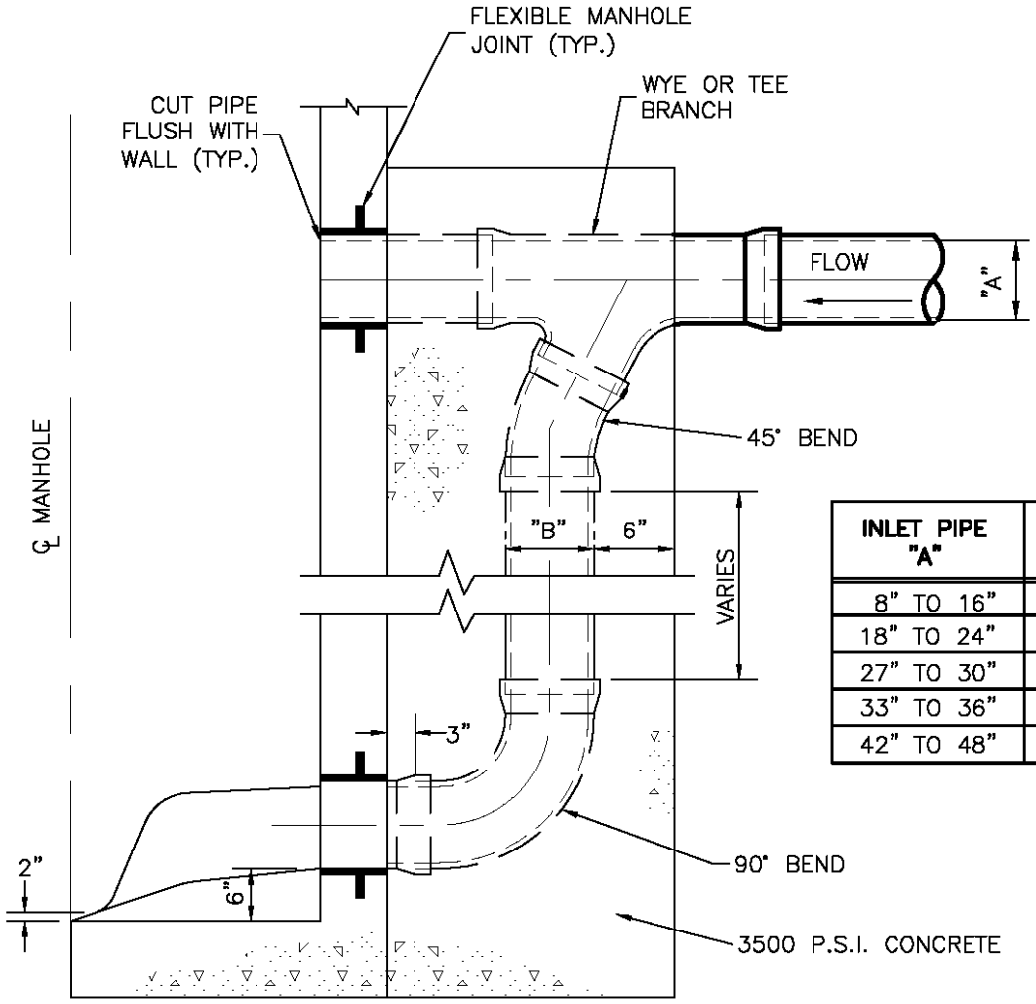
05/06/2009

Township of Lower, Cape May County, New Jersey



TYPICAL CHANNELING OF MANHOLE BOTTOM

N.T.S.



INLET PIPE "A"	DROP CONNECTION "B"
8" TO 16"	8"
18" TO 24"	12"
27" TO 30"	18"
33" TO 36"	24"
42" TO 48"	30"

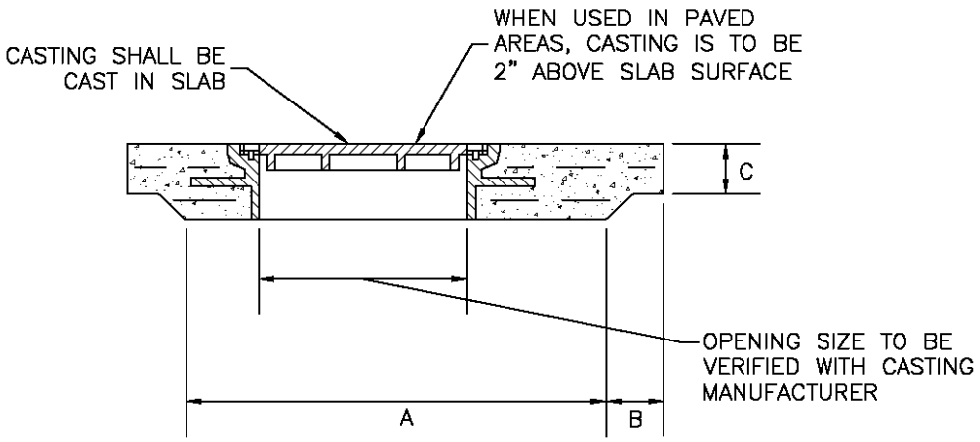
NOTES:

1. DROP PIPE TO BE USED IN ALL CASES WHERE DIFFERENCE BETWEEN INLET AND LOWEST OUTLET INVERT IS 2 FEET OR GREATER.

TYPICAL DROP MANHOLE SECTION

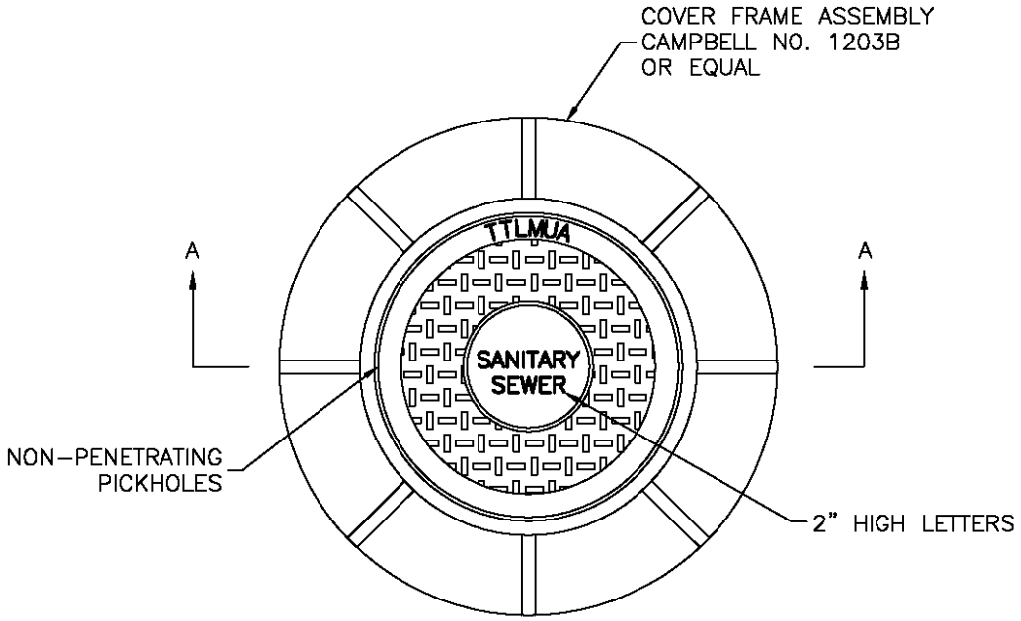
N.T.S.

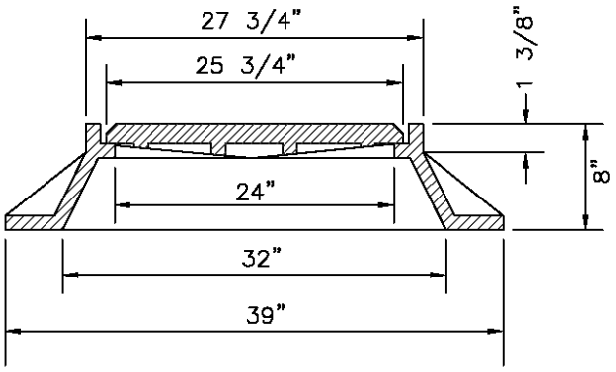
PIPE DIAMETER	DIMENSIONS		
	"A"	"B"	"C"
UNDER 24"	4'-0"	5"	4"
24" TO 33"	5'-0"	6"	4"



FLAT TOP MANHOLE DETAIL

N.T.S.





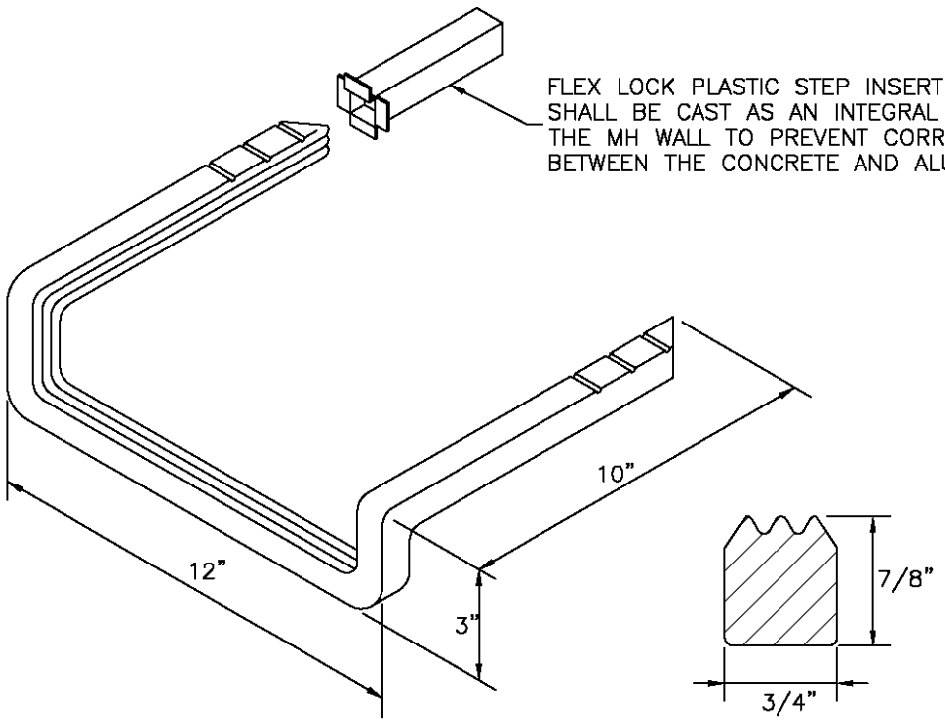
SECTION A-A

NOTES:

1. MANHOLE FRAME AND COVER SHALL CONFORM TO CAMPBELL FOUNDARY PATERN 1203B OR APPROVED EQUAL.
2. CASTING SHALL BE FULLY COATED INSIDE AND OUTSIDE WITH COAL TAR PITCH VARNISH.

STANDARD MANHOLE FRAME AND COVER

N.T.S.



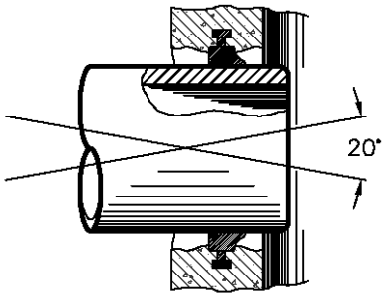
TYPICAL SECTION

NOTES:

1. STEP MATERIAL SHALL BE ALUMINUM TYPE 6061–T6.
2. STEP SHALL MEET OSHA REQUIREMENTS.
3. GROOVES SHALL PROVIDE SAFE TREAD.

MANHOLE STEP

N.T.S.

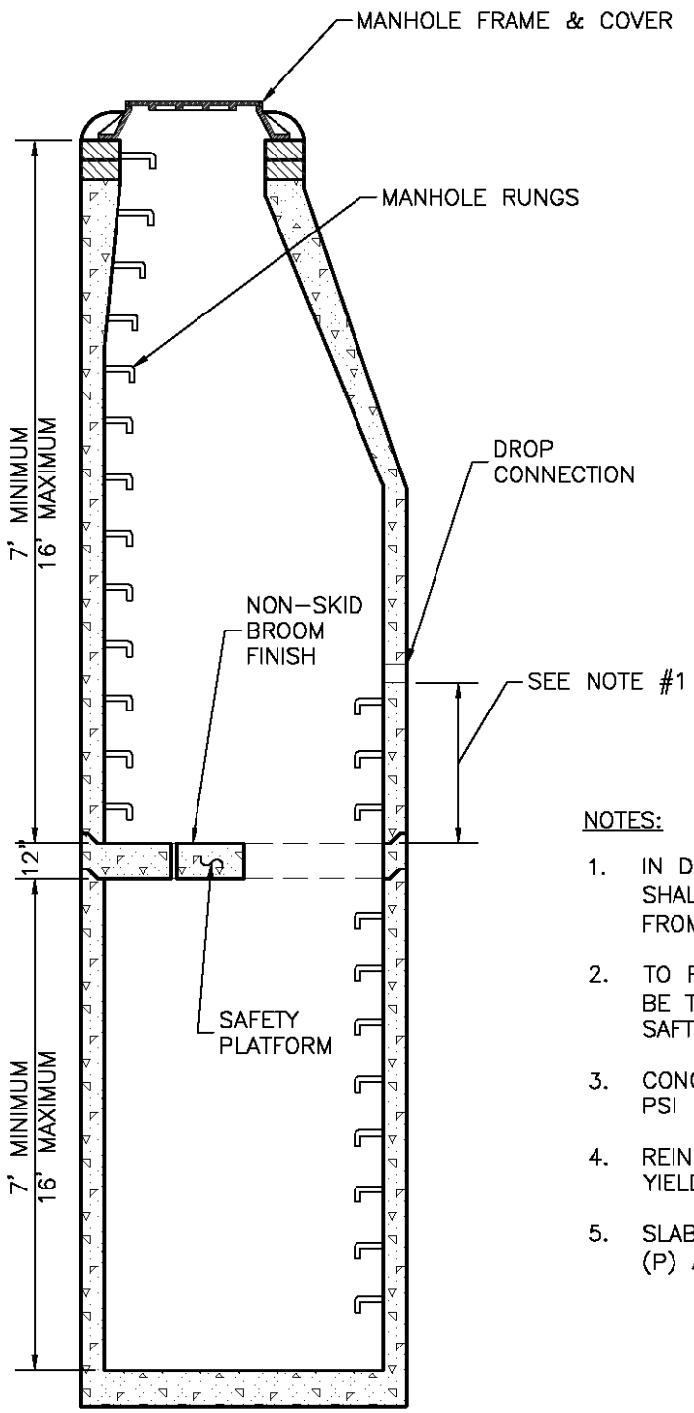


NOTES:

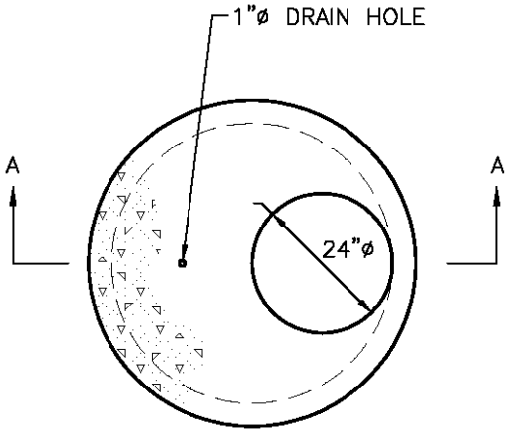
1. A–LOK GASKET PER A.S.T.M. RUBBER GASKET SPECS. C923, CAST INTEGRALLY IN MANHOLE WALL AND LOCATED AS REQUIRED.
2. A–LOK GASKET SHALL ALLOW 10° OMNIDIRECTIONAL DEFLECTION.
3. A–LOK GASKET SHALL MEET RESILIENT CONNECTORS REQUIREMENTS OF A.S.T.M. C–923.

PIPE TO MANHOLE FLEXIBLE SEAL DETAIL

N.T.S.



SECTION A-A



PLATFORM – PLAN

NOTES:

1. IN DROP MANHOLES, THE SAFETY PLATFORM SHALL BE SET 1' MINIMUM TO 4' MAXIMUM FROM PIPE INVERT (WHEN POSSIBLE).
2. TO FACILITATE INGRESS & EGRESS, THERE SHALL BE THREE (3) MANHOLE RUNGS ABOVE THE SAFTEY PLATFORM.
3. CONCRETE SHALL HAVE A STRENGTH OF 4,000 PSI IN 28 DAYS.
4. REINFORCING STEEL SHALL HAVE A MINIMUM YIELD OF 60,000 PSI.
5. SLAB IS DESIGNED FOR A CONCENTRATED LOAD (P) AS FOLLOW:

MH ø (FT.)	P (LB.)
4'	12,000

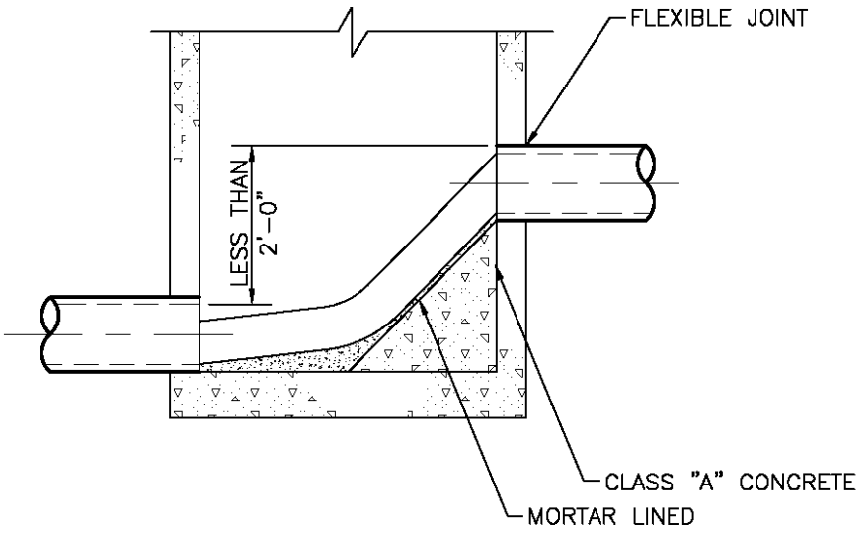
SAFETY PLATFORM FOR DEEP MANHOLES

N.T.S.

Lower Township MUA

05/06/2009

Township of Lower, Cape May County, New Jersey

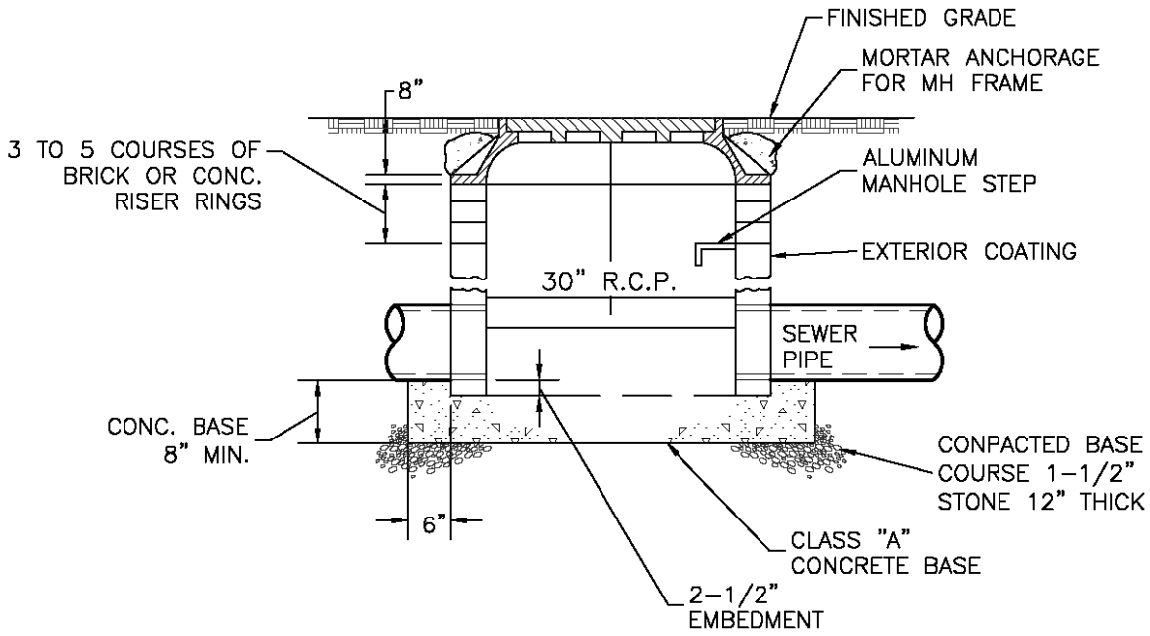


NOTES:

1. MANHOLE CHUTE IS TO BE USED WHERE DIFFERENCE IN CROWN ELEVATIONS BETWEEN INCOMING PIPE AND OUTGOING PIPE IS LESS THAN 2'-0". IF THE DIFFERENCE IS 2'-0" OR GREATER, THEN DROP CONNECTION SHALL BE MADE.

MANHOLE CHUTE DETAIL

N.T.S.

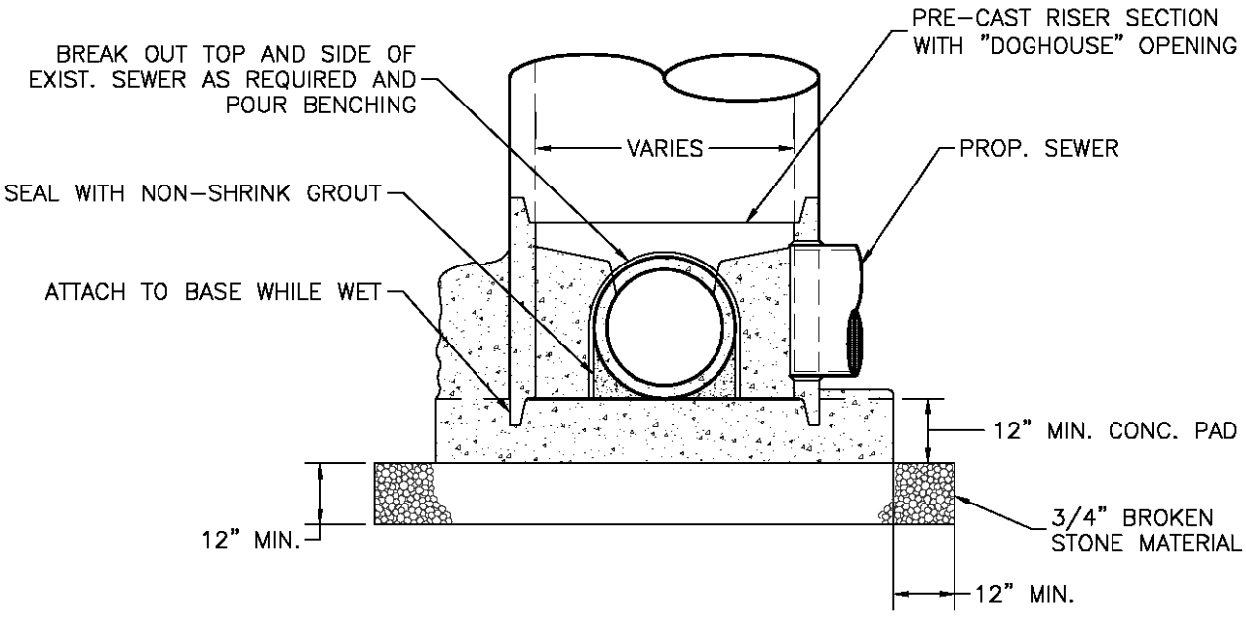


NOTES:

1. SHALLOW MH (CIRCULAR) TO BE USED AT LOCATIONS WHERE DISTANCE FROM FINISHED GRADE TO PIPE INVERT IS 3'-0" OR LESS.
2. INLETS AND OUTLETS SHALL BE CONNECTED TO MANHOLE USING FLEXIBLE MANHOLE SLEEVES.
3. FOR FOUNDATION BEDDING, SEE PRECAST REINFORCED CONCRETE MANHOLE DETAIL.

SHALLOW MANHOLE

N.T.S.



DOGHOUSE MANHOLE DETAIL

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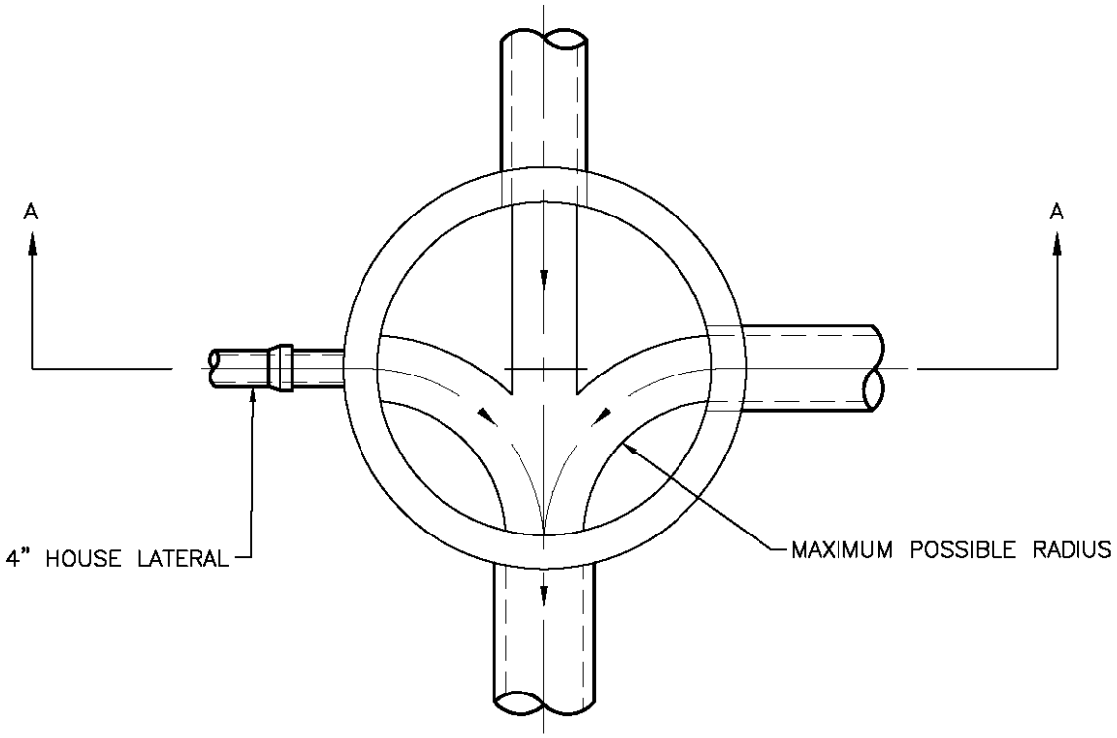
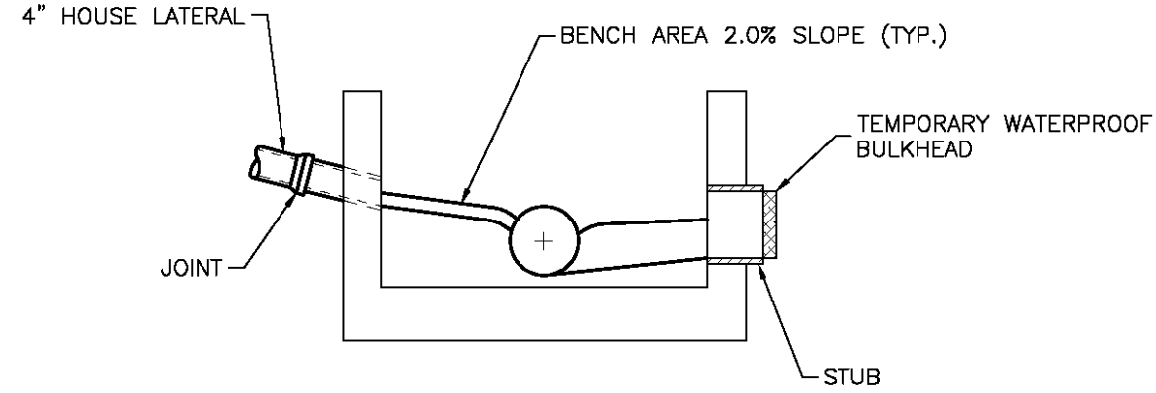


PLAN



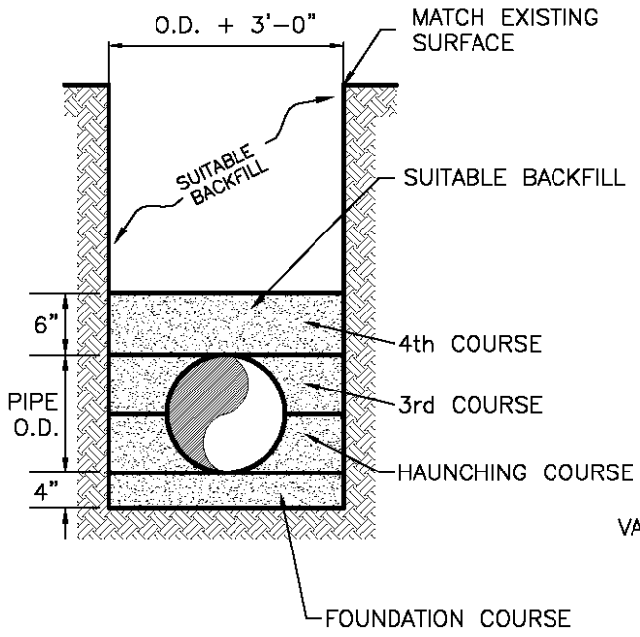
SECTION A–A

NOTES:

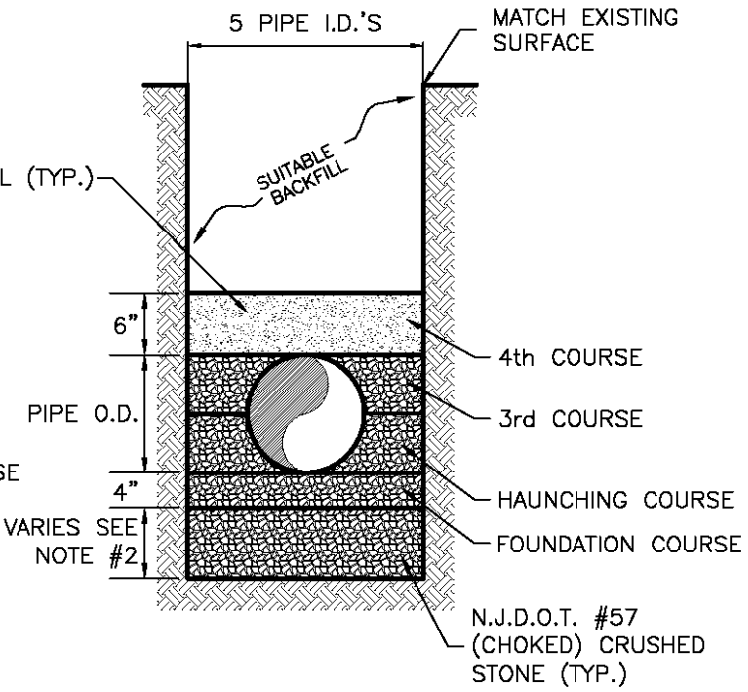
1. HOUSE CONNECTIONS SHALL NOT BE PERMITTED TO MANHOLES EXCEPT IN CUL–DE–SACS. A MAXIMUM OF TWO HOUSE CONNECTIONS SHALL BE PERMITTED TO THE TERMINAL MANHOLE PROVIDED THAT THE HOLE IS PRECAST INTO THE MANHOLE OR CORED BY MACHINE.

MANHOLE WITH STUB & 4" SERVICE CONNECTION

N.T.S.



STABLE BEDDING FOUNDATION



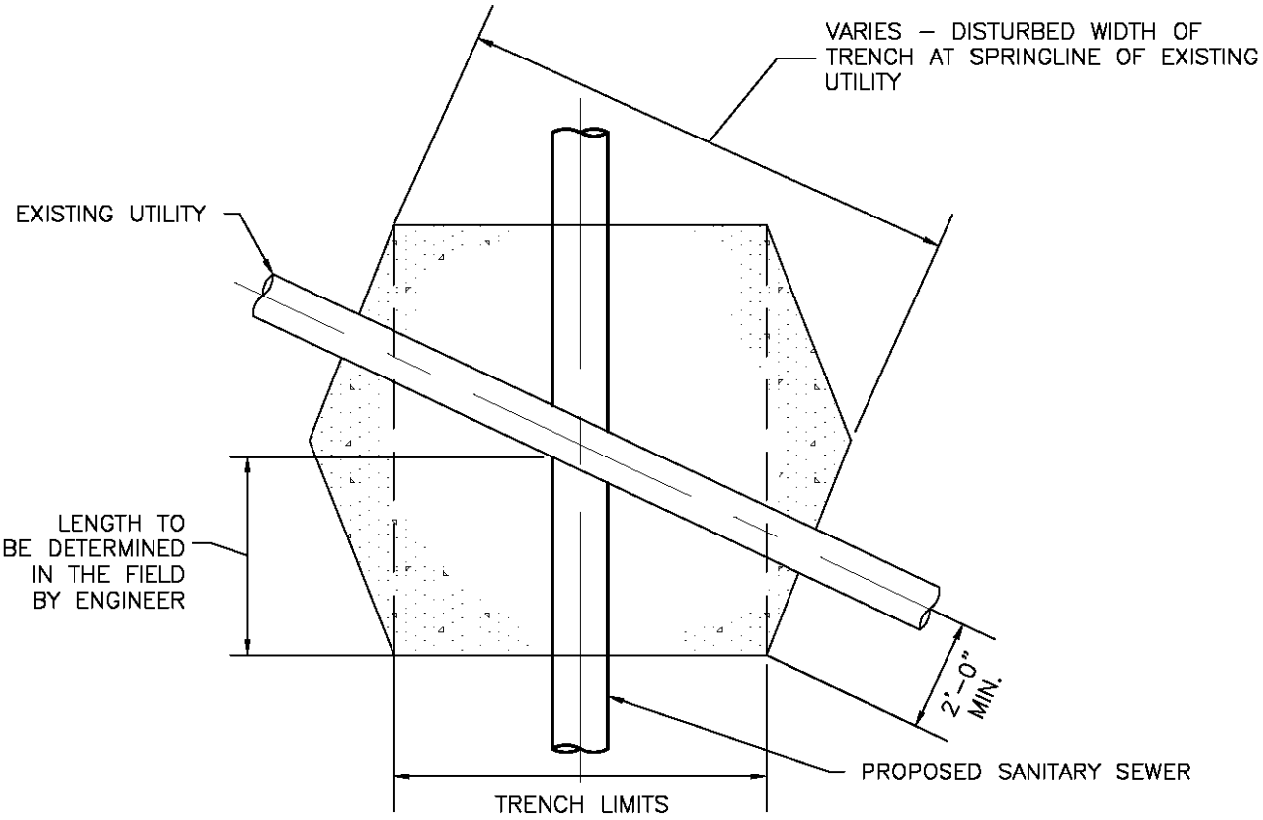
UNSTABLE TRENCH

NOTES:

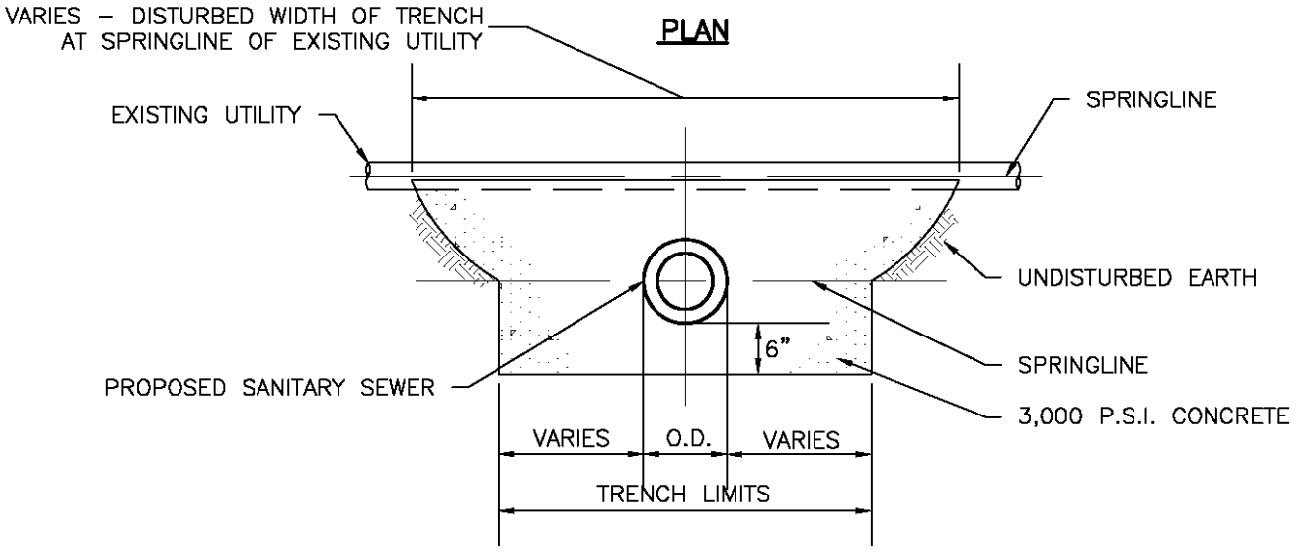
1. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE O.S.H.A. STANDARDS.
2. UNSUITABLE MATERIAL, AS DETERMINED BY THE ENGINEER, ENCOUNTERED BENEATH THE TRENCH TO BE REMOVED. REMOVAL DEPTH TO BE DETERMINED BY THE ENGINEER.
3. SUITABLE BACKFILL SHALL CONSIST OF BANK RUN SAND AND GRAVEL OR SUITABLE EXCAVATED MATERIAL FREE FROM ORGANIC OR DELERTEIOUS MATERIAL.

PVC PIPE BEDDING & BACKFILL DETAILS

N.T.S.



PLAN



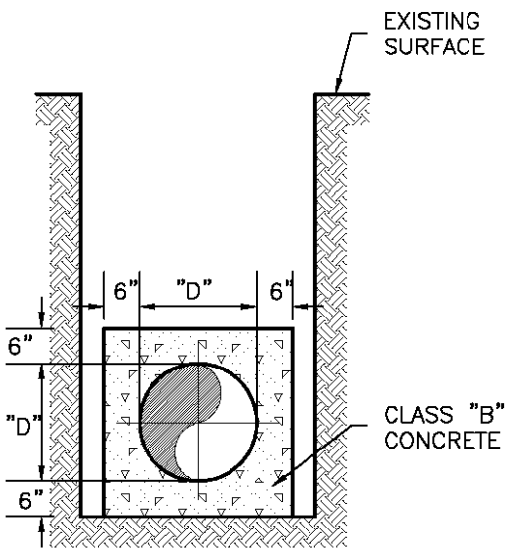
SECTION A–A

NOTES:

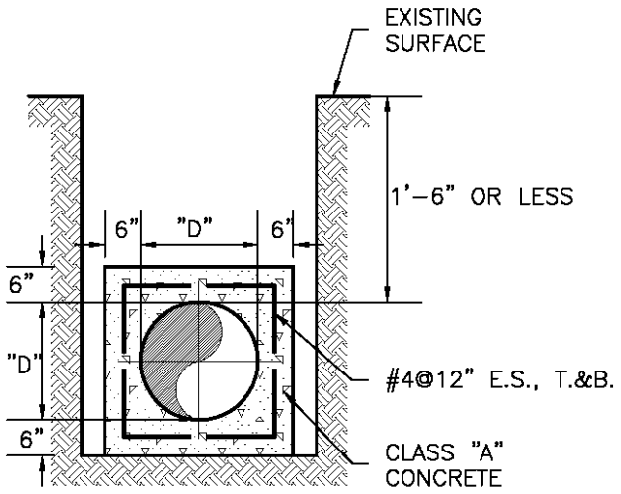
1. WHERE SANITARY SEWER MAINS CROSS UNDER OR OVER AN EXISTING WATER MAIN, STORM DRAIN OR OTHER UTILITY AND WHERE THE MINIMUM DISTANCE BETWEEN THEM IS 6" OR LESS, THE ENGINEER MAY ELECT TO CONSTRUCT A CONCRETE CRADLE TO THE SPRINGLINE OF THE UPPER PIPE. THE WIDTH OF THE CRADLE SHALL BE EQUAL TO THE ACTUAL EXCAVATED WIDTH OF THE TRENCH (6" BELOW THE LOWER PIPE) AND VARIES TO THE DISTURBED TRENCH WIDTH AT THE SPRINGLINE OF THE UPPER PIPE. THE LENGTH VARIES AND IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

CONCRETE CRADLE DETAIL

N.T.S.



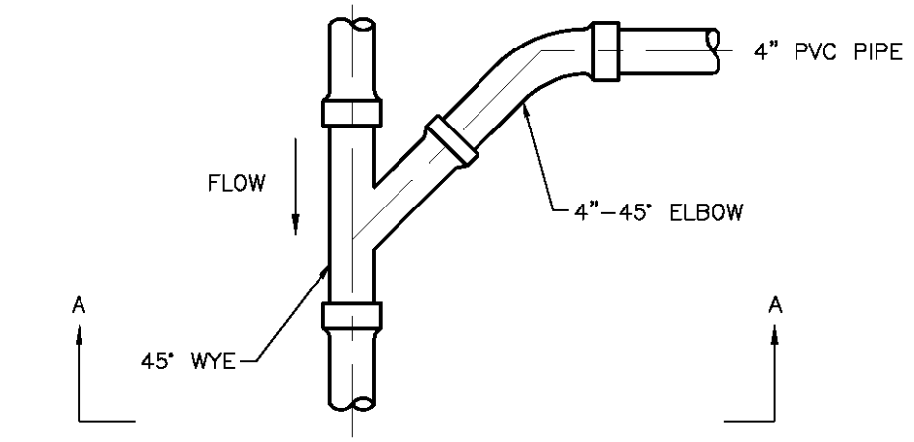
STANDARD



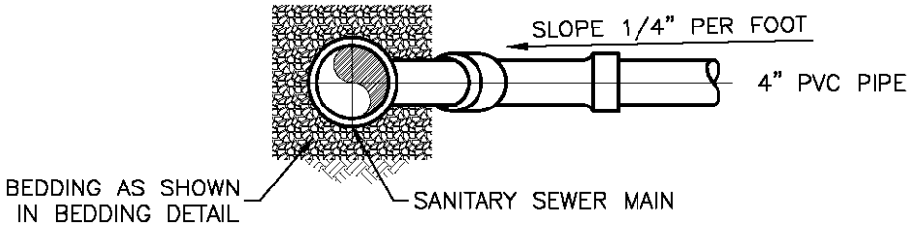
SPECIAL

ENCASEMENT IN CONCRETE

N.T.S.



PLAN



SECTION A–A

NOTES:

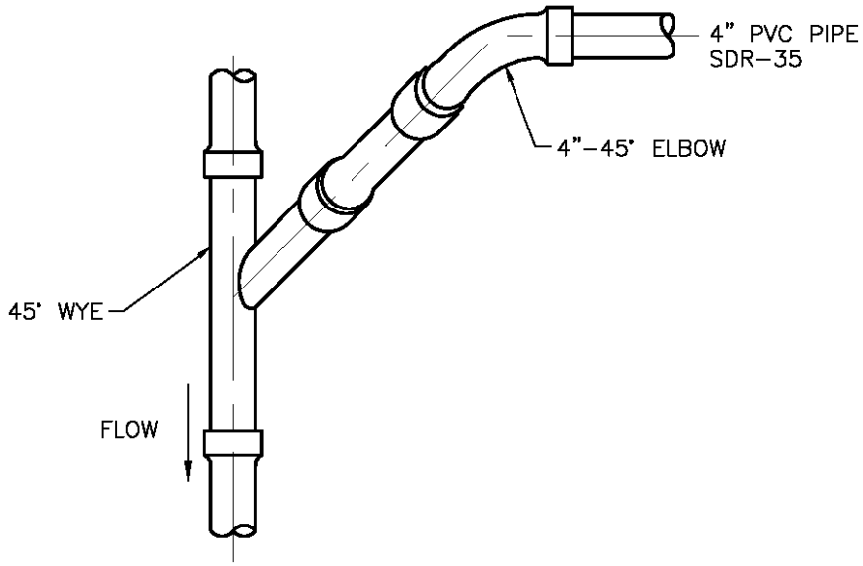
1. ALL COUPLINGS, PLUGS & CAPS TO BE STD. FOR TYPE OF PIPE USED & INSTALLATION TO BE WATERTIGHT.
2. 1/4" PER FOOT SLOPE GOVERNS OVER CONFLICTS WITH THE 3' MIN. COVER DIMENSION.
3. CLEANOUT TO BE LOCATED TWO (2) FEET FROM CURB IN THE PLANTER AREA. WHERE CURBS DO NOT EXIST, PLACE CLEANOUT ONE (1) FOOT OUTSIDE OF PROPERTY LINE.
4. SPECIAL WYE FITTING SERVICE CONNECTION SHALL ONLY BE PERMITTED TO MAINTAIN THE THREE (3) FOOT MINIMUM COVER DIMENSION.
5. CLEANOUTS ARE REQUIRED ON ALL SERVICE CONNECTIONS.
6. THE SITE CONTRACTOR SHALL EXTEND THE SERVICE PIPING TO THE PROPERTY LINE.
7. SEPARATION BETWEEN THE WATER AND SANITARY SEWER SERVICE CONNECTION SHALL BE TEN FEET TYPICAL AND FIVE FEET MINIMUM.
8. CLEANOUT SHALL NEVER BE INSTALLED OUTSIDE OF RIGHT–OF–WAY ON PRIVATE PROPERTY AND NEVER IN CONCRETE SIDEWALK OR DRIVEWAY.
9. NO CONNECTION SHALL BE BACKFILLED UNTIL WRITTEN APPROVAL IS MADE BY THE ENGINEER OR HIS REPRESENTATIVE. VIOLATORS WILL BE REQUIRED TO EXPOSE THE WORK FOR INSPECTION BEFORE ACCEPTANCE OF THE CONNECTION.

SPECIAL WYE FITTING 4" SERVICE CONNECTION

N.T.S.

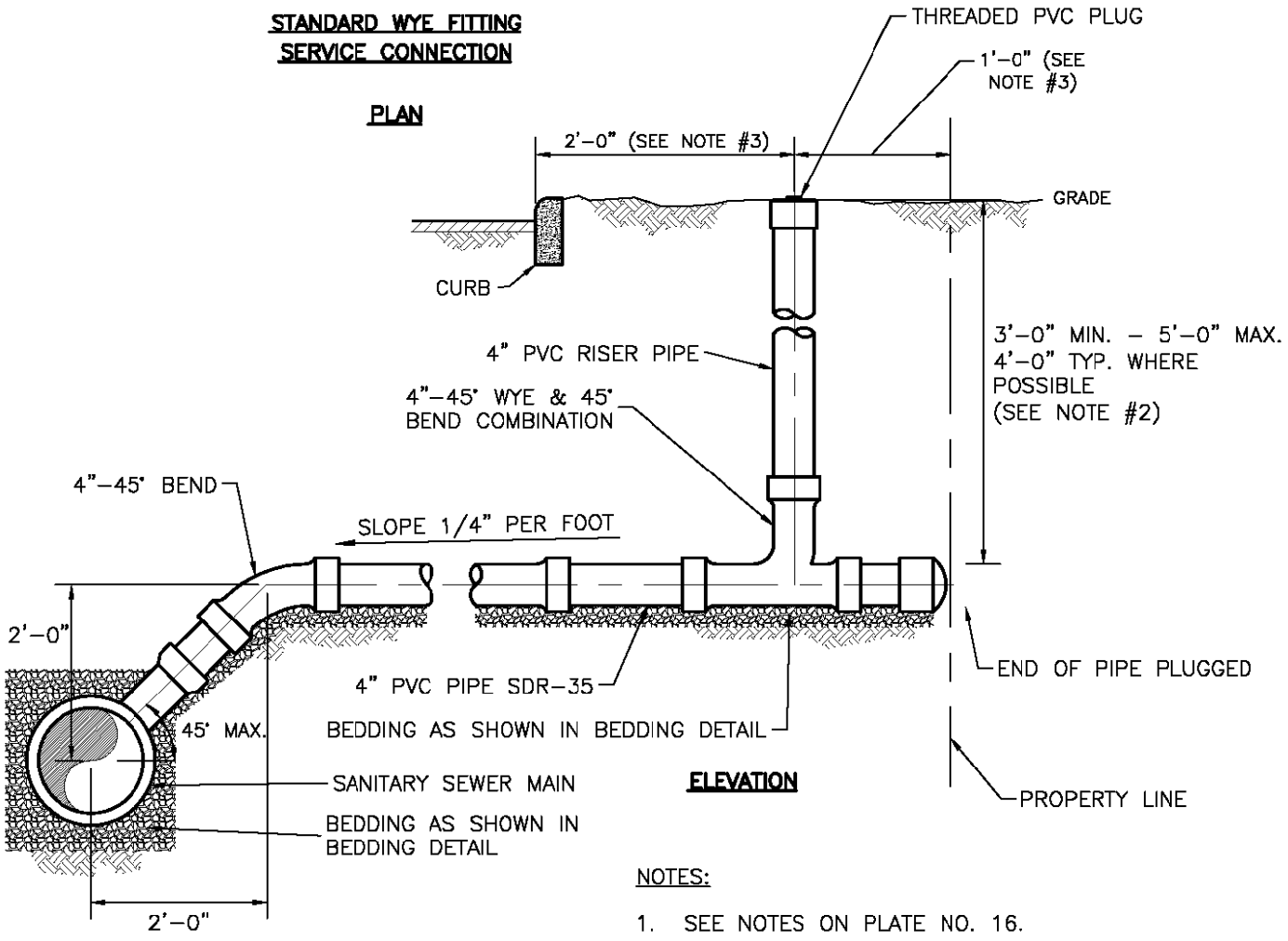
Lower Township MUA 05/06/2009

Township of Lower, Cape May County, New Jersey



STANDARD WYE FITTING
SERVICE CONNECTION

PLAN



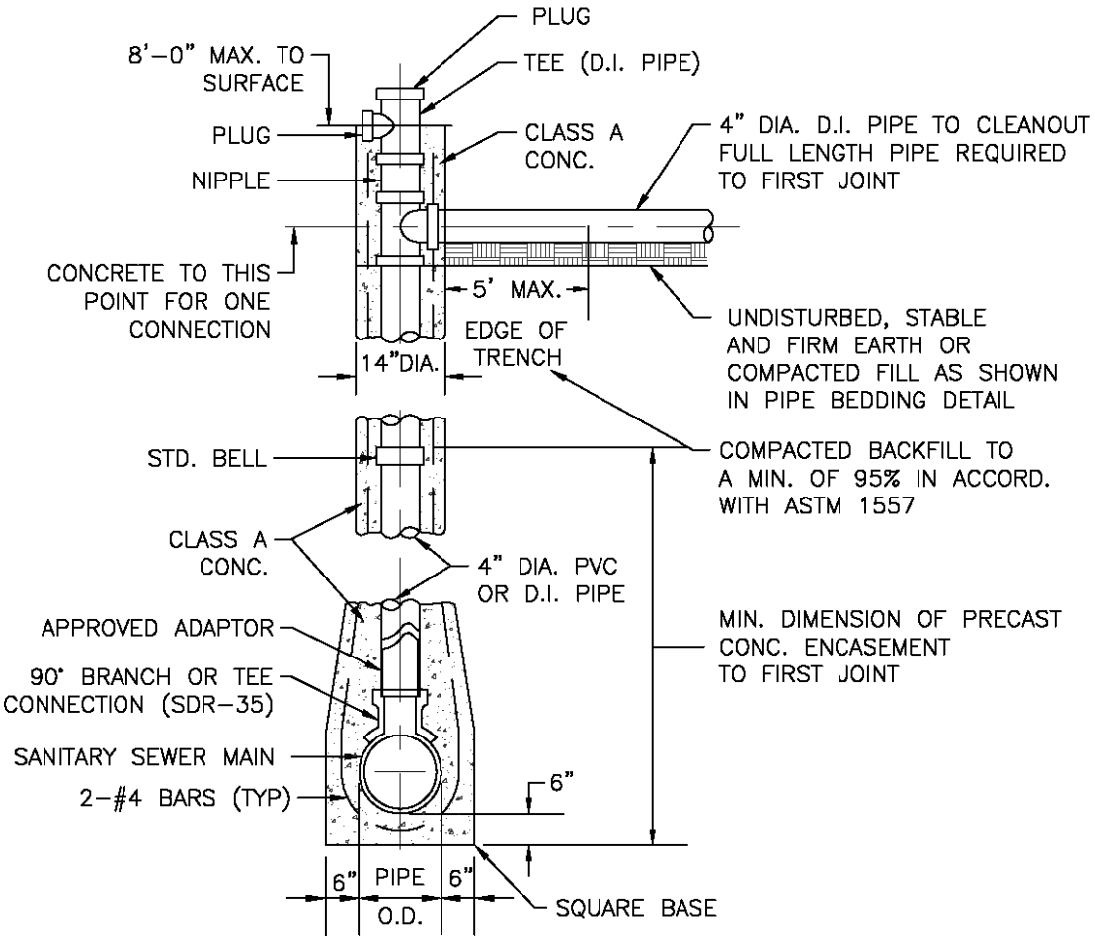
ELEVATION

NOTES:

1. SEE NOTES ON PLATE NO. 16.

TYPICAL 4" SERVICE CONNECTION

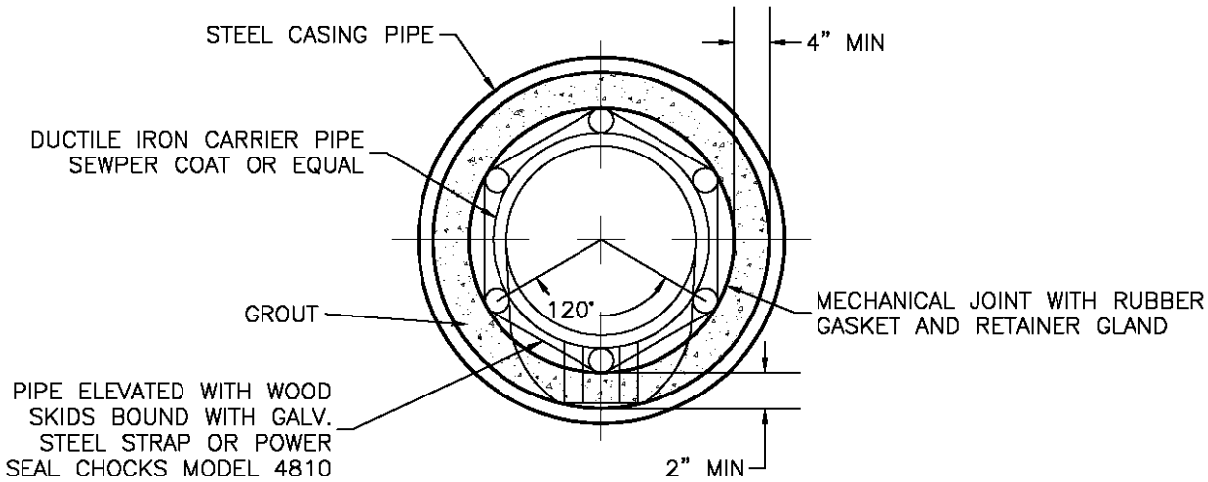
N.T.S.



TYPICAL 4 INCH DEEP HOUSE CONNECTION

N.T.S.

CASING SIZE	MIN. CASING THICKNESS WITH 1:4 GROUT
8"–24"	3/8"
24" TO 33"	1/2"
36" & LARGER	5/8"

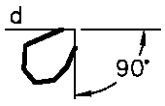
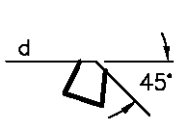
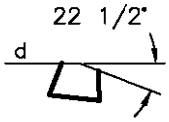
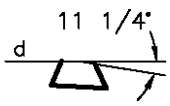
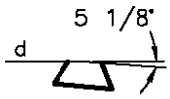


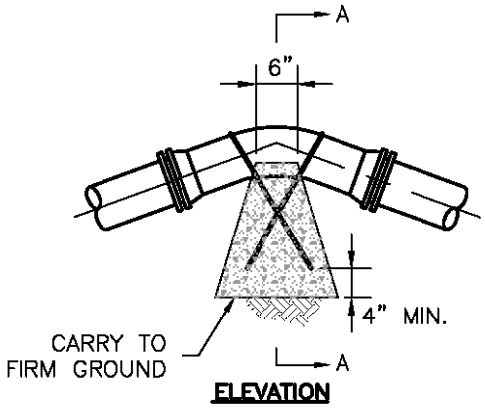
NOTES:

1. A 1.0 FOOT THICK MASONRY BULKHEAD SHALL BE CONSTRUCTED AT EACH END OF THE CASING PIPE.

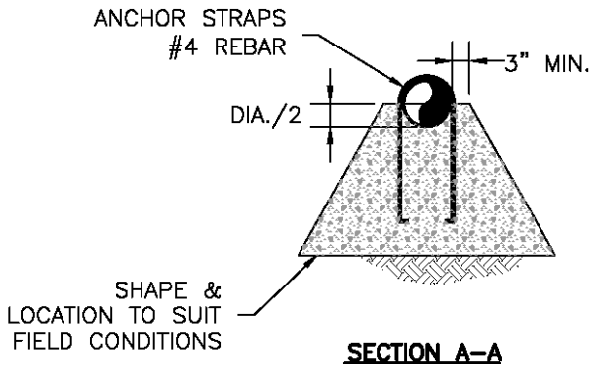
CARRIER PIPE IN DRIVEN STEEL CASING

N.T.S.

	REQUIRED VOLUME OF CONCRETE FOR THRUST BLOCKS IN CUBIC FEET 150 PSI TEST PRESSURE				
	90° ELBOW	45° ELBOW	22 1/2° ELBOW	11 1/4° ELBOW	5 1/8° ELBOW
DIAMETER OF PIPE (d)					
6"	39	28	15	8	3
8"	63	44	24	12	6
10"	96	68	37	19	9
12"	137	97	53	27	12
16"	239	169	92	47	21
18"	298	211	114	58	27
20"	364	258	139	71	33
24"	521	369	199	102	47
30"	804	568	308	157	72
36"	1152	*815	441	225	103



ELEVATION



SECTION A–A

VERTICAL DOWNWARD BENDS

NOTES:

1. VOLUME OF CONCRETE BASED ON 1 CU. FT. WEIGHING 150 LBS.
2. ALL VERTICAL CONCRETE THRUST BLOCKS SHALL BE CLASS B CONCRETE.
3. NO JOINT SHALL BE COVERED WITH CONCRETE.
4. RETAINER GLANDS SHALL BE USED ON ALL MECHANICAL JOINT CONNECTIONS.
5. * VOLUME OF CONCRETE CALCULATED:

$$\text{Volume of Concrete in Cu.Ft.} = \frac{PA \sin 45^\circ}{\text{Weight of Concrete per Cu.Ft.}}$$

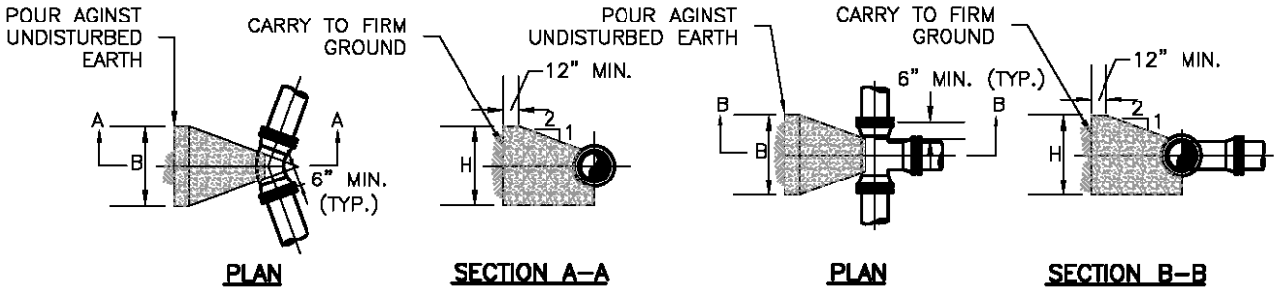
$$= \frac{(150)\ (1152.09)\ (0.7071)}{150}$$

$$= 815 \text{ Cu.Ft.}$$

THRUST BLOCKS
VERTICAL DOWNWARD BENDS

N.T.S.

DIAMETER OF PIPE (d)	CONTACT BEARING AREA OF THRUST BLOCKS WITH EARTH IN SQUARE FEET ("A") 150 PSI TEST PRESSURE					
	90° ELBOW	45° ELBOW	22 1/2° ELBOW	11 1/4° ELBOW	5 1/8° ELBOW	DEAD END
6"	2.8	1.5	0.8	0.4	0.2	2
8"	4.4	2.4	1.2	0.6	0.3	3.1
10"	6.8	3.7	1.9	0.9	0.4	4.8
12"	9.7	5.3	2.7	1.3	0.6	6.9
16"	16.9	9.2	4.7	2.3	1.1	12.0
18"	21.1	11.4	5.8	2.9	1.3	19.9
20"	25.8	13.9	7.1	3.6	1.6	18.2
24"	36.9	19.9	10.2	5.1	2.3	26.1
30"	56.8	30.8	15.7	7.9	3.6	40.2
36"	81.5	* 44.1	22.5	11.3	5.1	** 57.6



TO DETERMINE THRUST BLOCK BASE AND HEIGHT DIMENSIONS USE THE FOLLOWING FORMULA:
AREA (A) = BASE (B) * HEIGHT (H)

EXAMPLE: IF A=7 SQ. FT. AND B=3.5 FT. THEN H=2 FT.

NOTES:

1. BEARING AREAS ARE BASED ON UNDISTURBED SOIL WITH A BEARING CAPACITY OF 3000 LBS. PER SQ. FT. FOR A LESSER SOIL BEARING CAPACITY, BEARING AREAS SHALL BE INCREASED ACCORDINGLY.
2. ALL CONCRETE THRUST BLOCKS SHALL BE CLASS B CONCRETE.
3. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
4. NO JOINT SHALL BE COVERED WITH CONCRETE.
5. RETAINER GLANDS SHALL BE USED ON ALL MECHANICAL JOINT CONNECTIONS.
6. BEARING AREA CALCULATED: P=Pressure in Lbs/Sq.In.
   A=Area of the pipe ($A=\pi r^2$)

* Bearing Area in Sq.Ft. $= \dfrac{2\ PA\ \sin\ (\text{Angle of Bend}/2)}{\text{Soil Bearing Capacity}}$

$= \dfrac{(2)\ (150)\ (1152.09)\ (0.3827)}{3{,}000\ \text{Lbs/Sq. Ft.}}$

$= 44.1$ Sq. Ft.

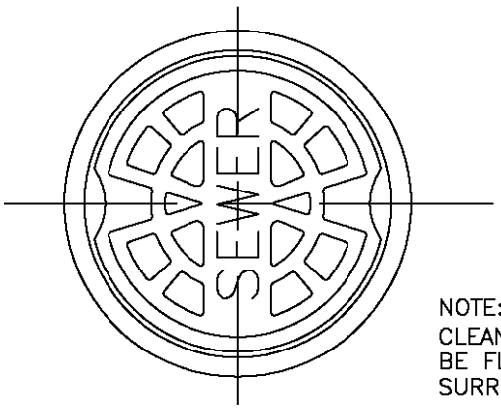
** Bearing Area in Sq.Ft. $= \dfrac{PA}{\text{Soil Bearing Capacity}}$

$= \dfrac{(150)\ (1152.00)}{3{,}000\ \text{Lbs/Sq. Ft.}}$

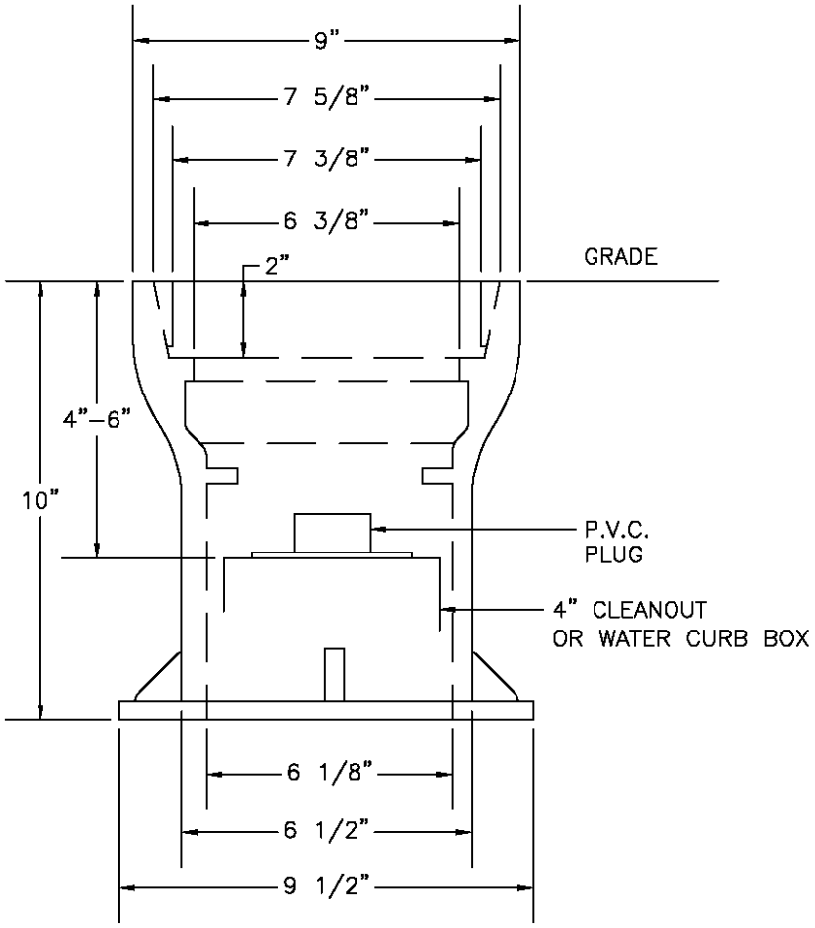
$= 57.6$ Sq. Ft.

THRUST BLOCKS
HORZONTAL BENDS AND VERTICAL UPWARD BENDS

N.T.S.



NOTE:
CLEANOUT COVER TO BE FLUSH WITH SURROUNDING GRADE.

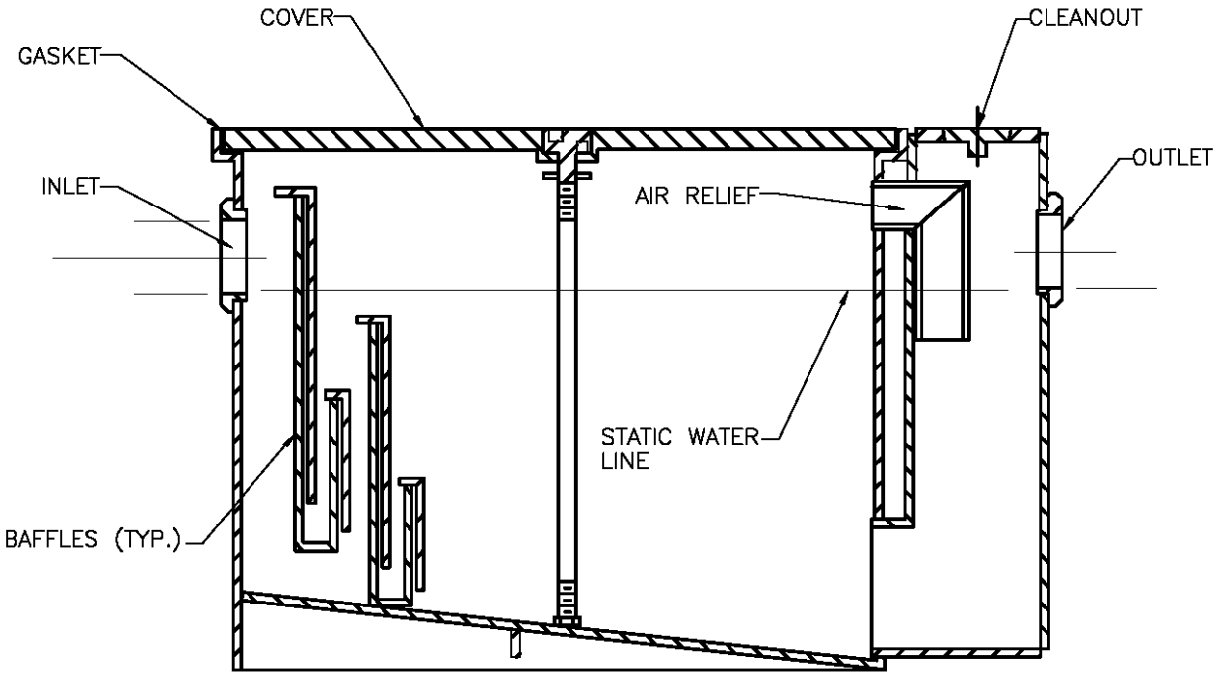


NOTES:

1. TOP SECTION OF A TYLER 6865 SERIES VALVE BOX OR APPROVED EQUAL

CLEANOUT BOX

N.T.S.



NOTES:

1. ACCEPTABLE GREASE TRAP MANUFACTURERS INCLUDE: JOSAM COMPANY, JAY R. SMITH MFG. CO., OR APPROVED EQUAL.
2. ALL EQUIPMENT, PIPING AND APPURTENANCES SHALL BE SUPPLIED/MANUFACTURED BY THE SAME MANUFACTURER AS THE GREASE TRAP.
3. FOR GREASE TRAPS SIZED TO HANDLE 50 GPM OR LESS, CONTRACTOR SHALL VERIFY THAT THE PRODUCT HAS BEEN CERTIFIED TO PDI–G101 STANDARDS.
4. FOR LARGER OUTDOOR GREASE TRAPS, SIZED TO HANDLE MORE THAN 50 GPM, THE BASIN SHALL BE CONSTRUCTED OF CONCRETE.
5. VENTING FOR GREASE TRAPS SHALL BE SO DESIGNED THAT THEY WILL NOT BECOME AIR BOUND WHEN AIRTIGHT COVERS ARE USED.
6. INSTALLATION OF THE GREASE TRAP SHALL ALLOW THE COVER TO BE ACCESSIBLE AND EASILY REMOVABLE FOR CLEANING. IN ADDIITON, CLEARANCES SHOULD BE SUCH THAT THE INTERNAL BAFFLING CAN BE EASILY SERVICED.
7. A FLOW CONTROL FITTING FURNISHED WITH THE GREASE TRAP SHALL BE INSTALLED IN THE WASTE LINE AHEAD OF THE INTERCEPTOR.
8. STEEL BASINS SHALL BE PROVIDED WITH GRAY DUCO COATING AND A BITUMASTIC COATING INSIDE AND OUT.
9. EXTERIOR CONCRETE BELOW GRADE SURFACES SHALL BE PROVIDED WITH TWO (2) COATS OF COAL TAR EPOXY.
10. ALL INTERIOR CONCRETE SURFACES SHALL BE RECEIVE A THREE (3) COAT EPOXY PAINT SYSTEM. COLOR SHALL BE WHITE.

GREASE TRAP

N.T.S.

Lower Township Municipal Utilities Authority
2900 Bayshore Road
Villas, New Jersey 08251
(609) 886-7146
(609) 886-4487 Fax
www.ltmua.org

CAPACITY FEASIBILITY APPLICATION

Date:_____

Owner/Applicant:_____

Mailing Address:_____

_____

Phone:_____ **Fax:**_____ **Email:**_____

Project Name:_____

Project Location **Block:**_____ **Lot(s):**_____

Street: _____

RESIDENTIAL

Number of Units:_____

Type of Unit: Single Family _____ **Town home/Condo**_____ **Duplex**_____

Estimated Usage:_____**Gallons per Day:**_____

Size of Water Service:_____ **Size of Meter:**_____

Size of Fire Service:_____

COMMERCIAL

Type of Business:_____

Estimated Usage:_____**Gallons per Day:**_____

Size of Water Service:_____ **Size of Meter:**_____

Size of Fire Service:_____

OWNER/APPLICANT SIGNATURE:_____

_____

LTMUA USE ONLY

SEWER CAPACITY AVAILABLE ☐ **YES** ☐ **NO**

WATER CAPACITY AVAILABLE ☐ **YES** ☐ **NO**

SUPERINTENDENT:_____ **DATE:**_____

EXECUTIVE DIRECTOR:_____ **DATE:**_____

CONNECTION PERMIT

Public Sewer and / or Water Connection

Lower Township Municipal Utilities Authority
2900 Bayshore Road ● Villas, New Jersey 08251
(609) 886-7146 ● Fax (609) 886-4487
www.LTMUA.org

Date: _____ Permit Number 2009 - _____

This permit is valid for one year from approval date.

Permission to connect is hereby granted to:

Name(s): _____

Property Address: _____ Block: _____ Lot: _____

Mailing Address: _____

Telephone Number: _____ Mobile Number: _____

WATER CONNECTION

Water Connection Fee: _____ Amount Paid: _____

Service Size: _____Meter Size: _____ No. of Units: _____

SEWER CONNECTION

Water Connection Fee: _____ Amount Paid: _____

Service Size: _____Meter Size: _____ No. of Units: _____

Superintendent Approval: _____ Date: _____

Executive Director Approval: _____ Date: _____

Plumbing permit fees must be paid to the Lower Township Plumbing Inspector located at 2600 Bayshore Road Villas, NJ 08251. Property owner or their plumber must contact the LTMUA office with the date of connection and plumbing permit number.

Office Use Only

Account Number: _____ Plumbing Permit Number: _____

Lateral Install Date: _____ Water Tap Install Date: _____

Billing Date: _____ Meter Install Date: _____

*APPLICATION NUMBER*_____

LOWER TOWNSHIP MUNICIPAL UTILITIES AUTHORITY
Application for Review of Preliminary Plans for
Sanitary Sewer System Facilities

This application must be filed in duplicate with the Executive Director of the Authority and shall be accompanied by an Application Fee as well as the Attorney Review Fee, Engineering Review Fee, as per the Authority's Application Fee Schedule.

Application is hereby made for review and approval of preliminary plans for the construction of sanitary sewer system facilities.

1. Does this project require an NJDEP permit YES NO

2. Does this Project require a State road opening permit YES NO

3. Does this Project require a County road opening permit YES NO

4. Applicant's Name:_____

Address:_____

_____

Phone:_____ Fax:_____

Email Address:_____

5. Name and Address of present owner if other than above:

_____

_____

_____

6. Location of Proposed Construction: Block:_____ Lot(s)_____

Street:_____

Project Name: _____

7. Number of connections to be served:_____

Estimated average daily demand per connection in gallons per day:_____

Estimated average daily TOTAL demand in gallons per day:_____

8. Name of person designing plans:

Name:_____ Company:_____

Address:_____

Phone:_____ Fax:_____

Email Address:_____

9. Describe your proposal for sanitary sewer disposal:

_____

_____

10. List plans and other supporting data accompanying this application:

a) _____

b) _____

c) _____

d) _____

_____
Signature of Applicant Date

_____
Applicant Name Title

Make all checks payable to the "LOWER TOWNSHIP MUA"

For Official Use Only

Application Received and Fees Collected by Financial Officer date: _____

Application Fee Paid: $_____

Engineering Review Fee Paid: $_____

Attorney Review Fee Paid: $_____

Authority's Engineer's Report Received: _____ Dated: _____

Action by the Authority:

Authority Meeting Date _____

Resolution No. _____

Approved: YES NO Disapproved Reason: _____

_____

Secretary _____ Date: _____

*APPLICATION NUMBER*_____

LOWER TOWNSHIP MUNICIPAL UTILITIES AUTHORITY
Application for Review of Final Plans for
Sanitary Sewer System Facilities

This application must be filed in duplicate with the Executive Director of the Authority and shall be accompanied by an Application Fee, Attorney Review Fee, and Engineering Review Fee as per the Authority's Application Fee Schedule.

Application is hereby made for review and approval of final plans for the construction of sanitary sewer system facilities.

1. Applicant's Name: _____

Address: _____

_____

Phone: _____ Fax: _____

Email Address: _____

2. Name and Address of present owner if other than above:

_____

_____

_____

3. Location of Proposed Construction: Block: _____ Lot(s) _____

Street: _____

Project Name: _____

4. Number of connections to be served: _____

Estimated average daily demand per connection in gallons per day: _____

Estimated average daily TOTAL demand in gallons per day: _____

5. Name of person designing plans:

Name: _____ Company: _____

Address: _____

Phone: _____ Fax: _____

Email Address: _____

6. Development Plans to:

a) Sell lots only YES NO

b) Construction of houses for sale YES NO

c) Other _____

7. Does applicant have title in order to convey by fee to the Authority, easements to all areas showing sanitary sewer system facilities and all rights to sanitary sewer system facilities?

_____

_____

8. List plans and other supporting data accompanying and application.

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

g) _____

h) _____

9. Do the final plans follow the preliminary plans approved by the Authority: YES NO

If no, describe changes: _____

_____

10. Applicant Engineer's estimate of all construction costs, including as-built plans

(Attach Engineer's estimate): $ _____

11.Calendar days required to complete the entire project, after approval is granted. _____

_____ _____

Signature of Applicant Date

_____

Applicant Name and Title

Make all checks payable to the "LOWER TOWNSHIP MUA"

For Official Use Only

Application Received and Fees Collected by Financial Officer date:_____

Application Fee Paid: $_____

Attorney Review Fee Paid: $_____

Engineering Review Fee Paid: $_____

Date Performance Guarantee Received:_____ Amount: $_____

Bond Company Name and Bond Number:_____

Bank Name and Letter of Credit Number:_____

Cash Posted and Account Deposit Number:_____

Inspection Fee Received: $_____ Date:_____

Date of Approval by Planning Board:_____

Last Revision Date on Drawings: _____

Authority's Engineer's Report Received:_____ Dated:_____

Action by the Authority:

Authority Meeting Date:_____

Resolution No:_____

Approved: YES NO Disapproved Reason:_____

_____

Secretary:_____ Date:_____

*APPLICATION NUMBER*_____

LOWER TOWNSHIP MUNICIPAL UTILITIES AUTHORITY
Application for Certification of Completion for
Sanitary Sewer System Facilities

This application must be filed in duplicate with the Executive Director of the Authority and shall be accompanied by all of the documents required herein.

Application is hereby made for Certification of Completion for sanitary sewer system facilities.

1. Applicant's Name:_____

Address:_____

Phone:_____ Fax:_____

Email Address:_____

2. Name and Address of present owner if other than above:

_____

_____

_____

3. Location of Construction: Block:_____ Lot(s):_____

Street:_____

Project Name:_____

4. This Application must be accompanied by the following documents:

a) Authority Engineer's certification that the construction has been completed in accordance with the approved plans and specifications.

b) Deeds with metes and bounds description to all lands, easements, and improvements not previously transferred, together with title policies.

c) Affidavits of Title for land, easements, and equipment and a recitation thereon that everything conveyed to the Authority has been paid for in full. Include corporate resolution authorizing said transfers if applicable.

d) Copy of filed subdivision plat showing all easements containing the filed plat number and filing date.

e) Surveys for sites and easements dedicated to the Authority, signed and sealed by a licensed New Jersey Land Surveyor.

f) Bills of Sale for all equipment and facilities, including warranties from manufacturers of equipment.

g) Releases from the general site contractor(s) who furnished and installed the facilities.

h) Three sets of sealed prints, one mylar reproducible, and electronic files of the as-built plans prepared by a licensed New Jersey Land Surveyor.

i) Surety Maintenance Bond (or irrevocable letter of credit) in a form and content approved by the Authority and to the satisfaction of the Attorney equal to ten (10%) percent of the Estimate of Cost, guaranteeing the satisfactory performance and functioning of the improvements for a minimum of two (2) years.

j) Affidavit that all submittals are true, accurate and complete and that all conveyances are free from any lien or encumbrances.

_____ _____

Signature of Applicant Date

_____

Applicant Name and Title

For Official Use Only

Date Received: _____

Authority's Remarks: _____

_____

_____

Attorney's Remarks: _____

_____

_____

Date Maintenance Guarantee Received: _____ Amount: $_____

Bond Company Name and Bond Number: _____

Bank Name and Letter of Credit Number: _____

Cash Posted and Account Deposit Number: _____

Date of Expiration: _____

Action by the Authority: Authority Meeting Date: _____

Resolution No: _____

Approved: YES NO Disapproved Reason: _____

_____

Certification of Completion Granted (Effective Date): _____

Date of Release of Performance Guarantee: _____

Secretary: _____ Date: _____

Lower Township Municipal Utilities Authority

Development Construction Cost	**Sanitary Sewer System**			
Unit Price Estimating Schedule				**1 OF 1**
Application No.	**Development Name:**			
ITEM DESCRIPTION	UNITS	QUANTITY	MINIMUM UNIT COST	ITEM COST
PVC Pipe				
8" Gravity Pipe 0 - 8 feet deep	LF		$35.00	$0.00
8" Gravity Pipe 8 - 10 feet deep	LF		$40.00	$0.00
8" Gravity Pipe 10 - 12 feet deep	LF		$42.50	$0.00
8" Gravity Pipe 12 - 14 feet deep	LF		$45.00	$0.00
8" Gravity Pipe 14 feet and deeper	LF		$50.00	$0.00
10" Gravity Pipe 0 - 8 feet deep	LF		$40.00	$0.00
10" Gravity Pipe 8 - 10 feet deep	LF		$42.50	$0.00
10" Gravity Pipe 10 - 12 feet deep	LF		$45.00	$0.00
10" Gravity Pipe 12 - 14 feet deep	LF		$50.00	$0.00
10" Gravity Pipe 14 feet and deeper	LF		$55.00	$0.00
12" Gravity Pipe 0 - 8 feet deep	LF		$45.00	$0.00
12" Gravity Pipe 8 - 10 feet deep	LF		$50.00	$0.00
12" Gravity Pipe 10 - 12 feet deep	LF		$52.50	$0.00
12" Gravity Pipe 12 - 14 feet deep	LF		$55.00	$0.00
12" Gravity Pipe 14 feet and deeper	LF		$60.00	$0.00
15" Gravity Pipe 0 - 8 feet deep	LF		$52.50	$0.00
15" Gravity Pipe 8 - 10 feet deep	LF		$55.00	$0.00
15" Gravity Pipe 10 - 12 feet deep	LF		$60.00	$0.00
15" Gravity Pipe 12 - 14 feet deep	LF		$65.00	$0.00
15" Gravity Pipe 14 feet and deeper	LF		$70.00	$0.00
Pipe 15" and greater at time of applicatio	LF			$0.00
Dewatering for depths up to 10'	LF		$15.00	$0.00
Dewatering for depths greater then 10'	LF		$22.50	$0.00
Ductile Iron Pipe (add to pvc price)	LF		$7.50	$0.00
Manholes				
Standard Manhole 0 - 8 feet deep	Each		$2,000.00	$0.00
Reinforced Concrete Manhole Riser	VRT. FT.		$500.00	$0.00
Drop Manhole Connections	VRT. FT.		$250.00	$0.00
Locking Watertight Manhole (additional)	Each		$550.00	$0.00
Doghouse Manhole (add to MH price)	Each		$750.00	$0.00
Connection To Existing Manhole				
With Core and Channeling	Each		$2,500.00	$0.00
Connection to Existing Stub	Each		$750.00	$0.00
Service Connections				
4" House Lateral (PVC) W/ cleanout	Each		$750.00	$0.00
Deep House Connection	VRT. FT.		$500.00	$0.00
Services Greater Then 30' In Length (add	LF		$20.00	$0.00
Ductile Iron Pipe (add to pvc price)	LF		$5.00	$0.00
Force Mains				
4" DIP Force Main	LF		$35.00	$0.00
6" DIP Force Main	LF		$40.00	$0.00
8" DIP Force Main	LF		$45.00	$0.00
Miscellaneous				
Dewatering	LF		$15.00	$0.00
Off Site Road Restoration	SY		$25.00	$0.00
Additional Items as Needed:				$0.00
1) 6" PVC Lateral	LS		$250.00	$0.00
2) Record Drawings	LS		$1,250.00	$0.00
			TOTAL	**$0.00**

LOWER TOWNSHIP MUNICIPAL UTILITIES AUTHORITY FILING, REVIEW & INSPECTION FEES	
DESCRIPTION	**CHARGE**
WATER	
Application Fee for Preliminary Approval	$200.00
Engineering Review Fee for Preliminary Approval	1.5% of estimated cost of construction
Attorney Review Fee for Preliminary Approval	$500.00
Application Fee for Final Approval	$200.00
Engineering Review Fee for Final Approval	2.5 % of estimated cost of construction
Attorney Review Fee for Final Approval	$500.00
SANITARY SEWER	
Application Fee for Preliminary Approval	$200.00
Engineering Review Fee for Preliminary Approval	1.5% of estimated cost of construction
Attorney Review Fee for Preliminary Approval	$500.00
Application Fee for Final Approval	$200.00
Engineering Review Fee for Final Approval	2.5 % of estimated cost of construction
Attorney Review Fee for Final Approval	$500.00
INSPECTION FEE	10% of estimated cost of construction
PERFORMANCE GUARANTEE	120% of estimated cost of construction
MAINTENANCE GUARANTEE	10% of estimated cost of construction
USE OF FIRE HYDRANTS	
0 to 1,000 gallons of water	$25.00 plus the rate schedule for water used
1,001 to 10,000 gallons of water	$50.00 plus the rate schedule for water used
10,001 gallons of water and over	$100.00 plus the rate schedule for water used