

**FRANKLIN TOWNSHIP SEWERAGE AUTHORITY**

**RATES, RULES AND REGULATIONS**

**APPLICABLE TO SEWER SERVICE**

**IN THE**

**TOWNSHIP OF FRANKLIN**

**SOMERSET COUNTY, NEW JERSEY**



**February 2024**

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# Section 1 Introduction

## 1.1 Purpose

The purpose of the Franklin Township Sewerage Authority is to implement the Sewerage Authorities Law (NJ Laws of 1946 Chapter 138 R.S. 40:14 A-1 et seq.) in the public interest for the Township of Franklin in the County of Somerset, State of New Jersey in order to foster and promote relief of waters from pollution and abate the menace to public health. These Rates, Rules and Regulations are established for the conduct of the Authority's business, to cover the use of sanitary sewer system treatment plants, to outline what things are allowed/prohibited, to provide a schedule of fees and rates, and whatever else is deemed proper within the sphere of the Authority's activity.

## 1.2 Office of Authority and Hours of Business

The principal office of the Authority, place of business and mailing address is 70 Commerce Drive, Somerset, New Jersey 08873. The telephone number is 732-873-2121. The website address is: [www.ftsa-nj.org](http://www.ftsa-nj.org)

The office of the Authority will be open for the purpose of the transaction of regular business between the hours of 8:00 A.M. and 4:00 P.M. prevailing time, each weekday, Monday through Friday, except holidays.

## 1.3 Abbreviations

AASHTO	-	American Association of State Highway and Transportation Officials
ABS	-	Acrylonitrile-Butadiene-Styrene
ASA	-	American Standards Association
ASTM	-	American Society for Testing and Materials
BOD	-	Biochemical Oxygen Demand
CD	-	Chlorine Demand
IMPIA	-	Infrastructure Master Plan and Impact Analysis
MCUA	-	Middlesex County Utilities Authority
NJDEP	-	New Jersey Department of Environmental Protection
PVC	-	Polyvinyl Chloride
SS	-	Suspended Solids
FTSA	-	Franklin Township Sewerage Authority

## 1.4 Definitions

Unless the context specifically indicates otherwise, the meaning of the terms used in these Rates, Rules and Regulations shall be as follows:

Application Fee shall mean a fee an applicant is required to pay the Authority for a request for sewer service. The fee charged shall be the current rate which is applicable to the proposed sewer service request and must be accompanied by the current FTSA application form.

As-built shall mean a record of an actual installation created after construction showing the final configuration of the installation.

Authority shall mean the Franklin Township Sewerage Authority ordained by Franklin Township Ordinance No. 105, adopted October 11, 1956.

Authority Sewer shall mean the sewer installed or owned by the Authority in public streets or easements, including the lateral to the property line or edge of easement.

BOD shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure contained in "Standard Methods" in five (5) days at twenty (20) degrees Centigrade, expressed in mg/L by weight. The method of determination shall be the latest revision of "Standard Methods".

Board of Health shall mean the Board of Health of the Township of Franklin.

Building shall mean any house, building, or structure heretofore or hereafter constructed and designed or used for dwelling or other use or occupancy by persons, either temporary or permanent.

Building Drain shall mean that part of the lowest horizontal piping of drainage system which receives the discharge from waste pipes inside the walls of the Building and conveys it to the Building Sewer, beginning five (5) feet outside the inner face of the Building wall.

Building Sewer shall mean an extension from a building or place used for commercial, institutional or industrial purposes, to the Authority's sewer and shall be synonymous with "house connection" except that the words "building sewer" shall not include a sewer line to a building or place used for residential purposes.

CD - Chlorine Demand - The Chlorine Demand of water is the difference between the amount of chlorine applied to a treated supply and the amount of free combined or total available chlorine remaining at the end of the contact period.

Commercial Concern shall mean any concern engaged in service, trade, business, traffic or commerce in general, exclusive of industrial concerns.

COD shall mean chemical oxygen demand which is a measure of the oxygen consuming capacity of inorganic and organic matter present in water or wastewater expressed as the amount of oxygen consumed by a chemical oxidant in accordance with an approved test procedure.

Commercial Waste shall mean domestic sewage only from commercial buildings, research establishments, retail stores, professional offices, and similar establishments. It shall not include any industrial waste.

Commissioner - one of five members who are appointed by resolution of the governing body to oversee the operation of the Franklin Township Sewerage Authority.

Composite Sample - a combination of individual (or continuously taken) samples (aliquots) of at least 100 milliliters, collected at periodic intervals over the entire discharge day. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling to the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. For a continuous discharge, a minimum of 24 aliquots (at hourly intervals) shall be collected and combined to constitute a 24-hour composite sample. For intermittent discharges of more than 4 hours duration, aliquots shall be taken at a minimum of 30-minute intervals. For intermittent discharges of less than 4 hours duration, aliquots shall be taken at a minimum of 15-minute intervals.

Connection date shall mean the 90th day following the service of a notice by either the Authority or the Township upon an Owner that a sewer is available to serve a building except that in the case of a building completed subsequent to the availability of a sewer to the premises on which a building is located, "Connection Date" shall mean the date of the issuance of a Certificate of Occupancy therefor.

Connection Fee shall mean the fee due and payable before connection is made to the sewer system of the Authority.

Consulting Engineer shall mean the consulting engineer appointed by the Township of Franklin Sewerage Authority and authorized to review and recommend approvals of submissions and construction.

Contractor shall mean the party or parties performing the work, which may include the Developer or the Owner.

Cut Sheets shall mean submitted sheets showing depths and elevations of a proposed piping system with station locations.

DEP - The New Jersey Department of Environmental Protection.

Developer shall mean the person performing site improvements on behalf of the owner.

Developer's Agreement shall mean the agreement set forth in Appendix E for those projects that have on-tract or off-tract impacts on the Authority's existing facilities.

Domestic Sewage shall mean the normal waterborne fluid wastes from residences, commercial establishments, institutions and industrial establishments, limited to the wastes from kitchens, bathrooms, water closets, lavatories and laundries.

Dry Sewer shall mean a sanitary sewer system completely installed and ready for service but terminated in a manhole with no outlet and into which sewage is not allowed until the system is connected to a trunk, sub-trunk, interceptor or lateral sewer connected to the Authority system.

Easement shall mean an acquired legal right for the specific use of land owned by others.

Engineer shall mean the Authority Engineer.

Executive Director shall mean the person duly employed as the executive head of the Authority.

Fixture Unit shall mean each plumbing unit including but not limited to sink, toilet, urinal, tub or shower.

Garbage shall mean solid wastes from the domestic and commercial preparation, cooking and dispensing of food and from the handling, storage and sale of produce. "Properly Shredded" Garbage shall mean Garbage that has been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in Public Sewers, with no particle greater than one-half (1/2) inch in any dimension.

Grab Sample - means an individual sample of at least 100 milliliters collected over a period not exceeding 15 minutes.

Health Officer shall mean the person duly licensed by the State of New Jersey and performing the duties of Health Officer appointed by the Township of Franklin.

House Connection shall mean any pipe together with necessary connections conveying sewage from a single building or premises of any kind or sort to the sewer system at either the curb line or Authority's easement line.

Indirect User shall mean any entity who discharges into the FTSA system. All indirect users shall comply with the requirements of N.J.A.C. 7:14A-21 et seq., as applicable.

Impact Fees shall mean those fees charged to a developer/applicant for off tract impacts on the existing facilities.

Industrial Concern shall mean any concern engaged primarily in manufacturing or processing operations.

Industrial Waste shall mean the liquid wastes from industrial processes as distinct from sanitary sewage.

Infrastructure Master Plan and Impact Analysis shall mean the document that updates the Authority's sewer system Master Plan to accommodate infrastructure expansion and improvement within the sewer service area and apportion of the fair share of the capital improvement costs to upgrade and expand the entire system (off-tract improvements obligations) to the existing and future users of the sewer system.

Inspector shall mean the duly designated person assigned by the Authority to insure compliance with plans and specifications, rules and regulations, and perform such other duties as may be authorized by the Authority.

Main Sewer shall mean a sewer installed or owned by the Authority in a public street or easement, from which House Connections or building sewers are extended.

Master Plan means the plan for sewerage of the Township, prepared by the Authority's Consulting Engineers, together with any supplements, amendments, alterations or additions thereto as now or hereafter in existence, and as approved by the Authority. Such Master Plan may be developed as a whole or in parts, and any or all of the same may be rescinded, superseded, amended or changed by the Authority from time to time.

May and Shall - The word "may" is used permissively and the word "shall" has a mandatory meaning, unless the context clearly indicates the future tense.

MCUA - Middlesex County Utilities Authority.

Medical waste means any solid waste that is generated in the diagnosis, treatment (for example, provision of medical services), or immunization of human beings or animals, in research pertaining thereto, in the production or testing of biologicals, or in home self-care, according to New Jersey Administrative Code 7:26-3A.5. The term does not include any hazardous waste identified or listed under 40 CFR Part 261. Customers may not dispose of regulated medical waste (as defined in NJAC 7:26-3A.6) into the municipal sewer system of the Township of Franklin. Medical wastes that are naturally liquid [as described in New Jersey Administrative Code 7:26-3A.16 (b) (1)], are acceptable. Wastes that are liquid as a result of a mechanical process are not.

Multiple Dwelling shall mean a building housing two (2) or more separate families.

NFPA - National Fire Protection Association

NJDOTSS - New Jersey Department of Transportation Standard Specifications For Road and Bridge Construction, latest edition.

NJPDES - The New Jersey system for issuing, modifying, suspending, revoking and reissuing, terminating, monitoring and enforcing discharge permits pursuant to the State Act. The term also includes discharge permits (NJDES) issued pursuant to Section 402 of the Act.

North Crossing Subsystem shall mean the portion of the Authority's sewer collection system within the 20-year Sewer Service Area that flows to the North Crossing of the Raritan River, located north of Cedar Grove Avenue.

O&M shall mean the operation and maintenance of the system.

OSHA - Occupational Safety and Health Administration

Owner shall mean the property owner upon whose behalf an application for a sewer connection is made to the Authority.

Permit A written approval.

Person shall mean any individual, firm, company, association, society, corporation or group.



pH shall mean the logarithm of the reciprocal of the hydrogen ion concentration. The concentration is the weight of hydrogen ions, in grams, per liter of solution. Neutral water, for example, has a pH value of 7.

Planning Board shall mean the Township of Franklin Planning Board.

Plumbing Inspector shall mean the person duly designated by the Township of Franklin to inspect plumbing work.

Pollutant - Any dredged spoil, solid waste, holding tank waste, incinerator residue, garbage, refuse, oil, grease, sewage, sludge, septage, munitions, chemical wastes, biological materials, radioactive substance, chemical waste, wrecked or discarded equipment, rock, sand, cellar, dirt, and industrial, municipal or agricultural waste or other residue directly or indirectly discharged into the waters of the State, the introduction of which renders these waters detrimental or immediately or potentially dangerous to the public health or unfit for public or commercial use.

POTW - Publicly Owned Treatment Works.

Pretreatment - The application of physical, chemical and/or biological processes to reduce the amount of pollutants in, or alter the nature of the polluting properties of wastewater prior to discharging such wastewater into the treatment works.

PPM - Parts per million which is equivalent to milligrams per liter (mg/L).

Private Sewer shall mean a sewer privately owned as distinct from the Authority's sewer or other public sewer.

Professional Engineer shall mean a person licensed to practice professional engineering in the State of New Jersey.

Public Sewer shall mean any Main Sewer, or appurtenance thereto, installed or owned by the Authority in a public street or easement.

Riverview Subsystem shall mean the portion of the Authority's sewer collection system within the 20-year Sewer Service Area that flows to the Riverview Crossing of the Raritan River, located north of Franklin Blvd.

Sanitary Sewage shall mean the liquid and intermixed solid wastes from homes or other structures, exclusive of industrial wastes or storm and surface waters and drainage.

Sanitary Sewer shall mean a sewer which carries or is intended to carry sewage and into which storm, surface and ground water is not intentionally admitted. (N.J.A.C. 7:9-13.3(h), latest rev.)

Service Charges shall mean rents, rates or fees, other than permit fees, charged for direct or indirect connection with, and the use of, the Authority's sewerage system. The charges shall be made on a periodic basis.

Service Lateral shall mean the Sewer between the Main Sewer and the curb or easement line.

Sewage or Wastewater shall mean a combination of the water carried wastes from residences, business buildings, institutions, industrial establishments and other buildings or places.

Sewage Treatment Plant shall mean any arrangement of devices and structures used for the treating of sewage.

Sewerage Facilities shall mean the structures, equipment, and processes required to collect, carry-away, and treat domestic and industrial wastes and dispose of the effluent.

Sewer shall mean a pipe or conduit carrying or intended to carry sewage.

Sewer Extension shall mean any facility for the collection, transmission or pretreatment of sewage which may require a NJDEP Sewer Extension Permit.

Sewer Service Area shall mean the portion of the Township designated by Township Council to be sewerred by the Authority now or in the future, as further defined in N.J.A.C. 7:15 et. seq.

Sewer System shall mean all trunks, sub-trunks, sewers, interceptors, laterals, branches and all other sewer appurtenances, either privately owned or owned by the Authority.

Significant Industrial User - Any industrial user who discharges, into Sewerage Authority Facilities, industrial process wastewater where either:

- The volume exceeds 25,000 gallons per day, or
- The amount of BOD, COD or Suspended Solids in the discharge exceeds the mass equivalent of 25,000 gallons per day of the domestic waste of the affected POTW, or
- The discharge contributes five percent or more of the daily mass loading of any of the pollutants listed in Table I and/or in Appendix B-3 of the State NJPDES Regulations, N.J.A.C. 7:14A - 1 et seq., or
- The industrial user is subject to Federal Categorical Pretreatment Standards.

Slug shall mean any discharge of water or wastewater which, in concentration of any given constituent or in quantity of flow, exceeds for any period of duration longer than fifteen (15) minutes more than five (5) times the average twenty-four (24) hour concentration or flow during normal operation and may adversely affect the collection system and/or performance of the wastewater treatment works.

South Crossing Subsystem shall mean the portion of the Authority's sewer collection system within the 20-year Sewer Service Area that flows to the South Crossing of the Raritan River, located North of John F. Kennedy Blvd.

Standard Methods shall mean the most current version of the book, Standard Methods for the Examination of Water and Wastewater, published jointly by the American Public Health Association (APHA), the American Water Works Association (AWWA), and the Water Environment Federation (WEF).

State Act - The New Jersey "Water Pollution Control Act" NJSA 58:10A-1.

Storm Sewer (sometimes termed "Storm Drain") shall mean a sewer which carries storm and surface waters and drainage, but excludes sewage and industrial wastes, other than unpolluted cooling waters.

Street shall mean any and all streets, avenues, highways and roads whether publicly used or dedicated with or without acceptance.

Superintendent shall mean the superintendent, executive director or general manager of wastewater facilities; and/or of wastewater treatment works, or his/her authorized deputy, agent, or representative.

Suspended Solids shall mean total suspended matter that either floats on the surface of, or is in suspension in, water, wastewater, or other liquids, and that is removable by laboratory filtering as prescribed in the latest edition of Standard Methods for the Examination of Water and Wastewater.

Township shall mean the Township of Franklin in the County of Somerset, State of New Jersey.

Township Engineer shall mean the duly appointed engineer of the Township.

Toxic Pollutant - Those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly or indirectly by ingestion through food chains, may, on the basis of information available to the Authority, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformation, in such organisms or their offspring. Toxic Pollutants shall include, but not be limited to, those pollutants designated under Section 307 of the Federal Act or Section 4 of the State Act.

TWA- is the Treatment Works Approval (TWA) construction related and discharge permit required by DEP for collections, pump stations, extensions, interceptors and other related items.

## Section 2 Authority Approval

### 2.1 Conditions Requiring Authority Approval

- A. Any facility for the purpose of collecting, transmitting, storing, treating or disposing of sanitary sewage in the Township of Franklin shall require Authority approval, except facilities to be constructed under N.J.A.C. 7:9-2, "Standards for Construction of Individual Subsurface Sewage Disposal Systems."
- B. No building shall be served or permitted to be served in any other manner or by other means than the sewerage system of the Authority where the same is so located as to be serviced or be capable of being served by the said system of the Authority.
- C. Each property owner who undertakes to develop a residential, industrial and/or commercial subdivision shall be required to install complete sewerage facilities to service each parcel of the subdivision and to make connection between such facilities and the Authority's sewerage system. Depending on the property location, such property owner may also be required to pay impact fees as defined herein, and to execute a developer's agreement in connection with the development.
- D. FTSA may recommend to the Township that dry sewers be installed in projects defined as major subdivisions by the Township Planning Board or Zoning Board of Adjustment even if on-site disposal is to be used.
- E. The policy of the Authority is not to approve treatment plants. Only industrial pretreatment, sewage collection and sewage transmission facilities will be approved.
- F. The policy of the Authority is not to make extensions or expansions to the system or service connections unless those requesting said extension, expansion or connection pay for the entire cost of said extension, expansion or connection.
- G. The policy of the Authority is to take title to new facilities which serve more than one owner, except that sewers serving a condominium complex or development shall be owned by the condominium association. The Authority will operate and maintain all facilities to which it claims title.
- H. A schedule of fees for various services shall be set forth by the Authority. Various application forms are also set forth by the Authority. Said fees and forms are included with this document and are subject to change by the Authority. All applicants should contact the Authority to ensure they have the current fee schedule and forms.

- I. The policy of the Authority is to account for the impact which any new subdivision or approved site plan may have on existing Authority facilities and to place financial responsibility for upgrading or modifying existing facilities or constructing new facilities which are reasonably required in connection therewith upon the Developer/Applicant. In order to account for such impact, the Authority will enter into development agreements with all commercial and industrial entities, and also with multi-home residential applicants. The agreements will include an assessment for the applicant's fair share of the costs for on-tract or off-tract infrastructure improvements to convey the applicant's sewage through the Authority's sewerage collection system. The model Developer's Agreement is included in Appendix E.

## **Section 3 Applications, Permits, and Fees**

### **3.1 Permit Application**

No connection of any kind or nature shall be made to the Authority's sewer system without a Connection Permit issued by the Authority. The procedure for obtaining a Connection Permit is as follows:

#### **Will Serve Letter**

The Applicant is required to obtain a "Will Serve Letter" from the Authority to confirm the availability of sewer facilities and capacity for the proposed project.

#### **Approval of Sewer Facilities**

Upon receiving the Authority's confirmation of availability of sewers, the Applicant is required to submit an application for "Approval of Sewerage Facilities."

No permit application will be considered complete until all applicable fees are paid. Since certain fees can only be computed based on the project's plans, the applicant must submit plans with a request for a fee determination.

Preliminary plans of the proposed sewerage facilities shall consist of a general plan showing the number of parcels to be serviced, a layout of the proposed collection system, sizes of sewers, locations of manholes, and the point or points of connection to the Authority's sewerage system. A brief engineering report shall accompany the preliminary plans. The report shall contain information regarding the number and type of proposed connections, the estimated volume and nature of flow therefrom, and the criteria for the sewer design. A conceptual design of all pump stations and any other facilities shall be included. The plans and report shall be prepared by a professional engineer registered in the State of New Jersey.

The final application shall be submitted with the following (All items shall be submitted in triplicate):

1. Construction plans
2. Construction specifications
3. Engineer's Report (NJDEP Forms) (FTSA may request a supplemental Engineer's Report if required.)
4. Construction cost estimate
5. TWA-1 Form and endorsements (Standard NJDEP Forms) if required.
6. Application Fee and Escrow Deposit
7. Letter requesting approval

8. Executed "Sewerage Facilities Construction Agreement" or similar contract

Plans of sewer extensions shall be submitted by the developer to the Authority for review and approval. A fee shall be charged to the developer for the engineering review of each plan in the amount stated in the Rate Schedule. This fee is non-refundable even if the application is withdrawn.

The approved application will be valid and in force for a period of one year from the date of issue and, thereupon, be void unless, before the termination of such period, the Authority, upon written request of the Applicant, grants an extension for one additional year. All approved applications, if extended, shall become invalid at the termination of one extension of time. If the developer discontinues construction on a project for a period of one year, the project is considered abandoned and the approval is void unless reapplied for in writing.

The approved application shall constitute a contract between the Authority and the applicant, obliging the applicant to pay to the Authority its fees and charges as established from time to time and to comply with its "Rates, Rules and Regulations". An approved application may also require the execution of a Developer's agreement as set forth in Appendix E.

**Connection of Approved Sewer Facilities**

The Authority will Review the completed project in accordance with the "Project Completion Check List" for all applicable items.

**Application for Sewer Service**

Upon approval of the sewer facilities by the Authority, the Applicant is required to submit an application for "Sewer Service" along with the required connection fee payments. The connection fee must be paid in full before a permit number is issued.

Connection must be inspected and approved by Authority personnel with a required minimum of 48 hour notice. The Executive Director at his/her discretion, may route applications to the Commissioners for review and/or action.

The application for "Sewer Service" must be signed by the owner or his/her authorized agent. A separate application for "Sewer Service" must be filed for each building and/or each separately owned condominium.

FTSA approval to connect a project to the sewers is indicated by the assigning of a permit number to the "Sewer Service" application. Until this number is assigned, no physical connection to FTSA facilities shall be made either directly or indirectly through a private sewer system.

A resolution approved by the Board of Commissioners shall be required for the construction of any sewer system, private sewer system, industrial waste disposal system and any construction coming under the control or jurisdiction of the Authority which is defined as a sewer extension as defined by NJDEP.

Permission to start construction of a sewer extension will be granted administratively in writing after the applicant has satisfied the standard procedures of FTSA, any special conditions of the Resolution of Approval and after approval by (1) the Township, (2) MCUA, (3) the State Department of Environmental Protection, (4) and all other agencies having jurisdiction. The applicant shall be responsible for obtaining all approvals.

A project in which some of the sewer system will be owned by FTSA and some will be privately owned, will require two separate applications; one for public sewers and another for private sewers.

A project with more than one phase may be submitted as a single application. However, a phasing schedule shall be made a part of the application.

In every instance where there is to be a contractual agreement between the Sewerage Authority and any applicant, the applicant must, prior to contract negotiations, deposit with the Sewerage Authority an amount of money, to be determined by the Sewerage Authority, to cover any and all legal, engineering and other fees and expenses associated with the proposed contractual agreement and negotiations. If actual costs to the Authority exceed the amount of the deposit, the applicant will be required to deposit additional monies as determined by the Authority prior to continuation of contract negotiations. Where an applicant owes monies to the Authority with regard to a particular application, he/she may not make a different application to the Authority to continue negotiations on the original application without first making full payment to the Authority of all monies due the Authority.

### **Impact Fee Determination**

Anyone desiring to ascertain the estimated impact fees to be paid in connection with a development application shall complete the Impact Fee Determination Request Form located in Appendix A. There shall be a charge as set forth in Appendix B for each such determination. Any such determination by the Authority is preliminary in nature and is dependent upon the status of any other pending applications as well as other factors not within the Authority's control. A final determination will be made at the time of execution of a Developer's Agreement as set forth in Appendix E.



## Section 4 Plans for Installation of Sewers

### 4.1 Sewer Construction Plans

ALL SEWER CONSTRUCTION SHALL CONFORM TO APPENDIX C, SEWER SYSTEM STANDARDS, OF THE "RATES, RULES, AND REGULATIONS."

- A. Construction plans for installation of sewers shall include, but not be limited to, the following items:
  1. Plan View showing the following:
    - a. Building location lot and block numbers;
    - b. Site improvements and final grading;
    - c. Water, storm and sanitary sewers, and laterals (existing and proposed);
    - d. Manhole numbers, rim and invert elevations;
    - e. Match lines indicating other plan sheets;
    - f. Page numbers of matching profiles;
    - g. Description of all benchmarks including three (3) ties and the datum which shall coincide to USGS elevations;
    - h. Property lines and easement lines with bearings and distances;
    - i. Indication of what facilities will be privately owned and what facilities will be owned by FTSA;
    - j. If a set of plans has more than four (4) plan sheets, then a key map with all manhole numbers and sheet numbers shall be supplied.
  2. Profile View showing the following:
    - a. Sanitary sewer profiles (existing and proposed);
    - b. All existing and proposed utilities crossing under the sanitary sewer;
    - c. All existing and proposed utilities crossing over the sanitary sewers;

3. Minimum depths of five (5) feet of cover on all sewers and four (4) feet of cover on all laterals and force mains.
4. FTSA standard details.
5. Engineering Drawings of Special Structures:
  - B. Plans and profiles as needed to completely describe pump stations, syphon chambers, meter chambers, and other special structures.
  - C. The final DEP application (if required) shall contain three (3) copies of the NJDEP forms including the Engineer's Report, TWA-1 and Endorsements completely ready for execution. Any other documents which will be a part of the application to NJDEP shall be a part of the final application to FTSA.
  - D. After FTSA acts on a DEP application, one set of the application documents will be returned to the applicant with appropriate comments.
  - E. Review of an application will generate comments, if any, on administrative and technical deficiencies and will establish whether additional design review is required, along with the estimated cost to perform a subsequent design review. The review will establish the construction cost value for purpose of calculation of construction inspection escrow. In accordance with State law, the applicant will submit an initial deposit for construction inspection escrow in an amount of the greater of \$500.00 or 5% of the construction cost established by the design review. A subsequent deposit will be requested if necessary to cover the estimated cost of remaining inspections and construction closeout work to comply with the provisions of these regulations.
  - F. After approval of a Sewer Extension Application by FTSA, the applicant shall provide three sets of documents for execution by FTSA so the applicant can apply for MCUA and NJDEP approval. These documents will be executed by FTSA and returned to the applicant for forwarding to the appropriate agencies.
  - G. The applicant shall, at his/her own expense, obtain all other permits and clearances from all agencies having jurisdiction.

## Section 5 Procedures for Connections

### 5.1 Connections to FTSA System

- A. No connection shall be made to the FTSA system unless FTSA grants permission to do so in writing by approving a "Sewer Service" application.
- B. All costs and expenses incident to the installation and connection shall be borne by the applicant. The connection fee is paid solely for the privilege of connecting to the system. It is required for each new customer to pay his/her pro rata share of the capital expense of the entire FTSA system.
- C. The building sewer from the structure to the property line and/or sewer main shall be installed by a licensed plumber, sewer contractor registered with FTSA, or by an individual property owner who can prove his/her competence to perform the work.
- D. FTSA shall be notified two days prior to construction so an inspector may be present during construction. No work is to be covered until after it has been inspected and approved by FTSA. Work covered without inspection may be rejected because it cannot be fully inspected. The owner may be required to uncover such work at his/her own expense to permit proper inspection.
- E. No connection can be placed into service after construction is complete until it has been approved by FTSA.
- F. The approved application for "Sewer Service" is a binding contract which runs with the land and requires the "Applicant" and his/her heirs to comply with the "Rates, Rules and Regulations" as they now exist and as they may be revised in the future.
- G. All permits for connections are given on condition that the owners of the property served assume all risk of damages that may result from any failure of the FTSA system or from water getting into the premises from the sewer or their connections.
- H. Under no circumstances shall any new fixture be installed in a building or dwelling at an elevation lower than the front curb elevation or the street centerline elevation, whichever is higher, unless special precautions are incorporated into the new fixture installation to prevent surcharging of the new fixture installation from the sanitary sewer main because of high flow or blockage. Owners of existing houses or dwellings or buildings, where fixtures or drains or outlets are lower than the elevation above-specified, must install and maintain a check valve system, or other protective device. The installation and maintenance of protective systems is the responsibility of the property owner for any damage as a result of system malfunctioning, blockages or surcharges in the public sewer system.
- I. Regulations or requirements specified herein shall also pertain to commercial or industrial properties, where applicable.

- J. Except as otherwise covered and allowed by these "Rates, Rules and Regulations", no person shall discharge or cause to be discharged anything to FTSA facilities which does not conform to "Standards for Acceptable Wastes" as described in Chapter VII.

## Section 6 Standards for Connections

### 6.1 Sewer Connections to FTSA System

- A. Any building with sanitary facilities, which is within 150 feet of a property line, shall be required to connect to the sanitary sewer.
- B. No building sewer or lateral shall be laid within five (5) "horizontal" feet of any gas pipe, water service or any other facility of any public utility company, nor within five (5) feet of any open excavation, vault or meter pit; nor shall the location be under any sidewalk or driveway unless approved. All building sewers or laterals shall be installed within the limits of the customer's property and a minimum of three (3) feet from any property line(s) or building walls.
- C. No person shall make connection of sump pumps, roof downspouts, exterior foundation drains, area-way drains, or other sources of surface runoff or ground water to a Building Sewer or Building Drain which is in turn connected directly or indirectly to a public sanitary sewer.
- D. The connection of the Building Sewer into the Public Sewer shall conform to the requirements of FTSA's "Rates, Rules and Regulations", the building and plumbing code or other applicable rules and regulations or ordinances of the Township. All such connections shall be made gastight and watertight.
- E. All excavations for Building Sewer installations shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the Authority and Township officials.
- F. The joint made between the sewer connection and the Building Sewer shall be secure and watertight. Standard approved fittings with watertight joints shall be used for connection.
- G. The property owner is responsible for maintaining the Building Sewer in a safe and watertight condition from the Building to the street or sewer easement. If the Owner fails to maintain the Building Sewer properly as aforesaid, the Authority reserves the right to disconnect the Building Sewer.
- H. The homeowner owns the lateral from the cleanout between the property line and the curb line, to the house. If a cleanout does not exist in this location, then the homeowner owns the lateral from the house to the property line or sanitary sewer easement line. The homeowner is also responsible for the cost of cleaning the lateral in the street if the blockage is due to excessive amounts of grease or other material originating in the house which should not be discharged to the sewer.

## Section 7 Standards for Acceptable Wastes

### 7.1 Waste Discharges

- A. No person shall discharge or cause to be discharged any storm water, surface water, ground water, roof runoff, subsurface drainage, uncontaminated cooling water, air conditioner or steam condensate, or unpolluted industrial process waters to any sanitary sewer.
- B. No person shall discharge or cause to be discharged any of the following described waters or wastes to any public sewers:
  - 1. Any gasoline, benzene, naphtha, fuel oil, lubricating oil, or other flammable or explosive liquid, solid or gas.
  - 2. Any water or wastes containing toxic or poisonous solids, liquids or gases in sufficient quantity, either singly or in combination with other wastes, to injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance or create any hazard in the receiving waters of the sewage treatment plant, including, but not limited to, cyanides in excess of two (2) mg/L as CN in the wastes as discharged to the public sewers.
  - 3. Any waters or wastes having a pH lower than 5.5, or higher than 9.5, or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works.
  - 4. Solid or viscous substances in quantities of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the sewage works such as, but not limited to, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, whole blood, paunch manure, hair and fleshing, entrails, paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.
- C. No person shall discharge or cause to be discharged the following described substances, materials, waters or wastes if it appears likely, in the opinion of the Authority, that such wastes can harm either the sewers, sewage treatment process, or equipment, have an adverse effect on the receiving stream, or can otherwise endanger life, limb, public property or constitute a nuisance. In forming an opinion as to the acceptability of these wastes, the Authority will give consideration to such factors as the quantities of subject wastes in relation to flows and velocities in the sewers, materials of construction of the sewers, nature of the sewage treatment process, capacity of the sewage treatment plant, degree of treatability of wastes in the sewage treatment plant, and other pertinent factors. The substances prohibited are:
  - 1. Any liquid or vapor having a temperature higher than one hundred fifty degrees Fahrenheit (150 °F).

2. Any water or waste containing fats, wax, grease or oils, whether emulsified or not, in excess of one hundred (100) mg/L on a monthly average or containing substances which may solidify or become viscous at temperatures between thirty-two and one hundred fifty degrees Fahrenheit (32 and 150 deg. F or 0 and 65 deg. C).
3. Any garbage that has not been properly shredded. The installation and operation of any garbage grinder equipped with a motor of one-half (1/2) horsepower or greater may be subject to the review and approval of the Authority.
4. Any waters or wastes containing strong acid iron pickling wastes or concentrated plating solutions whether neutralized or not.
5. Any waters or wastes containing iron, chromium, copper, zinc and similar objectionable or toxic substances, or wastes exerting an excessive chlorine requirement, to such degree that any such material received in the composite sewage at the MCUA meter chamber works exceeds the limits established by the Executive Director for such materials.
6. Any waters or wastes containing phenols or other taste or odor-producing substances, in such concentrations exceeding limits which may be established by the Authority as necessary, after treatment of the composite sewage, to meet the requirements of the State, Federal or other public agencies of jurisdiction for such discharge to the receiving waters.
7. Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Authority in compliance with applicable State or Federal regulations.
8. Materials which exert or cause:
  - a. Unusual concentrations of inert suspended solids (such as, but not limited to, Fullers earth, lime slurries and lime residues) or of dissolved solids (such as, but not limited to, sodium sulfate).
  - b. Excessive discoloration (such as, but not limited to dye wastes and vegetable tanning solutions).
  - c. Unusual BOD, chemical oxygen demand or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment works.
  - d. Unusual volume of flow or concentration of wastes constituting "slugs" as defined herein.

9. Waters or wastes containing substances which are not amenable to treatment or reduction by the sewage treatment process employed, or are amenable to treatment only to such degree that the sewage treatment plant effluent, sludge and other discharge cannot meet the requirements of agencies having jurisdiction over discharges or sludge from the plant.
  10. Materials or liquids removed from septic tanks or cesspools.
  11. Materials which cause a nuisance, health or safety hazard to FTSA personnel or the public.
- D. If any waters or wastes are discharged, or are proposed to be discharged to the public sewers, which waters contain the substances or possess the characteristics enumerated herein, and which in the judgment of the Authority may have a deleterious effect upon the sewage works process, equipment or receiving waters, or which otherwise create a hazard to life or constitute a public nuisance, the Authority may:
1. Reject the wastes, or terminate service.
  2. Require pretreatment to an acceptable condition for discharge to the public sewers.
  3. Require control over the quantities and rates of discharge.
  4. Require payment to cover the added cost of handling and treating the wastes not covered by existing sewer charges, and to cover the cost of any damages incurred. If the Authority permits pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the Authority and subject to the requirements of all applicable codes, ordinances and laws.
- E. Grease, oil and sand interceptors shall be provided when, in the opinion of the Authority, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand or other harmful ingredients, except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the Authority and shall be so located as to be readily and easily accessible for cleaning and inspection.
- F. Where preliminary treatment or flow-equalizing facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at his/her expense.



- G. When required by the Authority, the owner of any property serviced by a building sewer carrying industrial or commercial wastes shall monitor his/her waste for quantity and quality, at his/her own expense. If needed, the owner shall install a suitable control/monitoring manhole together with such necessary meters and other appurtenances in the building sewer to facilitate observation, sampling and measurement of the wastes. Such manholes, when required, shall be accessible and safely located, and shall be constructed in accordance with plans approved by the Authority. The manhole shall be installed by the owner, at his/her own expense, and shall be maintained by him/her, so as to be safe and accessible at all times.
  
- H. All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in the "Rates, Rules and Regulations" shall be determined in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater", published jointly by the American Public Health Association (APHA), the American Water Works Association (AWWA), and the Water Environment Federation (WEF). All measurements, tests, and analyses shall be performed on samples obtained from the control/monitoring manhole provided or upon suitable samples taken at said control/monitoring manhole. In the event that no special control/monitoring manhole has been required, the control/monitoring manhole shall be considered to be the nearest downstream manhole in the public sewer to the point at which the building sewer is connected. Sampling shall be carried out by customarily accepted methods to reflect the effect of constituents upon the sewage works and to determine the existence of hazards to life, limb and property. The particular analyses involved will determine whether a twenty-four (24) hour composite of all outfalls of a premise is appropriate or whether a grab sample or samples should be taken. Normally, but not always, BOD and suspended solids analyses are obtained from 24-hour composites of all outfalls whereas pH is determined from periodic grab samples.
  
- I. FTSA, as a condition of providing services, reserves the right to enter, after reasonable notice, any premises discharging industrial waste.
  
- J. No sump pumps or leaking laterals shall be connected to the sanitary sewers. If sump pumps exist, they shall be disconnected. Any leaking pipes connected to FTSA facilities shall be repaired to meet FTSA standards.

## Section 8 Easements' Standards

### 8.1 Sewer Easements

- A. Where sewers are installed in other than lands dedicated or conveyed, or to be dedicated or conveyed as public roads or streets, conveyance of easements of a minimum width of twenty (20) feet or twice the depth of cover (whichever is greater) shall be executed and delivered to the Authority without payment or cost. The minimum distance from the pipe to the easement line shall equal the depth of cover of the pipe. All pipes, laterals, systems and equipment in any development connecting with the Authority's System, in public rights-of-way, shall be conveyed to the Authority without cost to the Authority. Where sewers are to be installed in streets which will not be dedicated to the Township of Franklin, the County of Somerset, or the State of New Jersey, and in which the services will not be privately owned and maintained, the easement shall extend from curb to curb, or wider, depending on the depth and location of the pipe within the street.
- B. Easement to FTSA shall prohibit the erection or construction of any structure, fence, pavement, or other man-made object. It shall prohibit the planting of trees. It shall permit landscaping and grass. However, it shall only require FTSA to restore the easement with grass regardless of what may be in the easement.
- C. Pump stations shall be located on land deeded in fee simple to FTSA. The distance from the property line to the building shall, as a minimum, equal the distance from the bottom of the footings of the wet well to the surface of the ground.
- D. Ownership of land and easements shall be indicated on a final plat which shall be recorded as a filed map with the County. The map shall conform to the Map Filing Law. Also, a written Deed shall be filed with the County.
- E. A copy of the map and deed shall be provided to FTSA.
- F. The plans of a sewer system shall contain a plan view which shall have the following information recorded on it:
  - 1. The sewer system
  - 2. The easement and property lines
  - 3. The indication of the point at which FTSA ownership ends and private ownership begins.
  - 4. The filed map, book and page where all easements and deeds to FTSA are recorded.

5. The name of the licensed surveyor who performed the survey, a reference to the control monument(s) where the vertical and horizontal datum were obtained, all tied into and adjusted to the North American Vertical Datum, NAVD 1988, and the NJ State Plane Coordinate System, NAD1983 in English Units. Each sheet shall have a minimum of four location coordinate pairs.

## Section 9 Connection Approvals

### 9.1 Approval for Sewer Connections

- A. Approval for connection shall be indicated by the assigning of a connection permit number and payment of required connection fees. Approval of a connection application shall grant the holder certain rights and obligations including the following:
  - 1. The right to connect the facility described in the application to the FTSA system at his/her own expense.
  - 2. The right to use capacity in the FTSA system in the amount described in the application and for the purpose described in the application.
  - 3. The obligation to conform to the FTSA "Rates, Rules and Regulations" as they now exist or may reasonably be revised in the future.
  - 4. Connection approvals run with the land and may not be transferred to another location.
  - 5. Connection approvals are only valid for the type of waste for which they are granted.
  
- B. Approval for Sewer Extension shall be a two-stage process which may be handled separately or together.
  - 1. Preliminary approval will deal with capacity availability and general system layout. Preliminary approval shall grant the holder certain rights and obligations including the following:
    - a. The obligation to conform to the "Rates, Rules and Regulations" as they now exist, or as they may reasonably be revised in the future.
    - b. FTSA is obligated to reserve the capacity required for the project involved for one year.
    - c. FTSA is committed to accept facilities generally as shown on the plans, unless the final design shows the original concept to be seriously flawed.

2. Final approval shall deal with the details of implementing the design concept of a Sewer Extension. It shall be granted only by a Resolution of Approval by the Board. It shall grant the holder certain rights and obligations, including the following:
  - a. The same obligations and rights conferred by preliminary approval.
  - b. FTSA is committed to endorse and/or sign permits to other agencies for said project. The information in these other permits must be consistent with the plans approved by FTSA or this provision is void.
  - c. The applicant may construct his/her project at his/her own expense if he/she can obtain all required approvals.
  - d. The approval is only for the project and location described in the application and no deviation will be permitted without approval by FTSA.

## **Section 10 Procedures to Construct Approved Sewer Extensions**

### **10.1 Approval for Sewer Extensions**

- A. Before beginning construction of any facility which requires a sewer extension permit, certain conditions must be met:
1. The Contractor must provide a Certificate of Insurance to hold harmless FTSA specifying that FTSA will be notified 10 days before the effective date of any change in the policy and naming FTSA as a co-insured in the amounts as follows:
    - a. Bodily Injury Liability. For liability for bodily injury, including accidental or wrongful death, three million dollars (\$3,000,000) for any one person and, subject to the same limit for each person, five million dollars (\$5,000,000), on account of any one occurrence.
    - b. Property Damage Liability. For liability for property damage, two million dollars (\$2,000,000) on account of any one occurrence and five million dollars (\$5,000,000) on account of all occurrences.
    - c. Insurance policies shall provide for reinstatement of full coverage after payment of any claim.
  2. The following types of insurance shall also be provided:
    - a. Workmen's Compensation Insurance. The Contractor shall take out and maintain during the life of this Contract, Workmen's Compensation Insurance for all of his/her employees employed at the site, and, in case any work is sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all employees of the latter unless such employees are covered by the protection afforded by the Contractor.
    - b. Contractor's Bodily Injury Insurance. Liability for Contractor's Bodily Injury Insurance shall be in the amounts specified in 10.A.1.a herein before.
    - c. Contractor's Protective Bodily Injury Insurance. Liability for Contractor's Protective Bodily Injury Insurance shall be in the amounts specified in 10.A.1.a hereinbefore.
    - d. Contractor's Contractual Bodily Injury Insurance. Liability for Contractor's Contractual Bodily Injury Insurance shall be in the amounts specified in 10.A.1.a hereinbefore.
    - e. Contractor's Property Damage Insurance. Liability for Contractor's Property Damage Insurance shall be in the amounts specified in 10.A.1.b hereinbefore.

- f. Contractor's Protective Property Damage Insurance. Liability for Contractor's Protective Property Damage Insurance shall be in the amounts specified in 10.A1.b hereinbefore.
  - g. Contractor's Contractual Property Damage Insurance. Liability for Contractor's Contractual Property Damage Insurance shall be in the amounts specified in 10.A.1.b hereinbefore.
  - h. Motor Vehicle Liability Insurance.
    - (i) Bodily Injury Insurance covering the operation of all motor vehicles owned, rented or leased by the Contractor, or used by the Contractor in the prosecution of the work under the Contract, shall be in the amounts specified in 10.A.1.a hereinbefore.
    - (ii) Property Damage Insurance covering the operation of all motor vehicles owned, rented or leased by the Contractor, or used by the Contractor in the prosecution of the work under the Contract, shall be in the amounts specified in 10.A.1.b hereinbefore.
  - i. Contingent Liability. The above policies for Public Liability and Property Damage Insurance must be so written as to include Contingent Liability and Contingent Property Damage Insurance to protect the Contractor against claims arising from the operation of Sub-contractors.
  - j. Owner's Protective Liability Insurance. Liability for Owner's Protective Personal Injury Insurance shall be in the amounts required in 10.A.1.a hereinbefore, and liability for Owner's Protective Property Damage Insurance shall be in the amounts required in 10.A.1.b hereinbefore. Insured parties shall be listed hereinbefore.
3. The Contractor must provide cut sheets.
  4. The Contractor must provide 8"x 10" photographs taken every 50 ft. or closer of all areas to be disturbed by the project which do not belong to the developer.
  5. The Developer must provide three additional full sets of plans.
  6. The Contractor shall provide manufacturer's information sheets and manuals on all materials to be used and equipment to be supplied.
  7. A Performance Bond in the amount of 100% of the approved bonding estimate and a one thousand dollar (\$1,000) cash bond shall be provided for public contracts.
  8. Escrow money to cover FTSA construction inspection shall be provided. The amount shall be enough to cover the entire project or at a minimum, the first month's work.

9. The developer shall provide unexecuted copies of all documents to be used to transfer title to FTSA.
10. Copies of MCUA and NJDEP approvals must be provided.
11. After items 1 through 5 are delivered to FTSA, the Contractor and the Developer shall meet with FTSA in a preconstruction meeting at FTSA.

- B. Construction of all sewerage facilities shall be inspected at all times by Authority personnel or a representative thereof during the course of actual construction. Charges for such inspection shall be paid by the developer at a rate established by FTSA. There shall be one inspector per pipe laying crew. Time spent on inspecting construction in excess of eight (8) hours per day or Saturday, Sunday and any legal holiday, including those observed by the Authority, shall be charged at current Union contractual rates.

Prior to construction, the cost of inspection shall be estimated in advance and the monies placed in the Escrow Fund of the Authority. Any surplus will be returned upon completion of the project and written request by the Applicant. If the Escrow Fund is insufficient to cover the remaining work, the Authority will notify the applicant requesting additional Escrow Funds. FTSA may remove its inspector from the job and stop construction of sewers if these funds are not received.

All construction within two feet of any sanitary sewer and under any sanitary sewer shall be inspected by FTSA. Failure to install the facilities in accordance with approved plans and specifications shall be cause for ordering the work to be stopped, removed and reinstalled as per specs with no additional cost to the Franklin Township Sewerage Authority.



## **Section 11 Testing and Acceptance of Sewer Extensions**

### **11.1 Testing for Sewer Extensions**

- A. A plug, or some other physical separation, shall be maintained by the developer and his representatives to prevent any water from flowing from the facilities under construction into the existing sewer. If the developer fails to maintain a watertight barrier, FTSA reserves the right to seal the end of the pipe with concrete. The watertight plug is not to be removed until written permission to do so is received from the FTSA or Consulting Engineer.
- B. If a sewer system is to be built in phases, then a plug(s) shall be used to isolate unapproved section(s) from those approved for operation.
- C. Upon completion, the new facilities will be inspected and tested in accordance with Appendix C. Pumping, metering and pretreatment facilities will be handled on a case by case basis according to their complexity.
- D. Inspection work by the Authority, its employees, engineer or agents is intended only to review compliance of the work with the approved design documents. Such inspections (or lack of inspections) are not intended to review safety precautions, adherence to State or Federal regulation, or hazards to the public, contractor, employees, or third parties. Each applicant assumes full responsibility for damages or injuries caused on its work sites, and agree to indemnify and hold harmless and provide separate defense for the Authority and its representatives against all actions or claims.
- E. The purpose of testing and inspection is to prevent the acceptance of defective and substandard work or work which deviates from the plans. It is the Contractor's sole responsibility to avoid performing defective or substandard function. FTSA reserves the right to demand the correction of any defective or substandard work or work which deviates from the plans at any time prior to final written acceptance of the project regardless of when the problem developed and when it was first discovered. After corrections are made, the corrected work must be retested at no additional cost to the Authority.
- F. After the work has passed all tests, all known defects have been corrected and all fees paid, final acceptance may be issued and lateral connections may be made. Permission to connect laterals and final acceptance must be in writing.
- G. No facility is to be placed into operation until the final acceptance is issued.

- H. The developer, at its expense, will furnish three sets of as-built plans of the project prior to final acceptance. They shall include all plans that were a part of the final approval. Also, one set of as-built originals shall be submitted, one electronic copy of as-built plans in PDF format on CD, and one copy of as-built plans in CAD File format. As-built plans shall include the following:
1. Original values that have changed or crossed out with a single line so they are still readable.
  2. All as built rim and invert elevations. All elevations shall be referenced to NAVD 1988; the reference monument(s) used shall be noted.
  3. Horizontal control shall be referenced to the NJ State Plane Coordinate system using the North American Vertical Datum of 1983 (NAD1983), using units of feet. Easting and Northing (X and Y) shall be noted for each manhole, cleanout and other surface feature. Alternately, Easting and Northing coordinates for a minimum of four locations per sheet shall be indicated.
  4. All pipe lengths, diameters, slopes and materials as-built.
  5. All utilities within ten (10) feet of any sanitary sewer.
  6. The location (by station) and length of every lateral connection to the main by survey or from the as-built sewer TV inspection tapes.
  7. The location and depth of every cleanout.
  8. The certification of a licensed land surveyor or engineer that the as-built information is accurate.
  9. Identification of the permanent survey monuments utilized along with the horizontal coordinates of the manholes referenced to NJ State Plane Coordinate System, and the horizontal and vertical survey data.

## **Section 12 Certification to Operate New Sewers**

### **12.1 Operation of New Sewers**

- A. No connections will be made to a sanitary sewer and no sanitary sewer will be placed into operation until after it has been certified for operation by the Authority.
- B. The Authority will not certify any sewer for operation until:
  - 1. All construction is complete.
  - 2. A satisfactory maintenance guarantee is posted (see Section 13)
  - 3. The as-built plans are accepted.
  - 4. FTSA has accepted title to those parts of the system to which it wants title.
  - 5. All charges have been paid, including a fee for the Authority to add new sewer and manhole information into its computerized Geographic Information System calculated by the Authority.

## **Section 13 Maintenance Guarantees**

### **13.1 Sewer Maintenance**

- A. The Developer will be held unconditionally responsible for the integrity of the new sewer extension for one full year from the date of Certification for Operation.
- B. During this period, any excessive leakage as defined by State regulations, which is discovered, shall be repaired by the Developer. Any defects which develop during this period, including ponding due to pipe settlement, shall be repaired by the Developer at his/her sole expense.
- C. During this period, FTSA reserves the right to require additional leakage testing of the system if the possibility of a leakage problem can be demonstrated.
- D. Upon the final acceptance of the project, the contractor shall guarantee said work for a period of one year from the acceptance date. In addition, the Contractor shall post a maintenance bond in the amount of 15% of the project cost for the one year maintenance period to FTSA.
- E. Failure to correct any problem within ten (10) days of written notice shall give FTSA the right to correct the problem and bill the charges to the Developer, the Escrow Fund or the Bond, as FTSA sees fit.

## **Section 14 Prohibited Connections**

### **14.1 Prohibited Connections to FTSA System**

- A. No connection shall be made directly or indirectly to the sewer system unless application for service has previously been made by the property owner and approved by the Authority, and the connection inspected and approved by Authority personnel.
  
- B. No connection shall be made directly or indirectly to the sewer system to which is connected any of the following:
  - 1. Floor drain, area drain or yard drain.
  - 2. Roof leader.
  - 3. Swimming pool drain.
  - 4. Storm water inlet or catch basin.
  - 5. Drain from a water-using piece of equipment or manufacturing process.
  - 6. Sump pump.

## **Section 15 Responsibility to Others**

### **15.1 Rules for all Transmission and Treating Entities**

- A. All users of the FTSA system shall be subject to the rules of all Transmission and Treating entities through which their waste flows including, but not limited to, MCUA, the City of New Brunswick, South Brunswick Township, South Bound Brook and Stony Brook Regional Sewerage Authorities.

## **Section 16 Policy on Blockages, Repairs and Damages to System**

### **16.1 Repair Responsibilities**

- A. The Authority policy with regard to procedures for repairs of building sewers and house connections to the Authority's system is as follows:
1. In the event of a stoppage or failure in a building sewer or house connection, the property owner shall be responsible for endeavoring to correct the situation and for obtaining a measurement to the point of stoppage or failure.
  2. If the problem is found to exist between the property or easement line, and the house or building, then the property owner shall be responsible for proceeding with all necessary corrective work.
  3. If the problem is found to exist between the property or easement line, and the main sewer, the Authority shall be responsible for proceeding with all necessary corrective work and shall reimburse the property owner for costs of the investigation and sewer cleaning.
  4. If the work is performed by the Authority and it is found that the problem has been caused by faulty use of the sewer by the property owner, such as discharge of bulky materials, discharge of acids, etc., then all costs must be borne by the property owner and shall be paid promptly by the property owner to the Authority. If not paid promptly, the amount of said costs shall be added on to the next sewer bill submitted to the property owner.
  5. Under no circumstances shall the Authority be responsible for damage to furnishing or house or building interiors unless negligence on the part of the Authority is demonstrated.
  6. In the event damage is inadvertently made to the Authority's system by any individual, the Authority reserves the right to call in a contractor to affect said repairs and all costs shall be borne by the individual responsible for the damage.
  7. No person(s) shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface, or tamper with any structure, appurtenance or equipment which is part of the Franklin Township Sewerage Authority wastewater facilities. Any person(s) violating this provision shall be subject to immediate arrest.
  8. When an Authority inspection indicates that a sewer cap or cleanout is missing or damaged, the customer will be notified that the facility must be repaired or cover replaced, within seven (7) days. After that time period, the Authority will replace or repair the clean-out or cap and the customer will be charged for parts and service.

9. No unauthorized person(s) shall uncover, make any connections with or opening into, use, alter, or disturb any public sewer, service lateral or appurtenance thereof without first obtaining a written permit from the Authority.



**FRANKLIN TOWNSHIP SEWERAGE AUTHORITY**

**RATES, RULES AND REGULATIONS**

**Appendix A**

**FTSA Standard Forms**

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**FRANKLIN TOWNSHIP SEWERAGE AUTHORITY  
EFFLUENT SAMPLE REPORT FORM**

<b>BLOCK:</b>		<b>LOT:</b>	
<b>DATE:</b>			
	Facility Name:		
	Address:		
	Sample Location:		
	Principal Product:		
	Principal Raw Material:		
	Is Pretreatment provided?	Yes	No
	Flow Discharge (gallons per day):		
	Is flow?	Intermittent	Continuous
	Characteristic of Wastewater:		
	Parameter	Units	Sample
	a. BOD	mg/L	24-hr composite
	b. Suspended Solids	mg/L	24-hr composite
	c. COD	mg/L	24-hr composite
	d. pH	Standard units	Grab
	Laboratory Name:		
	Laboratory Address:		
	Laboratory State License No.:		
	Date Samples Pulled:		
	Date Samples Tested:		
	Signature:		
	Title:		

**FRANKLIN TOWNSHIP SEWERAGE AUTHORITY  
INDUSTRIAL SEWER PERMIT**

<b>BLOCK:</b>		<b>LOT:</b>	
<b>DATE:</b>			
1.	Name of Facility:		
2.	Location of Facility:		
3.	Owner of Business:		
4.	Address:		
5.	Send Sewer Bills To:		
6.	Person to Contact About this Application:		
	Title:		
7.	Person to Contact in an Emergency:		
	Title:		
	Phone No.:		
	Emergency No.:		
8.	Description of Business:		
9.	Wastewater Generating Operations:		
	Describe process occurring on the premises, including Plant Operations, Raw Materials used, Chemicals and any variations in Discharge Volumes:		
10.	Seasonal Variations:		
	Indicate if business activity is continuous throughout the year. If not, list months and various seasonal discharge volumes:		

**FRANKLIN TOWNSHIP SEWERAGE AUTHORITY  
INDUSTRIAL SEWER PERMIT (CONT.)**

11.	Flammable Materials				
	Are any of the following materials used or stored on the premises?				
	a. Flammable or explosive materials	Y	N	f. Phenols	Y N
	b. Acid, alkaline, or corrosive material	Y	N	g. Large amounts of soaps or detergents	Y N
	c. Pesticides or toxic material	Y	N	h. Radioactive Material	Y N
	d. Oil, grease or solvents	Y	N	i. Dyes	Y N
	e. Metal solutions	Y	N	j. Other (describe)	Y N
12.	If answered YES to any part of #11a – 11j, please give description of item. In addition, list the significant raw materials used or stored on premises and indicate duration of storage. Include all hazardous, poisonous or toxic materials even if they are kept on premises only occasionally. Neglect materials used in laboratory or quality control operations. If quantities in inventory vary, select an average amount or give ranges.				
13.	Water Source (i.e. Private Well, Public Supply Metered, Public Supply Unmetered):				
14.	Wastewater Flow Rate:				
	Peak hourly				gallons/hour
	Max daily				gallons/day
	Average daily				gallons/day
15.	Is pretreatment of wastewater required? Yes or No				
	If yes, what is the:				
	a. Purpose of pretreatment:				
	b. Type of pretreatment:				
16.	Signature:				
	Title:				

**FRANKLIN TOWNSHIP SEWERAGE AUTHORITY  
APPLICATION FOR APPROVAL OF SEWERAGE FACILITIES**

<b>BLOCK:</b>		<b>LOT:</b>	
<b>DATE:</b>			
Application is hereby made for review of proposed sewer plans:			
1.	Applicant's Name:		
	Applicant's Address:		
	Phone No.:		
2.	Name and address of present owner (if other than No. 1 above):		
	Owner's Name:		
	Owner's Address:		
	Phone No.:		
3.	Interest of applicant (if other than Owner):		
4.	Location of project:		
5.	Is a TWA-1 Application required for this project?		
6.	Type of project (Residential, Commercial, Industrial, Other):		
7.	Residential a. Type of Structure 1) Single family house ..... 2) Condominiums..... 3) Townhouses ..... 4) Other ..... b. Number of Units ..... c. Anticipated sewage discharge (gpd) .....		
8.	Industrial (Effluent sample report forms are required to be completed for this application) a. Building Size (sf) ..... b. Number of Employees ..... c. Anticipated Sewer Discharge (gpd) .....		

**FRANKLIN TOWNSHIP SEWERAGE AUTHORITY  
APPLICATION FOR APPROVAL OF SEWERAGE FACILITIES (CONT.)**

9.	<p>Commercial</p> <p>a. Proposed Building Use.....</p> <p>b. Building Size (sf).....</p> <p>c. Number of Employees.....</p> <p>d. Will the building be used for more than one purpose, such as office-warehouse.....</p> <p>e. Indicate square footage for each use.....</p> <p>f. Anticipated Sewer Discharge (gpd).....</p>								
10.	Name and profession of person designing project:								
	Name of Firm:								
	Address:								
	Phone:								
11.	Does applicant have title in order to convey by fee to the Authority easements to all curbs and rights to the sewerage facilities?								
12.	Does applicant have financial capacity to post performance bond and maintenance bond?								
13.	<p>List plans and other material accompanying application and number of each:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Item:</td> <td style="width: 40%;">Number:</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	Item:	Number:						
Item:	Number:								
14.	<p>Include with this application a check in an amount calculated by completing the following table to defray the cost of initial review of the application package. Reference Prevailing Rates Table in Appendix F of this document. Complete all blanks. Enter zero as appropriate.</p> <p>A. _____ Residential Units x \$50.00 per unit = .....</p> <p>B. _____ Pumping Stations x \$2,000.00 per unit = .....</p> <p>C. _____ S.F. Commercial or Industrial x \$0.20 = .....</p> <p><b>D. TOTAL .....</b></p> <p style="text-align: center;"><b>Initial escrow deposit is greater of \$500 or the TOTAL above.</b></p>								
15.	Signature:								
	Title:								

**FRANKLIN TOWNSHIP SEWERAGE AUTHORITY  
APPLICATION FOR CONNECTION OF SEWERAGE FACILITIES  
PROJECT COMPLETION CHECKLIST**

<b>BLOCK:</b>		<b>LOT:</b>	
<b>DATE:</b>			
Application is hereby made for connection of constructed sewerage facilities to the FTSA sewer collection system.			
1.	Applicant's Name:		
	Applicant's Address:		
	Phone No.:		
2.	Name and address of present owner (if other than No. 1 above):		
	Applicant's Name:		
	Applicant's Address:		
	Phone No.:		
3.	Interest of applicant if other than Owner:		
4.	Location of project:		
<b>PROJECT COMPLETION CHECKLIST (FOR OFFICIAL USE ONLY)</b>			
5.	Construction Complete	S.E.	
6.	Sewer Pressure Testing Complete	S.E.	
7.	Manhole Vacuum Testing Complete:	S.E.	
8.	Sewer Flushing/CCTV Inspection:	S.E.	
9.	Mandrel Testing Performed	S.E.	
10.	Maintenance Bond Filed	E.D.	
11.	As-Built Drawings Submitted (electronically and full size prints)	S.E.	
12.	GIS System Updated	S.E.	
13.	WQM-005 Form Filed	E.D.	
14.	Sewer Connection Notices Sent	E.D.	
15.	Escrow Account Reconciled	E.D.	
16.	Approved For Connection:		
	_____	_____	
	Executive Director	Date	

**FRANKLIN TOWNSHIP SEWERAGE AUTHORITY  
IMPACT FEE DETERMINATION REQUEST**

<b>BLOCK:</b>		<b>LOT:</b>	
<b>DATE:</b>			
1.	Requested by (on behalf of):		
2.	Owner:		
3.	Address:		
4.	Agent's telephone:		
5.	Agent's fax		
6.	Property Location:		
7.	Development Name:		
8.	Projected Flow (gpd):		
<p>Determination will be mailed to Owner unless other arrangements are indicated.            Fee of \$500.00 per determination request will be assessed against Owner's escrow account</p>			



**Appendix A**  
**FORM W-9: REQUEST FOR TAXPAYER ID NUMBER**

**FRANKLIN TOWNSHIP SEWERAGE AUTHORITY**

**RATES, RULES AND REGULATIONS**

**Appendix B**  
**Schedule of Rates**

This Schedule of Rates is adopted pursuant to the authority and power given to the Franklin Township Sewerage Authority for the purpose for which it was established pursuant to the statute so made and provided (N.J.S.A. 40:14A-1 et seq.) and is intended to be and form, a part of the "Rates, Rules and Regulations," to which annexed, and adopted herewith and the provisions of said "Rates, Rules and Regulations" wherever applicable shall be deemed a part of this Schedule as though herein fully set forth.

- A. The Rates herein adopted shall be subject to change by the Authority.
- B. Every person applying for a permit, connecting a building or premises with or using the system of the Authority, shall have thereby consented to the Authority's duly appointed representative entering and inspecting any such building or premises at all reasonable times, for the purpose of ascertaining the use or uses made or being planned and whether or not the same is in accord with the provisions of the "Rates, Rules and Regulations" of the Authority and the rates charged therefor.

For existing improvements, the connection fee shall be due and payable prior to the actual connection of the improvement to the system, within 90 days of the date of availability.

It shall be the owner's responsibility to provide the necessary service connection(s) and laterals to the Authority system as to all new extensions to the system and/or property requiring a variance prior to development.

- C. Rates and Charges
  - 1. The rates and charges herein established shall apply to all real estate and premises in the Township of Franklin, County of Somerset, using the Authority's sewerage system in the Township. The annual rate and charge shall be as follows:
  - 2. User Class and User Charges.
    - a) Residential Users - A charge based upon the following:
      - a) Estimated sewage flows of 225 gallons per day per residential unit. Such charge is to be computed by determining the user class' proportionate share of total cost of operation, maintenance and debt service.
      - b) A charge based upon all other costs of the Authority exclusive of the aforesaid charge.
    - b) Commercial and Small Industrial - (All users discharging less than 25,000 gallons of domestic sanitary wastewater per day) - A charge based upon the following:

- a) Estimated sewage flows based upon number of employees or other reasonable factors. Such charges to be computed by determining the user class' proportionate share of operation and maintenance, including replacement costs of sewage facilities, based on the users proportionate contribution to the total waste water loading from all users (or user classes).
  - b) A charge based upon all other costs of the Authority exclusive of the aforesaid charge.
  - c) In the event the Authority requires testing of the sanitary waste of any particular customer which test results reveal other than domestic sanitary waste, an additional charge based upon the measured flow B.O.D., S.S. and Chlorine Demand will be charged based upon current charges imposed upon the Authority by its treatment agency (MCUA) and shall be computed in accordance with current fee schedules. This charge is covered further under Industrial Monitoring.
- c) Industrial and Commercial Users - (All users discharging more than 25,000 gallons of sanitary waste per day). A charge based upon the following:
- a) Estimated sewage flows based upon number of employees or other reasonable factors. Such charges to be computed by determining the user class proportionate share of operation and maintenance including replacement costs of sewage facilities, based on the user's proportionate contribution to the total wastewater loading from all users (or user classes).
  - b) A charge based upon all other costs of the Authority exclusive of the aforesaid charge.
  - c) In the event the Authority requires testing of the sanitary waste of any particular customer which test results reveal other than domestic sanitary waste, an additional charge based upon the measured flow B.O.D., S.S. and Chlorine Demand will be charged based upon current charges imposed upon the Authority by its treatment agency (MCUA) and shall be computed in accordance with current fee schedules. This charge is covered further under Industrial Monitoring.
  - d) Where a commercial establishment uses water for processing purposes, instead of 3.B.III.a above, the measured flow of sewage or if not measured, than the metered water usage, said charge having been computed by determining the users proportionate share of operation, maintenance and debt service (including replacement) costs of sewage facilities, based on the users proportionate contribution to the total wastewater loading from all users (or user class).
- d) Minimum Annual Service Charge - All Owners shall be liable for a minimum annual service charge to cover operation, maintenance and debt service of the Authority whether or not the dwelling or building is occupied or in use.
- e) Extraneous Flows - Any flows or strengths which are not chargeable to a particular user, whether by reason of the user being exempted from charges, or by reason of

other cost not directly attributable to the user, such as infiltration/inflow, etc. will be passed on at the discretion of the Authority using a system based on either:

- a) Formula the same as actual use charge, or
- b) Under a system which uses one or any combination of the following factors on a reasonable basis:
  - (i) Flow volume of users
  - (ii) The number of hook-ups or discharges to the users.
- f) Any user who introduces into the system pollutants of any kind whether prohibited by the above standards for acceptable waste or not, which increases the managing of the effluent or the sludge of the treatment works shall be liable for the payment of a surcharge equal in amount to the additional cost of treatment required by the introduction of the pollutants into the system.
- g) Connection Fees - Each full connection fee unit shall be in accordance with current fee schedules.

3. The charge for residential users shall be in accordance with current fee schedules subject to appeal as hereinafter set forth.

D. Non-Metered Customers -- The following schedule setting forth the classification of users and the units assigned to each classification of user, shall be used for the purpose of computing and determining the annual user charge for billing purposes based upon estimated flow, B.O.D., S.S. and C.D. requirements with calculations computed in accordance with current fee schedules. Two (2) part time employees will be considered as one (1) full time employee.

**CLASS ONE: Dwellings<sup>1,2</sup>**

<u>Type</u>	<u>Connection Charge (Unit)</u>	<u>User Charge (Unit)</u>
<i>Single Family Dwelling</i>	1	1
<i>Multi-Family Dwelling</i> for each apartment including but not limited to apartments, condominiums, townhouses, dormitories, etc.	1	1
<i>Hotel or Motel or other rooming or lodging property</i> for each room  Plus additional annual charge of 1/4 unit for each washing machine if there are laundry facilities	1/4	1/4
<i>Extended Stay Hotels per room</i>	1/2	1/2
<i>Extended Stay Hotels with Washing Machines per room</i>	3/4	3/4

**CLASS TWO: Business<sup>2,3</sup>**

<u>Type</u>	<u>Connection Charge (Unit)</u>	<u>User Charge (Unit)</u>
<i>Retail business</i> (except as otherwise specified) shall be 1/5 unit for each employee with a minimum charge of 1 unit.	1/5	1/5
Where the proprietor solely conducts the business with no employees and resides on the same premises wherein the business is conducted.	1	1
<i>Restaurant-Diner or Catering Hall</i> with 25 seats or less	2-1/2	2-1/2
<i>Restaurant-Diner or Catering Hall</i> -26 to 50 seat capacity;  Each additional 10 seats or part thereof	5  1	5  1
<i>Drive In/Carry Out Service</i> (no seating capacity)	2	2
<i>Bar-Cocktail Lounge</i> (No food) up to 20 seating capacity  For each additional 10 seats or fraction thereof	2  1	2  1

1. The Authority shall issue Connection Fee reductions for Affordable Housing Units per Section 3 of P.L.2018, effective 08/10/2018.

2. The Authority shall issue Connection Fee credits for sanitary sewer cappings per Section 2 of P.L. 2018, effective 08/10/2018.

3. The Authority shall issue Connection Fees for an addition, alterations, or change in use that materially increases the level of use and imposes a greater demand on the sewerage system per Section 1 of P.L. 2018, effective 08/10/2018.

**Note:** The Authority shall adopt any additional updates relevant to P.L.2018.

<i>Beauty Parlor-Hair Stylist, Nail Salon, Massage, or Similar Establishment</i>	2	2
For Hair Stylist, additional annual charge for each wash booth over two		1/2
<i>Professional or Office Building including condominium offices-For each 5,000 square feet or fraction thereof certified for occupancy</i>	1	
Annual charge for each 2,000 square feet or fraction thereof of floor space		1
<i>Car Wash</i>	5	5
<i>Automobile sales or showrooms</i> conducted on the same premises with garage or service department	3	2-1/2
Additional charges for each wash bay	1	1
Gas Station or Garage	2	2
Additional charges for each wash bay	1	1
<i>Theater</i>	2	
Annual charge for each 50 person seating capacity or fraction thereof		1
<i>Swimming Pool &amp; Health Clubs</i> with no food service	2	
Annual charge for each sewage fixture		1-2/5
<i>Laundromats</i>	1	
For each machine	3/4	3/4
Dry Cleaners	1	1
<i>Bowling Alley</i> -for each 10 alleys or fraction thereof	1-1/2	
Annual Charge for each alley		1/4
For each <i>commercial establishment</i> not herein otherwise classified a connection fee to be determined by the Authority,	TBD	1
Plus 1/5 unit per employee		1

**CLASS THREE: Public Buildings and Schools<sup>2,3</sup>**

<u>Type</u>	<u>Connection Charge (Unit)</u>	<u>User Charge (Unit)</u>
<i>Municipal Buildings</i>	1	1
<i>Volunteer Fire Companies</i>	1	1
<i>Houses of Worship</i>	0	1
<i>Full Time Classrooms (utilized 4 or more days a week)</i>		1
<i>Part Time Classrooms (utilized 3 or less days a week)</i>		1/2
<i>Schools</i>	1	
Annual charge per classroom		1

#### CLASS FOUR: Nursing Homes<sup>2,3</sup>

<u>Type</u>	<u>Connection Charge (Unit)</u>	<u>User Charge (Unit)</u>
<i>Nursing, Assisted Living, Hospitals, or Similar Establishment - for each bed</i>	1/5	
Annual charge per bed capacity		1/2

#### CLASS FIVE: Commercial and Industrial Uses<sup>2,3</sup>

<u>Type</u>	<u>Connection Charge (Unit)</u>	<u>User Charge (Unit)</u>
<i>Commercial Use.</i> Every commercial user of which the class and type has been previously specified hereinbefore shall pay the connection and annual charges therewith set forth, but every commercial use not so classified shall pay the same connection and annual charges as an industrial user.		
<i>Industrial Use.</i> Every industrial user shall pay a connection fee to be determined by the Authority. The minimum connection fee shall be	3	
For five or less employees, a minimum annual service charge of		3
Additional connection & service charge for each employee over five (5)	1/5	1/5

Plus the applicable industrial waste charge and the metered flow charge.		
<i>Warehouse Use.</i> For each 20,000 SF/unit or fraction thereof with a minimum fee of	3	3

## CLASS SIX: Developments

1. Type: *Subdivision of land for commercial or industrial* use shall be classified under Class Five as hereinbefore set forth
  2. Type: *Any division of land for residential purpose* shall be classified under Class One as hereinbefore set forth.
- A. The volume of sewage and/or waste from each non-residential customer shall, at the option of the Authority, be determined by meters, paid for, installed and maintained by the owner, actual water meter records and/or private well meter records combined with municipal water records or from estimates or measurements made by the Authority, at the cost of the owner.
  - B. The characteristics of the sewage waste shall be determined from actual samplings or other approved means and shall be based upon analysis made in accordance with the procedures outlined in the latest edition of "Standard Methods of Analysis of Water and Wastewater" published by the American Public Health Association. The Authority may require the installation of automatic samplers at the cost of the owner to obtain representative samples at a frequency determined by the Authority or as may be required. All costs of effluent analysis shall be borne by the owner.
  - C. Additional classifications or modifications of the schedule may be established by the Authority from time to time as deemed necessary.
  - D. The Authority will accept industrial wastes into the sanitary sewerage system upon acceptance of a formal written application, under and subject to, the provisions appearing in the "Rates, Rules and Regulations" stated herein or by approved contract with the Authority. The application will set out in detail the characteristics of the wastes, the flow conditions which shall govern and the conditions with respect to the physical connection or connections. It will be the policy of the Authority to consider each application on its own merits, and to establish specific conditions applicable to the particular situation, for each applicant. No connection shall be made prior to acceptance of the application. Representatives of the Authority, State of New Jersey Department of Environmental Protection, United States Environmental Protection Agency, and the respective participants shall have the right to enter all properties of the contributing industry for the purpose of inspection, and of reviewing reports required to be compiled by these "Rates, Rules and Regulations" or by requirements of federal and state law.
  - E. Prior to approving an application for a connection involving the acceptance of industrial wastes, the applicant shall submit complete data with respect to the following:
    1. Expected average, maximum, and minimum rates of flow.



2. Flow diagram, showing points of applications of chemicals, type and quantity of each chemical used per day and per shift, a schedule of operations, expected chemical characteristics of the untreated wastes, and the point or points of connection to the sewerage system. The normal situation will require the separation of, and separate points of connection for domestic sewerage and industrial wastes from each industrial establishment.
3. Pretreatment will be required for all wastes which fail to meet the Authority's "Standards for Acceptable Wastes" as set forth within the "Rates, Rules and Regulations" and/or fails to meet the applicable pretreatment standards and which, in the judgment of the Authority, may have a deleterious effect upon the Sewerage System.
4. The Authority fees will be determined based upon the following parameters and in the following manner:
  - a) BOD, SS and CD will be determined by laboratory tests and reported in mg/L.
  - b) Flow will be determined on water consumption and gallons per quarter if no effluent flow meter exists.
  - c) MCUA rates will be based on charges submitted to the Authority.
  - d) The fee charged by FTSA shall be 150% of the MCUA charges. The FTSA fee includes 10% for administration costs and 40 % for user fees. The 40% increase will compensate the FTSA for their cost in operation and maintenance of the collection system

Testing & Sampling - Testing parameters - The individual customers shall test for BOD, SS, CD and pH. These parameters shall determine charges for strength of sewage.

Procedure - All tests and analysis of the effluent characteristics will be determined in accordance with Standard Methods for the Examination of waste and wastewater.

Sampling Method -

- pH - grab
- BOD - 24 hour Composite
- SS - 24 hour Composite
- CD - 24 hour Composite

Testing - The Industry shall independently pull samples of the industry effluent on an as need basis with sampling a minimum of once per quarter, or as needed.

Testing Costs - The Authority will back charge the industry costs incurred from reading meters and transportation as indicated in the Prevailing Rates included in Appendix F.

Flow Determination - May be deemed to be the amount of water flowing into the property as recorded by the water meter or meters, or the user may install a meter chamber for effluent quantities. The meter chamber shall be at the cost and expense of the user and the approval of the Authority.

Sampling Location - The Industry shall supply, at their own cost, a sampling location for the proposed testing. If all the effluent is not discharged through this location, the user shall so notify the Authority in writing. Information regarding the percentage of flow through each location and effluent concentration or type will be included in the correspondence.

Falsification of Information - Any person who knowingly makes any false statements, representations or certifications in an application, record, report, plan or other documents filed or required to be maintained pursuant to these Rules & Regulations or who falsifies, tampers with or knowingly renders inaccurate, any monitoring device or method required to be maintained pursuant to the Rules and Regulations, shall be in violation of these Rules and Regulations and may be subject to legal recourse by the Authority. In addition, the Authority may suspend sewer service when said suspension is necessary in the opinion of the Authority to maintain the integrity of the system or to terminate an actual or threatened discharge which presents or may present an imminent endangerment to the health or welfare of any person or to the environment.

- F. Where two or more separate uses of classes or types within a class, in the same building, as the uses are classified and typed as hereinbefore set forth, the user charge for each such use shall be made and paid, and the connection charge, in such case, to be made and paid, shall be the connection charge, shown for the type thereof, as hereinbefore set forth, provided however, each and every use separately connected to the Authority's system shall be charged and pay the full connection charge as well as all annual charges, and provided, further, that each and every use in separate buildings, connected to the Authority's system by a single connection or by more than one connection shall be charged and pay the full connection charges as well as all annual charges.
- G. Unless it be otherwise specifically provided in the "Rates, Rules and Regulations" all fees and charges shall be payable in advance.
- H. No connection or tie-in to the Authority's system shall be made or suffered to be made unless and until all fees and charges are paid in advance.
- I. Any real property use not falling into one of the categories listed herein, shall pay such user charges as shall be determined by the Authority upon the recommendation of the Executive Director and after a consideration of all those factors relevant to such a determination.
- J. Any user objecting to any estimated flow, strength, or classification made hereunder, shall have the option, at its own cost and expense, of installing metering equipment on its discharge lines to record actual flow and strength readings. The metering equipment

used, its installation and the location of the installation, shall all be subject to review and approval by the Authority or its designated representative. Such equipment shall be maintained so as to provide accurate operation and shall be subject to inspections and calibrations as required by the Authority. In the event any user shall be dissatisfied with the classification assigned to his/her or its use thereunder, shall, before initiating any action for relief before any tribunal having jurisdiction, notify the Authority in writing that he/she is so dissatisfied based upon an allegation that either (1) there is a disproportionate distribution of the flow cost among user classes to which the challenging user belongs or (2) the estimated flow charge is unreasonable in the users particular factual situation. The Authority shall give such user an opportunity to be heard at a public meeting occurring within 45 days of its receipt of such written notice and shall make its decision in the matter at the regular meeting of the Authority following such hearing which shall be the following month. In making its determination, the Authority shall forthwith supply such user, its findings in writing. Relief may be granted retroactively only for the billing quarter immediately preceding written notification by the customer to the Authority of the customer's dissatisfaction as set forth above.

K. The Rates set forth above and the user charge structure for non-metered customers set forth in paragraph "D" shall be subject to change by the Authority upon review of the user charge system. Such review shall take place at least once every two years. In its review and revision of the user charges, the Authority shall establish a schedule of charges by user class, type of flow, biochemical oxygen demand, suspended solids and such other criteria as the Authority shall deem appropriate. Such rate revision shall occur when it is necessary to accomplish the following:

1. Maintain proportionate distribution of costs among users and user classes including pre-treatment if any.
2. Generate more revenue, such revenue being necessary to cover total operation and maintenance cost.
3. Apply excess revenues collected from a class of users to the cost of operation or maintenance attributable to that class for the next year and adjust the rate accordingly.
4. Notice of rate changes shall be done by Public Hearing and rate changes shall be published in local newspapers.

L. DISTRIBUTION

1. Hard copies of these "Rates, Rules and Regulations" shall be available at the principal office of the Authority, at 70 Commerce Drive, Somerset, New Jersey 08873 for a fee covering the FTSA's cost of reproduction. Electronic copy will be available on the Authority's website at [WWW.ftsa-nj.org](http://WWW.ftsa-nj.org). Electronic copies are provided free of charge.
2. Three (3) copies of these "Rates, Rules and Regulations" shall be filed in the office of the Township Clerk at the Municipal Building, Somerset, New Jersey and the same

shall remain on file for use and examination by the Public as long as they are in effect.

3. Notice of the adoption of these "Rates, Rules and Regulations" and the date of adoption shall be published in the official newspaper of the Township of Franklin or a newspaper with circulation in the community, for one insertion thereof, which notice shall also state that the same are available for inspection by the Public at the office of the Authority and at the office of the Franklin Township Clerk.

FRANKLIN TOWNSHIP SEWERAGE AUTHORITY

RATES, RULES AND REGULATIONS

Appendix C

Sewer System Standards

A. GENERAL

1. PURPOSE. These specifications are minimum acceptable standards for sanitary sewer systems in developments, subdivisions, and industrial and commercial projects lying within the jurisdictional area of the Franklin Township Sewerage Authority, or connecting to the Authority system, including the connections from main sewers to the point of connection with the building outlet. Wherever other standards are applicable or portions of this standard are contradictory, the stricter standard shall govern.
2. STANDARD DETAILS. The drawings entitled "Standard Details, Franklin Township Sewerage Authority", which comprise Appendix D of these Rates, Rules and Regulations, depict construction details for construction of sanitary sewer systems in the Township of Franklin. The Standard Details shall be adhered to at all times.
3. PRE-DESIGN MEETING. These sewer system standards are intended to provide guidance to entities contemplating construction of sewerage facilities. For sewer collection system projects, a pre-design meeting is encouraged. For pumping station projects, a pre-design meeting with FTSA and the engineer is mandatory, as these guides are not intended to be a design reference manual.
4. APPROVALS. Drawings and specifications shall be submitted in advance for approval by the Engineer, in accordance with the Authority procedures described in the preceding portion of this section. Drawings shall include plans, profiles and details prepared by a New Jersey licensed professional engineer. No deviation from these documents will be permitted without prior approval of the Engineer. Ambiguities and inconsistencies in the specifications shall be referred to the Engineer for clarification in writing. Approval of the State Department of Environmental Protection may also be required. **Approval is required of the Municipal Engineer and Director of Public Works of the Township of Franklin of the method and materials for backfilling trenches in public rights of way. Somerset County approval is required where sewers traverse county roads.**
5. INSPECTION. The Authority contemplates inspection of all work. The purpose of inspection is to prevent the acceptance of work that does not comply with Authority standards. The Authority will not provide direct construction supervision. No construction shall be undertaken without notice of at least two working weeks to the Authority, and without prior approval of the drawings and specifications by FTSA, MCUA and NJDEP. Work that is found faulty shall be removed and properly replaced, on the orders of the Authority's Inspector. The Authority's Inspector may stop the work if it is not being properly performed. The Authority reserves the right to re-inspect and reject faulty work until final written acceptance. Costs of inspection shall be charged to the Developer as required by the Township ordinance or the Authority's regulation.

6. PERMITS AND FEES. The Developer, at his cost, shall obtain all necessary permits for performing the work. All fees and charges of the Township and the Authority shall be paid in accordance with existing Township ordinances or the rules and regulations of the Authority. No work may be started unless all required fees have been paid and performance and maintenance guarantees have been submitted and accepted.
7. GENERAL REQUIREMENTS. Sewer system flow shall be one-directional, with no loops. Sewers shall be sloped in accordance with the minimum requirements of the State Department of Environmental Protection and FTSA, of which the more stringent standard shall govern. All sewer construction shall coordinate with the overall regional or FTSA sewer system master plan and needs.
8. All lots within the subdivision shall be sewerred, and adjacent properties shall be taken into consideration when considering the sewer layout. Sewers that can be extended to serve adjacent properties shall be designed to do so.
9. DEFINITIONS. See Introduction & Definitions section.

B. DESIGN OF SEWERS

1. DESIGN CAPACITY. Sewer capacities shall be designed for the estimated ultimate tributary population, based upon existing zoning and the FTSA approved Sewer Service Area Map. Consideration shall be given to the maximum anticipated capacity of institutions, industrial parks, etc. All sanitary sewers shall be designed to carry at least twice the estimated average daily flow when flowing half-full.

In determining the required capacities of sanitary sewers, the following factors shall be considered:

- a) Maximum hourly domestic sewage flow;
  - b) Additional maximum sewage or waste flow from industrial plants and other non-residential sewers;
  - c) Inflow and groundwater infiltration;
  - d) Topography of area;
  - e) Zoning of area;
  - f) Depth of excavation; and
  - g) Pumping requirements.
2. DESIGN FLOW. New sewer systems shall be designed on the basis of an average daily per capita sewage flow of not less than 100 gallons per day multiplied by an appropriate peaking factor. Flow criteria for new projects may consider guidelines established in NJAC 7:14A-23.3. An additional allowance of 500 gallons per mile per inch diameter of sewer per day shall be made for infiltration to account for future degradation of the system.

The peak flow shall be determined based upon the ratio of peak to average flow determined by the following formula:

$$\frac{Q_{peak}}{Q_{avg}} = \frac{18 + \sqrt{P}}{4 + \sqrt{P}}$$

Where P = population in thousands

The adequacy of an existing sewer to accept additional flows shall be determined by combining the proposed additional peak flow with the existing peak flow to determine the total proposed flow to be conveyed in the existing sewer. The total proposed flow shall be less than the capacity of the existing sewer. The existing peak flow shall be determined by actual flow measurements during wet weather. The method and period of measurement shall be approved by the Authority prior to installation of flow measuring devices.

For the design of a replacement sewer, the above method for determining the peak design flow shall be utilized.

3. **MINIMUM SIZE.** No gravity sewer conveying raw sewage shall be less than 8 inches in diameter (except for house and building connections).
4. **DEPTH.** In general, sewers should be designed to comply with the depth requirements contained in N.J.A.C 7:14A-23.6. Insulation shall be provided for sewers that cannot be placed at a depth sufficient to prevent freezing.
5. **SLOPE.** All sewers shall be designed and constructed to give mean velocities, when flowing full, of not less than 2.0 feet per second, based on Manning's formula using an "n" value of 0.013, except for 24 in. and larger where 2.5 feet per second shall be used. The following are the minimum slopes that should be provided; however, slopes greater than these are desirable.

Minimum Sewer Slope	
<u>Sewer Size</u>	<u>Per 100 Feet</u>
8-inch	0.4
10-inch	0.29
12-inch	0.22
14-inch	0.17
15-inch	0.16
16-inch	0.14
18-inch	0.12
20-inch	0.1
21-inch	0.095
24-inch	0.08
27-inch	0.067
30-inch	0.058
33-inch	0.052
36-inch	0.046

Sewers shall be laid with uniform slope between manholes.

The diameter of a proposed sewer shall not be oversized unless the proposed sewer will flow at least one-half full under peak flow conditions. If a proposed sewer is to be oversized for future flow, the oversized pipe shall be laid at the minimum slope of the minimum required pipe or steeper.

Where velocities greater than 10 feet per second are attained, special provisions shall be made to protect against displacement by erosion and shock.

Sewers on 20 percent slopes or greater, shall be anchored securely with concrete anchors or equal, spaced as follows:

Not over 36 feet center to center on grades 20 percent and up to 35 percent;

Not over 24 feet center to center on grades 35 percent and up to 50 percent; and

Not over 16 feet center to center on grades 50 percent and over.

6. ALIGNMENT. All sewers shall be laid with straight alignment between manholes. The alignment shall be checked by using a laser beam or lamping.
7. CHANGES IN PIPE SIZE. When a smaller sewer joins a large one, the invert of the larger sewer shall be lowered sufficiently to maintain the same energy gradient. An approximate method for securing these results is to place the 0.8 depth point of both sewers at the same elevation.

Sewer extensions should be designed for projected flows even when the diameter of the receiving sewer is less than the diameter of the proposed extensions.

8. CHANGES IN PIPE DIRECTION. All changes in direction shall utilize manholes. The radius of curvature of a bend within a manhole shall be not less than 1.5-times the nominal diameter of the sewer pipe.
9. LOCATION OF SEWERS ON STREAMS. The top of all sewers entering or crossing streams shall be at a sufficient depth below the natural bottom of the stream bed to protect the sewer line. In general, the following cover requirements must be met:
  - a) One foot of cover is required where the sewer is located in rock;
  - b) Three feet of cover is required in other material. In major streams, more than three feet of cover may be required; and
  - c) In paved stream channels, the top of the sewer line should be placed below the bottom of the channel pavement.

Less cover will be approved only if the proposed sewer crossing will not interfere with the future improvements to the stream channel. Reasons for requesting less cover should be given in the project proposal.



Sewers located along streams shall be located outside of the streambed and sufficiently removed therefrom to provide for future possible stream widening and to prevent pollution by siltation during construction.

The sewer outfalls, head walls, manholes, gate boxes, or other structures, shall be located so they do not interfere with the free discharge of flood flows of the stream.

Sewers crossing streams shall be designed to cross the stream as nearly perpendicular to the stream flow as possible and shall be free from change in grade. Sewer systems shall be designed to minimize the number of stream crossings.

Sewers entering or crossing streams shall be constructed of ductile iron pipe with ball and socket joints; otherwise they shall be constructed so they will remain watertight and free from changes in alignment or grade. Material used to backfill the trench shall be stone, coarse aggregate, washed gravel, or other materials that will not cause siltation.

Construction methods that will minimize siltation and erosion shall be employed. The design engineer shall include in the project, specifications the method(s) to be employed in the construction of sewers in or near streams to provide adequate control of siltation and erosion. Specifications shall require that cleanup, grading, seeding, and planting or restoration of all work areas shall begin immediately. Exposed areas shall not remain unprotected for more than seven days.

10. Gravity pipe AERIAL CROSSINGS. Support shall be provided for all joints in pipes utilized for aerial crossings. The supports shall be designed to prevent frost heave, overturning and settlement.

Precautions against freezing, such as insulation and increased slope, shall be provided. Expansion jointing shall be provided between aboveground and belowground sewers.

For aerial stream crossings, the impact of floodwaters and debris shall be considered. The bottom of the pipe should be placed no lower than the elevation of the one hundred (100) year flood, or the flood hazard line if such line has been established by NJDEP.

11. SEPARATION FROM WATER MAINS. Sewers and water mains generally shall be separated a distance of at least 10 ft. horizontally. If such lateral separation is not possible, the pipes shall be in separate trenches with the sewer at least 18 inches below the bottom of the water main; or such other separation as approved by FTSA shall be made. In general, the vertical separation at a crossing of sewer and water line shall be at least 18 inches. Where this is not possible, the sewer shall be constructed of ductile iron pipe using mechanical or slip-on joints for a distance of at least 10 ft. on either side of the crossing or other suitable protection shall be provided.
12. SURVEY DATUM. Sewers and manholes shall be designed based on land surveys tied to a permanent survey monument. Datum for all survey shall be NAVD 1988 and the NJ State Plane Coordinate System, NAD 1983. Manhole rims and all pipe inverts shall be

identified and contours and topographic features of the ground surface along the pipeline route shall be provided. Contour intervals shall be as tabulated below:

<u>Slope (%)</u>	<u>Interval (ft)</u>
0 - 5	1
5 - 15	2
> 15	5

C. EXCAVATION AND EARTHWORK

1. UTILITY IDENTIFICATION. Prior to any excavation, the Developer shall locate and mark all existing utilities and structures in the vicinity of, or intersecting the proposed sewers. The Developer shall be responsible for the continuity of such services affected by his operation, and shall maintain them in a safe and satisfactory operational condition.
2. LIMITS OF EXCAVATION. Excavation shall be made to approved lines which shall be of sufficient width for forming the pipe joints. Trench widths shall be selected so that the backfill will not exceed the safe load on the pipe. In all cases, the trench sides shall be vertical from the bottom to 12 inches above the top outside diameter of the pipe. In general, the widths of pipe trenches shall not be wider than the outside diameter of the pipe barrel plus 2 feet at the level of the top of the pipe, unless otherwise approved. All loose material shall be removed from the trench bottom before the pipe bedding is installed. In general, the limiting lines of excavation for manholes shall be determined by vertical planes 1 foot beyond the walls or as shown or as ordered. Tunneling under or undermining of roads, curbs, sidewalk or other structures will not be permitted. Roads and other structures shall be cleanly cut to a point at least 1 foot beyond the edge of the trench. Sidewalk and curb shall be removed to an existing joint at least 1 foot beyond the edge of the trench.
3. BLASTING. No blasting shall be performed by the Developer except upon written permission of the Authority. Any request shall be received by the Engineer at least 24 hours prior to start of said proposed blasting. If blasting permission is granted, the Developer shall adhere strictly to all required State and local safety regulations governing blasting and storage of explosives. In addition, the developer shall submit copies of the explosion and collapse insurance to the Authority.
  - a) The Developer shall be responsible for any damage to adjacent structures and property caused by his/her operations. He/she shall inspect all structures adjacent to the site of blasting and, where ordered by the Authority, he/she shall take clear, close-up photographs of these structures before and after blasting. Copies of all photographs shall be submitted to the Authority.
  - b) The Authority or its representative must be present at all times during blasting operations.

4. SHEETING AND BRACING. Where excavations are made with vertical sides which require support, the sheeting and bracing shall be of sufficient strength to sustain the sides of the excavations and to prevent movement which could in any way injure the work, or diminish the working space sufficiently to delay the work. Sheeting shall be of a material that will not split while being driven. Special precautions shall be taken where there are additional pressures due to the presence of other structures, or loads, and in such cases the Developer shall submit, to the Engineer, a plan signed and sealed by a New Jersey Licensed Professional Engineer, showing the location and details for the proposed sheeting.

Sheeting and bracing shall conform to the requirements of the "Construction Safety Code" of the Bureau of Engineering and Safety of the New Jersey Department of Labor and Industry and the Federal Occupational Safety and Health Act (OSHA).

In trenches 12 ft. in depth and less, or where the pipe is not closer than 20 ft. to any existing building, house, or garage, sheeting and bracing may be removed at the Developer's option, providing that such removal will not endanger the work, adjacent utilities or cause settlement of pavements. In trenches greater than 12 ft. in depth, or where the pipe is closer than 20 ft. to any existing building, house or garage, the Developer will be required to leave sheeting in place. After backfilling the trench, no sheeting shall extend to within 12 in. of the ground surface.

5. DEWATERING. The Developer shall provide, operate, and maintain satisfactory facilities and equipment, including well points if necessary, with which to collect and pump all water entering excavations or other parts of the work, to suitable places for disposal. All excavations shall be kept free of water and water level kept at least 1 in. below the pipe invert, until the work to be built therein is completed. Approved settling basins and sumps shall be provided for catching and temporarily holding water containing mud, clay, sand, or other material in suspension, pumped from excavations. Such basins shall be large enough to allow storage time for the settlement of such suspended matter. The settled material shall be cleaned out frequently and disposed of as directed. Water shall not be allowed to discharge to the sanitary sewer system.

Water shall be discharged through pipes, flumes, gutters, or any other artificial means to catch basins, watercourses, ditches or any other approved locations adjoining the work. Water shall be disposed of in such a manner as to avoid interference with business, pedestrian and vehicular traffic and so as to prevent damage to property.

Lowering of groundwater to the injury or detriment of other structures shall be a part of the Developer's risk and responsibility. Any structure injured or damaged as a result of the lowering of groundwater shall be repaired or replaced to the satisfaction of the owners thereof, at the expense of the Developer.

6. BACKFILL. **All backfill shall be in accordance with the Township of Franklin Standards.**

The Developer shall be responsible for meeting the backfill requirements of other government agencies, utilities, and landowners wherever applicable. The attention of the developer is called to the requirements of any road opening permits.

Backfills and fills shall be made to the slopes, grades and elevations shown, specified, or required. Backfills shall be compacted, as herein under specified, to a density at least equal to that of the adjacent undisturbed soil to avoid future unequal settlement.

For work in trenches, the remainder of the trench shall be backfilled in accordance with the road-opening permit or as approved by the Authority, and/or Municipal Engineer. For easements, refer to the Authority's Standard Details in Appendix D.

No backfill shall be placed until the structure has been inspected in place and approved. Backfilling shall be carried out as soon as possible after such approval, and no trenches in public streets shall be left open at the end of the workday. Steel plates over open trenches in public streets will not be allowed.

Where trenches in roadway areas cave in underneath the existing pavement, the Developer will be required to remove the pavement over the caved-in portion by saw cutting, backfill the entire area in accordance with this specification, and restore the pavement.

When sheeting is being withdrawn, all cavities left thereby shall be filled with suitable granular earth, hosed or tamped in place so as to fill all voids thoroughly.

Where embankment is shown to support the sewers or to cover the same, it shall be made to the width and slopes shown on the approved plan for the work. The ground shall be prepared by carefully grubbing and clearing it and removing all mulch and improper material of whatever nature. The embankment shall be formed of good loam, gravel or sand, free from all stones above four (4) inches in diameter, and shall not contain in any place, a proportion of stones of or greater than one part to three parts of earth. The material shall be deposited and spread in horizontal layers of not more than one foot in uncompacted thickness, each layer to be separately compacted, so that no settlement of the sewer or its appurtenances will thereafter occur. In no case, shall compaction be less than 95% Proctor density. Embankment shall be topped with 4 inches of topsoil and seeded.

7. FOUNDATION MATERIAL. Foundation material used for pipe bedding, from a distance below the pipe invert as shown, to the lower quarter point of the pipe (6 inches minimum) shall be 3/4-inch clean stone.

Additional foundation material used for replacement of unsuitable organic material or unconsolidated silts below the pipe foundation shall be Soil Aggregate Type I-5 of the NJDOTSS. It shall be compacted to 95% modified proctor in maximum of 6-inch lifts.

All foundation material shall be placed and compacted as directed and approved by the Authority and the Consulting Engineer.

8. PIPE DAMS. Sewer segments shall include at least one pipe dam to preclude the migration of ground water through the bedding material. Pipe dam material may be natural clay, manufactured clay panels, concrete or other suitable approved impervious material, as approved for its use. Impervious pipe dams shall have a maximum permeability of  $1 \times 10^{-5}$  cm/sec. Pipe dams shall be spaced a maximum of 300 feet apart, with at least one dam between manholes.
9. TOPSOIL. Where topsoil is located within the areas to be excavated and is of acceptable quality for re-use, it shall be stripped, cleared of stumps and roots, and stored at approved locations separate from other storage until required to be placed on top of the backfill, fill, or other areas.

In easements and all other areas where seeding or sodding is required, the Developer shall furnish and spread a minimum of 4 inches of acceptable topsoil.

The general fill or other material shall be carried to a sub-grade that permits topsoil of the required depth to be placed to bring it to the finished grade. As far as practicable, the under-lying fill shall be given time to settle through several heavy rains or by artificial wetting before the topsoil is placed.

Topsoil used in the restoration of easements shall comply with the NJDOT Standard Specifications.

D. PIPE AND PIPE-LAYING

*SHALL CONFORM TO LATEST ANSI, AWWA, ASTM, & AISC STANDARDS*

1. DUCTILE IRON PIPE AND FITTINGS. Ductile iron pipe shall be push-on, mechanical, restrained push-on, flanged or Ball and Socket, as dictated by installation requirements and approved by FTSA.

Ductile iron pipe fittings (including bends, tees, etc.) shall be furnished with mechanical joint bells on all inlets, outlets, and branches, even though they may be used with flexible joint pipe.

All ductile iron pipe and fittings shall conform in all respects to ANSI A 21.51/AWWA C151 for Thickness Class 52. Flexible joint pipe shall be equal to the "Tyton Joint" pipe manufactured by the United States Pipe and Foundry Company, or the "Fastite Joint" pipe manufactured by the Clow Water Systems Co., and shall comply with ANSI A 21.11/AWWA C111 and shall be equal to the product of the aforementioned manufacturers. Gaskets shall be suitable for the use and approved by FTSA. Gasket dimensions shall be in accordance with the manufacturer's standard design of dimensions and tolerances.

Plain ends of pipe for coupling joints shall be prepared in strict accordance with the requirements and instructions of the manufacturer of the coupling to be used.

Flexible couplings shall be equal to Dresser Manufacturing Company Style 38 or 138, or the similar products of the Smith-Blair or Rockwell Companies.

All ductile iron pipe and fittings shall have a protective internal sulfide-resistant lining and an exterior coating, both approved by FTSA.

At all horizontal and vertical bends and valves, force main pipe shall be harnessed back a minimum of 30 feet or three full pipe lengths, whichever is greater, in both directions. Harness rods shall be the same size as the bolts for mechanical joint pipe, AISC A-50 high strength steel, conforming to the requirements of ASTM F3125. Where harness rods are used in conjunction with bell/spigot joint pipe, approved socket clamps shall be installed to brace the pipe bells against movement. The set bolts in all shall be torqued to a minimum of 70 foot-lbs. to provide an adequate friction fit against movement. Properly designed thrust blocks may be utilized in conjunction with, or instead of, harness rods.

All harness rods, clamps and connectors, shall be coated with two mil thick coats of Inertol No. 49, or equal.

Alternative joint restraint systems may be submitted for approval.

2. PVC PIPE. PVC pipe and fittings from 8" to 15" diameter main line sewers shall be polyvinyl chloride bell and plain end sewer pipe and shall conform to ASTM-D3034. The minimum wall thickness shall be in accordance with Type SDR-35 of ASTM-D3034. The average diameter shall be no less than the nominal diameter.

The plastic material shall be equal to Type 1, Grade 1 of the specifications for Rigid Polyvinyl Chloride Compounds, ASTM D-1784. Pipe and fittings from 18" to 27" diameter sewers shall conform to ASTM F679 (T-1).

Polyvinyl chloride pipe for 4" and 6" laterals and inspection risers shall be PVC Schedule 40 conforming to ASTM-D1785. Any PVC inspection risers located in pavement, sidewalk or lawn areas (or any area other than the foundation shrubbery planting strip) shall be protected by use of an appropriate casting (Campbell Foundry #1000 with camlock or equal).

The pipe shall be capable of carrying a trench load equal to 25 feet of cover. Under conditions of maximum cover, the pipe shall be adequate to maintain a factor of safety of two against collapse. Special compaction procedures will be required as specified under "Placing and Compacting Backfill."

Pipe joints shall be of the round rubber gasket type and shall be lubricated with a vegetable compound soap purchased from the pipe manufacturer.

Pipe ring material shall be in accordance with ASTM F477.

PVC pipe shall be installed to the standard of ASTM D2321 or to the standards of the Authority. For each detail of installation, the stricter standard shall govern. Attention is called to the following cases where FTSA standards govern:

Pipe design must have a factor of safety of two against excessive deflection.

Excess deflection is 5% of I.D. in 90 days after backfilling.

3. OTHER PIPE MATERIALS. Use of alternate materials of pipe not specified within these standards will be considered by the Authority and the Engineer for sewer lines 30 inches in diameter or larger, or to meet the technical requirements of unusual conditions on a case by case basis.
4. CERTIFICATIONS. Certificates of compliance shall be furnished attesting to conformance with FTSA standards, if required. Such certification shall come from the manufacturer and shall be specific to the particular items supplied for a particular project.
5. PIPE STRENGTHS. Except where special requirements govern, the choice of pipe shall be in accordance with the following:

<b>Sewer Pipe Size (inches)</b>	<b>Depth from Finished Grade to Pipe Invert (feet)</b>	<b>Permissible Choices</b>
4-6	20 and less	PVC Pipe Schedule 40
		Ductile Iron Pipe Class 52
8	20 and less	PVC Pipe SDR 35
		Ductile Iron Pipe Class 52
10	17 and less	PVC Pipe SDR 35
		Ductile Iron Pipe Class 52
10	17 to 18	PVC Pipe SDR 35
		Ductile Iron Pipe Class 52
12	11 and less	PVC Pipe SDR 35
		Ductile Iron Pipe Class 52
12	11 to 17	PVC Pipe SDR 35
		Ductile Iron Pipe Class 52

<b>Sewer Pipe Size (inches)</b>	<b>Depth from Finished Grade to Pipe Invert (feet)</b>	<b>Permissible Choices</b>
12	17 to 20	Extra Strength PVC Pipe
		Ductile Iron Pipe Class 52
15 inches and over*	Pipe material to be reviewed	
* The design of these size pipes for the various depths of cover shall be in accordance with the applicable ASTM and AWWA specifications and the manufacturer's recommendations.		

Except where specified by the Engineer, the minimum bedding material shall be as follows:

<b>Pipe Material</b>	<b>Minimum Bedding Class</b>
PVC SDR 35	B
Ductile Iron	C
Other Pipe	To Be Reviewed

The use of Type D class bedding will not be permitted for any pipes or laterals.

The bedding classes shall be as defined in Water Environment Federation, Manual of Practice No. FD-5, "Gravity Sanitary Sewer Design and Construction".

#### 6. PIPE LAYING AND INSTALLATION.

All pipe and fittings shall be installed to the lines and elevations shown or ordered, and in accordance with the manufacturer's recommendations.

Suitable tools and equipment shall be used for proper handling, storing, and laying pipe and fittings. In order to avoid damage to the interior coatings of pipe, lifting hooks or bars shall not be inserted therein. Each pipe and fitting shall be checked for defects and injuries as laying proceeds. Imperfect pipe materials shall be rejected and removed from the work. Pipe found to be defective after laying, shall be removed and replaced by undamaged material.



The interior of all pipes shall be cleaned of dirt, and other deleterious materials, and kept clean, as the next section of pipe is laid. During the progress of the work, the exposed ends of the pipe shall be provided with approved temporary covers fitted to the pipe, in order to prevent material from entering the pipe.

Where pipe must be cut to fit as closing pieces, such cuts shall be evenly and squarely made in a workmanlike manner with approved equipment. Injury to linings or coatings shall be satisfactorily repaired.

Where cast iron mechanical joint, Tyton or Ring-Tite fittings are used, the Developer shall furnish and install concrete thrust blocks, tie rods, or other approved means for preventing movements at joints, bends, tees, and other fittings as shown or directed. Joints must be thoroughly brushed with a wire brush to remove all loose rust or foreign material. Soapy water must be brushed over the joint surfaces and over the gasket. Bolts shall be tightened uniformly, using only torque-limiting wrenches to avoid over stressing the bolts. Bolt heads, nuts and other unpainted surfaces shall be coated with two (2) heavy applications of black asphaltum varnish.

All pipes shall be laid in accordance with approved details. Where concrete cradles are used to support the pipe, foundation material will not be required. No solid blocking will be permitted under pipe. Joints shall be made in accordance with the recommendations of the manufacturer

7. **MATERIAL TESTING.** Ductile iron pipe shall be hydrostatically tested at the point of manufacture to 500 psi for duration of one minute. Testing may be performed prior to machining bell and spigot. Failure of ductile iron pipe shall be defined as any rupture of pipe wall. Certified test certificates shall be furnished in duplicate to FTSA prior to time of shipment. All ductile iron pipe and ductile iron fittings shall be inspected and tested at the foundry as required by the standard specifications to which the material is manufactured. Furnish in duplicate to FTSA sworn certificates that all tests and inspections required by the Specifications under which the pipe is manufactured have been satisfied.
8. **GRAVITY PIPE LINE TESTING.** The Authority reserves the right to retest and re-inspect any construction at any time prior to final acceptance at the end of the maintenance period. The Developer shall be required to correct any defects found in such latter inspections even if said defects had existed, but were not reported, during a previous inspection. The Developer shall bear the cost of all pipe testing.

After installation and inspection has completed, all new sewers shall be flushed to remove all foreign material. Pipe shall be inspected and tested for alignment, freedom from obstruction, and lack of structural damage a minimum of 90 days after installation using closed circuit television and mandrels. A mandrel rated at 5% deflection shall be passed through all new PVC sewers after 90 days has elapsed since backfilling has completed. Notwithstanding satisfactory testing, any flexible pipe deflected more than 5.0% within 90 days of installation or the date of testing, whichever is later, shall be replaced at the Applicant's expense.

Sewer segments shall then be pressure-tested with air utilizing ASTM C828. Internal air pressure in pipe lines shall never exceed 8 psi. After each segment is pressurized to 4 psi, at least two minutes shall be allowed for stabilization, prior to disconnecting air supply from the test control panel. The time required for the pressure in the section to decrease from 3.5 to 2.5 psi shall not be less than shown in the following table.

**Minimum Test Time for Various Pipe Sizes**

Nominal Pipe Size (In.)	T (time) min/100 ft	Nominal Pipe Size (In.)	T (time) min/100 ft.
3	0.2	21	3
4	0.3	24	3.6
6	0.7	27	4.2
8	1.2	30	4.8
10	1.5	33	5.4
12	1.8	36	6
15	2.1	39	6.6
18	2.4	42	7.3

All new sewer segments shall be inspected with closed circuit T.V. using a pan and tilt camera to allow inspection of all lateral fittings. Inspection shall be done in the presence of FTSA. Recordings shall be turned over to FTSA.

9. PRESSURE PIPE LINE TESTING. Pressure pipe for force mains shall be tested for leakage by the Developer. The Developer shall provide the necessary facilities, water, bulkheads, and labor therefor. Leaks at joints shall be corrected and made tight. Pressure pipe shall be tested under a constant hydrostatic pressure of 75 psi or twice the rated working pressure unless the Engineer approves less. The duration of each test shall be no less than four hours and an accurate pressure gauge shall be installed at an approved, convenient point in the line for observation. The acceptable leakage shall be in accordance with AWWA C-600, as amended.

E. **MANHOLES**

1. CONSTRUCTION. All manholes shall be constructed of precast, reinforced concrete riser sections, an eccentric conical or flat slab top section, and a base section as shown or required. Where required, eccentric reducing sections shall be used to join riser sections of different diameters.

Precast manhole sections shall be manufactured in accordance with ASTM Designation C478-61T. Manholes shall be manufactured by the "wet" process and shall be cured in the forms for several hours. The minimum compressive strength of the concrete for all sections shall be 4000 lbs. per sq. in. The maximum allowable absorption of the concrete shall not exceed 8% of the dry weight. Tests shall be similar to those described in ASTM C-76. The circumferential reinforcement in the walls of all sections shall be a minimum of 0.12 sq. in. per linear ft. for inside diameters up to and including 54 in., and 0.17 sq. in. per linear ft. for the larger sizes. Reinforcement in flat slab top sections shall be designed for the load to be supported. Additional reinforcement shall be provided at all openings larger than 6 inches.

Joints of the sections shall be formed entirely of concrete in accordance with ASTM Designation C361 and shall be made with a rubber gasket installed in accordance with the manufacturer's recommendations. Joints shall be self-centering and water tight against internal and external hydrostatic pressure with the gasket utilized as the sealing element and external seams grouted. Grout shall be of water proof non-shrink type.

Base sections shall be furnished by the manufacturer with flexible connectors designed to produce a positive watertight connection for pipes entering the manhole. Connectors shall be cast in the concrete at the time of manufacturing and shall comply with ASTM C923. Connectors shall be A-Lok or Z-Lok models by A-Lok Products, Inc. or approved equal. Waterways shall be constructed by a qualified mason in the field after the manhole has been installed. The shape and size of waterways shall conform to the shape and size of connecting pipes as shown or ordered. Special care shall be taken to form channels with curved shapes that will provide the best hydraulic conditions for smooth flow. Benches shall be sloped to drain to the waterways. Concrete used in forming waterways shall be a stiff, rich mix, and shall be given a steel trowel finish.

Foundation material under manholes shall be crushed stone. Excavation and earthwork shall be as previously specified.

Height adjustment between manhole concrete and cast iron manhole frame shall be constructed of the necessary combination of grade rings and unit masonry as shown on the drawings. Masonry units shall conform to ASTM C32 grade MS or ASTM C139. Grade rings and masonry shall be set with a mortar mix using 1:2 ratio of cement to sand with equal quantities of masonry cement and portland cement. No more than two courses of masonry units shall be used. Masonry shall be laid in running bond on a full bed of mortar and full head joints. The inside and outside faces of the masonry shall be rubbed with burlap and coated with a wash coat of neat cement applied with a stiff bristle brush. The outside face of the masonry shall be finished with a minimum of two coats of coal tar epoxy or bitumastic to a minimum total thickness of 24 mils.

2. MANHOLE APPURTENANCES. Appurtenances shall include manhole frames and covers, manhole rungs, and manhole encapsulation.

Manhole frames and covers shall be of the best quality close grained grey iron castings conforming to the requirements of ASTM A 48, Class No. 30. Seating surfaces of manhole frame and covers shall be machined to insure a non-chattering fit. Manhole frames and covers shall be properly cleaned and coated with a waterproof asphaltum applied by immersion, while the castings are hot.

Watertight manhole frames and covers shall be required in all areas that are located below the 100 year flood level, easements, and rights-of-way where adverse drainage conditions exist, or as ordered. Watertight manhole frames and covers shall be Campbell Foundry 6545 or equal.

Unless otherwise indicated, manhole frames and covers shall be of the circular flared type frame with round flange equal to Catalog No.1203 as manufactured by Campbell Foundry Company.

Locking manhole frames and covers equal to Campbell No.1487 shall be provided on all manholes located in easements. Locking type covers shall also be provided with a single recessed lifting handle as shown on the details. Lifting handle shall be equal to that shown for Campbell No.1268. A key shall be supplied with each locking type unit.

Frames and covers equal to those specified above as manufactured by the Neenah Foundry Co. or Flockhart Foundry Co. will be acceptable.

All covers shall be cast with the identifying letters as specified on the Standard Details. Letters shall be 2 in. high and embossed against a recessed background.

Manhole rungs shall be steel reinforced, copolymer polypropylene conforming to ASTM D4101, Classification PP200 B33450 Z02. Steel reinforcing shall be 1/2-inch diameter, conforming to ASTM A615, Grade 60 and shall be continuous throughout the rung. Rungs shall be cast in the vertical sides of the manhole sections on 12 in. centers.

Special details are provided for drop manholes with invert differences exceeding two (2) feet, and for shallow manholes where the grade-to-invert depth is less than 5'6".

Between manholes, pipe shall be straight and at uniform grade. Any deviation from uniform grade shall be grounds for rejection of that portion of the sewer system and the Developer shall be required to excavate and reconstruct the said portion to the required grade. Spacing between manholes shall not exceed 400 feet.

The Contractor shall modify existing manholes by core drilling the masonry to the specified size and installing a Kor and Seal Kit or equal. The waterways shall be chipped and roughened and then finished with five star waterproofing non-shrink grout or equivalent to provide the best hydraulic conditions for smooth flow.

Flexible joints shall be placed at the manhole wall, and within four feet of the wall, as shown on the Standard Details.

All new manholes shall be provided with a flexible manhole frame encapsulation system that seals the frame to the top most barrel or cone section and prevents seepage over the life of the structure. The sleeve shall be made from materials that provide high electrical resistivity, resistance to corrosive environments, low water absorption, low moisture permeability and shall effectively bond to steel, concrete and common coatings. Manhole frame encapsulation system shall be Wrapid Seal by CCI Pipeline Systems, Breaux Bridge, LA or approved equal.

Interior and exterior of manholes (including bench and channel) shall receive a high build polyamide epoxy coating. Exterior manhole coating shall be Coal Tar Epoxy C-200 by Sherwin Williams, or approved equal. Interior manhole coating shall be Cor-Cote SC by Sherwin Williams, or approved equal. Joints between precast manhole sections must be patched with cement mortar and field coated with interior and exterior coating. The minimum dry mils thickness shall be 30 mils.

3. **MANHOLE TESTING.** All new manholes shall be vacuum-tested prior to being placed into service using test procedures detailed in ASTM C1244. After the manhole is prepared, a vacuum of 10 inches mercury shall be drawn on the manhole, the valve on the vacuum line of the test head closed, and the vacuum pump shut off. The time shall be measured for the vacuum to drop to 9 inches mercury. The manhole shall pass if the time meets or exceeds the values indicated in the following table.

**Minimum Test Times for Various Manhole Diameters**

Depth (ft.)	Diameter (in.)				
	48	54	60	66	72
	Time (sec.)				
8	20	23	26	29	33
10	25	29	33	36	41
12	30	35	39	43	49
14	35	41	48	51	57
16	40	46	52	58	67
18	45	52	59	65	73
20	50	53	65	72	81
22	55	64	72	79	89
24	59	64	78	87	97
26	64	75	85	94	105
28	69	81	91	101	113
30	74	87	98	108	121

F. HOUSE CONNECTIONS

1. MATERIALS. From the street to the curb, the Developer has the option of furnishing the following types of single house connections:

- a) 6 inch PVC pipe, schedule 40
- b) 6 inch ductile iron pipe - Class 52

Wye connections shall be used at the junction of the house connection and street sewer. Tee-wye clean-outs shall be installed at the curb line (see details).

Water-tight plugs or caps shall be furnished at all dead ends.

Bends in house connection lines shall be made using standard, flexible fittings. A riser with a clean-out at grade shall be used for any off-street bend 45 degrees or greater.

Flexible, water-tight joints shall be used throughout, with round rubber rings or rubber gaskets as the seal.

2. INSTALLATION. Slopes of house connections shall, in general, be 1/4 inch per foot.

The Developer shall mark the curb or pavement opposite the end of each house connection, in a suitable and approved permanent manner; by scoring curbs or pavements, or by well-marked permanent stakes elsewhere. Exact location and depth, referenced to a permanent marker shall be shown on as-built drawings for any temporary dead end. Each location shall be checked by the Engineer, and the final as-built drawings shall be submitted to the Engineer for approval prior to final acceptance.

For house connections more than 8 feet below grade, a riser pipe shall be installed at a slope of not more than 45 degrees (see details).

House connections shall meet the same standard of allowable leakage as main line sewers.

#### G. SPECIAL STRUCTURES

1. No one shall be permitted to construct a sewage treatment plant in the Township of Franklin. Industries may construct pretreatment systems that may discharge to the FTSA system, if needed, subject to review and approval by the Authority.
2. Information on pumping stations, stream crossings, or other special structures shall be submitted for approval in preliminary form, before detailed drawings are prepared, or equipment is ordered. Grease traps, sand traps, or other special appurtenances may be required for special conditions. Advance approval of the State Department of Environmental Protection may be required.
3. The Authority reserves the right to inspect any pretreatment system to ensure that it is operating properly.

#### H. SEWAGE PUMPING STATIONS - GENERAL REQUIREMENTS

1. FLOODING. Sewage pumping station structures and electrical and mechanical equipment shall be protected from physical damage by the one hundred (100) year flood, or the flood hazard line, if one has been established by NJDEP. Sewage pumping stations should remain fully operational and accessible during the one hundred (100) year flood.
2. ACCESSIBILITY. The pumping station shall be readily accessible by maintenance vehicles during all weather conditions. The facility should be located off the traffic way of streets and alleys.
3. GRIT. Where it is necessary to pump sewage prior to grit removal, the design of the wet well and pump station piping shall receive special consideration to avoid operational problems from the accumulation of grit.

I. SEWAGE PUMPING STATIONS – DESIGN

1. TYPE. Sewage pumping stations shall generally conform to the following standards. Other types as set forth elsewhere in this section may be approved where circumstances justify their use.

Motor Horsepower	Pump Type	Building Required
5 or less	Submersible grinder	Yes
5-10	Wet well submersible	Yes
Greater than 10	Dry well pumps	Yes

2. STRUCTURES. Dry wells, including their superstructure, may utilize common wall construction, but in any event shall be physically separated from the wet well. Below grade dry wells and wet wells shall be constructed of reinforced concrete. Provisions shall be made to facilitate removal of pumps, motors, and other mechanical and electrical equipment.

All pump stations shall have grinders.

Suitable and safe means of access shall be provided to dry wells, and to wet wells, containing either bar screens or mechanical equipment requiring inspection or maintenance.

For all pump stations, building code compliant stairways with rest landings shall be provided at vertical intervals not to exceed 12 feet. Where a landing is used, a suitable and rigidly fixed barrier shall be provided to prevent an individual from falling past the intermediate landing to a lower level. Mechanical man lifts shall not be used.

Reference should be made to state and federal safety codes, which, if they are more stringent, shall govern.

Due consideration shall be given to the selection of materials because of the presence of hydrogen sulfide and other corrosive gases, greases, oils, and other constituents frequently present in sewage.

3. ARCHITECTURE. Pumping stations shall utilize cavity wall masonry construction, with rigid insulation in the cavity. Roof system shall be 30-year asphalt shingles, 5/12 pitch minimum. Aluminum doors and windows are required. If windows are used, a one-inch double pane insulated glass system shall be provided. Handrails shall be aluminum, designed to OSHA requirements. Aluminum gutters and down spouts with PVDF finish are required. All interior surfaces shall be epoxy painted. All colors and final treatments shall be selected by FTSA.



4. PUMPS. At least 2 pumps shall be provided. A minimum of 3 pumps shall be provided for stations handling flows greater than 1 MGD.

If only 2 units are provided, they should have the same capacity. Each shall be capable of handling peak flow. Where 3 or more units are provided, they should be designed to fit actual flow conditions and must be of such capacity that, with any one unit out of service, the remaining units will have capacity to handle peak sewage flows.

The pump shall be so placed that, under normal operating conditions, it will operate under a positive suction head.

Electrical systems and components (e.g., motors, lights, cables, conduits, switch boxes, control circuits, etc.) in raw sewage wet wells, or in enclosed or partially enclosed spaces where hazardous concentrations of flammable gases or vapors may be present, shall comply with the National Electrical Code requirements for Class I Group D, Division I locations. In addition, equipment located in the wet well shall be suitable for use under corrosive conditions. Each flexible cable shall be provided with watertight seal and separate strain relief. A fused disconnect switch located above ground shall be provided for all pumping stations. When such equipment is exposed to weather, it shall meet the requirements of weatherproof equipment (NEMA 3R).

Each pump should have an individual intake. Wet well design should be such as to avoid turbulence near the intake. Intake piping should be as straight and short as possible.

A separate sump pump equipped with horizontally installed, dual check valves shall be provided in the dry wells to remove leakage or drainage, with the discharge located as high as possible. A connection to the pump suction is also recommended as an auxiliary feature. Water ejectors connected to a potable water supply will not be approved. All floor and walkway surfaces should have an adequate slope to a point of drainage. Pump seal water shall be piped to the sump.

The pumps and controls of main pumping stations should be selected to operate at varying delivery rates to permit discharging sewage at approximately its rate of delivery to the pump station.

5. CONTROLS. Control systems shall be as follows:

Primary control systems for all types of pump stations shall be of the air bubbler type. The backup system will be a probe type system such as Multitrode or equal.

The electrical equipment shall comply with the National Electrical Code requirements for Class I, Group D, Division I locations.

The control system shall be located away from the turbulence of incoming flow and pump suction.

In all stations, provisions shall be made to automatically alternate the pumps in use.

Instrument loop diagrams shall be submitted for approval, drawn to the conventions published in ISA Standard 5.4 - Standard Instrument Loop Diagrams. The Instrument Society of America (ISA) operates under the International Society for Measurement and Control.

Magnetic flow meters, located in a meter vault with piping bypass and isolation valves shall be provided on all pump stations.

6. VALVES. Suitable shutoff valves shall be placed on the suction line of each pump, except on submersible and vacuum-primed pumps.

Suitable isolation gate valves (solid wedge or resilient seated) and buffered swing check valves shall be placed on the discharge line of each pump. The check valve shall be located between the shutoff valve and the pump. Check valves shall be suitable for the material being handled. Check valves shall not be placed on the vertical portion of discharge piping. Valves shall be capable of withstanding normal pressure and water hammer.

Valves shall not be located in wet wells. For submersible stations, they shall be located in a valve pit, with valves installed just below the frost line so they are readily accessible from grade.

7. PLUMBING. Toilet facilities are required for all stations. Minimum facilities shall include a water closet, service sink and a suitably sized water heater.

Wash hose stations are required where directed by FTSA, with 1-inch and 3/4-inch hose end outlet valves for wash down purposes. Water meters and back flow prevention devices shall be provided, designed in accordance with applicable codes.

All pumping stations shall have a source of clean water. There shall be no physical connection between any potable water supply and a sewage pumping station, which, under any conditions, might cause contamination of the potable water supply. If a potable water supply is brought to the station, it should comply with Franklin Township Water Department's requirements.

8. WET WELL. The wet well size and control setting shall be appropriate to avoid heat buildup in the pump motor due to frequent starting and to avoid septic conditions due to excessive detention time.

The wet well floor shall have a minimum slope of one to one to the hopper bottom. The horizontal area of the hopper bottom shall not be greater than necessary for proper installation and function of the inlet.

For stations with dry pit pumps, wet wells shall be divided into multiple sections, properly interconnected, to facilitate repairs and cleaning.

9. VENTILATION. Pumping station ventilation shall be designed to be compliant with NFPA Article 820.
10. ALARM SYSTEMS. Alarm systems shall be provided for pumping stations. The alarm shall be activated in cases of power failure, pump failure, use of the lag pump, unauthorized entry, or any cause of pump station malfunction. Pumping station alarms shall be telemetered, including identification of the alarm condition, to the Authority's system. The work shall be coordinated with the alarm system vendor
11. EQUIPMENT REQUIREMENTS. The following general requirements shall apply to all internal combustion engines used to drive auxiliary pumps, service pumps through special drives, or electrical generating equipment.
  - a) Engine Protection. The engine must be protected from operating conditions that would result in damage to equipment. Protective equipment shall be capable of shutting down the engine and activating an alarm on site as provided in "Alarm Systems." Protective equipment shall monitor for conditions of low oil pressure and overheating except that oil pressure monitoring will not be required for engines with splash lubrication.
  - b) Size. The engine shall have adequate rated power to start and continuously operate all connected loads.
  - c) Fuel Type. Diesel fuel or natural gas.
  - d) Engine Ventilation. The engine shall be located above grade with adequate ventilation of fuel vapors and exhaust gases.
  - e) Routine Start-up. All emergency equipment shall be provided with instructions indicating the need for regular starting and running of such units at full loads.
  - f) Protection of Equipment. Emergency equipment shall be protected from damage at the restoration of regular electrical power.
12. EMERGENCY GENERATOR. Permanently installed generating equipment is required. The following requirements, in addition to "Equipment Requirements" above, shall apply.
  - a) Generating Capacity. Generating unit size shall be adequate and will have capacity to start all pumps simultaneously with auxiliary equipment operating.

- b) Operation. Provisions shall be made for automatic and manual start-up and load transfer. The generator must be protected from operating conditions that would result in damage to equipment. Provisions should be considered to allow the engine to start and stabilize at operating speed before assuming the load.
  - c) A load bank shall be provided sized such that the generator runs under its design load when normal exercising occurs.
13. FORCE MAINS. At design average flow, a velocity of at least 2.5 feet per second shall be maintained.

Automatic air relief valves shall be minimized by prudent hydraulic design. Where necessary, they shall be placed at high points in the force main to prevent air locking.

Force mains should enter the gravity sewer system at a point not more than 2 feet above the flow line of the receiving manhole.

The force main and fittings, including reaction blocking, shall be designed to withstand normal pressure and pressure surges (water hammer).

Force main construction near streams or used for aerial crossing shall meet the requirements of the applicable sections relating to gravity sewers.

Force mains shall be laid to grade as much as possible to facilitate the use of air injection for odor control. Part of the force main design, shall be an analysis of the impact of various pipe sizes on detention times, odor generation and pumping costs. Multiple force mains or odor control stations may be required.

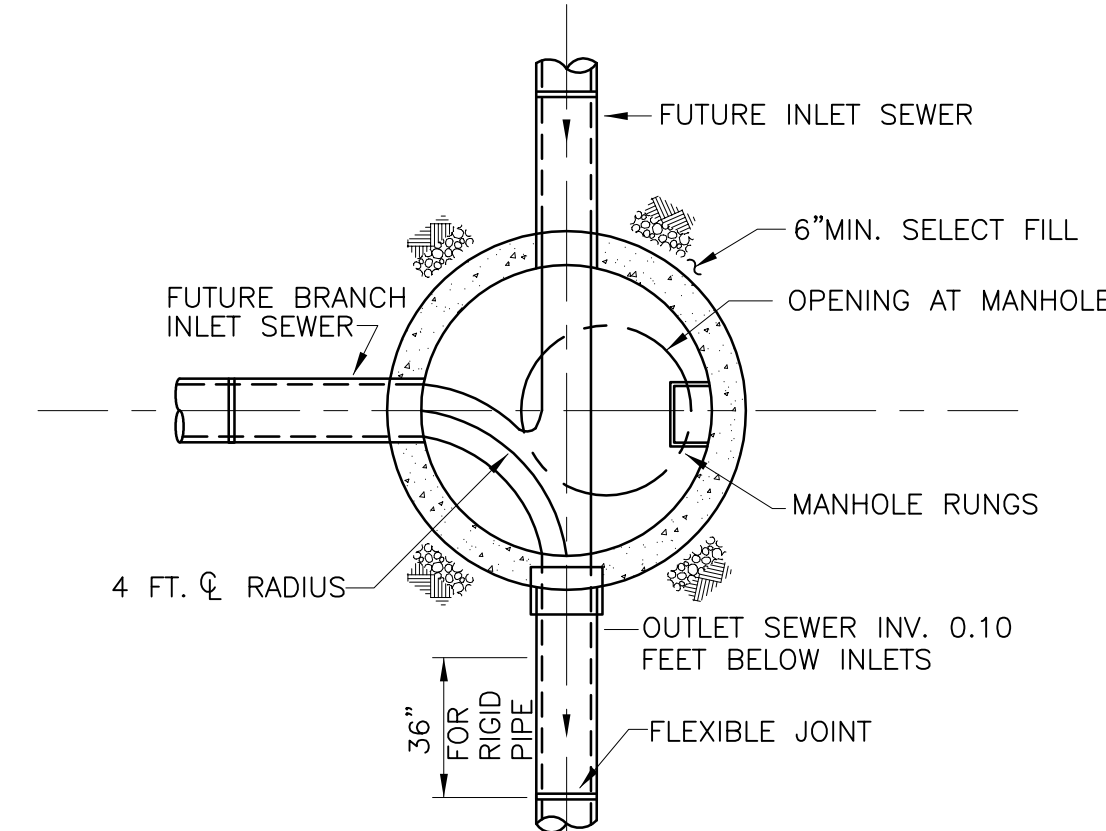
Force mains shall be made of a minimum of Class 52, ductile iron pipe, with corrosion-resistant interior lining and external encapsulation where the presence of aggressive soils warrant same.

14. ENERGY CONSERVATION. Pump Stations shall be designed to provide for energy conservation. Items which may be required by the Authority are as follows:
- a) Interlock to prevent an electric unit heater from operating when any pump is running.
  - b) Roof insulation. 6" thick R-19.
  - c) Thermostat for heat capable of operating from 45 degree F. to 75 degree F.
  - d) Phase correction on motors.
  - e) High efficiency lighting.
  - f) Motor operated louvers which will stay tightly closed when the generator is not operating.
  - g) Weather stripping on the doors.

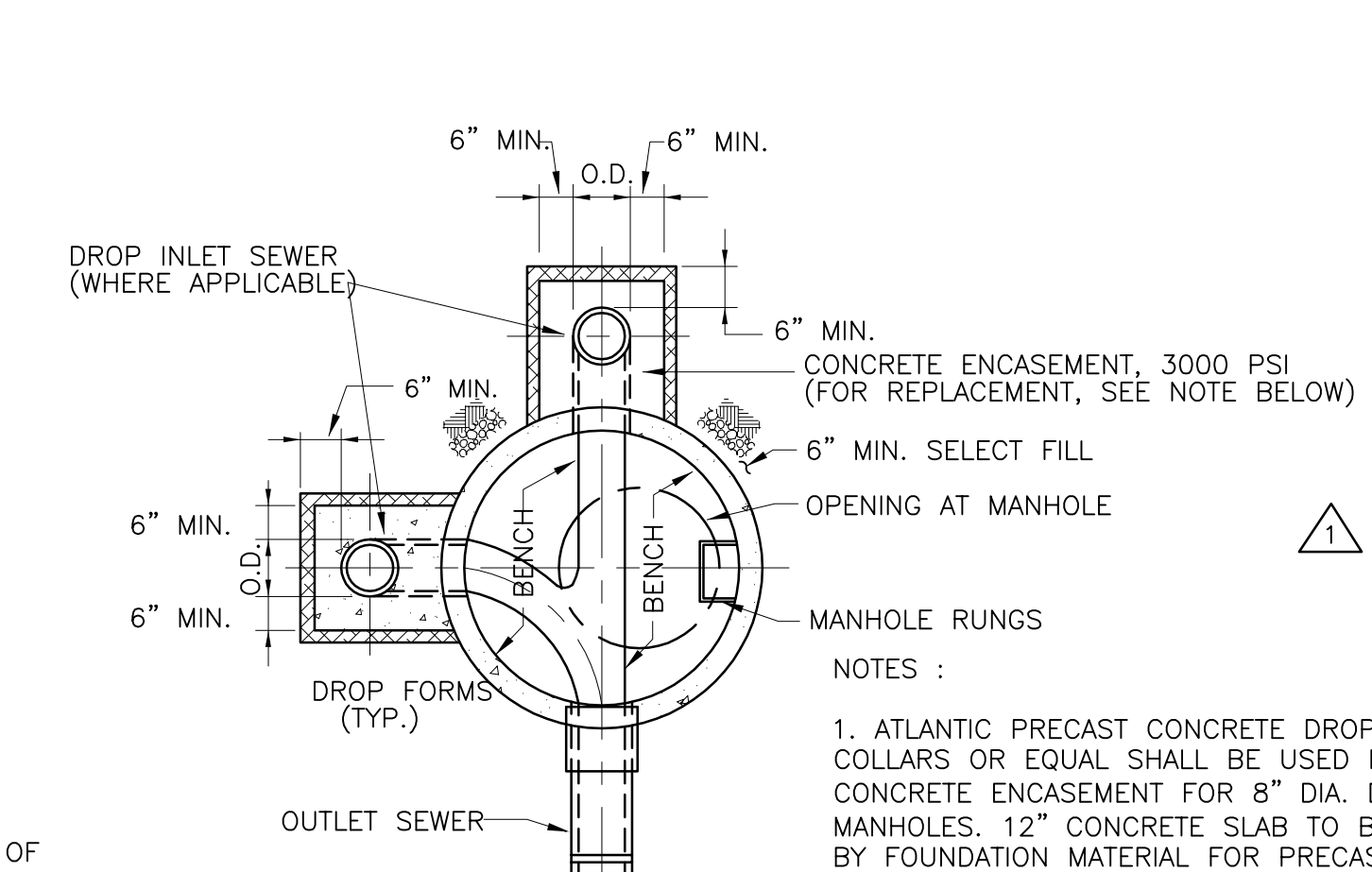
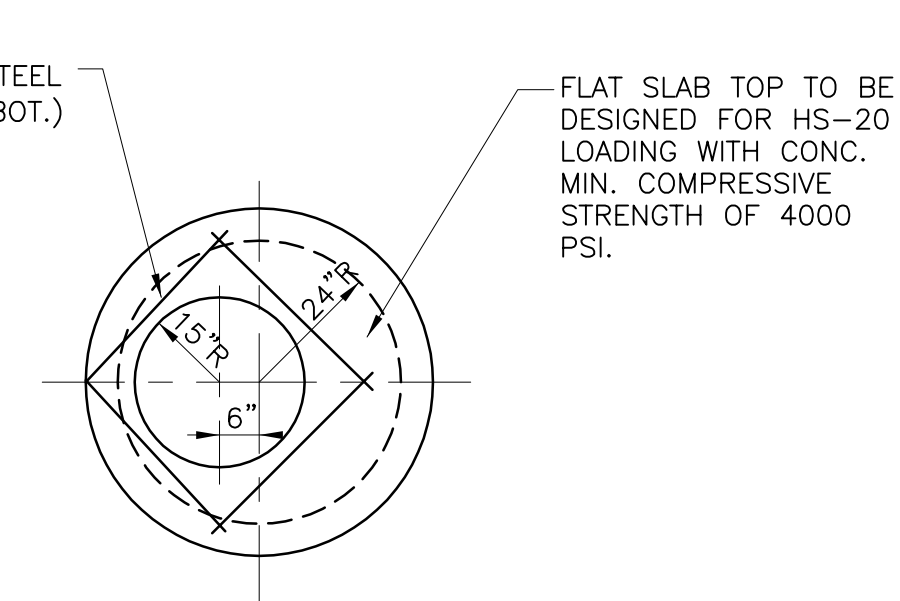
- h) Provide the highest energy efficient motors and power factor correction capacitors for motors greater than 5 HP
- i) Consider the use of VFD's and 2 speed motors when dictated by process or hydraulic requirements. Such requirements require review and approval by the Authority's engineer.

# **Appendix D**

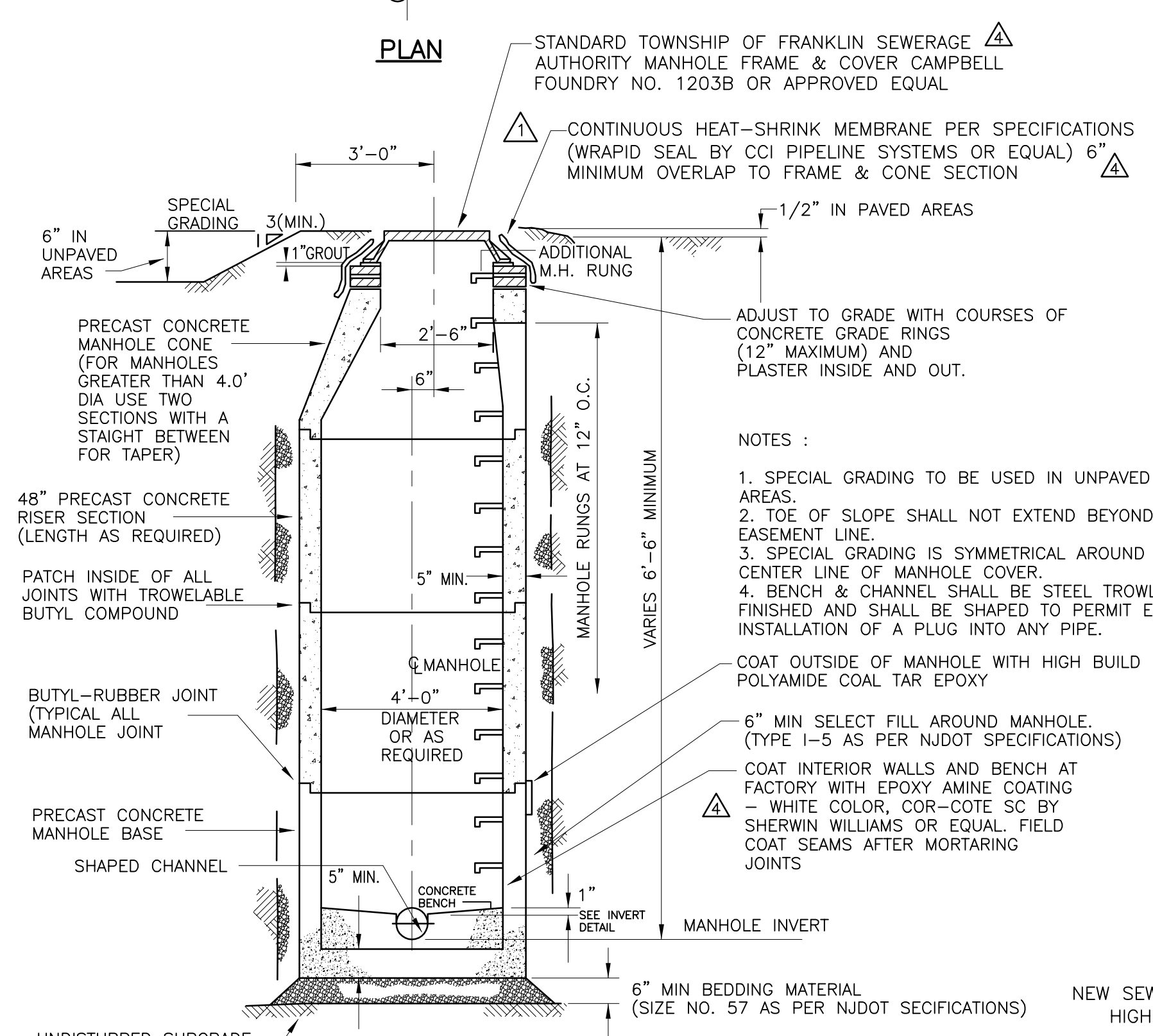
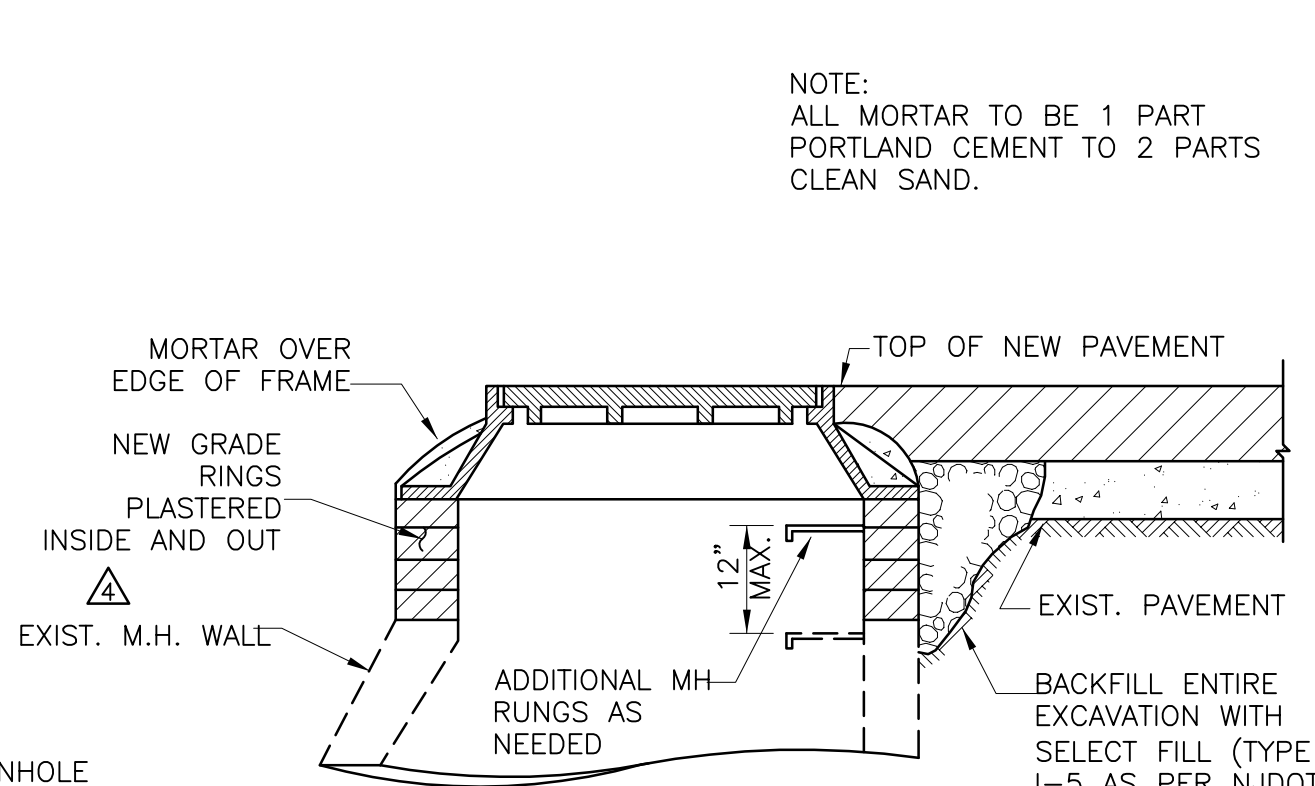
## **Standard Details**



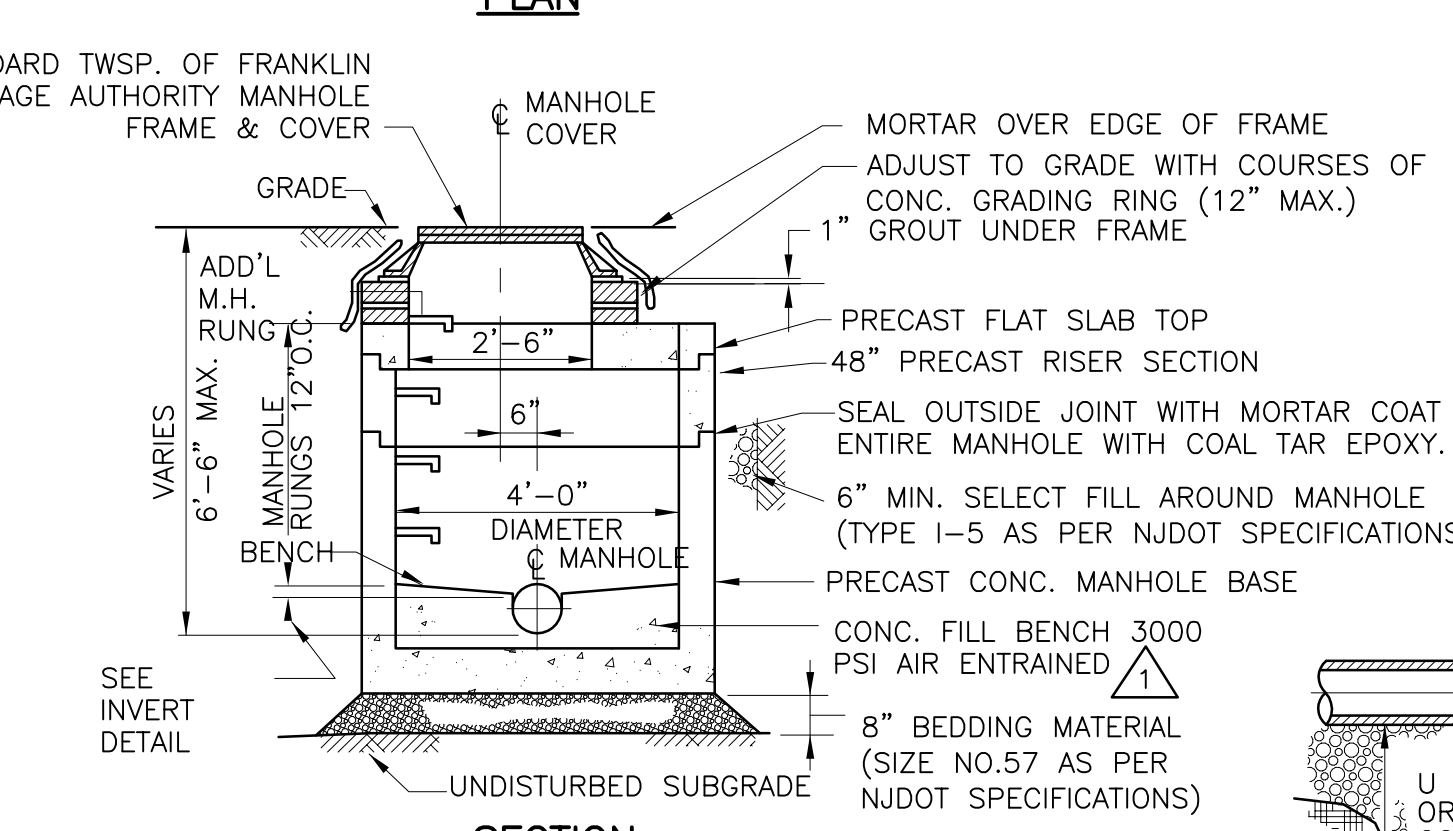
- NOTES :
1. USE STANDARD AUTHORITY MANHOLE FRAME AND COVER.
  2. SPECIAL DETAILS WILL BE PROVIDED FOR SEWERS 27" AND LARGER.



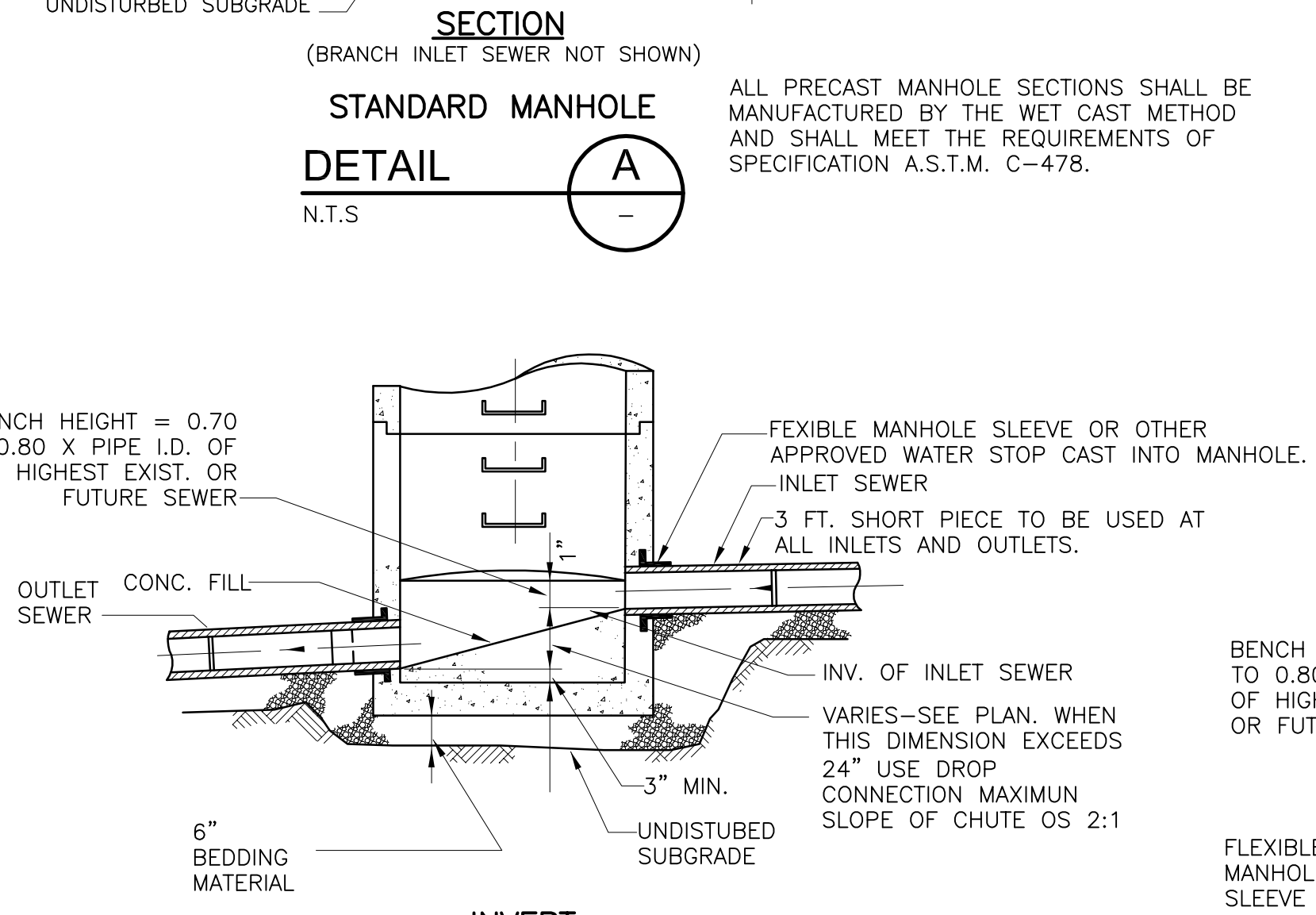
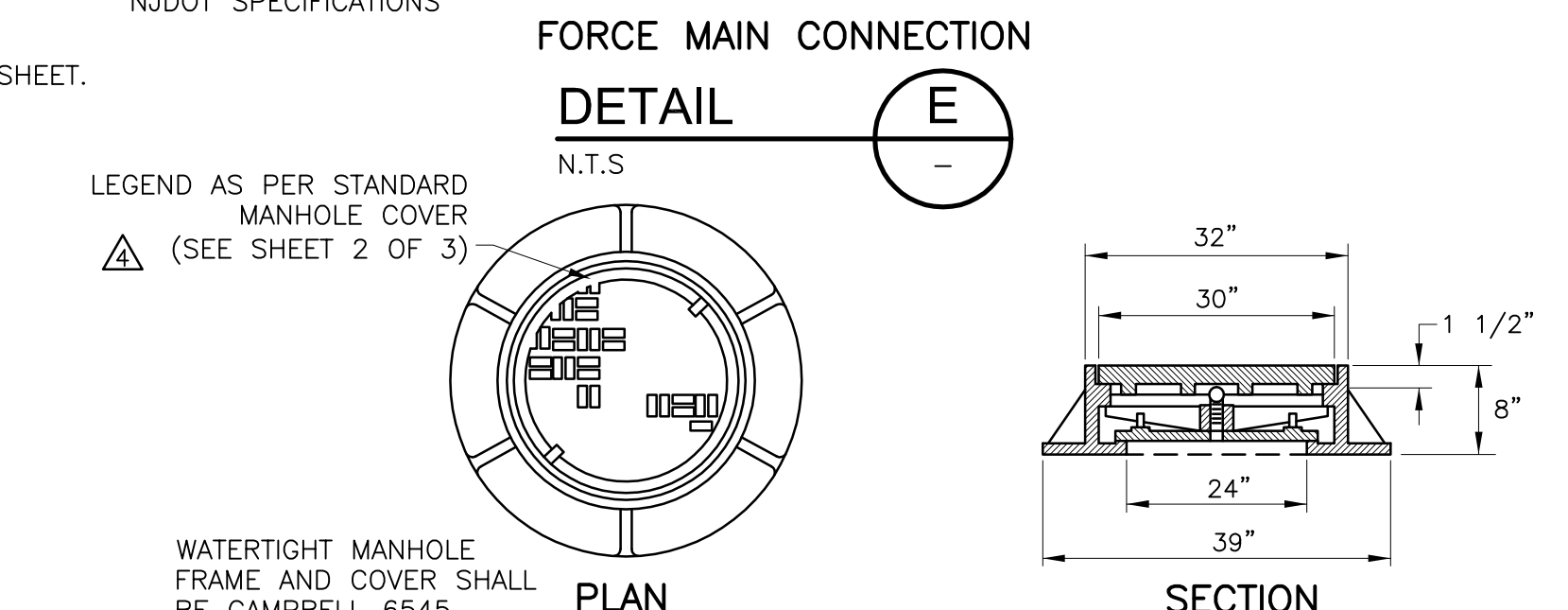
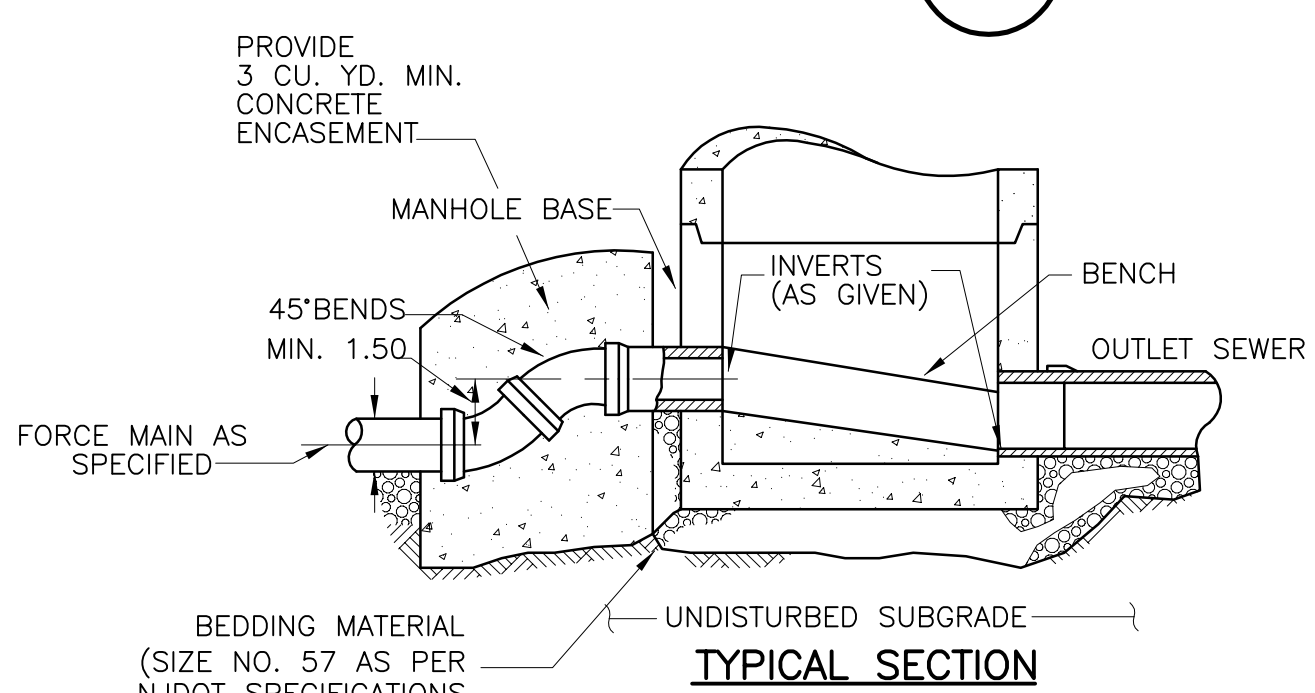
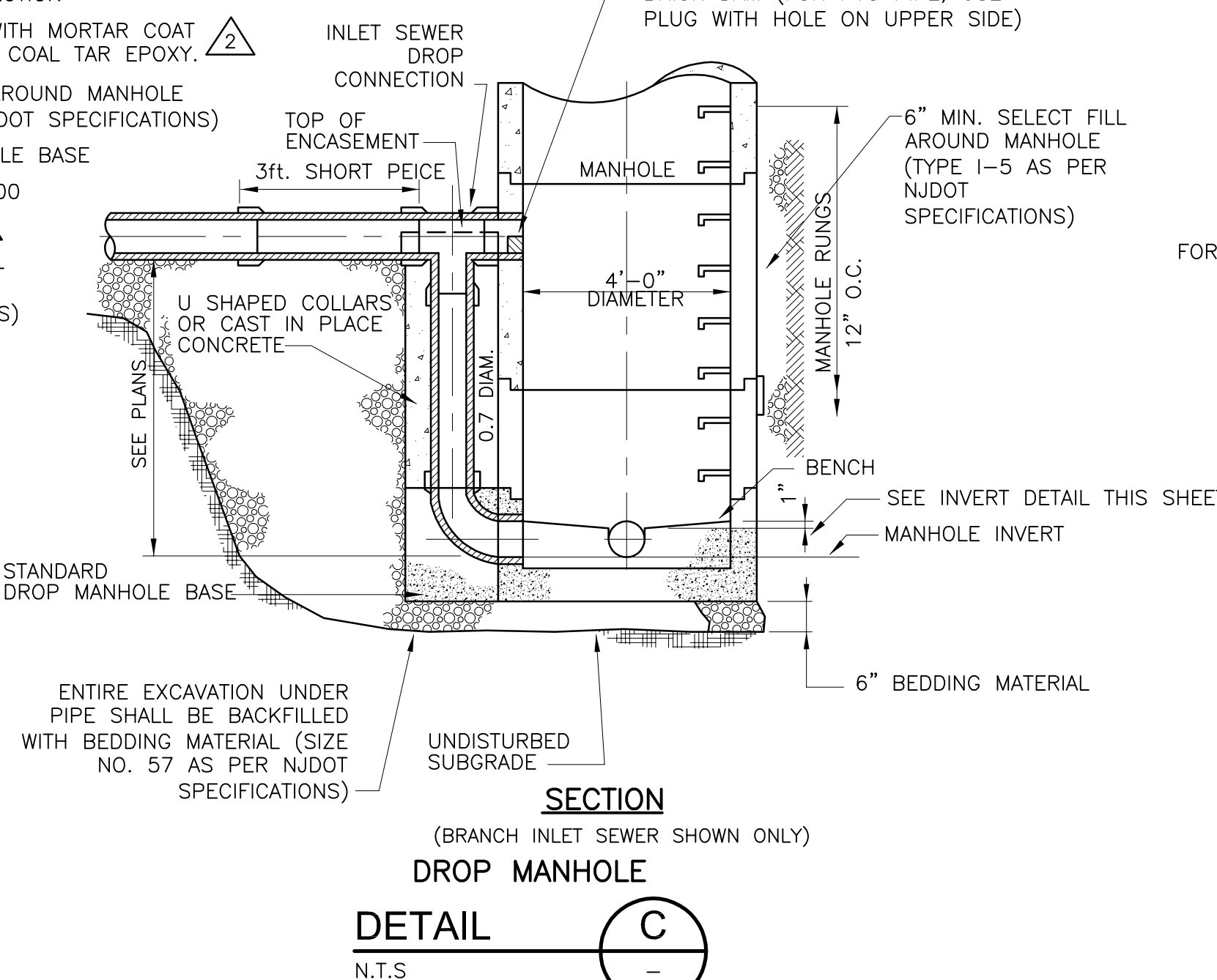
- NOTES :
1. ATLANTIC PRECAST CONCRETE DROP MANHOLE COLLARS OR EQUAL SHALL BE USED IN PLACE OF CONCRETE ENCASEMENT FOR 8" DIA. DROP MANHOLES. 12" CONCRETE SLAB TO BE REPLACED BY FOUNDATION MATERIAL FOR PRECAST UNITS.
  2. PRECAST UNITS ARE REQUIRED UNLESS JOB CONDITIONS PRECLUDE THEIR USE.



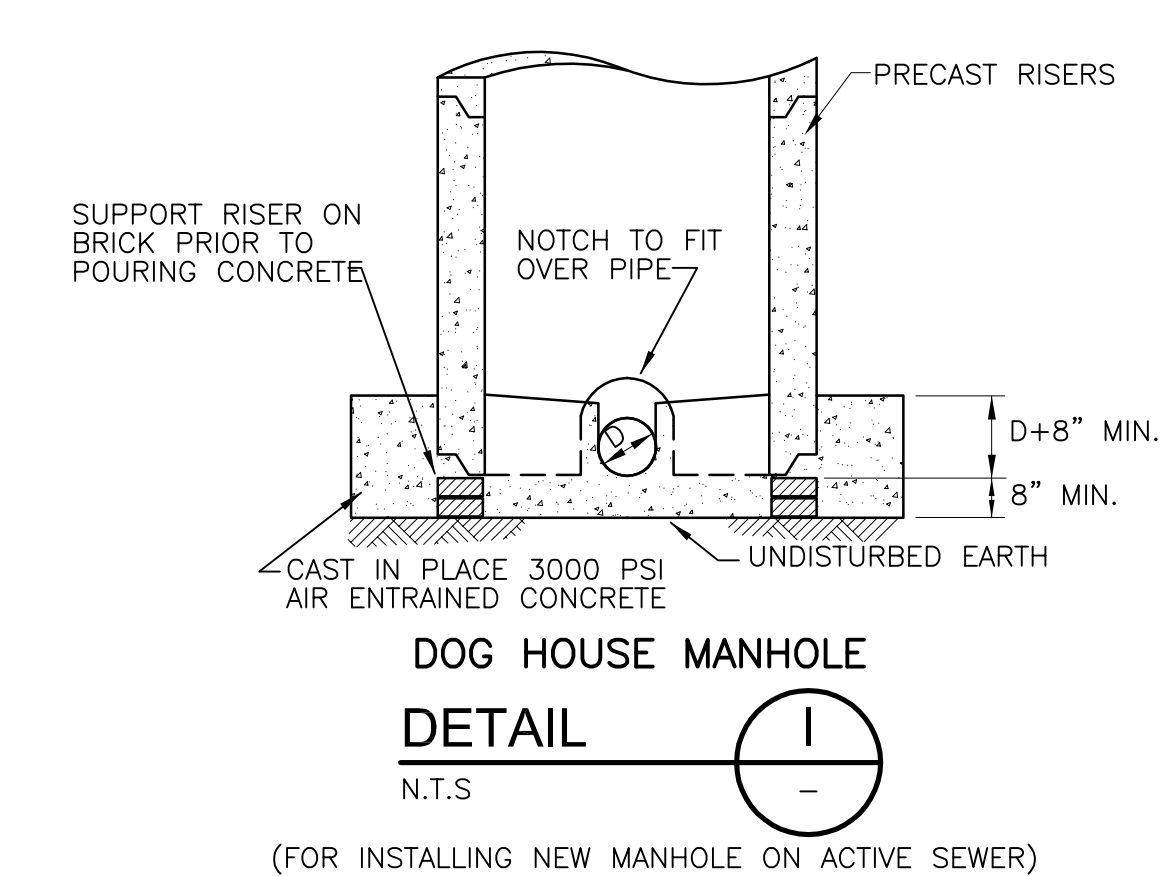
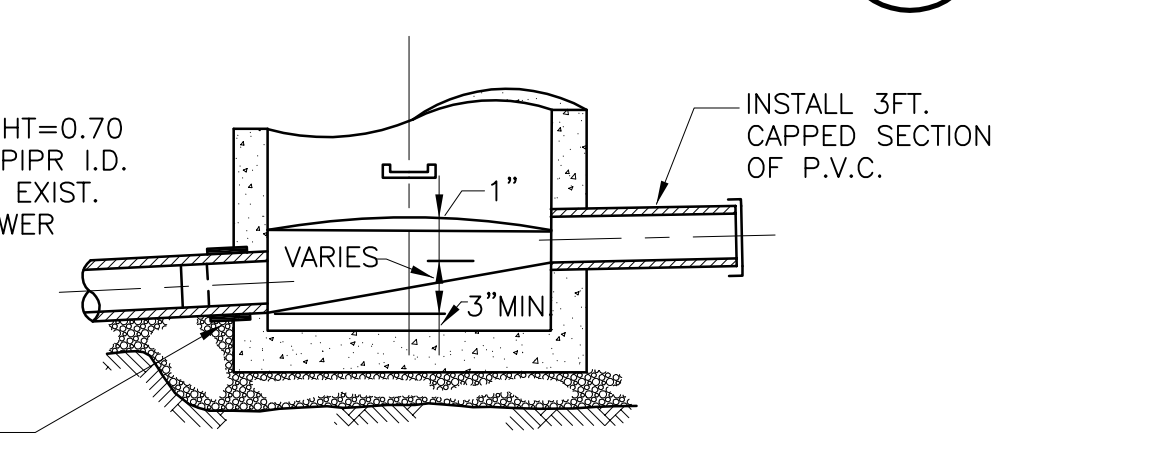
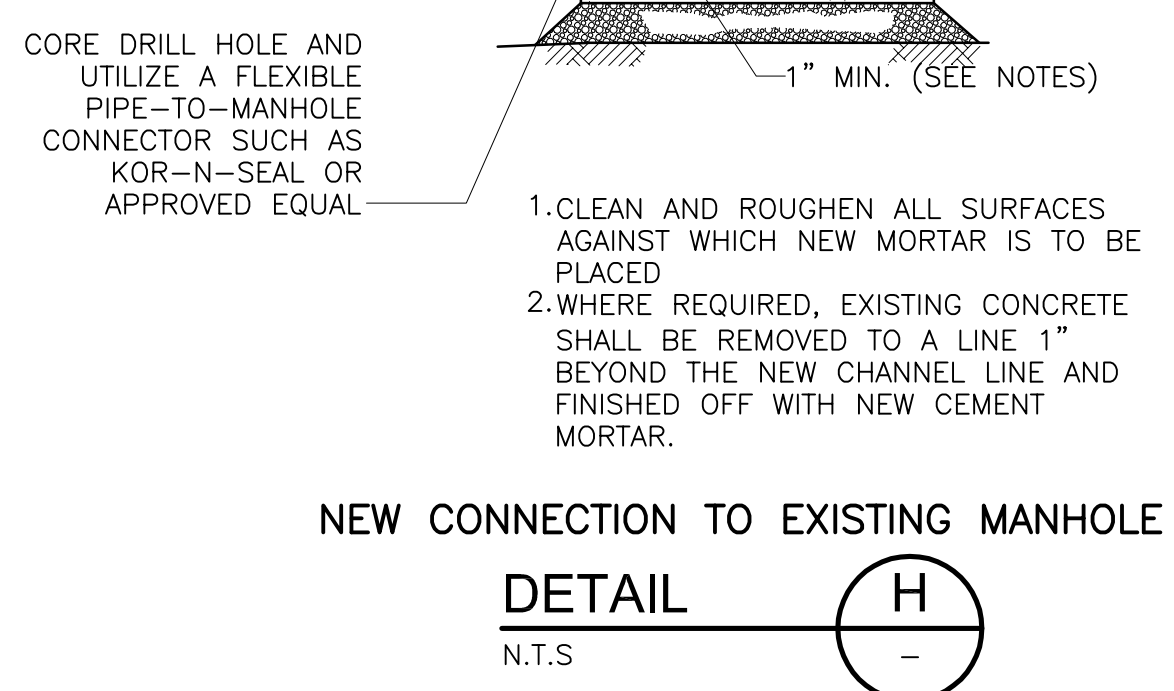
- NOTES :
1. SPECIAL GRADING TO BE USED IN UNPAVED AREAS.
  2. TOE OF SLOPE SHALL NOT EXTEND BEYOND EASEMENT LINE.
  3. SPECIAL GRADING IS SYMMETRICAL AROUND CENTER LINE OF MANHOLE COVER.
  4. BENCH & CHANNEL SHALL BE STEEL TROWEL FINISHED AND SHALL BE SHAPED TO PERMIT EASY INSTALLATION OF A PLUG INTO ANY PIPE.



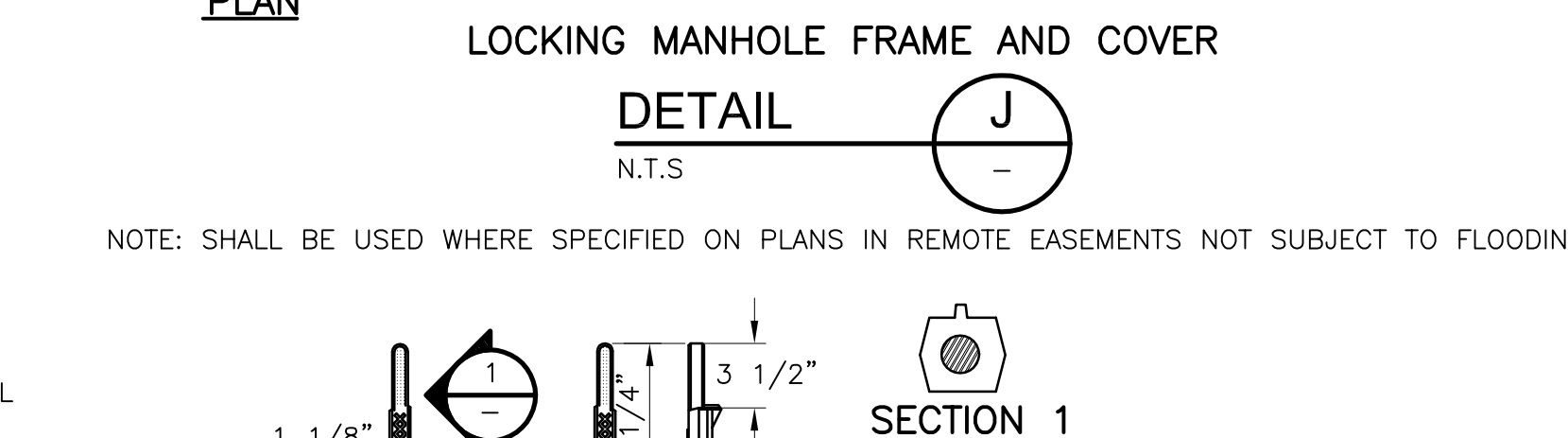
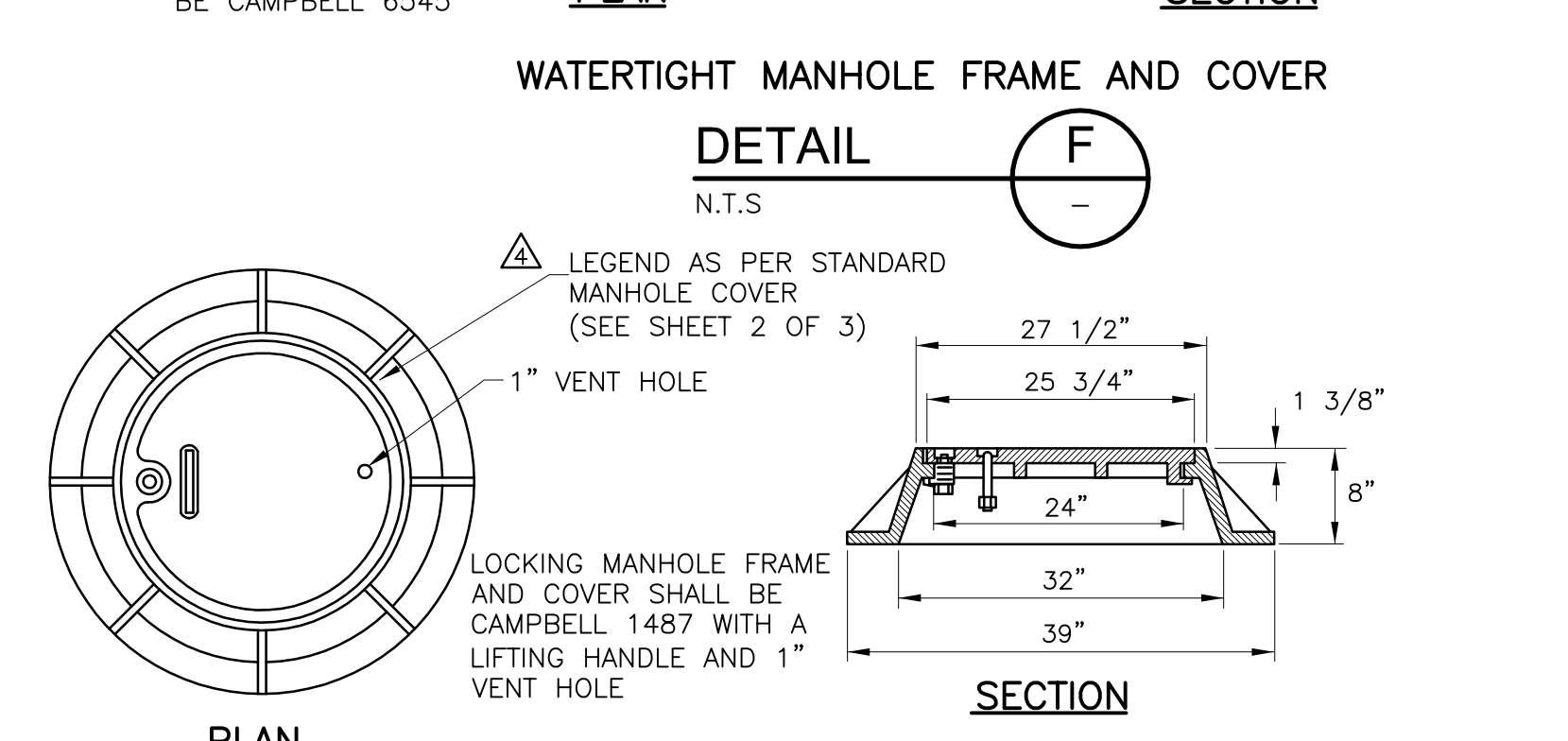
- NOTE:
1. FOR INLET, OUTLET, BASE AND BRANCH DETAILS SEE INVERT DETAILS.
  2. INTERIOR COATING AND CONTINUOUS HEAT-SHRINK MEMBRANE SHALL BE AS INDICATED ON STANDARD MANHOLE DETAIL A THIS SHEET.



- NOTES :
1. CHANNEL WIDTH TO BE BETWEEN 1.0 AND 1.10 X PIPE DIAMETER.
  2. BENCH AND CHANNEL SHALL HAVE A STEEL TROWEL FINISH.



- NOTES :
1. TOP OF PIPE SHALL BE NEATLY CUT AFTER CAST-IN-PLACE CONC. BASE AND BENCH HAS SET.
  2. FOR DETAIL OF UPPER PART OF MANHOLE, SEE "STANDARD MANHOLE" DETAIL.
  3. ACRYLAMIDE GEL GROUT INJECTION SHALL BE USED TO STOP LEAKS, IF ANY, AROUND MANHOLE SEAMS AND PIPES.
  4. FTSA APPROVAL SHALL BE REQUIRED PRIOR TO INSTALLATION OF ANY DOG HOUSE MANHOLE.
  5. INTERIOR COATING AND CONTINUOUS HEAT-SHRINK MEMBRANE SHALL BE AS INDICATED ON STANDARD MANHOLE DETAIL A THIS SHEET.



NOTE: ALL WORK SHALL COMPLY WITH THE REVISION OF THE "RATES, RULES & REGULATIONS APPLICABLE TO SEWER SERVICE IN THE TOWNSHIP OF FRANKLIN, SOMERSET COUNTY, NEW JERSEY" IN EFFECT AT THE TIME CONSTRUCTION BEGINS.

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REV. NO.	DATE	DRWN	CHKD	REMARKS
10/13	CDM	FTSA		REVISIONS TO UPDATE RATES, RULES AND REGULATIONS
5/00	CDM	FTSA		GENERAL NOTE
2/98	CDM	FTSA		
5/97	CDM	FTSA		MANHOLE COATINGS, ENCAPSULATION SYSTEM, BEDDING

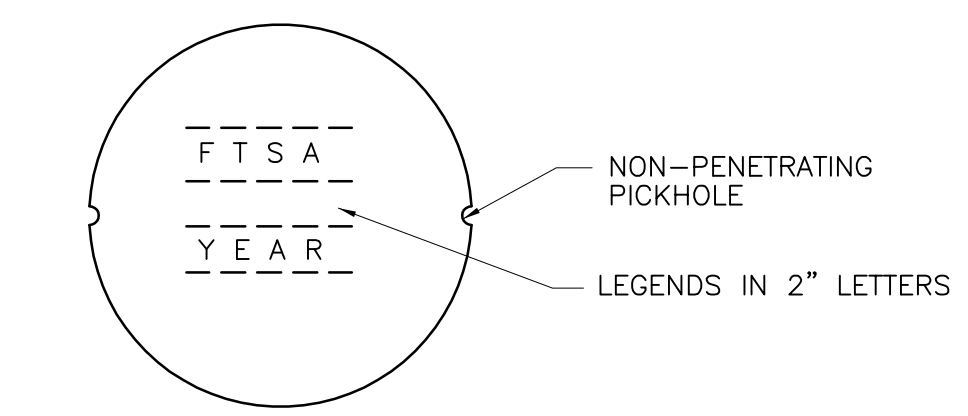
DESIGNED BY: H. MATTESSON  
 DRAWN BY: D. GARVEY  
 SHEET CHK'D BY: X  
 CROSS CHK'D BY: X  
 APPROVED BY: X  
 DATE: OCTOBER 2013



FRANKLIN TOWNSHIP SEWERAGE AUTHORITY  
 SOMERSET COUNTY, NEW JERSEY

PROJECT NO. 105979-89351  
 FILE NAME: CSTD0001  
 SHEET NO. 1 OF 3

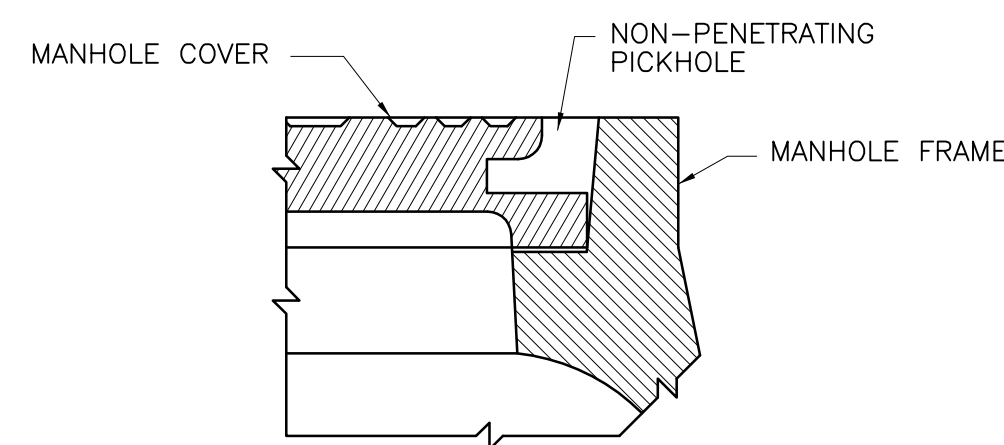
STANDARD DETAILS I



**STANDARD MANHOLE COVER**

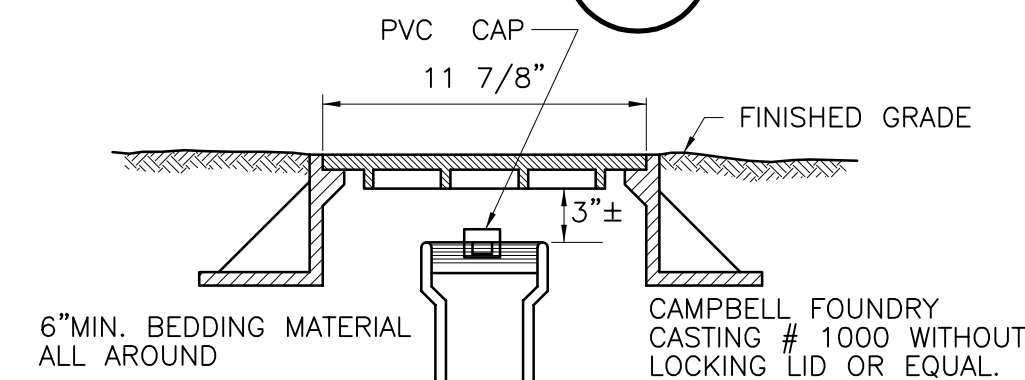
**DETAIL A**  
N.T.S.

- NOTES :
1. MANHOLE COVERS SHALL INDICATES "FTSA" AND YEAR
  2. SEATING SURFACES OF MANHOLE FRAME AND COVERS SHALL BE MACHINED TO INSURE A NON-CHATTERING FIT. MANHOLE FRAMES AND COVERS SHALL BE PROPERLY CLEANED AND DIP COATED IN A WATERPROOF ASPHALTUM PAINT.
  3. MANHOLE COVERS TO BE CAMPBELL NO. 1203 B OR AN APPROVED EQUAL.
  4. LETTERING TO BE APPROVED BY AUTHORITY PRIOR TO CASTING.
  5. NO STANDARD COVERS ARE TO HAVE VENTS.



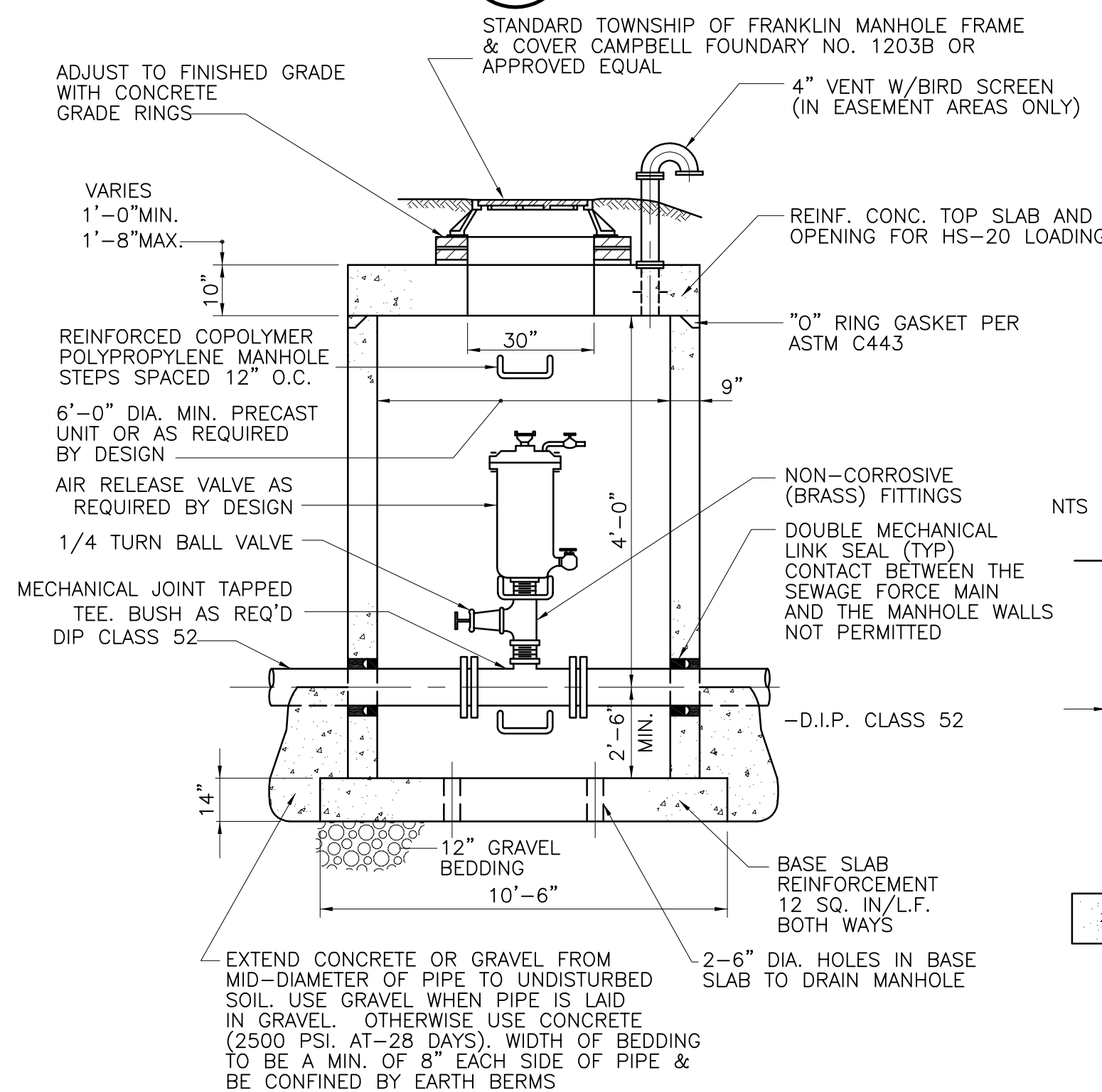
**SPECIAL PICKHOLE**

**DETAIL E**  
N.T.S.



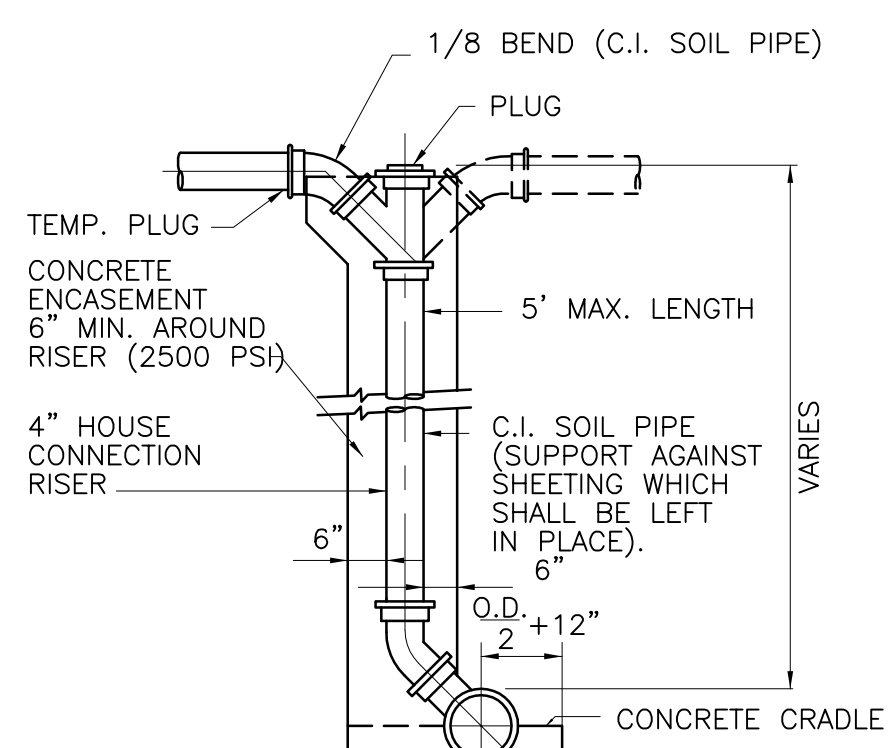
**RISER COVER**

**DETAIL F**  
N.T.S.



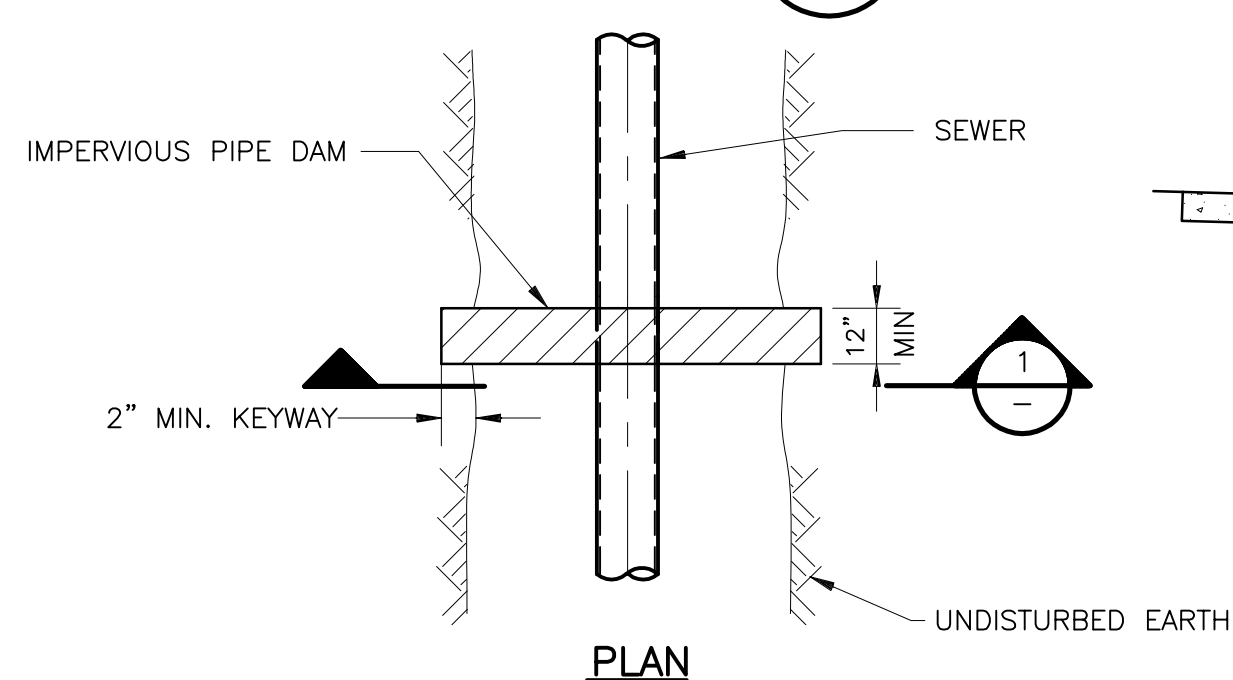
**SEWAGE FORCE MAIN AIR RELEASE VALVE**

**DETAIL I**  
N.T.S.



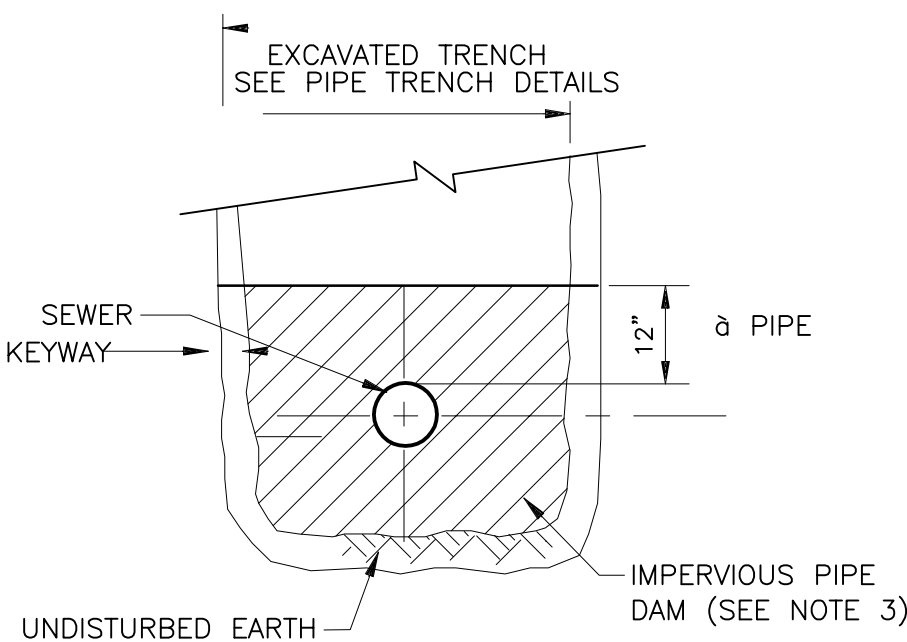
**RISER**

**DETAIL B**  
N.T.S.



**SECTION C**  
**STANDARD HOUSE CONNECTION**

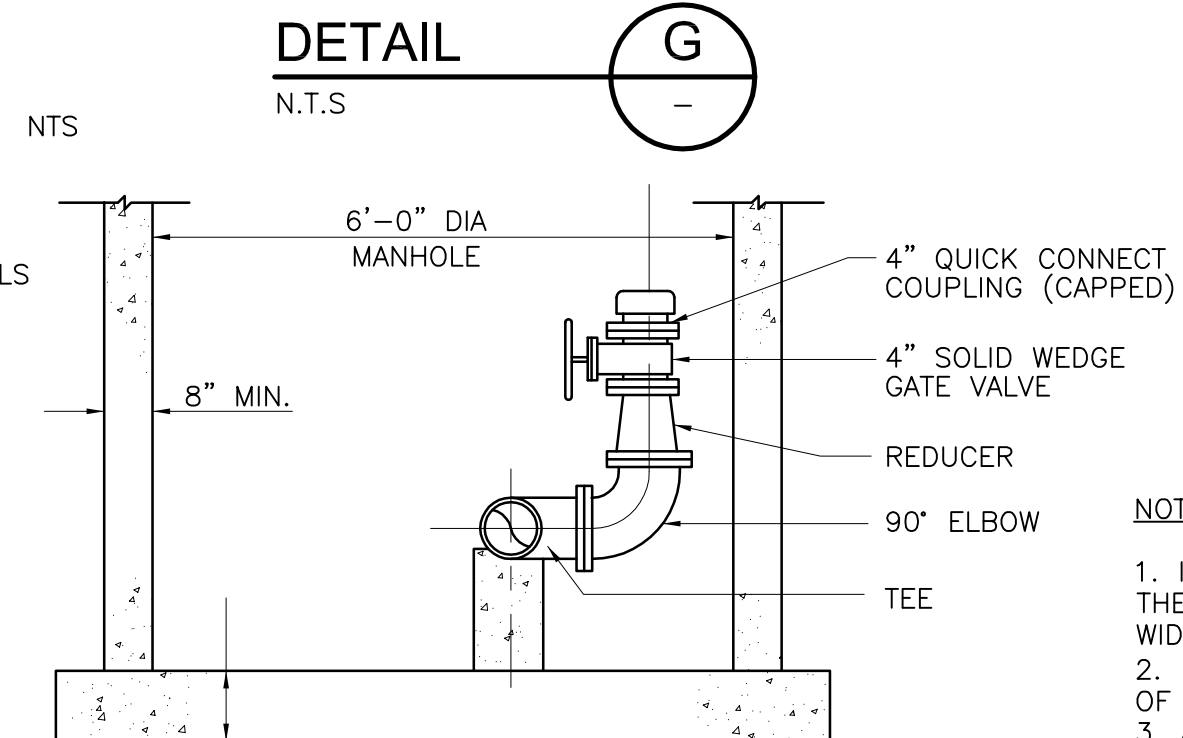
**DETAIL C**  
N.T.S.



**SECTION 1**

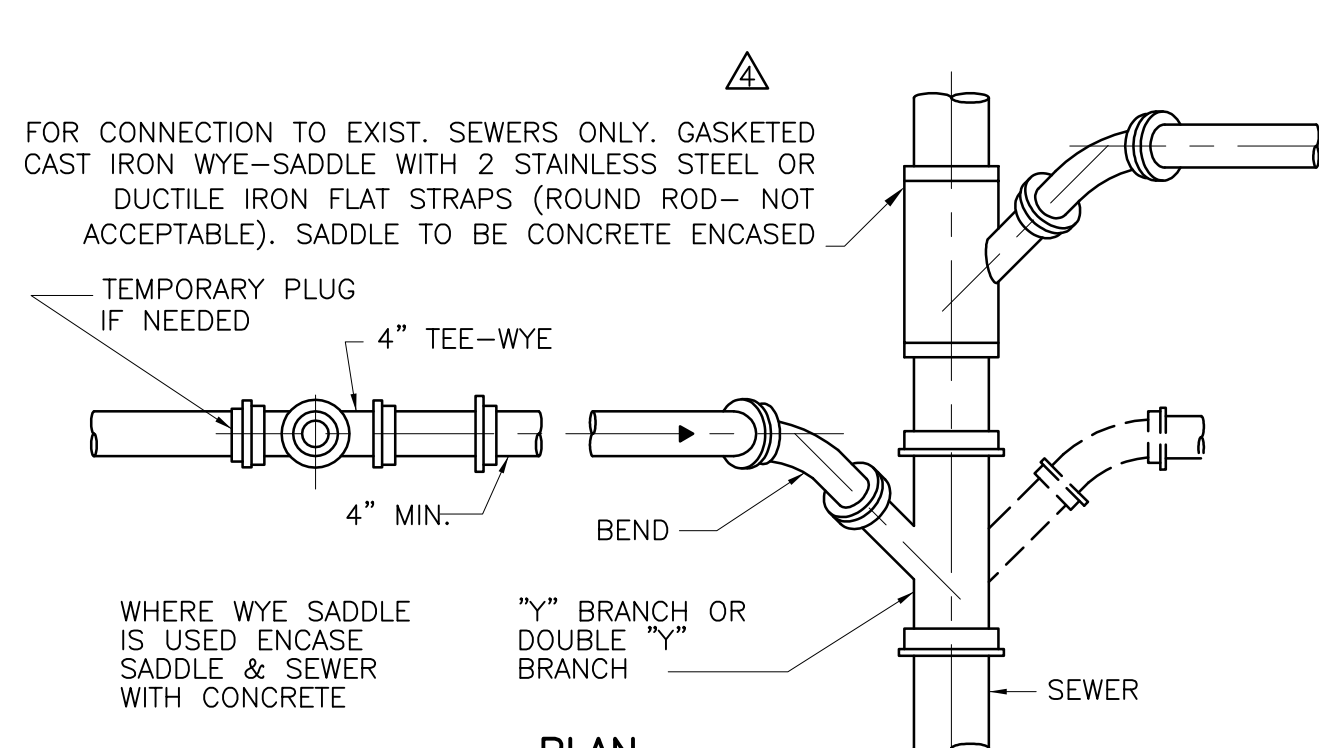
- NOTES:
1. IMPERVIOUS PIPE DAMS SHALL BE INSTALLED A MAXIMUM OF 300 FEET APART, WITH AT LEAST ONE DAM BETWEEN MANHOLES.
  2. IMPERVIOUS PIPE DAMS SHALL BE INSTALLED EQUIDISTANT FROM PIPE JOINTS.
  3. IMPERVIOUS PIPE DAM SHALL BE NATURAL CLAY, MANUFACTURED CLAY PANELS, CONCRETE, OR OTHER SUITABLE APPROVED MATERIAL AND SHALL HAVE A MAXIMUM PERMIABILITY OF  $1 \times 10^{-5}$  CM/SEC.

**TYPICAL PIPE TRENCH DAM**



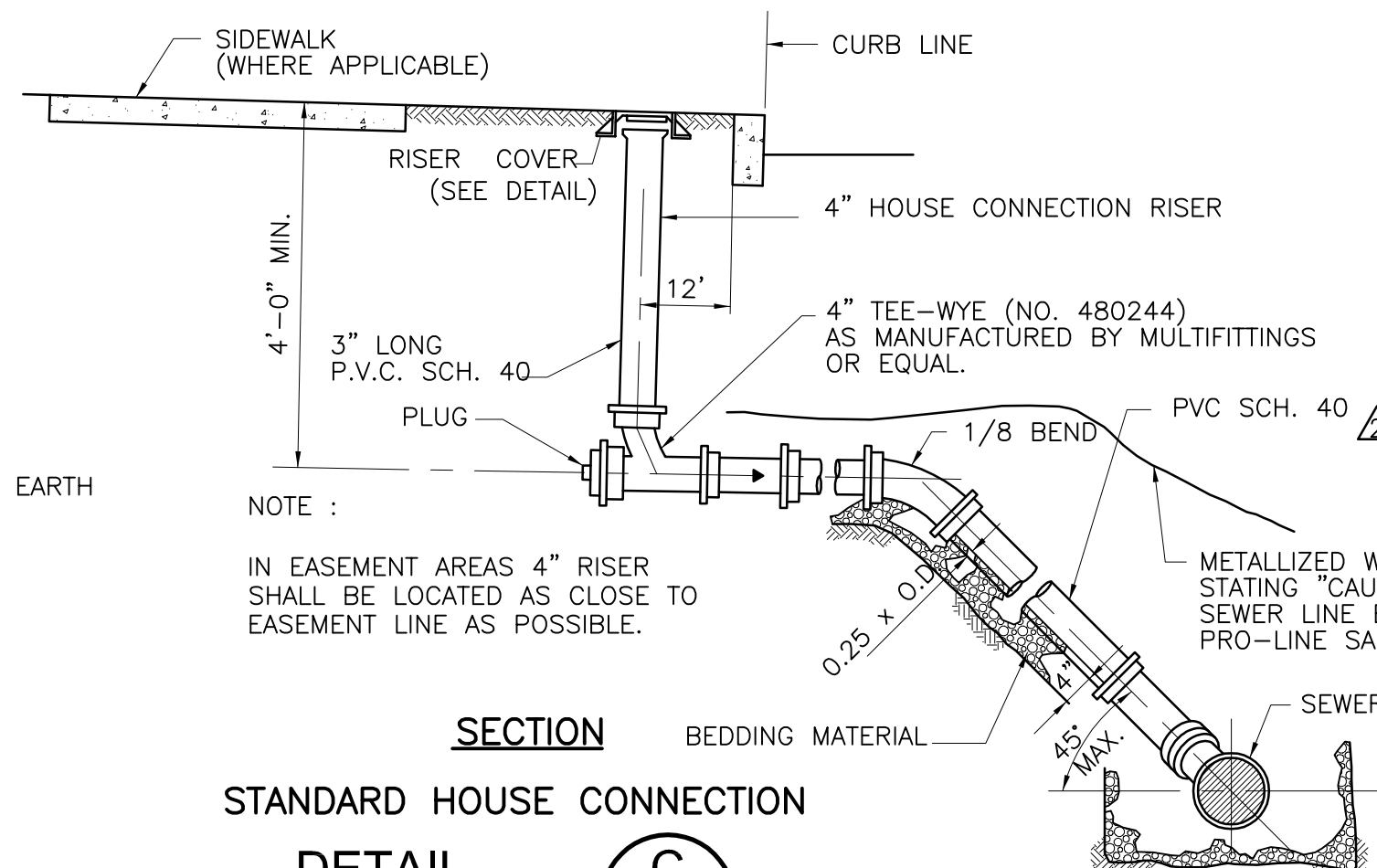
**FORCE MAIN BLOW OFF**

**DETAIL J**  
N.T.S.



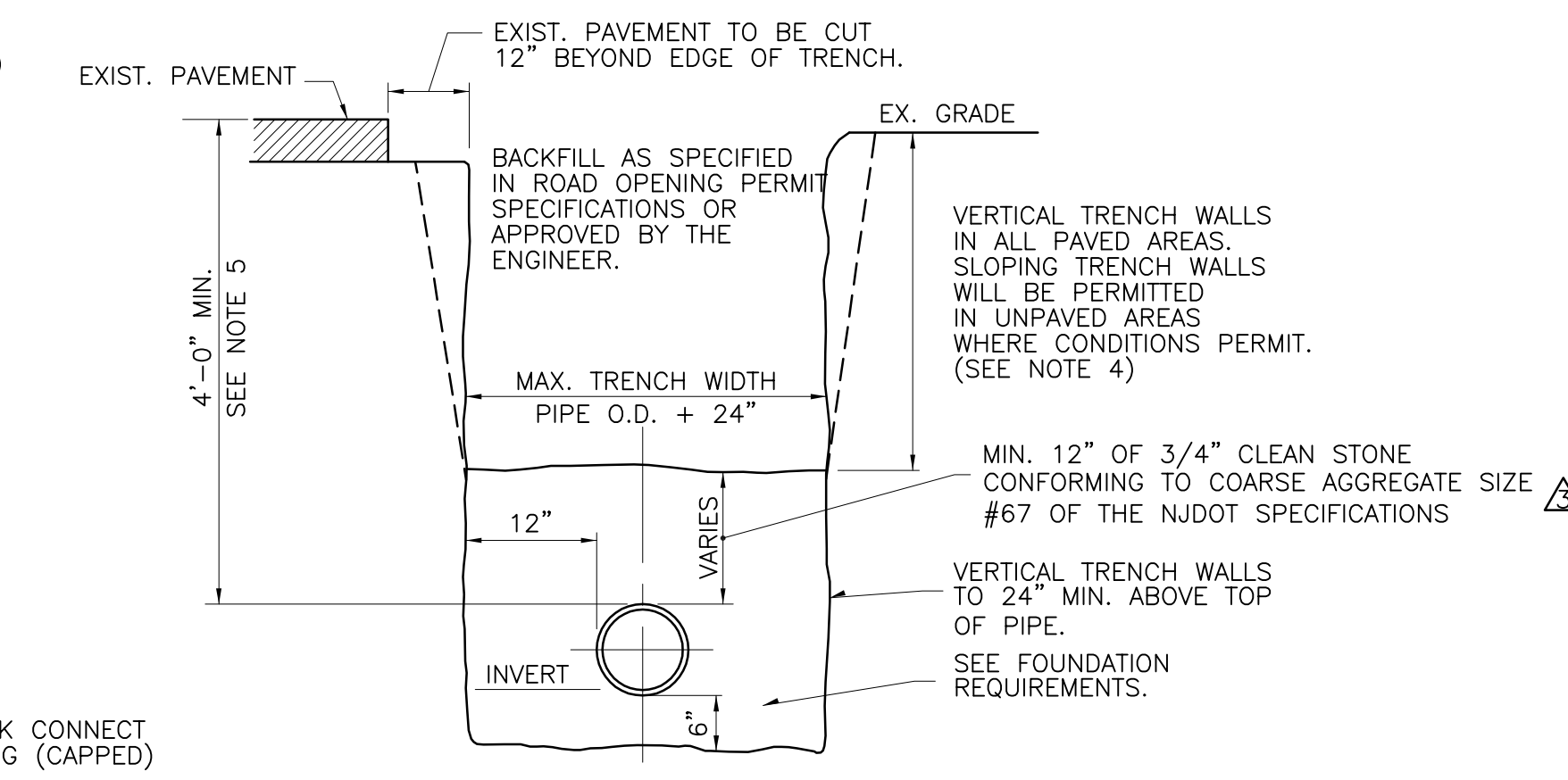
**FOUNDATION MATERIAL ON EARTH**

- NOTES :
1. CLEANOUT TO BE LOCATED IN GRASSED AREA BETWEEN SIDEWALK AND CURB. CLEANOUTS WILL NOT BE PERMITTED IN DRIVEWAYS OR SIDEWALKS.
  2. LATERAL TO BE SAME SIZE FOR ENTIRE LENGTH FROM BUILDING TO SEWER, 4" OR 6" PVC SCH. 40



**SECTION C**  
**STANDARD HOUSE CONNECTION**

**DETAIL C**  
N.T.S.

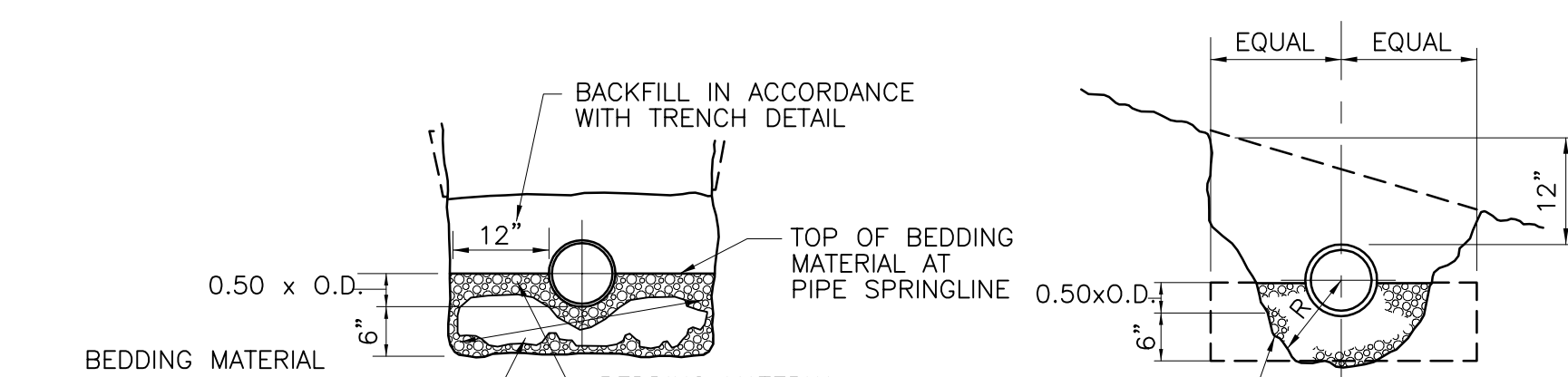


**TRENCH**

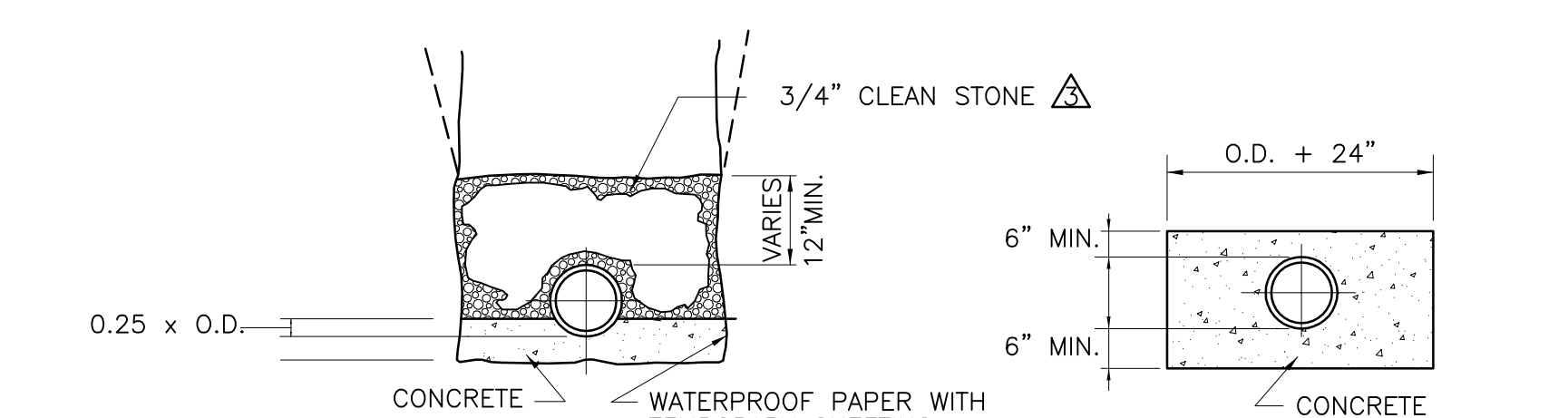
**DETAIL K**  
N.T.S.

- NOTES :
1. IF CONTRACTOR INCREASES TRENCH WIDTH, HE IS TO RECOMPUTE & SUBMIT FOR APPROVAL BY THE ENGINEER ALL PIPE CLASSES, ANY ADDITIONAL COST NECESSITATED BY THE INCREASE IN TRENCH WIDTH IS TO BE BORNE BY THE CONTRACTOR.
  2. IN PAVED AREAS, WIDTH OF PAVEMENT TO BE REMOVED SHALL BE EXTENDED 12" BEYOND EDGE OF TRENCH.
  3. ALL EXCAVATION, TRENCHING, SHEETING AND BRACING SHALL CONFORM TO THE REQUIREMENTS OF THE "CONSTRUCTION SAFETY CODE OF THE BUREAU OF ENGINEERING AND SAFETY OF THE NEW JERSEY DEPARTMENT OF LABOR AND INDUSTRY.
  4. SLOPE OF THE TRENCH SHALL NOT EXCEED O.S.H.A. REQUIREMENTS WHERE SUCH SLOPE WILL CAUSE TOP WIDTH OF TRENCH TO PROTRUDE BEYOND THE ACQUIRED EASEMENT (PERMANENT PLUS TEMPORARY) THE CONTRACTOR SHALL USE SHEETING.
  5. NO SEWER SHALL BE DESIGNED WITH LESS THAN 4FT. OF COVER WITHOUT SPECIAL PERMISSION OF FTSA.
  6. PROVIDE AT LEAST ONE IMPERVIOUS PIPE TRENCH DAM IN BEDDING BETWEEN EACH MANHOLE OR EVERY 300 FT, WHICHEVER IS LESS (SEE DETAIL THIS SHEET)

NOTE: ALL WORK SHALL COMPLY WITH THE REVISION OF THE "RATES, RULES & REGULATIONS APPLICABLE TO SEWER SERVICE IN THE TOWNSHIP OF FRANKLIN, SOMERSET COUNTY, NEW JERSEY" IN EFFECT AT THE TIME CONSTRUCTION BEGINS.



**FOUNDATION MATERIAL ON EARTH**

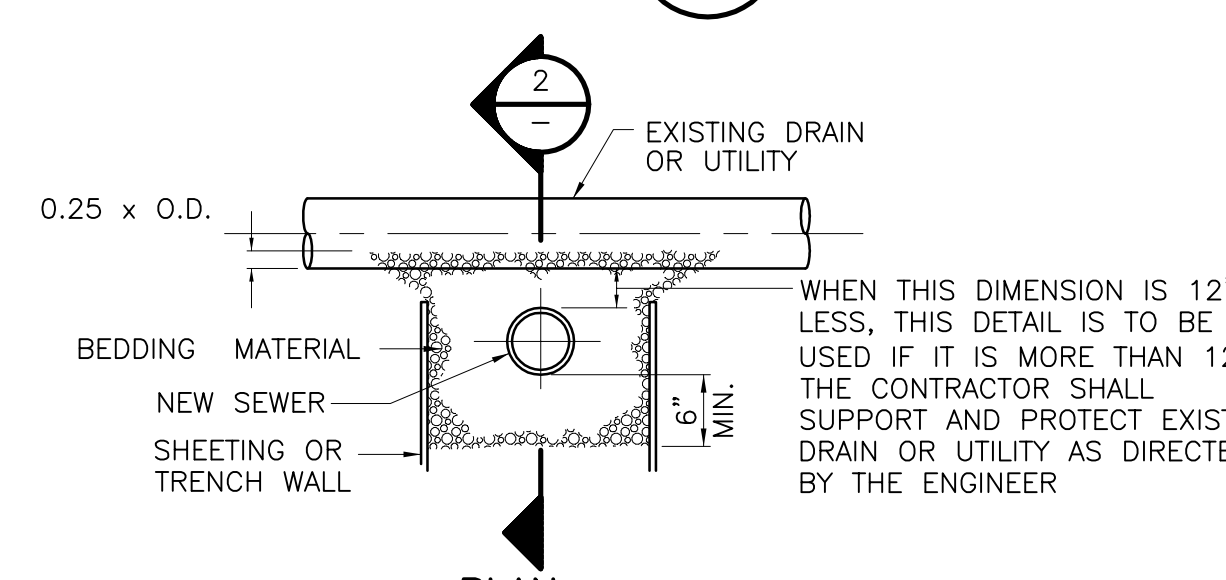


**CONCRETE CRADLE ON EARTH**

**CONCRETE ENCASEMENT**

**FOUNDATION REQUIREMENTS**

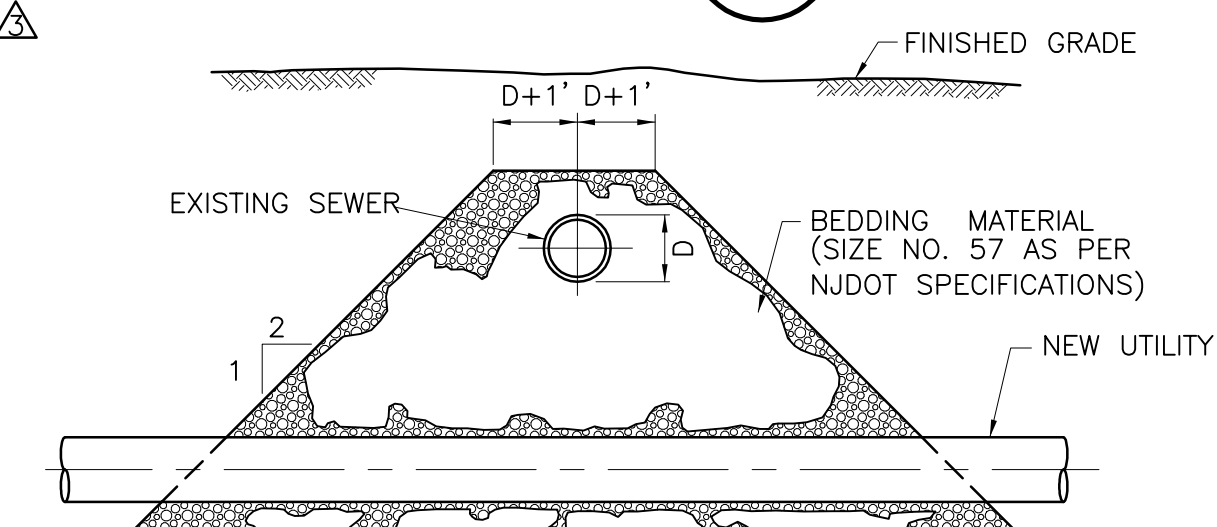
**DETAIL D**  
N.T.S.



**SECTION 2**

**SEWER CROSSING BELOW EXISTING DRAIN OR UTILITY**

**DETAIL H**  
N.T.S.



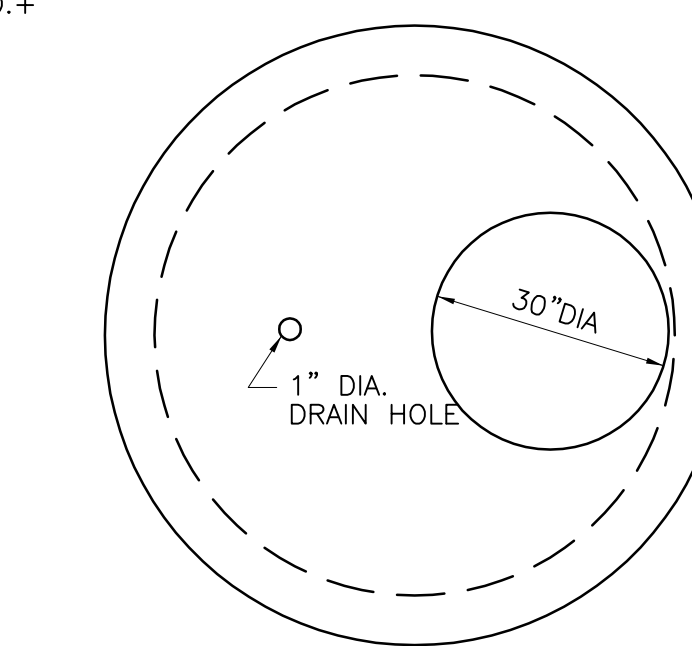
**UTILITY CROSSING BELOW EXISTING SEWER**

**DETAIL L**  
N.T.S.

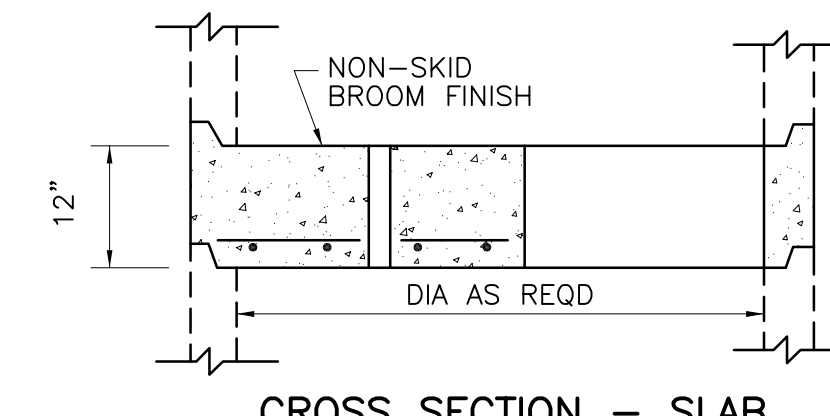
- NOTE :
- ALL MATERIAL REMOVED FROM BENEATH ANY EXISTING SEWER SHALL BE REPLACED WITH CONCRETE OR CLEAN CRUSHED STONE. IF THE VOID UNDER THE SEWER IS LESS THAN 12" THEN ONLY CONCRETE SHALL BE USED.



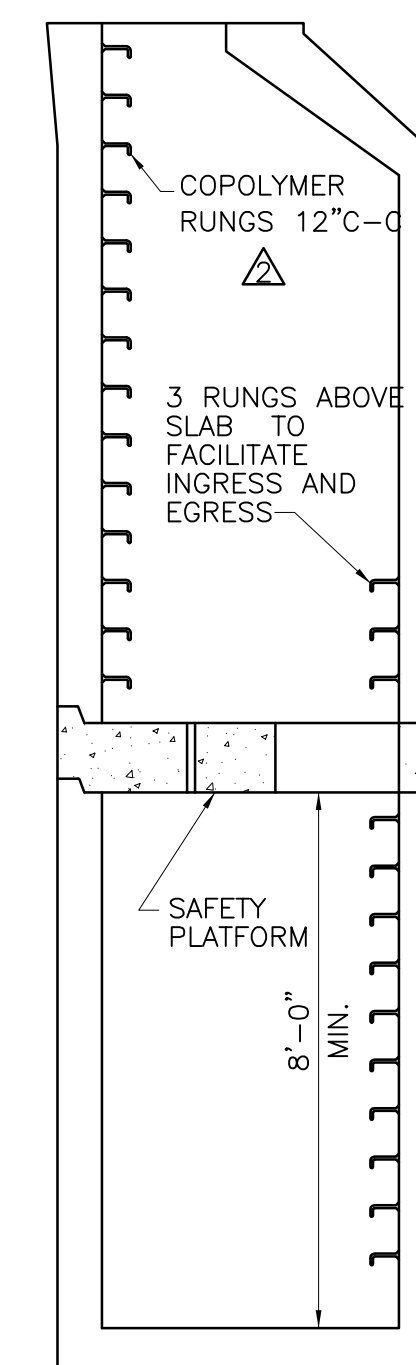
**FOUNDATION MATERIAL ON ROCK**



**PLAN VIEW-SLAB**



**CROSS SECTION - SLAB**



**MH CROSS SECTION**

**SAFETY PLATFORM FOR DEEP MANHOLES**

**DETAIL M**  
N.T.S.

- NOTE :
- WHEN DEPTH OF MH FROM TOP OF FRAME AND COVER TO INVERT EXCEEDS 15'-0" THIS DETAIL IS TO BE USED.

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REV. NO.	DATE	DRWN	CHKD	REMARKS
10/13	CDM	FTSA		REVISIONS TO UPDATE RATES, RULES AND REGULATIONS
5/00	CDM	FTSA		PIPE BEDDING & GENERAL NOTE
2/98	CDM	FTSA		LATERAL RUNGS
5/97	CDM	FTSA		MANHOLE COATINGS, ENCAPSULATION SYSTEM, BEDDING

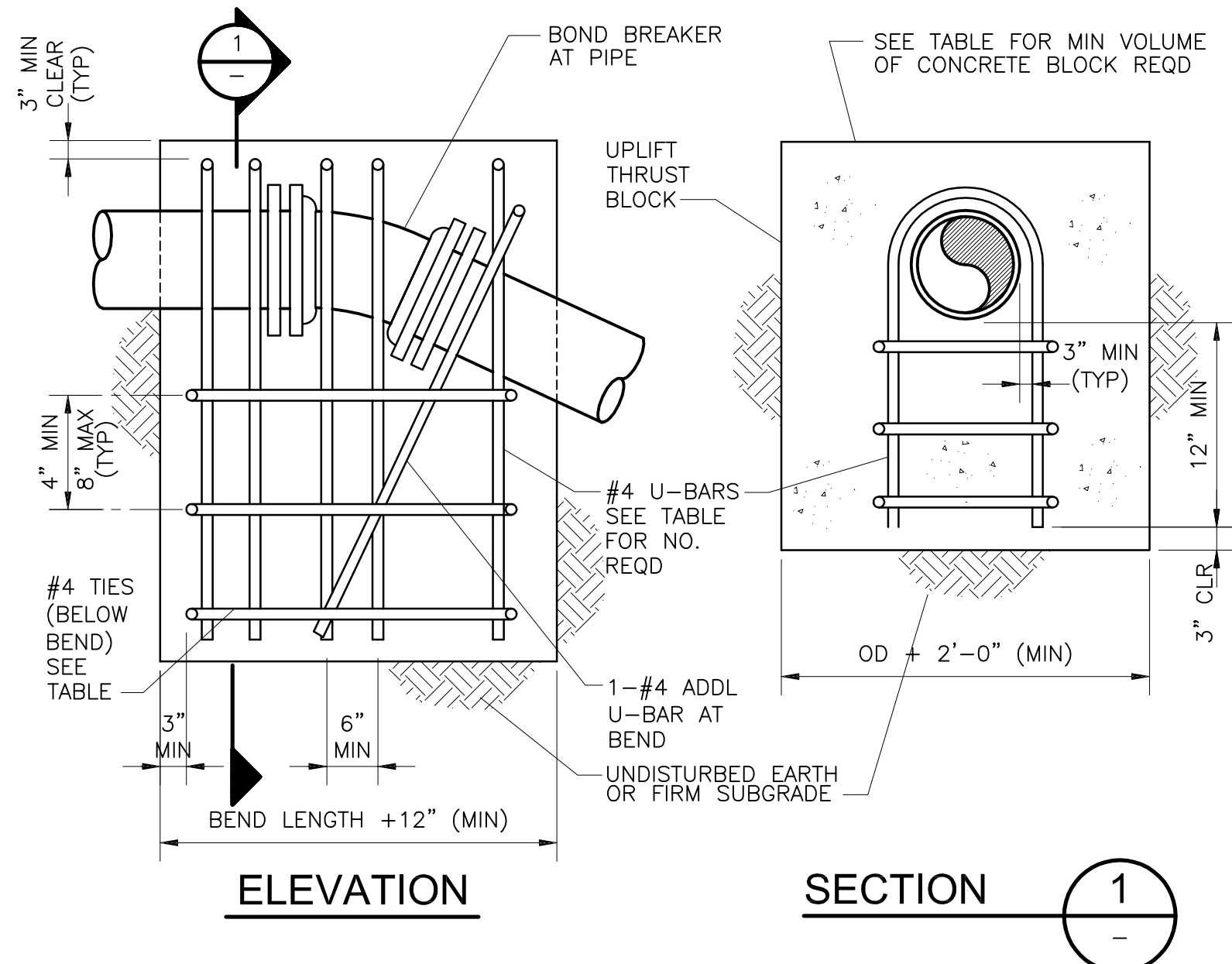
DESIGNED BY:	H. MATTESON
DRAWN BY:	D. GARVEY
SHEET CHK'D BY:	X
CROSS CHK'D BY:	X
APPROVED BY:	X
DATE:	OCTOBER 2013

**CDM Smith**  
 CDM Smith Inc.  
 110 Fieldcrest Avenue, #8, 6th Floor  
 Edison, NJ 08837  
 Tel: (732) 225-7000

FRANKLIN TOWNSHIP SEWERAGE AUTHORITY  
 SOMERSET COUNTY, NEW JERSEY

PROJECT NO.	105979-89351
FILE NAME:	CSTD002
SHEET NO.	2 OF 3



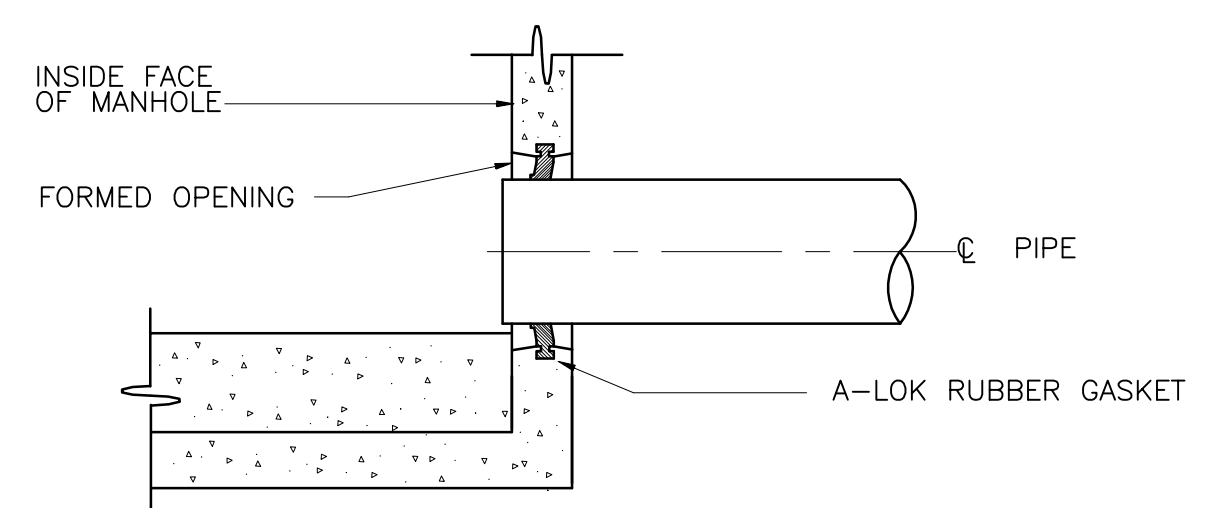


PIPE SIZE (IN.)	PIPE O.D. (IN.)	60 DEG		45 DEG		30 DEG		22.5 DEG		#4 TIES REQD
		REINF	CONC	REINF	CONC	REINF	CONC	REINF	CONC	
3	3.96	2	1	2	0.5	2	0.5	2	0.5	2
4	4.80	2	1	2	1.0	2	0.5	2	0.5	2
6	6.90	2	2	2	1.5	2	1.0	2	1.0	2
8	9.05	2	3.5	2	3	2	2	2	1.5	2
10	11.10	2	5	2	4	2	3	2	2.0	2
12	13.20	3	7	3	6	2	4	2	3	2
14	15.30	4	9	4	7	3	5	2	4	4
16	17.40	6	12	5	10	3	7	3	5	4
18	19.50	7	15	6	12	4	9	3	7	4

- NOTES:  
 1. "REINF" = NO. OF #4-U-BARS REQUIRED.  
 2. "CONCRETE" = VOLUME OF CONCRETE BLOCK REQUIRED, CU YD.  
 3. MAXIMUM TEST PRESSURE = 1.50x1.50 PSI.  
 4. MINIMUM GRADE 40 REBAR.

THRUST BLOCK FOR UPPER VERTICAL BENDS WITH REINFORCING BARS

DETAIL A  
N.T.S.

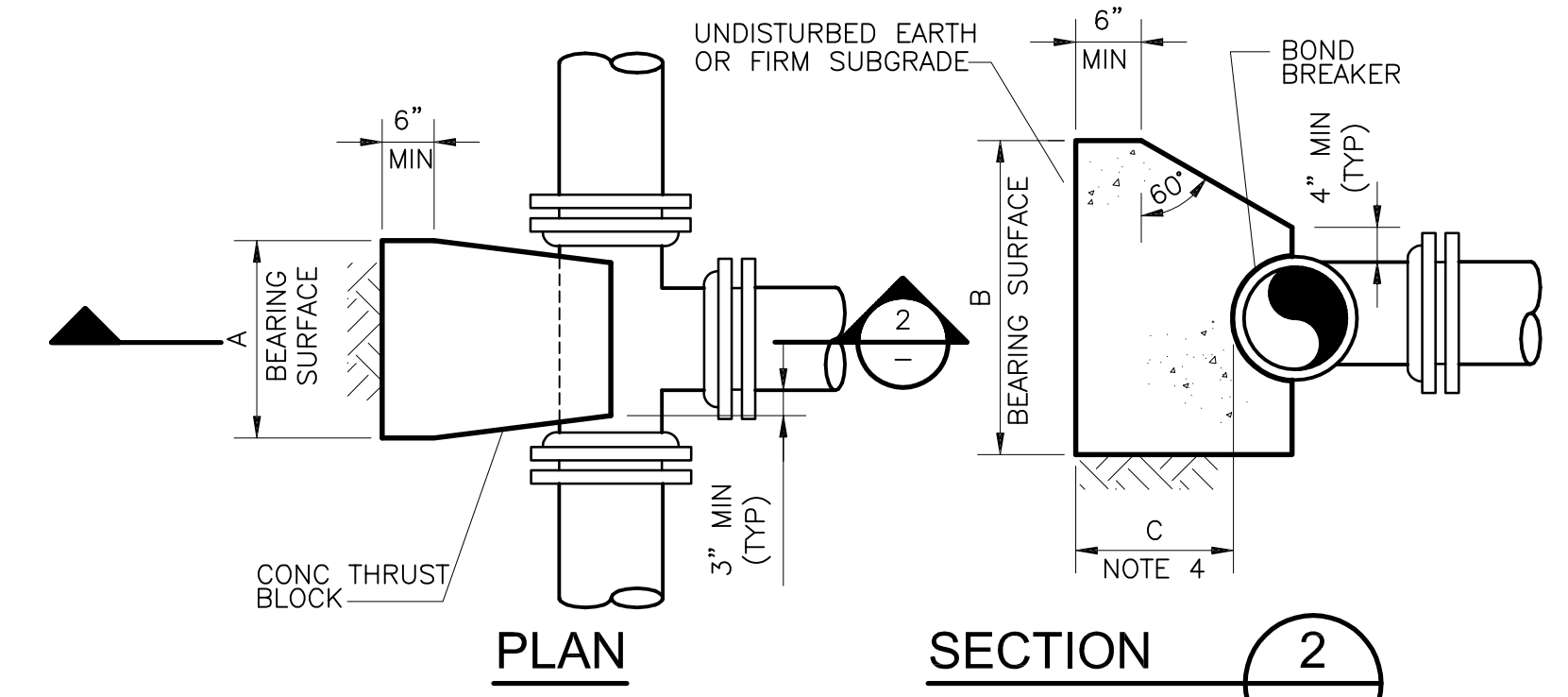


THRUST BLOCK FOR TEES, CAPS AND PLUGS

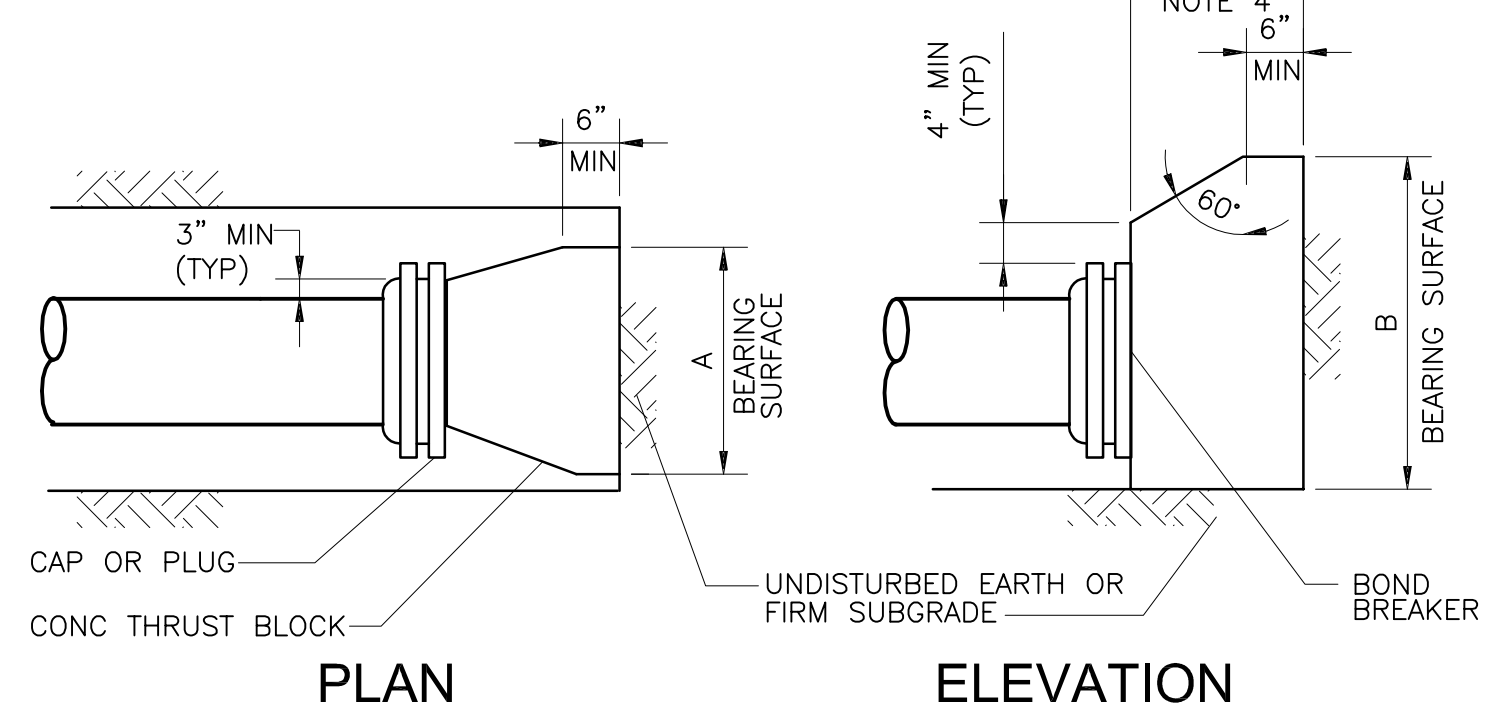
DETAIL B  
N.T.S.

NOMINAL PIPE SIZE (IN)	MAXIMUM PIPE OD (IN)	REQUIRED BEARING AREA (SQ FT)
3	3.96	1.4
4	4.80	2.0
6	6.90	4
8	9.05	7
10	11.10	11
12	13.20	15
14	15.30	21
16	17.40	27
18	19.50	34
20	21.60	41
24	25.80	59
30	32.00	90
36	38.30	130

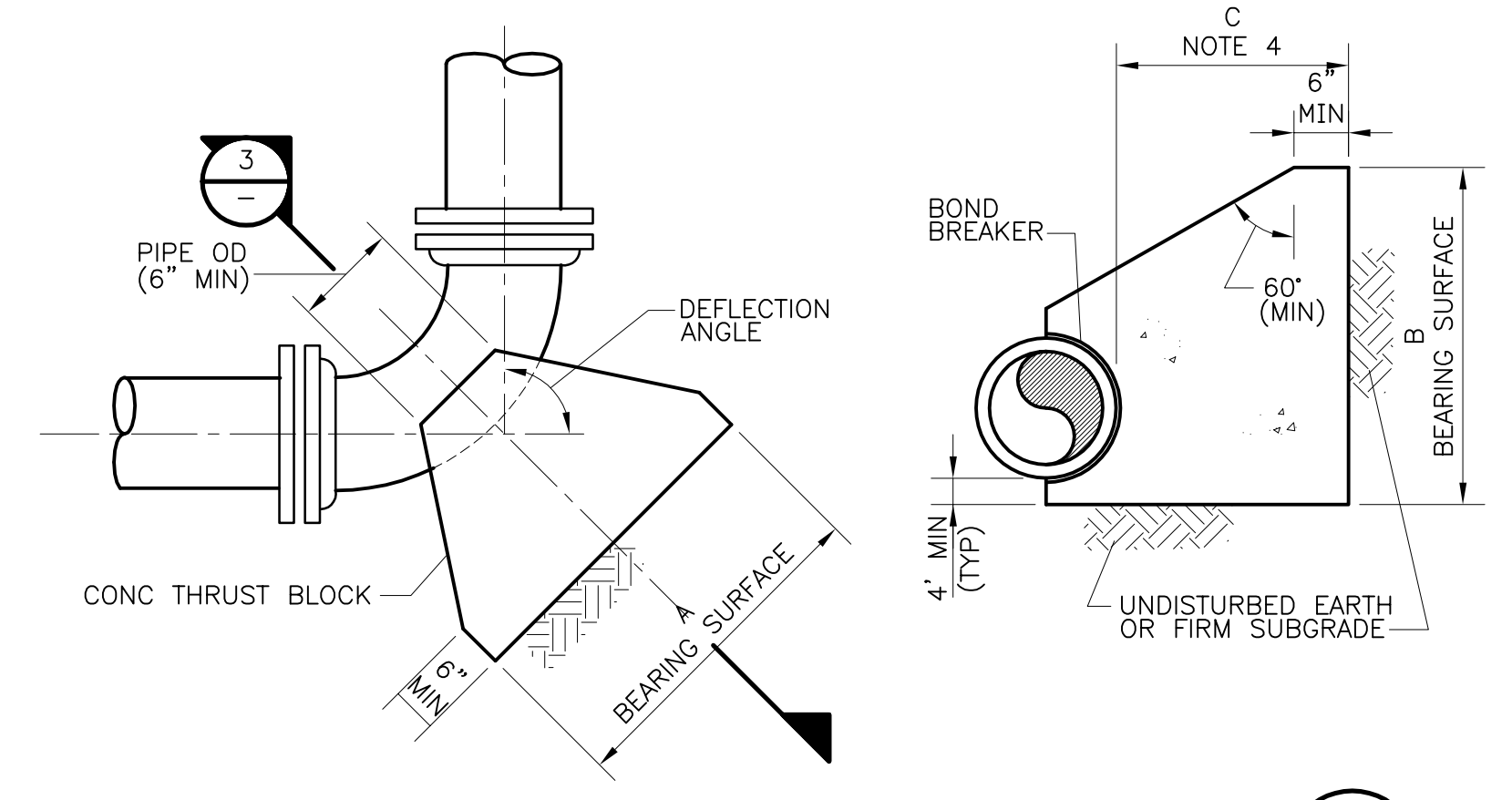
- NOTES:  
 1. MAXIMUM TEST PRESSURE = 1.50x150 PSI  
 2. MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF  
 3. BEARING AREA = A x B  
 4. C SHALL BE GREATER THAN A/2 AND B/2.



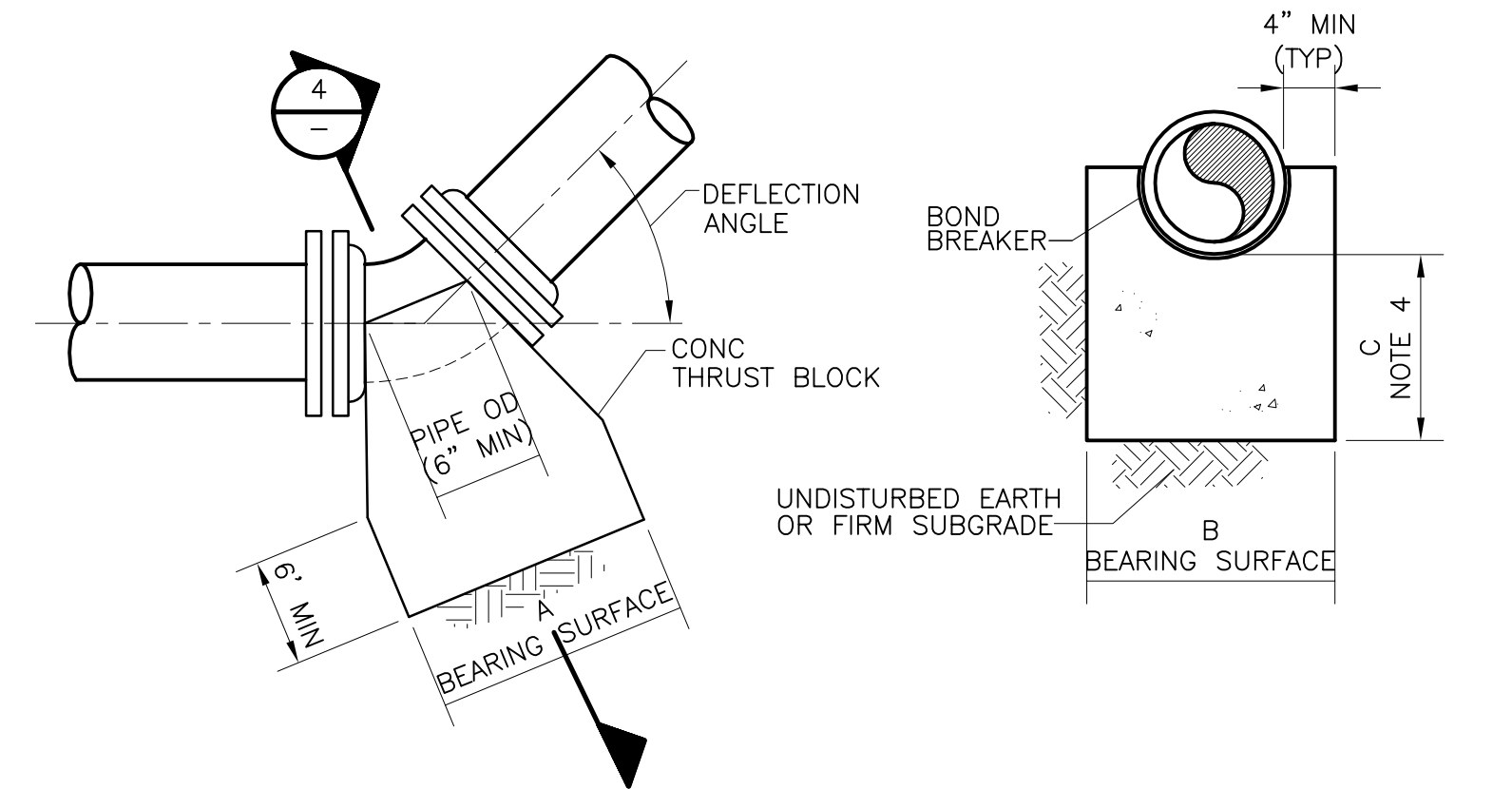
DETAIL FOR TEES



DETAIL FOR CAPS OR PLUGS



DETAIL FOR HORIZONTAL BENDS



DETAIL FOR LOWER VERTICAL BENDS

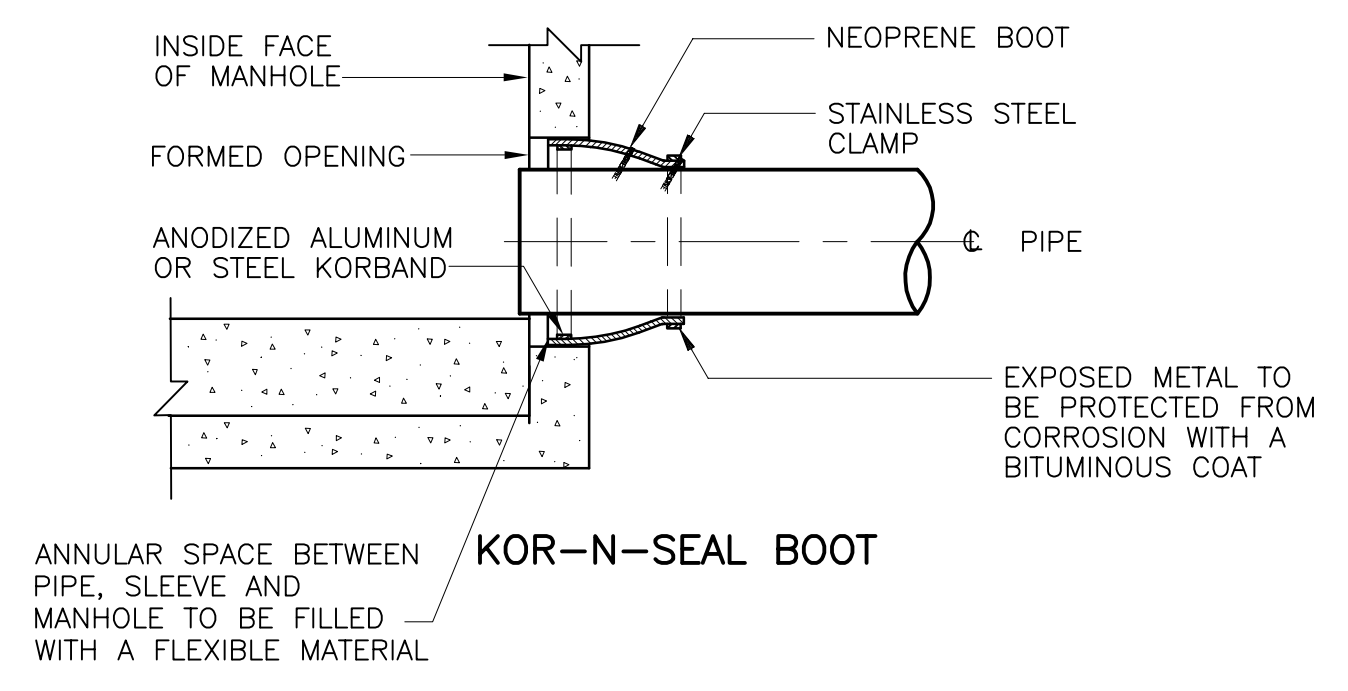
NOMINAL PIPE SIZE (INCHES)	MAXIMUM PIPE OD (INCHES)	REQUIRED BEARING AREA (SQ FT)					
		90 DEG	60 DEG	45 DEG	30 DEG	22.50 DEG	11.25 DEG
3	3.96	2.0	1.4	1.1	0.7	0.5	0.3
4	4.80	2.9	2.0	1.6	1.1	0.8	0.4
6	6.90	6	4	3	2.2	1.6	0.8
8	9.05	10	7	6	4	3	1.4
10	11.10	15	11	8	6	4	2.1
12	13.20	22	15	12	8	6	3
14	15.30	29	21	16	11	8	4
16	17.40	38	27	20	14	10	5
18	19.50	48	34	26	17	13	7
20	21.60	58	41	32	21	16	8
24	25.80	83	59	45	30	23	12
30	32.00	128	90	69	47	35	18
36	38.30	183	130	99	67	51	25

THRUST BLOCKS FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS

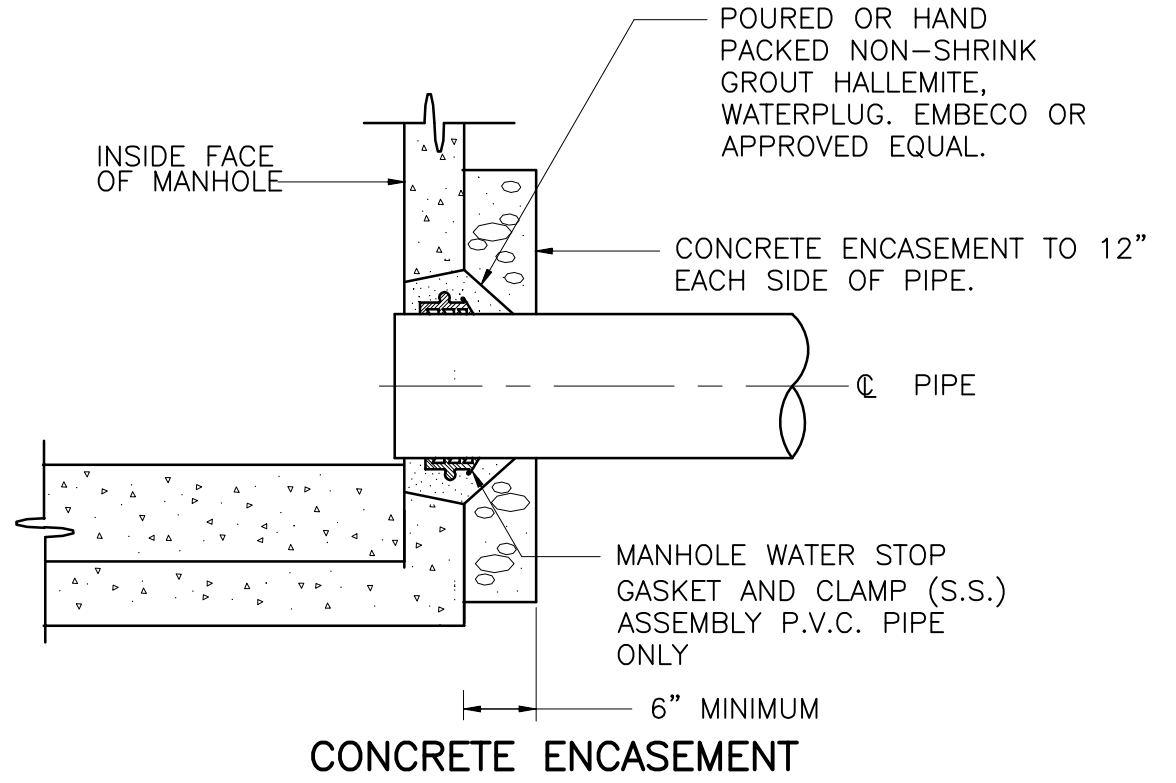
- NOTES:  
 1. MAXIMUM TEST PRESSURE = 1.5 x 150 PSI  
 2. MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF  
 3. BEARING AREA = A x B  
 4. C SHALL BE GREATER THAN A/2 AND B/2.

THRUST BLOCKS FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS

DETAIL C  
N.T.S.



PIPE CONNECTIONS I  
DETAIL D  
N.T.S.



PIPE CONNECTIONS II  
DETAIL E  
N.T.S.

NOTE: ALL WORK SHALL COMPLY WITH THE REVISION OF THE "RATES, RULES & REGULATIONS APPLICABLE TO SEWER SERVICE IN THE TOWNSHIP OF FRANKLIN, SOMERSET COUNTY, NEW JERSEY" IN EFFECT AT THE TIME CONSTRUCTION BEGINS.

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DESIGNED BY: H. MATTESON  
 DRAWN BY: D. GARVEY  
 SHEET CHK'D BY: X  
 CROSS CHK'D BY: X  
 APPROVED BY: X  
 DATE: OCTOBER 2013



FRANKLIN TOWNSHIP SEWERAGE AUTHORITY  
 SOMERSET COUNTY, NEW JERSEY

STANDARD DETAILS III

PROJECT NO. 105979-89351  
 FILE NAME: CSTD1003  
 SHEET NO.  
 3 OF 3

REV. NO.	DATE	DRWN	CHKD	REMARKS

# **Appendix E**

## **Model Developer's Agreement**

*[Under no circumstances shall this template be deleted or modified in any way. Any questions shall be directed to the Authority's Staff Engineer]*

CAPACITY ALLOCATION AND DEVELOPER'S  
ON-TRACT AND OFF-TRACT AGREEMENT

THIS AGREEMENT, made this \_\_\_\_\_ day of \_\_\_\_\_ by and between:

THE FRANKLIN TOWNSHIP SEWERAGE AUTHORITY, a public body corporate and politic of the State of New Jersey, with offices at 70 Commerce Drive, Somerset, New Jersey 08873-3470 (hereinafter referred to as the "Authority" or "FTSA")

and

(hereinafter referred to as the "Developer")

WITNESSETH

WHEREAS, The Developer is the owner of parcels of land located within the Township of Franklin designated as Block(s)\_\_\_\_, Lot(s)\_\_\_\_ on the Official Tax Map of the Township of Franklin consisting of \_\_\_\_\_

\_\_\_\_\_ and;

WHEREAS, the Developer has submitted to the Authority for approval, Plans and Specifications for the construction of certain sanitary sewer facilities to be located on Block \_\_\_\_, Lot \_\_\_\_ of the Official Tax Map of the Township of Franklin for providing sanitary sewer service to that development known as " \_\_\_\_\_ " (The "Development") consisting of \_\_\_\_\_ on approximately \_\_ acres, more particularly described on plans entitled " \_\_\_\_\_ ", prepared by \_\_\_\_\_, dated \_\_\_\_\_, latest revision dated \_\_\_\_\_ and consisting of \_\_\_\_\_ sheets, as approved by the Authority ("Approved Plans and Specifications") and any other governmental entity having jurisdiction thereover; and shall [✓] one of the following:

- A. [ ] WHEREAS, the \_\_\_\_\_ of the Township of Franklin ("Approving Board" or "Board") granted \_\_\_\_\_ approval on \_\_\_\_\_ for the subject property; and

WHEREAS, the Development consists of \_\_\_\_\_

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

as more fully set forth in a resolution adopted by the Board on \_\_\_\_\_; Resolution #: \_\_\_\_\_; or

- B. [ ] WHEREAS, the Township of Franklin does not require approval from the "Approving Board" or "Board"; but requires approval from the "Technical Review Committee", Construction Department, or similar.

WHEREAS, the proposal consists of \_\_\_\_\_

WHEREAS, the Developer and the Authority desire to enter into an agreement setting forth the rights, duties and obligations of the parties in connection with the construction of the sanitary sewer utility improvements related to said Development, including off-tract improvement obligations of the Developer.

NOW, THEREFORE, IN CONSIDERATION of the mutual promises, covenants and representations herein contained, the parties hereto, for themselves, their heirs, successors and assigns agree as follows:

I. ALLOCATION OF SANITARY SEWER CAPACITY

1. Allocation. An allocation of sanitary sewer capacity within the Authority's conveyance facilities is hereby granted in accordance with the Authority's Sanitary Sewer Allocation Policy dated January 12<sup>th</sup>, 1999 and adopted by the Authority on January 12<sup>th</sup>, 1999 ("Allocation Policy") and the Rates, Rules and Regulations adopted thereunder. The Developer is hereby granted a wastewater conveyance capacity allocation of \_\_\_\_\_ gallons per day to be utilized in connection with the Approved Plans and Specifications for \_\_\_\_\_.

2. Reversion of Allocation upon Re-application. Any change, modification or amendment to the Approved Plans and Specifications for this Development by Developer which is of such type or magnitude that the Approving Board should determine that the same can only be approved as a new application for development (as that term is defined within the Municipal Land Use Law) and not as an amendment to the existing Development, and which is approved by that Board as a new Development, shall likewise be deemed by the Authority to be a new Development, whereupon any allocation of wastewater conveyance capacity granted herein shall become null and void and shall revert to the Authority. In that event, a new application for wastewater conveyance capacity shall be submitted to the Authority for that new Development. The Authority shall utilize the resolution of the Approving Board, including the date of its adoption, to implement the Allocation Policy and to establish the priority of the new Development thereunder. Developer and the Authority acknowledge and agree that any abandonment of this Development or any modification to it which is so extensive that for all intents and purposes this Development is superseded or fundamentally changed shall void the allocation granted herein, while minor and customary amendments and modifications to the Approved Plans and Specifications which do not intrinsically change this Development shall neither void this allocation nor change the priority of this Development under the Authority's Allocation Policy.

3. Duration of Allocation. The allocation of capacity set forth herein shall remain valid and effective for the same period that the Developer maintains a valid Treatment Works Approval (TWA) with the New Jersey Department of Environmental Protection ("NJDEP") for this Development. In

the event that circumstances arise resulting in the Developer's inability to proceed (whether or not beyond the control of the Developer), the Authority retains the right to revoke the assigned gallonage allocation subject to applicable law and administrative practice in accordance with the Allocation Policy and the Rules and Regulations adopted thereunder if the Developer fails to achieve reasonable progress toward utilization of the gallonage allocation as measured by issuance of certificates of occupancy. For this development, reasonable progress shall be 100% utilization of the gallonage allocation within\_\_years of the execution of this Agreement, subject to any tolling permitted by law.

[ ] Mark here if TWA approval is not required. If so the allocation of capacity set forth in section I- 1 shall remain valid and effective indefinitely subject to a change in the conditions.

4. Transfer of Gallonage. The Developer agrees that the wastewater conveyance capacity allocation for this Development cannot be traded, sold, or otherwise reallocated by the Developer, unless the property to which the gallonage is allocated is sold to a new owner in which case the wastewater conveyance capacity allocation, together with all off-tract improvement obligations set forth or incorporated by reference herein, shall run with the land and be transferred to the new owner. All unused or excess wastewater conveyance capacity not needed by this Development shall automatically revert to the Authority with no credit issued.

## II. AGREEMENT AS TO SANITARY SEWER FACILITIES

1. Sanitary Sewerage Collection System. The Developer shall install at its sole cost and expense a complete on-tract sanitary sewerage collection system consisting of sanitary sewer mains, together with all appurtenances, manholes and other accessories, all in accordance with the Approved Plans and Specifications and in accordance with the Rates, Rules and Regulations of the Authority.

2. Connection to Existing Facilities. The Developer shall connect said sanitary sewer collection system to the Authority's existing sanitary sewer facilities at the Developer's sole cost and expense as set forth on the Approved Plans and Specifications and as required by the Authority. The Developer acknowledges that such existing facilities of the Authority may not be contiguous to the property which comprises this proposed development.

3. Permits. The Developer shall, at its sole cost and expense, obtain all necessary permits, including but not limited to a Treatment Works Approval Permit from the NJDEP and any other governmental entity having jurisdiction thereover. The Developer shall comply with all terms and conditions thereof.

4. Construction in Accordance with Plans and Specifications. All construction of said sanitary sewerage collection system shall be in accordance with the Approved Plans and Specifications above mentioned and as directed and approved by the Authority.

5. Conveyance of System to the Authority. All sanitary sewer mains and other appurtenances comprising the sanitary sewer collection system abovementioned, constructed by the Developer in public rights-of-way or easement areas shall be conveyed to the Authority in fee simple, by Bill of Sale or other adequate document of conveyance acceptable to the Authority's Legal Counsel, free and clear of all liens and encumbrances, for no additional consideration, upon completion thereof, provided that the Authority shall first certify to the satisfactory installation of the system. The Developer covenants and agrees that it will not object to this transfer of ownership before any Court or administrative agency in the State of New Jersey.

6. Revenues, Fees and Charges. Upon operation of the sanitary sewer collection system, or any portion thereof, irrespective of whether the same has yet been conveyed to or accepted by the Authority, all revenues, fees, and other charges thereafter derived shall belong to the Authority.

7. Acceptance of System. It is understood and agreed that the conveyance and dedication of the Sanitary Sewer Collection system constructed by the Developer shall not become effective until the Authority accepts the same by formal Resolution and a "Final Certificate of Inspection".

8. Service Connections. The construction of the sanitary sewer collection system shall include the installation of \_\_\_\_\_ service connection(s) to the edge of the right-of-way to service \_\_\_\_\_, all to be done at the Developer's sole cost and expense and in accordance with the Rates, Rules and Regulations of the Authority.

The Developer, at its sole cost and expense, shall install service connections to the edge of the right-of-way for each improved or unimproved lot along the route of any sanitary sewer line installed by the Developer off-site, but associated with this development, if the same is set forth as a requirement within the "Additional Provisions" in Section IV hereafter.

9. Permit and Approval to Operate. Prior to the operation of the sanitary sewer system installed by the Developer, the Authority, upon written request of the Developer and with the Developer's cooperation, shall secure a "Permit to Operate" or its equivalent from the New Jersey Department of Environmental Protection ("NJDEP"), if applicable, and obtain such other formal approval(s) as may be required in order to operate said sanitary sewer collection system. All costs associated with obtaining such Permit and/or approvals shall be borne by Developer.

### III. AGREEMENT AS TO OFF-TRACT IMPROVEMENTS

[ ] Mark here if no Impact Fees are required (to be marked by the Authority's staff).

1. Off-Tract Improvement Obligation. The Developer acknowledges that in addition to on-tract and off-tract improvements required to connect the Development to existing Authority systems, the Development also poses an impact upon existing Authority facilities. The Authority and Developer agree that the Authority has power and authority pursuant to the Municipal and County Utilities Authorities Law (N.J.S.A. 40:14B-1 et seq.), New Jersey case law and other legal precedent, including the Authority's Rates, Rules and Regulations, to install or require the Developer to install both on-tract and off-tract facilities and infrastructure necessary to secure adequate service from the common sanitary sewer facilities of the Authority. To the extent that the capacity of such existing facilities is exceeded, Developer acknowledges the need for relieving or expanding those existing facilities or providing new facilities. The Authority shall determine the extent to which the Developer will be required to pay an Off-Tract Improvement Fee ("OTIF") or construct certain off-tract improvements in lieu of such payment, based in part upon the findings as contained in the Infrastructure Master Plan and Impact Analysis, dated December 1998, and as may be from time to time amended.

2. Off-Tract Improvement Fee. The Developer agrees to remit to the Authority the sum of \$ \_\_\_\_\_ as the full amount of the Developer's proportionate share of the costs of the off-tract improvement(s) as determined by the Authority on \_\_\_\_\_, in accordance with the Authority's Rates, Rules and Regulations concerning OTIF requirements. Such off-tract fee shall be paid as follows:

Fifty (50%) percent within 90 days of the execution of this Agreement, the balance being due one (1) year after the execution of this Agreement, or unless otherwise stated here. If the Impact Fee is not paid on schedule then a late penalty of 1.5 percent per month will be charged on the unpaid balance.

[Alternate if Commercial Development:

The fee shall be paid in its entirety within 90 days of the execution of this Agreement by all parties. If the Impact Fee is not paid on schedule then a late penalty of 1.5 percent per month will be charged on the unpaid balance.]

[Alternate if House of Worship or Affiliate:

Inclusive of Connection Fee, User Fee, and Off-Tract Improvement Fee. The Developer agrees to remit to the Authority the sum of \$\_\_\_\_\_ as the full amount of the Developer's proportionate share of the costs of the off-tract improvement(s) as determined by the Authority on\_\_\_\_\_, in accordance with the Authority's Rates, Rules, and Regulations. In addition, the Developer agrees to remit to the Authority the sum of \$\_\_\_\_\_ as the full amount of the connection fee as determined by the Authority on\_\_\_\_\_, in accordance with the Authority's Rates, Rules, and Regulations. Said fees may be paid in twenty percent (20%) installments per year over a span of 5 years. Separate checks are to be made payable to the "Franklin Township Sewerage Authority" with a description of each payment. The first payment is due within 90 days of the execution of this Agreement and shall be required prior to a recommendation of a C/O to the Township. On the anniversary of the execution of this Agreement, the next installment of twenty percent (20%) is to be due to the Authority. The Developer's Annual User Fee shall increase incrementally on the anniversary of the execution of this Agreement in correlation with the number of Connection Fee Units paid to date. If the aforementioned payment schedule is not adhered to then a late penalty of 1.5 percent per month will be charged on the unpaid balance.

Example: if the facility is assessed 100 EDU's the fees will be as follows:

Year 1: 20 Connections, 20 User annual EDU's.

Year 2: 20 additional Connections, 40 User annual EDU's.

Year 3: 20 additional Connections, 60 User annual EDU's

Year 4: 20 additional Connections, 80 User annual EDU's

Year 5: 20 additional Connections, 100 User annual EDU's]

3. Satisfaction of Developer's Off-Tract Improvement Obligations. Satisfactory completion of the Developer's obligations in accordance with the terms and conditions of this Agreement and the payment of the OTIF as set forth herein, shall satisfy all off-tract improvement obligations which the Developer has to the Authority.

4. Time of the Essence. The Developer acknowledges that the payment of the OTIF or the construction of the off-tract improvements are important components of the Authority's program for the continued operation of its sanitary sewer system. Therefore, the Developer acknowledges that time is of the essence in connection with the obligations of the Developer herein, and accordingly, the Developer shall be required to undertake all actions and submit all OTIFs as set forth herein in a timely fashion, without any further demand by the Authority.

5. Obligation to Run with the Land. Developer agrees that satisfaction of the off-tract improvement obligation set forth herein constitutes a part of the consideration for the grant by the Authority of the wastewater conveyance capacity set forth in this Agreement, and performance of all

off-tract improvement obligations shall be a condition of this Agreement which shall be deemed to run with the land, and which shall be binding not only upon Developer, but also upon all heirs, successors and/or assigns of Developer's interest in the Development.

#### IV. COLLECTION SYSTEM MAINTENANCE AGREEMENT

[ ] Mark here if the Collection System is privately owned (to be marked by the Authority's staff).

1. The Owner of the Property shall undertake a preventative maintenance program which shall include of routine sewer cleanings, visual manhole inspections, Pump Station maintenance, odor control, I&I investigations, etc. as to retain the effective utilization of the sewerage facilities for the collection of the sanitary sewers as designed. Should the Owner fail to properly maintain the sewerage facilities, then said Owner shall be considered in default and in that event, the Authority reserves the absolute right to retain immediate ownership and maintenance of the sewerage facilities for purposes of securing overall public safety and shall further retain the right to charge against the Owner any outstanding maintenance costs which shall be subject to a lien being filed against the Property.

2. Inflow & Infiltration (I&I). The Township of Franklin Ordinance No. 3484 prohibits the introduction of substances which are not normal sanitary sewage and specifically prohibits infiltration. The Authority is authorized by Statute, regulation, and ordinance to enforce an investigation of a system for the presence of inundation following storm events and to further require the removal of such infiltration. The Owner shall commence an investigation at their own expense once every 10 years or if deemed by the Authority. All findings shall be submitted to the Authority and updated in the Owner's Operations and Maintenance Manual (see section 3 below).

3. Maintenance Schedule and Supplemental Procedures. The aforementioned maintenance program shall be performed in accordance with the maintenance schedule and procedures outlined in the Operations and Maintenance Manual entitled, "\_\_\_\_\_". The Operations and Maintenance Manual shall be kept by the property Owner in a safe and known location. Maintenance and repair activity logs shall be maintained by the property Owner and shall be provided to any appropriate governing authority upon their request.

4. Licensed Operator. N.J.A.C.7:10A which is authorized by N.J.S.A. 13:1D-1 et seq., 58:10A-1 et seq., 58:11-64 et seq., and 58:12A-1 et seq. requires that a system that serves more than 250 people or which conveys more than 25,000 gallons of wastewater per day shall be overseen by a licensed operator. This operator shall submit monthly status reports to the Authority via email at the expense of the Owner. A status report template will be provided to the Owner by the Authority. Prior the issuing of a CO, the Owner shall verify a Licensed Operator was acquired.

5. Right of Access for Facility Inspection. The Owner hereby grants permission for authorized personnel of the Authority to enter the property upon which the sewerage facilities are located for the purpose of inspecting such Facilities. Such inspections shall be made by Authority personnel at such times as deemed appropriate by Authority staff and may be conducted without prior notification.

6. Emergency Maintenance and Repairs. In the event that an emergency situation arises that makes it impractical to serve written notice upon the Owner and to provide Owner with a reasonable period for completion of necessary maintenance and repairs, then, and in that event, the Authority may immediately enter upon the property and perform or cause to be performed such emergency maintenance. Any and all such maintenance costs that are incurred by the Authority



shall be deemed to be included as part of the Sewer User Fees to be charged to the Owner and shall be due and payable upon the issuance of an invoice to the Owner by the Authority. Unpaid maintenance costs shall be subject to tax lien in the same manner as ordinary Sewer User Fees and other municipal charges.

7. Reasonable Exercise of Rights. All rights of the Authority herein above set forth shall be exercised by the Authority in a reasonable fashion and in the event of dispute in respect to the foregoing, the issue shall be decided by a court of competent jurisdiction.

a. Danger to Public. In the event that the sewerage facilities become a danger to public safety or public health, or if the sanitary sewerage facilities are in need of maintenance, the Owner will be notified in writing. Upon receipt of such notice, the Owner shall have fourteen (14) days to implement maintenance and repair of the Sanitary Sewer Facilities in a manner that is approved by the Authority's staff, provided, however, that if the repairs or maintenance are of an emergent nature, the Owner may be notified by telephone, facsimile, overnight delivery or hand delivery to implement immediate maintenance and repair of the sewerage facilities. If the Owner fails or refuses to perform such maintenance and repair, the Authority may immediately enter upon the Property with vehicles and equipment and proceed to perform such maintenance and repair and bill the cost thereof to the Owner. In the event of such entry by the Authority, the Owner agrees to save, defend, indemnify and hold the Authority harmless from and against any loss, damage, claim, suit or expense caused by or arising from any damage or injury to property or persons arising from or in connection with any of the rights hereby granted to the Authority. All costs incurred shall become a lien against the Property which shall be collected in the same manner as property taxes or by any other available manner provided by law.

b. Notice: Except in cases of emergency as provided herein, any notice related to this Agreement to be given to the Owner or to the Authority shall be sufficient if given in writing and sent by first class mail, postage prepaid, addressed to the Owner or Authority at the address set forth at the beginning of this Agreement, unless either party delivers a substitute address to the other party by certified mail, return receipt requested, in which case the notice shall be sent to that address.

c. Successors and Assigns. Wherever in this Agreement any party shall be designated or referred to by name or general reference, such designation is intended to and shall have the same effect as if the words "heirs, executors, administrators, personal or legal representatives, successors and assigns" had been inserted after each and every such designation. All the terms, covenants and conditions herein contained shall be for and shall inure to the benefit of and shall bind the respective parties hereto and their heirs, executors, administrators, personal or legal representatives, successors and assigns, respectively.

d. Governing Law. This Agreement shall in all respects be governed and constructed in accordance with the laws of the State of New Jersey.

e. Amendment. The provisions of this Agreement may not be amended, modified or terminated without the express written consent of the Authority, and no such amendment, modification or termination shall be effective for any purpose unless set forth in writing and signed by the appropriate officials of the Authority.

Mark here if the Collection System is FTSA owned (to be marked by the Authority's staff).

8. The Authority shall maintain the sewerage facilities to which it has ownership; the Authority's responsibilities shall include of inspections, maintenance work, repairs, etc. The Authority shall not be responsible for those parts of the sewerage facilities to which the Owner has ownership (see section IV-9 below).

9. The Owner shall own the lateral from the cleanout between the property line and the curb line, to the building(s). If a cleanout does not exist in this location, then the owner owns the lateral from the building(s) to the property line or sanitary sewer easement line. The Owner is also responsible for the cost of cleaning the lateral in the street if the blockage is due to excessive amounts of grease or other material originating in the building(s) which should not be discharged to the sewer.

10. Pump Station Maintenance Fee. Before the FTSA assumes ownership of a privately-owned pumping station and or a force main, the Owner shall provide a cash or bond escrow, in favor of the FTSA, in an amount equivalent to the net present value of the cost of power, labor, and maintenance of the pumping station, any force main and easement area for the same, to be borne by the FTSA to operate the pumping station, capitalized at five percent (5%) over forty (40) years. The total net present value of the above referenced costs shall be determined by the FTSA Engineer. The cost of determining the total net present value of such costs for power, labor and maintenance of the pumping station, any force main and easement area for the same, by the Authority's Engineer, as well as all costs associated with the appraisal and acquisition of any necessary easement areas, shall be included in the cash or bond escrow.

Mark here if section IV-10 is not applicable (to be marked by the Authority's staff).

11. Gravity Sewer Maintenance Fee. Before the FTSA assumes ownership of a privately-owned gravity sewer, the Owner shall provide a cash or bond escrow, in favor of the FTSA, in an amount equivalent to the net present value of the cost of labor and maintenance of the gravity sewer and easement area for the same, to be borne by the FTSA to operate the gravity sewer, capitalized at five percent (5%) over forty (40) years. The total net present value of the above referenced costs shall be determined by the FTSA Engineer. The cost of determining the total net present value of such costs for labor and maintenance of the gravity sewer and easement area for the same, by the Authority's Engineer, as well as all costs associated with the appraisal and acquisition of any necessary easement areas, shall be included in the cash or bond escrow.

Mark here if section IV-11 is not applicable (to be marked by the Authority's staff).

## V. GENERAL PROVISIONS

1. Contribution by Others. The Developer shall not be entitled to any contribution by the user or users of any sanitary sewer lines, facilities or appurtenances subsequently connected to any sanitary sewer lines, facilities or appurtenances installed by the Developer arising from the fact that the Developer has paid for or installed such sanitary sewer lines, facilities or appurtenances or has paid any fees to the Authority pursuant to this Agreement and/or the Authority's Rates, Rules and Regulations.

2. Time for Completion of Project. It is agreed that all sewer utility improvements to be

constructed by the Developer shall be completed within three (3) years of the date of preliminary approval as extended or tolled and prior to final approval thereof by the Approving Board unless a final performance guarantee is posted pursuant to the Rates, Rules and Regulations of the Authority. All work to be performed by the Developer shall be completed within two (2) years of the posting of said performance guarantee.

3. Agreement to Run With the Land and Release. This Agreement and its covenants shall run with the land and shall inure to the benefit of the Authority and its successors and assigns and shall be binding on any successor in title of the Developer, including, without limitation, any purchaser of the property comprising the Development, PROVIDED HOWEVER, that bona fide purchasers of single family units from the Developer shall not be bound by the terms and conditions of this Agreement. This Agreement shall be recorded in the Office of the Somerset County Clerk by the Authority at the expense of the Developer.

4. Within a reasonable time after the Developer has complied with all its obligations set forth herein, including, without limitation, the payment of all monetary obligations, the Authority shall adopt a resolution authorizing the execution of a release in satisfaction of this Agreement. This release in satisfaction shall be in recordable form and shall be recorded in the Office of the Somerset County Clerk by the Authority at the expense of the Developer. Within twenty (20) business days after request by the Developer, or an assignee thereof, the Executive Director of the Authority shall certify to such person as the requesting party may designate, by writing duly acknowledged, (i) whether or not there exists any default(s) under this Agreement, and (ii) if a default(s) exists, the nature thereof and a detailed description of each and every then outstanding default.

5. Easements, Rights-of-Way, Record Drawings and Operation and Maintenance Manuals. The Developer agrees to obtain all necessary sanitary sewer easements, rights-of-way and any other easements for on-tract and off-tract improvements as set forth on the Approved Plans and Specifications, or otherwise required by the Authority. The easements shall be conveyed in a form acceptable to the Authority. Said easements shall be granted by the Developer or third parties to the Authority free and clear of all liens and encumbrances at the Developer's sole cost and expense prior to the commencement of construction. Conveyance of the easements shall be a condition of acceptance of the facilities by the Authority. The easements shall be recorded at the expense of the Developer in the Office of the Somerset County Clerk. For those portions of the sanitary sewer systems which will ultimately be owned, operated and maintained by the Authority, unless otherwise provided to the contrary, the Developer shall grant or have granted to the Authority by third parties, at the Authority's request, appropriate easements along the entire length of the facilities to be conveyed to the Authority not in any public street, with a width of 20 feet measured at right angles, generally extending 10 feet on each side of the center line of the length of any such pipe, sewer line or extension or part thereof, together with the power of the Authority, its representatives, agents and employees to enter upon the lands of the owner within such rights-of-way, as well as upon streets, or other easements to construct, place, repair, replace, maintain and control any pipe, sewer line, appurtenant facility or extension of any part thereof or installation therein. Upon completion by the Developer and acceptance by the Authority of all or any portion of the improvements set forth herein, the improvements and all accompanying easements and rights-of-way shall be turned over and conveyed by the Developer and/or third party owners to the Authority, free and clear of all liens, encumbrances and mortgages. Any conveyance of easements shall be made by Deed or other related documents as may be reasonably required by the Authority, utilizing the form of easement document previously approved by the Authority. Prior to the Authority's acceptance of the conveyance of any such easement or right-of-way, the Developer shall furnish the Authority with a title search, satisfactory to the Authority's Legal Counsel, for any premises traversed by any such easement, whether or not the Developer is the fee owner of such premises.

The taking of said easements shall not be construed as the exercise of dominion or control by the Authority over any street or sanitary sewer located therein until such time as the street(s) is formally accepted by the Township and the Authority formally accepts the easements and the facilities located therein.

The Developer shall furnish seal record drawings to the Authority (hard copy, electronic, and CAD files) for all improvements being constructed hereunder in accordance with the requirements of the Authority and subject to the approval of the Authority. All such record drawings, plans, reviews and approvals thereof by the Authority shall be completed at the Developer's sole cost and expense.

If required by the Authority, the Developer, at its sole cost and expense, shall furnish to the Authority all operation and maintenance manuals for the improvements as applicable, along with manufacturers' catalogues, certifications, guarantees, warranties, and the like, as any of the above would apply.

6. Payment of Fees. The Developer shall pay to the Authority, at the rate which is then in effect, all sanitary sewer connection fees imposed by the Authority pursuant to its Rates, Rules and Regulations, except as otherwise provided for herein. The Developer shall comply with the Authority's Rates, Rules and Regulations with regard to obtaining a Sanitary Sewer Connection Permit for each unit within the Development which the Developer intends to connect to the Authority's facilities.

7. Project Review Fees, Permits, Inspection, and Impact (off-tract improvements cost determination) Fees; Escrow Deposits. The project review fees for the professional, staff, and administrative costs incurred by the Authority in connection with the planning, design, construction, and approval of the improvements set forth herein, shall be paid by the Developer through an escrow account to be established by the Authority. The Authority shall provide a reasonable estimate of all such costs and the Developer shall pay the entire estimate therefore at the time this Agreement is executed. When the amount in escrow is reduced to a sum equal to 25% of its original amount, the same shall be replenished to the original amount within 5 days written notice from the Authority to the Developer. The Developer shall be entitled to copies of any vouchers or the calculations and methodology utilized to develop the charges imposed against said escrow account. Except where specifically provided to the contrary in this Agreement, that portion of Appendix B and Appendix F of the Rates, Rules and Regulations, Specifications, Rate and Fee Schedules for Furnishing Services of the Authority, as adopted and as modified from time to time, shall apply. The Authority reserves the right to suspend activity on the improvements set forth herein if the escrow deposit is not maintained in accordance with this paragraph. All interest on said escrow shall be governed pursuant to the requirements of N.J.S.A. 40:14B-20.1.

The approval and permit to construct the sanitary sewer systems, appurtenances, facilities and/or off-tract improvements as set forth herein shall not be issued unless and until approvals for said systems are obtained in writing from the FTSA and the NJDEP, if necessary, and any other governmental entities having jurisdiction thereover and unless and until a construction inspection fee deposit is paid to the Authority by the Developer in the initial amount as set forth in the Rates, Rules and Regulations. It is understood that the Developer shall be responsible for obtaining all such approvals from the Authority, and if necessary, the NJDEP, and any other governmental entity having jurisdiction thereover and for the payment of all fees and costs in connection therewith.

8. Incorporation by Reference. The Developer's application, all maps on file, construction plans, detailed maps, State laws, Township ordinances, Authority Rates, Rules and Regulations, Approving Board Rules and Regulations, Resolutions with respect to this development and all the terms and conditions of all previous approvals by this Authority are hereby incorporated herein by reference

and made part hereof as if set forth at length.

9. Stop Work Order. In the event that the Authority determines that there is an improper installation of the sanitary sewer facilities set forth herein, either on-tract or off-tract, and/or a violation of the terms of this Agreement or of the Rules and Regulations of the Authority or any other agency having jurisdiction hereunder, the Authority may issue a Stop Work Order for said work until said violation is corrected. The foregoing remedy shall be in addition to and not in lieu of any other rights and remedies that the Authority may have to enforce the obligations of the Developer under this Agreement.

10. Rates, Rules and Regulations. The Developer shall comply with the Rules and Regulations of the Authority as from time to time revised, amended or readopted, entitled "Rates, Rules and Regulations", applicable to sewer service in the Township of Franklin, Somerset County, NJ.

11. Performance and Maintenance Guarantees. The Developer agrees to post an appropriate performance guarantee. The cost estimates for said guarantee shall be made in accordance to FTSA's Rates, Rules, and Regulations, determined from Appendix F.

Specifically, to guarantee and ensure performance of the terms and conditions of this Agreement and as a condition of final approval of the Development by the Authority, the Developer shall post a performance guarantee or other instrument as provided in the Authority's Rates, Rules and Regulations in a form acceptable to the Authority's Legal Counsel in an amount equal to 120 % of the estimated cost of the improvements as determined by Appendix F, 10% in the form of cash, with the remainder in the form of a surety bond or other collateral acceptable to the Authority and its Legal Counsel, including a letter of credit in a form so acceptable, with said guarantees expressly conditioned upon the satisfactory performance of the fulfillment of the obligations set forth in this Agreement, the construction of the improvements set forth herein, and compliance with all applicable Rules and Regulations of the Authority, the requirements of the NJDEP and the local building codes, as well as compliance with the requirements of any other governmental entities or agencies having jurisdiction over the subject matter referred to herein.

Reduction in the amount of the performance guarantee shall be in accordance with the provisions of the Municipal Land Use Law, specifically N.J.S.A. 40:55D-53. The cash portion of the performance guarantee shall be placed in an interest bearing account in the name of the Authority. All interest accruing on said cash amount shall be governed pursuant to the requirements of N.J.S.A. 40:14B-20.1.

Upon default of the Developer, the Authority shall be entitled to enforce the performance guarantee in accordance with its terms. The Authority shall enjoy all the rights and remedies provided by state statutes, local ordinances and case law. In the event of a default, the Authority can demand specific performance of the within Agreement, or, in the alternative, payment of all costs, expenses, fees and damages, in order to fulfill the terms of this Agreement and the requirements of the Authority, without first doing the work at its cost and expense.

At such time as the sewer utility improvements have been formally accepted by the Authority as provided in Section II, paragraph 7 herein, the Developer shall post a Maintenance Guarantee made in accordance with the Rates, Rules and Regulations of the Authority, which shall be in a form acceptable to the Authority's Legal Counsel.

It is understood and agreed that the guarantees posted and deposited hereunder shall cover all obligations set forth in this Agreement, as well as compliance with all applicable Rates, Rules and Regulations of the Authority, the requirements of the NJDEP and local building codes related to this

construction. The guarantees shall cover all attorneys' fees, costs of suit, and any other Authority expenses which may be incurred as a result of the enforcement of this Agreement with respect to these requirements.

To the extent that the performance/maintenance bond is provided in the form of cash or check, it can be deposited in the Developer's escrow account. However, that portion of the escrow account cannot be drawn upon until the Developer is in default of the Agreement. Should the Developer sell the property to a new owner, provisions must be made in the Agreement of Sale with regard to the transfer of the escrow monies and the new owner satisfying the Developer Agreement performance/maintenance bond requests prior to the release of the original Developer's bonds. Likewise, the Authority must be notified in writing proper to the sale of any property subject to a Developer Agreement.

12. Indemnification. The Developer covenants and agrees to indemnify and hold harmless the Authority, its officers, agents, employees, servants, Consulting Engineer, Legal Counsel, and each and every one of them against and from any and all liability, suits, and costs of every kind and description, and from all damages to which said Authority or any of its officers, agents, employees, servants, Consulting Engineer or Legal Counsel may be put with respect to any personal or other injury, loss or property damage which the Authority may suffer as a result of carelessness in the performance of said work or through the negligence of said Developer or through any improper or defective machinery, implements or appliances used by the Developer in the aforesaid work or through any act of omission or commission on the part of the Developer, its agent or agents, or as a result of any claim, demand, cost or judgment that may be made against it arising out of this Agreement or performance of its obligations hereunder, unless the said liability, loss or damage is caused by, or arises out of, the negligence of the Authority, its officers, agents, employees, servants, Consulting Engineer or Legal Counsel.

13. Safety of Employees. The Developer shall take all precautions for the safety of all employees at the work site and shall comply with all provisions of Federal, State, Municipal and Authority regulations and building codes to prevent accidents or injuries to persons on or about or adjacent to the premises where the work is being performed.

14. Insurance. The Developer shall procure insurance for public personal injury liability and property damage liability including contingent liability and contractual liability which might result from the performance of the work required under this Agreement and shall provide the Authority with a Certificate of Insurance designating the Authority, its Consulting Engineer and Legal Counsel as additional named insureds under each said policy. The Developer further covenants and agrees that it will provide vehicular liability and property damage insurance coverage and will provide the Authority with a Certificate of Insurance designating the Authority and its Consulting Engineer as additional insured. Coverage shall be in not less than the following amounts:

Comprehensive General Liability (Bodily injury and property damage)	\$1,000,000.00 combined single limit
Automobile Liability (Bodily injury and property damage)	\$1,000,000.00 combined single limit
Excess Liability and Property Damage	\$3,000,000.00 combined single limit

15. Worker's Compensation Insurance. The Developer further covenants and agrees that it will provide workers' compensation insurance coverage for its employees and will require evidence of such coverage to be supplied by any subcontractor who may be employed to perform work under

this Agreement.

16. Conviction of offenses. The Developer herein represents that neither the Developer nor any person owning 5% or more of the stock or equity interest in the Developer's business, has been convicted of an offense under N.J.S.A. 2C:21-34, N.J.S.A. 2C:27-2, N.J.S.A. 2C:27-3, N.J.S.A. 2C:27-5, N.J.S.A. 2C:27-9, N.J.S.A. 2C:27-10, N.J.S.A. 2C:27-11, N.J.S.A. 2C:29-4, N.J.S.A. 2C:30-2, or N.J.S.A. 2C:30-3, all as set forth in N.J.S.A. 2C:51-2.

17. Record Owner of Property. Under penalty of law, Developer herein certifies that it is or will be the owner of record of the property which is the subject matter of this Agreement prior to commencement of construction of the improvements set forth herein and is not a contract purchaser, agent, or other representative of the true owner.

18. American Products. Pursuant to N.J.S.A. 40A:11-18 as amended by P.L. 1982, c. 107, the Developer agrees that only manufactured products of the United States, wherever available, shall be utilized in the work as set forth in this Developer's Agreement.

19. Voluntary Agreement. The Developer herein represents that it has voluntarily entered into this Agreement and the same has not been executed by the Developer under duress, coercion, or other pressure imposed by the Authority or its representatives or any representative or agency of the Township of Franklin. Accordingly, the Developer herein covenants and agrees that it will not bring any action in law or in equity against the Authority with respect to the obligations assumed by the Developer under this Agreement or the terms and conditions thereof, which have been mutually negotiated by and between the parties.

In the event of any legal action instituted by a third party or governmental agency or official challenging the validity of any provision of this Agreement, the parties hereto agree to defend and fully cooperate in defending said action(s) to seek to uphold the validity and enforceability of this Agreement, or any portion(s) thereof. The Developer shall be responsible for the payment of any fees for professionals retained by either party in the defense of such actions.

20. Non-Reliance. The Developer acknowledges that it has not relied upon any cost estimates or opinions rendered by representatives of the Authority, including its Consulting Engineer, Executive Director, Legal Counsel, or any member or employee of the Authority, and that the Developer has satisfied itself as to the anticipated final construction costs of the improvement(s) set forth herein and its obligations hereunder prior to the execution of this Agreement.

21. Financial Ability of the Developer. The Developer represents that it is financially able to undertake and complete the obligations set forth in this Agreement and any financing which it may require is either currently available to it or can be secured subsequent to execution of this Agreement.

22. Non-Waiver. The failure of either party to insist upon strict performance of any of the covenants or conditions of this Agreement or to exercise any option herein conferred in any one or more instance shall not be construed as a waiver or a relinquishment for the future of any such covenant, condition or option, but the same shall be and remain in full force and effect unless amended in writing.

23. Severability/Illegal Provisions. Should any provision of this Agreement be found to be void or contrary to public policy, then such provision shall be deemed deleted from this Agreement. Such deletion, however, shall not affect the validity of the remaining provisions of this Agreement which shall remain in effect, unless the intent or purposes of this Agreement are frustrated by such deletion.

24. Captions. The captions throughout this Agreement are inserted only for reference and

convenience. They in no way define or limit the scope or intent of any provision of this Agreement.

25. Entire Agreement. This instrument contains the entire Agreement between the parties with regard to the subject matter set forth herein. It may only be changed by agreement in writing, signed by both parties, and may not be orally modified.

The parties hereto agree that they shall execute, acknowledge and deliver any and all other instruments or documents and engage in any other future actions which are reasonably necessary to effectuate the purposes of this Agreement. Furthermore, each party agrees to mutually cooperate with the other to fulfill the purposes and intent of this Agreement.

26. Agreement Not Equivalent to Board Approval. The execution of this Agreement by the Authority and the Developer shall in no way constitute an approval or have any binding effect upon any pending development application or future development application which is submitted by the Developer to any board or agency of the Township of Franklin or otherwise, and nothing herein shall be so construed. The Developer shall continue to be obligated to comply with all development approval requirements within the Township of Franklin or of any other board or agency having jurisdiction.

27. Enforcement. In addition to the methods and modes of enforcement set forth in Paragraph 8 of this Article IV and elsewhere in this Agreement, in the event that the Developer fails to make any payment as required under this Agreement as and when due, or to perform its obligations hereunder, the Authority, in its sole and absolute discretion, without waiving or impairing any other rights it may have under law or this Agreement, may undertake the following actions, or any combination thereof, at any time upon 10 business days written notice to the Developer, and provided that the Developer does not cure such failure within such 10 day period:

- a. Refuse to sign off on any construction permits, certificates of occupancy, or any other permits, licenses or certificates for any improvements for the proposed development;
- b. Issue a Stop Work Order to the Developer;
- c. Institute proceedings to compel compliance by the Developer with the terms and conditions of this Agreement.

28. Payment of Legal Fees. In the event that the Authority has to enforce the terms of this Agreement, the Developer shall pay all of the Authority's reasonable costs and expenses in connection therewith, including Attorneys' fees, Court costs and expert witness fees.

29. Governing Law. This Agreement shall be construed, governed and enforced in accordance with the laws of the State of New Jersey.

30. Notice. Any notices, requests, or other communications under this Agreement shall not be effective unless the same are in writing and mailed by Registered or Certified Mail, postage prepaid, or overnight delivery service, or by FAX transmission, addressed to the parties at the addresses below:



TOWNSHIP OF FRANKLIN SEWERAGE AUTHORITY

70 Commerce Drive

Somerset, New Jersey 08873-3470

Fax (732) 873-2038

Copy to:

Authority Attorney

and

Consulting Engineer

VI. ADDITIONAL PROVISIONS.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be signed by their proper corporate officers and their proper corporate seals to be affixed hereto the day and year indicated on the acknowledgments attached hereto and made a part hereof.

ATTEST:

TOWNSHIP OF FRANKLIN SEWERAGE AUTHORITY:

\_\_\_\_\_ (Type Name)      \_\_\_\_\_ (Type Name)

\_\_\_\_\_ (Signature)      \_\_\_\_\_ (Signature)

Secretary-Treasurer

Chairperson

WITNESS:

\_\_\_\_\_

[NAME OF DEVELOPER]

\_\_\_\_\_ (Type Name)

\_\_\_\_\_ (Signature)



CAPACITY, ALLOCATION AND  
DEVELOPER'S AGREEMENT

Between:

FRANKLIN TOWNSHIP  
SEWERAGE AUTHORITY

-and-

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DATE

**Appendix F**  
**Prevailing Rates/Cost Estimate**

**Effective Date: 06/01/2017**

**(Subject to periodic review and revision)**

Franklin Township Sewerage Authority – Prevailing Rates/Cost Estimate

Item	Unit	Quantity	Unit Price	Total Price
<b>Prevailing Rates</b>				
User Charge per unit/yearly (effective 11/01/2017)	UNITS		\$321.00	
Connection Charge – June 1 <sup>st</sup> 2021	UNITS		\$3,232.00	
Application Fee – Commercial, Industrial and Developer Plan Review, Sewer Extension	EA		\$50.00	
Authority or Consultant Review of Sewers	L.F.		\$0.50/L.F./\$500.00 (Min.)	
Pumping Station Review	Dwg		\$500.00	
Impact Fee Determination (Each Request)	EA		\$500.00	
TWA (Each Request)	EA		\$400.00	
As-Built Information Assimilation Fee	L.F.		\$0.50/L.F./\$500 (Min)	
Rates, Rules, and Regulations Book (Free Download)	EA		\$25.00	
Return Check Charges	EA		\$30.00	
Inspector	HR		\$65.00	
Flusher with Crew (Minimum of 4 Hours)	LS		\$450.00	
Additional Time Thereafter	HR		\$115.00	
TV with Crew (Minimum of 8 Hours)	LS		\$850.00	
Additional Time Thereafter	HR		\$115.00	
Sewer Maintenance Man	HR		\$55.00	
Pick-Up Truck (1/2) with one man	HR		\$65.00	
Van with One Man	HR		\$67.00	
Maintenance Truck with One Man	HR		\$69.00	
Back-Hoe with One Man	HR		\$107.00	
Dump Truck with One Man	HR		\$102.00	
Came Cover (2017)	EA		\$155.00	
Wye-Saddles	EA		\$315.00	
Vactor Truck with Crew (Minimum of 4 Hours)	HR		\$490.00	
Additional Time Thereafter	HR		\$120.00	
Manhole Frame and Cover	EA		\$320.00	
Industrial Monitoring	EA		\$110.00	

<b>Preparatory Work</b>				
Excavation for Test Pits	CY		\$1,200.00	
Dewatering	EA		\$4,250.00	
<b>Sanitary Sewer Piping</b>				
2" HDPE (force main)	LF		\$20.00	
3" PVC SCH 40 (force main)	LF		\$30.00	
4" PVC SCH 40	LF		\$30.00	
6" PVC SCH 40	LF		\$35.00	
8" PVC SDR 35<12 ft deep	LF		\$50.00	
8" PVC SDR 35>12 ft deep	LF		\$75.00	
10" PVC SDR 35<12 ft deep	LF		\$55.00	
10" PVC SDR 35>12 ft deep	LF		\$80.00	
12" PVC SDR 35<12 ft deep	LF		\$60.00	
12" PVC SDR 35>12 ft deep	LF		\$85.00	
16" PVC SDR 35<12 ft deep	LF		\$80.00	
16" PVC SDR 35>12 ft deep	LF		\$105.00	
6" DIP (Class 52)	LF		\$35.00	
8" DIP (Class 52)<12' deep	LF		\$50.00	
8" DIP (Class 52)>12' deep	LF		\$75.00	
10" DIP (Class 52)<12' deep	LF		\$55.00	
10" DIP (Class 52)>12' deep	LF		\$80.00	
12" DIP (Class 52)<12' deep	LF		\$60.00	
12" DIP (Class 52)>12' deep	LF		\$85.00	
16" DIP (Class 52)<12' deep	LF		\$80.00	
16" DIP (Class 52)>12' deep	LF		\$105.00	
24" DIP (Class 52)<12' deep	LF		\$125.00	
24" DIP (Class 52)>12' deep	LF		\$150.00	
<b>Manholes</b>				
4' Manhole (0'-8') deep	EA		\$4,000.00	
4' Manhole (8'-12') deep	EA		\$4,200.00	
4' Manhole (12'-16') deep	EA		\$4,900.00	

4' Manhole (16' >) deep	EA		\$5,600.00	
Doghouse Manhole	EA		\$3,500.00	
4' Drop Manhole up to 12' deep	EA		\$7,000.00	
4' Drop Manhole 12'> deep	EA		\$7,500.00	
5' Manhole (0'-8') deep	EA		\$5,500.00	
5' Manhole (8'-12') deep	EA		\$6,000.00	
5' Manhole (12'-16') deep	EA		\$6,500.00	
5' Manhole (16' >) deep	EA		\$7,500.00	
5' Drop Manhole up to 12' deep	EA		\$8,500.00	
5' Drop Manhole >12' deep	EA		\$10,000.00	
6' Manhole upto 12ft deep	EA		\$12,000.00	
6' Manhole 12 to 18 ft deep	EA		\$15,000.00	
6' Manhole 18 to 21 ft deep	EA		\$18,000.00	
6' Drop Manhole up to 12 ft deep	EA		\$17,000.00	
6' Drop Manhole > 12 ft deep	EA		\$20,000.00	
Manhole connection (core drill for 8" to 12" sewer)	EA		\$4,000.00	
High Build Epoxy Coating (Existing Manhole)	SF		\$400.00	
<b>Safety Measures</b>				
Emergency or Bypass Pumping	DAY		\$2,200.00	
<b>Pavement/Soil</b>				
Pavement - Township - Temporary Base Course	SY		\$14.00	
Pavement - Township Base Course	SY		\$14.50	
Pavement - Township Surface Course	SY		\$15.50	
Pavement - County - Temporary Base Course	SY		\$13.50	
Pavement - County - Base Course	SY		\$23.00	
Pavement - County - Surface Course	SY		\$15.50	
Milling of pavement - 2" deep	SY		\$3.75	
Pavement striping and marking	LF		\$3.25	
Coarse Aggregate Type 57	CY		\$37.00	
Dense Graded Aggregate (DGA)	TON		\$35.00	
Rock Excavation	CY		\$895.00	

9x18" Concrete Curb	LF		\$20.00	
Concrete Sidewalk	SF		\$5.00	
Concrete Driveway	SF		\$61.25	
Bituminous Concrete Driveway	SF		\$6.75	
Silt fence	LF		\$3.00	
Screened Topsoil	CY		\$30.00	
Concrete curb and gutter	LF		\$32.00	
<b>Rehabilitation</b>				
Lining of Sewers	LF			
8" Lining of Sewers (Protecto 401)			\$45.00	
10" Lining of sewers (Protecto 401)			\$88.00	
Sewer Line Chemical Root Treatment	LF		\$5.50	
Lining of Existing manholes	SF		\$195.00	
Lateral Connection Repair (LCR)	EA		\$3,500.00	
Additional Service Lateral Lining	LF		\$60.00	
<b>Other</b>				
Water Tight Manhole Frame & Cover	EA		\$2,140.00	
Sanitary Sewer Cleanout	EA		\$200.00	
Concrete Cradle or Encasement	LF		\$50.00	
<b>Gravity Sewer Flow Monitoring</b>				
Initial gravity sewer flow monitoring	EA		\$2,000.00	
Supply and operation of rain gauges	EA		\$1,500.00	
Flow meters for additional monitoring period	EA		\$1,500.00	
Rain gauges for additional monitoring period	EA		\$750.00	
Police traffic directors and vehicle	HR		\$140.00	

CY = Cubic Yard  
 DWG = Drawing  
 EA = Each  
 HR = Hour  
 LF = Linear Feet  
 LS = Lump Sum  
 SF = Square Foot  
 SY = Square Yard