

SECTION I
GENERAL CONDITIONS

1. SCOPE OF THE WORK:

The contractor shall construct and deliver to the Owner a complete and finished project in compliance with the drawings and these specifications.

2. DRAWINGS AND SPECIFICATIONS:

These specifications are to be used in conjunction with the attached drawings prepared by Smith and Associates, 122 Chamale Drive, Slidell, Louisiana 70460, (504)641-5432, hereinafter referred to as "ENGINEER". Jointly the drawings and specifications describe the materials and services to be provided for the project, although each item necessarily involved is not specifically mentioned.

3. GENERAL CONTRACTOR'S RESPONSIBILITY:

The General Contractor shall:

- Provide all new materials, labor, tools, equipment, insurance, temporary utilities, transportation, permits, fees, tax, superintendence, temporary construction and all other services or facilities necessary to complete and deliver the finished project to the Owner.
- Take out permits and arrange for all inspections required by all governmental agencies.
- Verify all grades, lines, levels and dimensions as shown on the drawings; employ a local registered civil engineer to layout all streets, utilities, easements and stake out and mark individual lots.
- Erect and maintain during the period of construction a job office of sufficient size to provide adequate facilities for his own use and that of the Engineer. Provide a telephone in the job office.
- Provide and maintain temporary toilet facilities for all workmen until the job is completed.
- Take necessary precautions for the safety of employees on the job, to prevent accidents or injury to persons performing the work, and prevent other unauthorized persons from being on the job site.
- Employ and keep on the job at all times a competent general superintendent as his representative; in the absence of the Contractor, instructions given to the superintendent shall be binding upon the Contractor.
- Maintain adequate protection of all work from damage and protect the Owner's property.
- Procure and maintain during the life of this contract, Workmen's Compensation insurance for all his employees, and require all subcontractors to provide same for their employees.
- Procure and maintain Public Liability insurance in an amount not less than \$100,000 for injuries, including accidental death, to any one person, and subject to the same limit for each person, in an amount not less than \$200,000 for one accident; and Property Damage insurance in an amount not less than \$50,000 for any one accident and \$100,000 aggregate.
- Procure and maintain Automobile Liability insurance covering all owned and rented automotive equipment used in connection with the work with \$100,000, \$300,000 and \$50,000 limits.
- Procure and maintain Builder's Risk insurance on any structures or buildings included in the project, against the perils of fire, wind, malicious mischief or vandalism.
- Require all subcontractors under him to procure and maintain all insurance described above as a minimum coverage.
- Furnish the Engineer insurance certificates in duplicate prior to commencement of work, showing expiration dates, with a statement from the insurance company that they will not cancel or reduce the limits without 10 days prior written notice.
- Upon completion, remove all excess materials, temporary structures, and debris, leaving the completed project in a neat and clean condition throughout. Each subcontractor shall be responsible for performance under this provision insofar as his own class of work is concerned.

4. CONTRACT DOCUMENTS:

The contract documents consist of the executed contract agreement, the general conditions, the drawings, the specifications and all addenda incorporated in the documents prior to execution. The contract documents shall be signed in duplicate by the Owner and the Contractor, which shall constitute an agreement between them to all of the contract documents, and what is called for by any one document shall be binding as if called for by all of them.

5. CONTRACTOR'S UNDERSTANDING:

It is understood and agreed that the Contractor and each subcontractor, by careful examination, satisfied himself as to the nature and location of the work, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed, the general and local conditions, and all other matters which can in any way affect the work under this contract.

DATE	BY	DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION

SECTION I - GENERAL CONDITIONS - continued:

No claim for extra work or cost shall be allowed unless the Contractor has received a written change order describing the work to be done and the change in the contract price.

No verbal agreement or conversation with any officer, agent or employee of the Owner, or Engineer, before or after execution of the contract, shall change any of the terms or obligations contained in the contract documents.

6. ERRORS & OMISSIONS:

If the Contractor finds any discrepancy between the drawings and the physical conditions at the site or any error or omission in the drawings or specifications it shall be his responsibility to inform the Engineer immediately. Any work done to correct any discrepancy, until authorized by change order, will be done at the Contractor's risk.

7. TERMS OF PAYMENT:

Payment shall be made monthly as work progresses, based upon 90% of the value of labor and/or materials delivered and/or in place. The amount of retainage withheld during construction shall be due and payable within 30 days after completion of the work. Payments shall be based upon the Contractor's estimate as approved by the Engineer.

8. ENGINEER'S AUTHORITY:

All work shall be subject to inspection and approval by the Engineer or his representative to insure strict compliance with the plans and specifications and terms of the contract. The Engineer shall have authority to stop work whenever such stoppage may be necessary to insure the proper execution of the contract. He shall also have authority to reject all work and materials which do not conform to the contract. He shall decide questions which arise in the execution of the work. The Engineer shall, within a reasonable time after their presentation to him, make decisions in writing on all questions of the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the Contract Documents. All disputes concerning questions of fact which may arise under this contract, and which are not disposed of by mutual agreement, shall be decided by the Engineer subject to written appeal by the Contractor to the Owner.

9. GUARANTEE:

All work under this contract shall be guaranteed for one year from date of final payment. Whenever guaranteed work is found faulty, the Contractor must repair or replace it in a satisfactory condition. Upon the Contractor's failure to proceed promptly to comply with the terms of any guaranty under this contract, the Owner may have such work performed economically and the Contractor shall promptly reimburse the Owner for the cost of the labor, materials, or equipment used in the repair. Wear and tear and the result of accidents, which are not the fault of the Contractor or his agents, are excluded from the guarantee.

10. SURVEY AND LAYOUT OF WORK:

The General Contractor shall employ a local registered civil engineer to survey the site, establish overall property lines, lay out street rights-of-way, utility easements, grades of sewers and related work, grades of water lines, street grades, ditching, establish and mark individual lots and other field work necessary to the completion of the project. Place steel pins at all corners and intersections of all property lines.

11. SEPARATE CONTRACTS:

The Owner reserves the right to let other contracts in connection with the work. The General Contractor shall cooperate with all other contractors, coordinate his work with theirs and advise the Engineer of any defects in the work or delays which prevent the Contractor from continuing his work.

12. ASSIGNMENT:

Neither party to the Contract shall assign the Contract without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him without the written consent of the Owner.

13. SUBCONTRACTORS:

The General Contractor shall be held fully responsible to the Owner for the acts, omissions and insurance of his subcontractors, and of persons either directly or indirectly employed by him. There is no contractual relation between any subcontractor and the Owner.

Subcontractors agree to be bound by the terms of this Contract, including the drawings and specifications, as far as applicable to his work and agree further to assume all the obligations and responsibilities that the General Contractor, by these instruments, assumes toward the Owner.

14. SHOP DRAWINGS:

The Contractor shall submit shop drawings or schedules to the Engineer promptly to avoid delay in work. The Contractor shall make any corrections required and return two corrected copies for the Engineer and Owner. The Engineer's approval of shop drawings shall not relieve the Contractor from responsibility for deviations from drawings or specifications, or errors and omissions in shop drawings.

15. "OR EQUAL" CLAUSE:

If an item is specified by using the trade name of a product or a particular manufacturer, or type of material or equipment, and the Contractor wishes to make an "or equal" substitution, he must obtain prior written approval of the substitution by the Engineer.

SECTION II

SANITARY SEWER SYSTEM

1. SCOPE:

This work includes furnishing labor, materials, machinery and equipment required for the sanitary sewer system, excluding the Sewage Treatment Plant, but including sewers, manholes, cleanouts, sewage lift stations and any other work necessary to complete the system in accordance with the drawings and these specifications.

2. MATERIALS:

ABS (Acrylonitrile Butadiene Styrene) Armbco Truss Pipe, ASTM D-1788. P.C.P. (Plain Concrete Pipe) shall conform with the latest edition of ASTM standards C 14 (equivalent FS SS-P-37) la). R.C.P. (Reinforced Concrete Pipe) shall conform with the latest edition of ASTM standards C 76 (equivalent SS-P-381). PVC (polyvinyl chloride) Force Mains, Schedule 160, SDR 26, ASTM D-2241. C.I.P. (Cast Iron Pipe) shall conform with the latest edition of FS standards WW-P-356.

PVC (polyvinyl chloride) Gravity Sewer Pipe, SDR 35, per ASTM Standard D3034 latest edition.

V. C.P. (Vitrified Clay Pipe) shall conform with ASTM C 261.

Brick shall conform to ASTM C-32, Grade MA.

Precast concrete blocks of proper radius shall conform to ASTM C-139.

Iron castings shall conform to ASTM A-48, Class 20.

Joints shall be gasket type.

3. EXCAVATION AND BACKFILLING:

Trenches shall be excavated to elevations shown in the drawings and to a width sufficient to allow for proper jointing of the conduit and thorough compaction of the bedding and backfill material under and around the conduit. Where feasible, trench walls shall be vertical. The completed trench bottom shall be firm for its full length and width. The bed shall be shaped to fit the conduit and shall have recesses shaped to receive the bell. Backfill material, free of undesirable matter, shall be placed evenly and carefully around and over pipe in 6" layers, and carefully rammed until 1" of cover exists over pipe. The remainder of backfill material shall be placed and compacted.

4. LAYING PIPE:

All sewers shall be laid true to line and grade with bells up. The sections of the pipe shall be so laid and fitted together that, when complete, the sewer will have a smooth and uniform invert. The pipe shall be kept thoroughly clean so that jointing will be effective. Each pipe shall be inspected for defects before being lowered into the trench. Lubricate rubber gaskets and spigots prior to placement. Sewer Pipe shall be laid to manufacturers specifications. Water shall not be allowed in the trenches while the pipes are being laid. Water shall not be allowed to rise around the joint until it has set.

Not more than 100' of trench shall be opened in advance of pipe laying, unless permitted by the Engineer. The excavation of trenches shall be fully completed a sufficient distance in advance of the laying of the sewer, and the exposed end of all pipes shall be fully protected with a board or other approved stopper to prevent earth or other substances from entering the pipe. The interior of the sewer shall be carefully freed from all dirt, cement or superfluous material of every description as the work progresses.

5. RELATION TO WATER MAINS:

Horizontal Separation: Whenever possible, sewers should be laid at least 10 feet, horizontally, from any existing or proposed water main. Should local conditions prevent a lateral separation of 10 feet, a sewer may be laid closer than 10 feet to a water main if:

- It is laid in a separate trench.
- It is laid in the same trench with the water mains located at one side on a bench of undisturbed earth.
- In either case the elevation of the crown of the sewer is at least 18 inches below the invert of the water main.

Vertical Separation: Whenever sewers must cross under water mains, the sewer shall be laid at such an elevation that the top of the sewer is at least 18 inches below the bottom of the water main. When the elevation of the sewer cannot be buried to meet the above requirement, the water main shall be relocated to provide this separation or reconstructed with slip-on or mechanical-joint cast iron pipe, asbestos cement pressure pipe or prestressed concrete cylinder pipe for a distance of 10 feet on each side of the sewer. One full length of water main should be centered over the sewer so that both joints will be as far from the sewer as possible.

Special Conditions: When it is impossible to obtain proper horizontal and vertical separation as stipulated above, the water main should be constructed of a slip-on or mechanical-joint cast iron pipe, asbestos cement pressure pipe or prestressed concrete cylinder pipe and the

SECTION IV - SANITARY SEWER SYSTEM - continued:

sewer constructed of mechanical-joint cast iron pipe and both services should be pressure tested to assure watertightness.

6. INFILTRATION:

Infiltration allowance is not to exceed 300 gallons per inch of pipe diameter per mile per day.

7. MANHOLES:

Manholes shall be constructed of brick, concrete or precast concrete blocks, with cast iron frames and covers as shown on the drawings. Wall shall be bonded to base slabs (3,000# concrete). Wet bricks before laying. Joints shall be completely filled with mortar. Manholes shall be constructed only when temperature is above 32°F. All work shall be protected against freezing.

Invert channels shall be smooth, accurately shaped and in accordance with the drawings. Invert may be form directly in the concrete of the manhole base; be built up of brickwork and mortar; consist of half tile laid in the concrete base; or be constructed by laying full section sewer pipe straight through the manhole and cutting out the top half after the concrete base is constructed and sufficiently set.

Cast iron (ASTM A-48) or galvanized wrought iron (ASTM A-41) steps shall be installed as shown on the drawings.

Mortar for laying bricks shall be composed of 1 part cement to 2 parts sand, with approximately 20 pounds hydrated lime added for each sack of cement. Mortar for laying precast concrete blocks shall be composed of 1 part cement to 2 parts sand.

Interior and exterior walls of manholes shall be plastered and troweled smooth with 4" of mortar composed of 1 part cement to 2 parts sand.

Frames and covers shall be of the type and duty shown on the drawings. All castings shall be true to pattern in form and dimensions, free from faults, sponginess, cracks, blowholes and other defects affecting their strength. Bearing surfaces between cast frames and covers shall be machined, fitted together, and match-marked to prevent rocking. Frame castings shall be set in full mortar beds on top of masonry and to proper elevation to finish flush with street paving or finished ground grade if manhole is not located in street, or to such elevation specified on the drawings.

8. SEWAGE LIFT STATIONS:

Furnish and install all sewage lift stations and force mains as indicated on the drawings.

Installation shall be complete "turn-key" job, including foundations and all additional field work required, piping, electrical wiring, and controls fully installed and ready for push button operation. The manufacturer's specifications, as approved by this Engineer, shall govern the design, fabrication and installation of the stations and shall be considered a part of this specification.

Electric motors and wiring system shall be 230 volt, 3-phase, 60 cycle, 4-wire, if available or single phase equivalent.

Factory Test & Warranty: Factory test at simulated field conditions for compliance with specifications and planned requirements. Furnish standard 1-year warranty.

9. GOVERNMENTAL AUTHORITIES:

This contractor shall secure and pay for all permits required. He shall arrange for all field tests required and secure all certificates of approval.

Perform all work in accordance with the rules and regulations of local and national codes, Public Health Department, Air and Water Pollution Control Commission, and any other applicable governing authorities.

10. GUARANTEE:

Except where longer warranty periods are specified or are provided by product manufacturers, all materials and workmanship shall be guaranteed free from defects for the period of one year from date of acceptance of the work by the Engineer.

The Contractor, when notified in writing by the Engineer or Owner, shall promptly remedy, without cost to the Owner, any defects which develop within the guarantee period.

11. CLEANING UP:

Upon completion, remove all excess materials, equipment, temporary structures and debris, leaving the completed project in a neat and clean condition throughout.

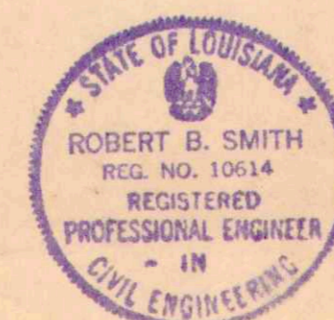
specifications

SMITH & ASSOCIATES

Consulting Engineers & Planners

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DATE: 2/28/85

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SHEET NO.

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