

MODULAR COMMUNITY TOWNSHIP



PREPARED BY:



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This document is a broad based overview of the various aspects of building a fully functioning modular community township. The scope includes planning, development, construction and financing from a bare tract of land to a residential community complete with all utilities, socio-economic waste facilities and integrated recreational facilities.

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PLANNING

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1.0 NEED

Once the client has established the need for personnel housing, the size and number of residences needs to be determined. Normally, a mixture of 1,2,3 and 4 bedroom homes are selected.

2.0 LOCATION

A tract of land suitably located for access and egress in proximity to facilities and places of work is selected. Soils reports, local environmental conditions and hydrodynamic evaluations should be completed prior to the final purchase of the property to assure solid foundation suitability and flood plain clearance. The size of this piece of land will be determined based upon the number and type of homes selected.

ENGINEERING

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1.0 SITE DEVELOPMENT

An engineering consulting firm will develop a site plan including homes, utilities, roads, perimeter dressing, parking, recreational facilities, etc.

2.0 CIVIL ENGINEERING

All areas will be graded for drainage with roads being utilized for peak rain fall run-offs. Topographical maps and hydrodynamic studies will be utilized for the overall civil engineering site development.

3.0 FOUNDATION DESIGN

Based upon the site soils report, the housing and utility equipment foundations will be designed. Utility easements and underground piping will be routed and invert elevation selected.

4.0 POWER DISTRIBUTION

Electrical power distribution will be developed based upon the site layout and loading requirements.

5.0 HOUSE DESIGN

The structural stability of the homes will be established based upon local environmental conditions and building code requirements, as determined by the client.

6.0 UTILITIES

Power supply, potable water, waste water and gas (if available) utilization will be based upon local conditions, as advised by the client.

UTILITIES

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1.0 POWER SUPPLY

The client will advise as to whether local power supply is available or not. If it is available, its reliability should be determined. Should the client determine that the township is to have its own supply of power, we will provide generators that will utilize readily available fuel and will match local power supply criteria. We recommend that power distribution throughout the township be underground.

2.0 POTABLE WATER

The client will advise as to whether local potable water supply is available. If it is available, its reliability should be determined. Should the client determine that the township is to have its own potable water supply, we will evaluate local conditions and provide the client with an engineered solution based on various scenarios, i.e. drilling wells, desalination, river water, lake water, etc. Tertiary treatment would then be included for safe consumption. Storage tanks will be provided complete with pressurization / hydropneumatic packages for water utilization throughout the township.

3.0 WASTE WATER

The township will be supplied with a sewage treatment plant to treat all waste water. The system is designed such that complete “endogenous respiration” takes place thereby producing zero residual sludge. Therefore, the unit will not require cleaning or sludge disposal of any kind. The effluent from the sewage treatment plant can be discharged directly into the local environment as it meets all World Health Organization (W.H.O.) standards. It can also be pooled into a reservoir and utilized for irrigation of the township horticulture. The client should advise any local effluent code criteria.

Lift Stations will be strategically located throughout the township to collect the waste and pump it to the central lift station at the sewage treatment plant. The system will be designed to optimize peak flows with local and central pumping and holding capacities.

4.0 FIRE PROTECTION

A fire protection system including pumps, water storage tanks, hydrants, etc. can be included in the township. The scope will be

determined by the client requirements and the availability of existing local fire protection.

5.0 GAS

Natural gas distribution can be centralized if resources are available and the client wishes to make it available.

6.0 ANCILLARIES

The homes can be equipped with cable for communication technologies, as determined by the client.

SCOPE OF SUPPLY

SCOPE OF SUPPLY (EX-IM BANK)

1.0 CLIENT

- A) Township Job Site
- B) All civil works including roads, grading, underground piping and conduit, building and equipment foundations, perimeter protection, landscaping, etc.
- C) All local labor required to construct the township
- D) Soils and hydrodynamic reports
- E) Local code and environmental criteria
- F) Recreation facilities such as swimming pools, tennis courts, etc.
- G) Interconnecting piping, electrical and instrumentation between equipment and facilities
- H) Clearances, duties, taxes, etc. and transportation to the job site of all imported materials and equipments
- I) Bank guarantees, bonds, etc. as required to satisfy Ex-Im Bank requirements

2.0 S&D WORLDWIDE ENTERPRISES, INC.

- A) All materials above the foundation grade beams to construct the homes including base slabs, walls, roofs, interior walls, insulation, lighting, air conditioning, washers and driers, stoves and ovens as shown on the house plans
- B) Supply all potable and waste water treatment equipment
- C) Supply power distribution equipment and generators, if required
- D) Fire protection equipment, if required
- E) Engineering, civil, structural, electrical and instrumentation, piping, architectural as required to complete the township
- F) Assist client with Ex-Im Bank applications, associated documents and logistics

TYPICAL TOWNSHIP DETAILS

FINANCING

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We anticipate this project to be an Ex-Im Bank guarantee. The Ex-Im Bank process can be very complex and involved. We have personnel who are trained and familiar with the process.

To qualify for this guarantee, the project value cannot be more than 40% of the applicant's (client's) net worth. In addition, a payment guarantee from the client's federal government could also be used to qualify.

S&D Worldwide Enterprises, Inc. can assist the client in making the application to Ex-Im Bank and obtain a loan from a third party bank. The client can also apply directly.

Various fees are charged by Ex-Im Bank and the third party bank, plus legal fees. Some of these fees can be included in the loan while some must be paid up front. The process will take at least 3 to 4 months of diligent paper work. Once a realistic basic design and cost evaluation have been completed, the process can be initialized.