

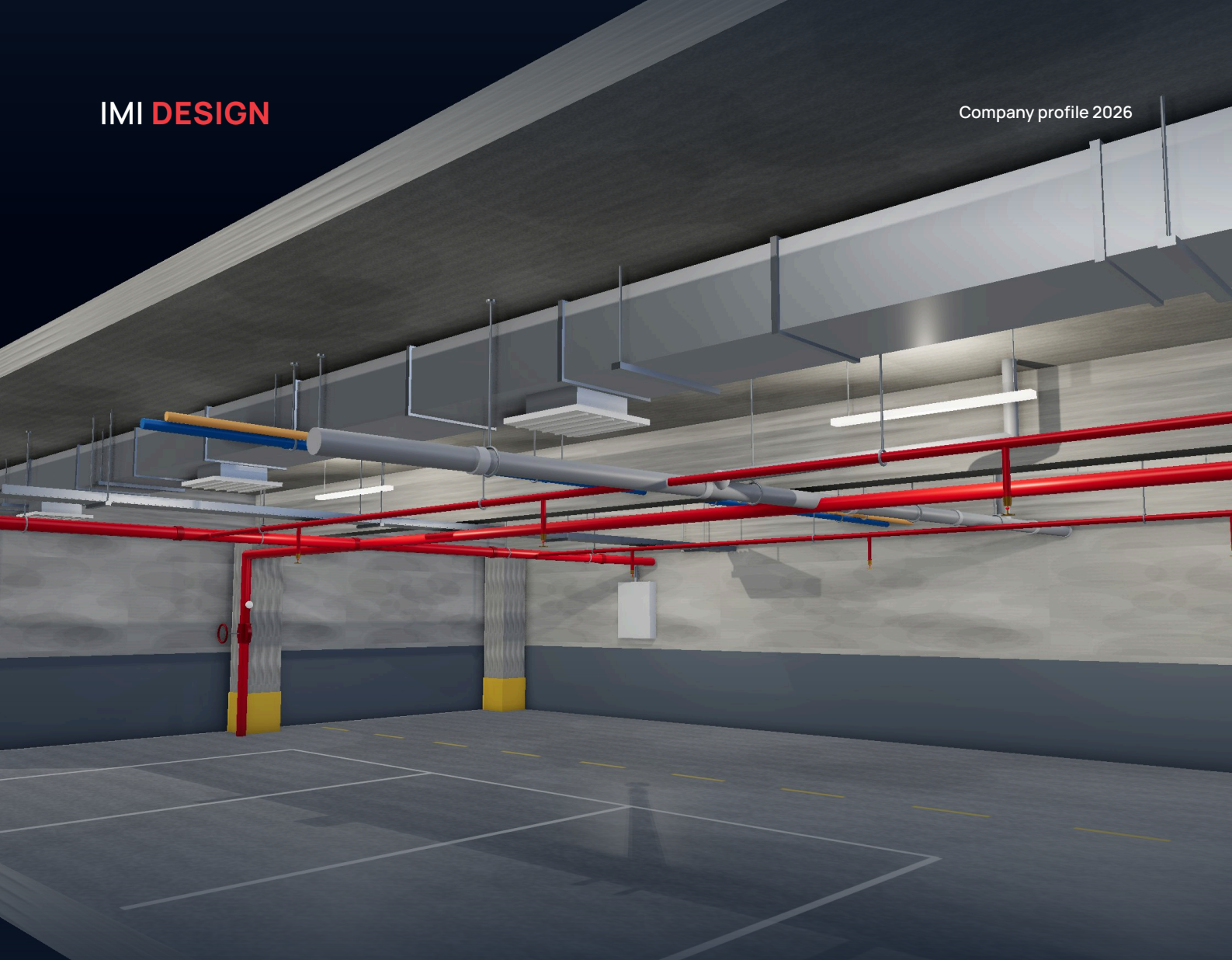


Illustration: HVAC, Electrical, Fire and Plumbing Services in a Basement Car Park

MEP, Fire Protection and Infrastructure Design.

A new engineering design practice in Vasco da Gama, Goa. We prepare calculated, code-referenced drawing packages for buildings and plotted developments.

Plumbing

Water Supply and Drainage

HVAC and Electrical

Cooling, Ventilation, Power

Fire Protection

Sprinklers, Hydrants, Fire Alarm

Infrastructure

Roads, Drains, Sewer, Water

A Young Practice, Judged by Its Drawings.

IMI Design is a small engineering design practice in Vasco da Gama, Goa, and a division of Infra Marine Innovations LLP.

We design building services (plumbing, fire protection, fire alarm, HVAC and electrical) and roads and utilities for plotted developments. Our completed work so far is in plumbing, fire protection and infrastructure, all in Mormugao taluka: a villa, a mixed-use building, a residential and commercial building, and a 21-plot layout. Those projects are shown in this profile, with drawings taken from the packages we issued.

We are new, so we don't have a long client list to show you. What we can show is how we work: every size on our drawings comes from a calculation, every package lists the codes it follows, and you deal directly with the engineer who does the design.

Calculated, Not Assumed

Water demand, fixture units, pump duty and fire water requirements are worked out and stated on the drawings.

Codes on Every Sheet

NBC 2016 and the relevant IS standards are listed in the general notes, so authorities and contractors can check the basis of design.

The Engineer, Not a Middleman

You speak to the person preparing your drawings, on the phone or at our office in Vasco.

Complete Packages

Layouts, schematics, isometrics, enlarged details and standard details, so the plumber or fire contractor has what they need.

Office

S6, Second Floor, Karma Point
Vasco da Gama, Goa 403802

Services

Plumbing, fire protection, fire alarm, HVAC and electrical design; infrastructure for plotted developments

Recent Work

Four projects in Mormugao taluka, 2026

Clients So Far

Private owners, a builder and a design firm

Software

AutoCAD, AutoCAD Civil 3D

Codes

NBC 2016 and Indian Standards; IRC, MoRTH and CPHEEO for infrastructure

Parent Company

Infra Marine Innovations LLP

What We Design.

Each service is delivered as a complete drawing package with notes, calculations and details.

Plumbing Design

Water supply and drainage for villas, apartment buildings and mixed-use buildings, designed to NBC 2016 Part 9, IS 2065 and IS 1172.

Recent work: P2 Vasco da Gama, P3 Arossim

- Water Demand and Tank Sizing
- Underground Sump, Overhead Tank, Transfer and Booster Pumps
- Hot and Cold Water, Solar Water Heating
- Soil, Waste, Vent and Rainwater Stacks
- Inspection Chambers and Underground Network
- Enlarged Toilet and Kitchen Details

Fire Protection and Fire Alarm Design

Fire fighting systems sized to the building's height and occupancy under NBC 2016 Part 4, with sprinklers to IS 15105, hydrants to IS 3844 and hose reels to IS 13039, and fire detection and alarm systems to IS 2189.

Recent work: P1 Dabolim

- Downcomer or Wet Riser with Landing Valves
- First-Aid Hose Reels and Extinguishers
- Sprinkler Layouts by Hazard Class
- Fire Water Tanks and Fire Pumps
- Fire Brigade Inlet and Control Valves
- Fire Alarm: Detectors, Call Points, Sounders and Panel
- Isometrics for Hydraulic Calculations

Infrastructure for Plotted Developments

Internal roads and the services in them, designed in AutoCAD Civil 3D to IRC, MoRTH and the CPHEEO manuals.

Recent work: P4 Issorcim

- Road Alignment, Profiles and Cross Sections
- U-Drains and Storm Water
- Sewer Lines and Manholes
- Borewell, Sump and Overhead Tank
- Water Mains, Hydrants and Street Lighting
- Utility Corridor and Quantities

HVAC and Electrical Design

Our engineers also design air conditioning, ventilation and electrical systems, so all the services in a building can come from one team. Our completed projects are in plumbing, fire and infrastructure; ask us about the engineers' experience in HVAC and electrical.

Designed to NBC 2016 Part 8, ISHRAE and ASHRAE guidance, and the National Electrical Code of India

- Heat Load Calculations
- Split, VRF and Ducted System Selection
- Duct and Ventilation Layouts, Basement and Toilet Exhaust
- Electrical Load Calculation and Load Sanction
- Power and Lighting Layouts
- Single-Line Diagrams and DB Schedules

IMI DESIGN	Section Services	Document Company Profile 2026	Sheet 03 / 13
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From Your Drawings to Ours.

A simple process, so you know what happens at each step and what you'll receive.

1

Send the Architecture

Plans, sections and the site location. We confirm what we need and ask any questions.

2

Scope and Fee

A written scope and quotation for the package before work starts.

3

Design and Calculations

Water demand, fixture units, pump and tank sizing, fire water demand or road levels.

4

Drawing Package

Issued to you for review and comments.

5

Approvals and Site

Drawings for authority submissions, and answers to contractor questions.



Illustration: Services in a Basement Ceiling, with Supply Air Duct and Diffusers, Cable Tray, Sprinkler Mains, Drainage and Water Supply.

What's in a Package

01	Cover Sheet, Drawing Index and Location Plan	05	Schematic and Riser Diagrams
02	General Notes, Codes and Abbreviations	06	Isometrics and Enlarged Details
03	Design Basis and Calculations	07	Standard Installation Details
04	Site Plan and Floor Layouts	08	Testing and Commissioning Notes

Recent Work in Mormugao, Goa.

Four recent commissions, from a single-family villa to a 21-plot development. The drawings on the following pages are taken from the issued packages.

Project	Our Scope	Package
P1 Residential and Commercial Building Dabolim, Mormugao. Basement parking, shops at ground level, six upper floors.	Fire Protection Downcomer, hose reels, sprinklers, terrace tank and pump	6 A0 sheets March 2026
P2 Mixed-Use Building with Stack Parking Vasco da Gama. Stilt level with twin mechanical stack parking, eight upper floors.	Plumbing Water supply and drainage: sump, overhead tank, grey, black and rainwater stacks	17 A0 sheets April 2026
P3 Single-Family Villa, Reconstruction and Extension Arossim, Mormugao. Ground and first floor.	Plumbing Hot and cold water, booster and solar water heating, drainage and rainwater	22 A3 sheets March 2026
P4 Plotted Development, 21 Plots Issorcim, Mormugao. Two internal road alignments.	Infrastructure Roads, U-drains, sewer, water supply, hydrants, street lighting, utility corridor	17 A0 sheets July 2026

What Every Package Includes

Cover sheet and drawing index, general notes with codes, testing and commissioning requirements, site plan, floor layouts, schematic and riser diagrams, enlarged details, and standard installation details.

Residential and Commercial Building

Dabolim, Mormugao, Goa

P1

Service

Fire Protection Design

Building

Basement, Ground and Six Floors

Height Category

15 M to 35 M (NBC)

Codes

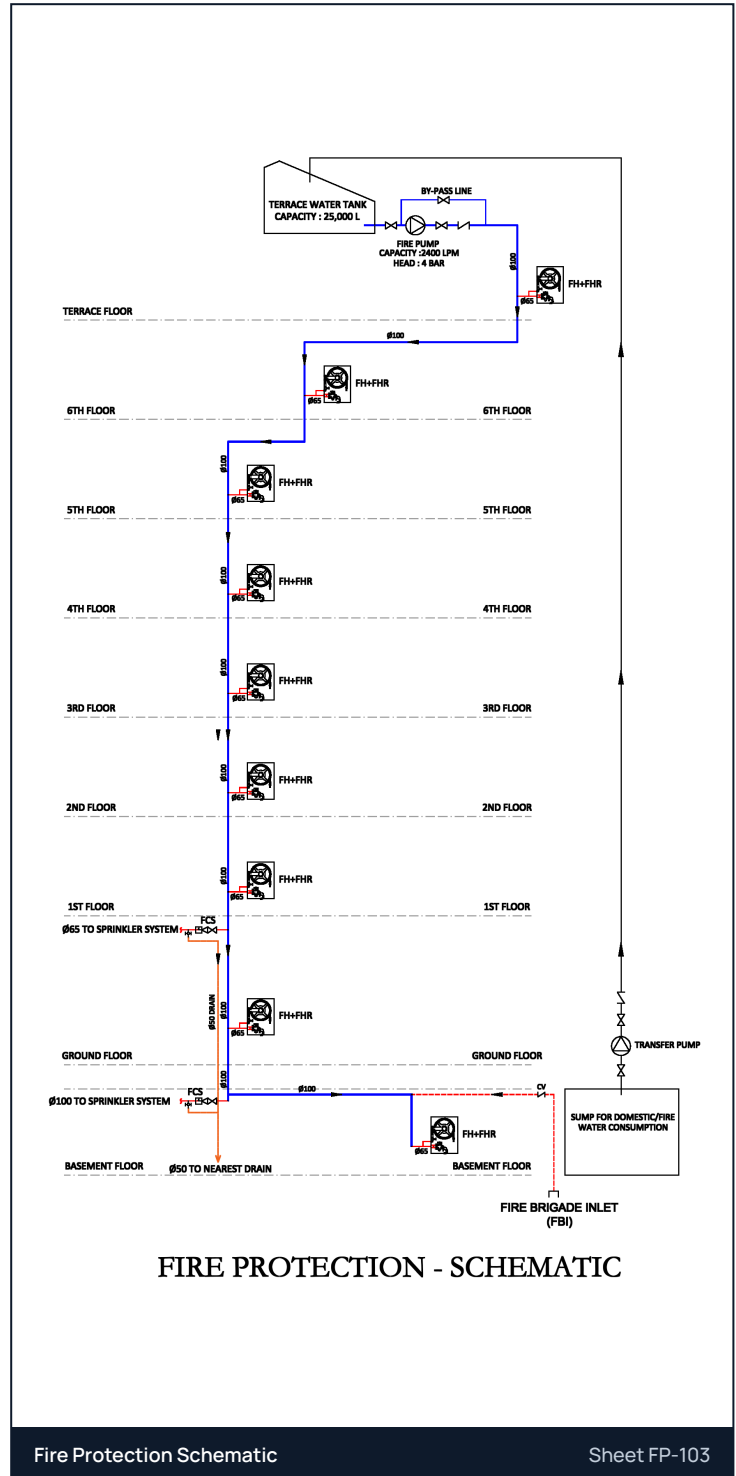
NBC 2016, IS 15105:2021

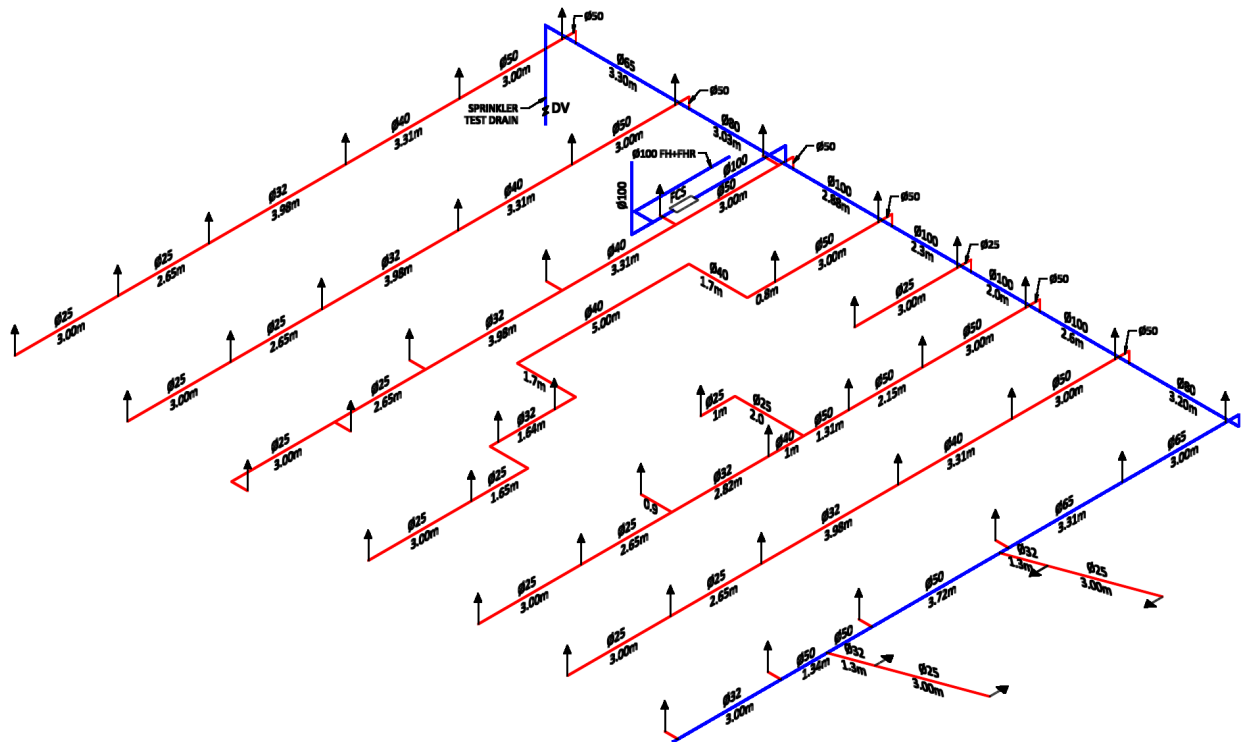
A mixed-use building with basement car parking, shops on the ground floor and apartments above. We designed the complete fire protection system to the National Building Code requirements for its height and occupancy.

With the building in the 15 to 35 metre category, a downcomer system with landing valves and hose reels serves every floor. Because the terrace tank alone cannot give the required pressure at the upper outlets, a terrace fire pump keeps the downcomer pressurised, with a fire brigade inlet at road level for the fire service.

Scope

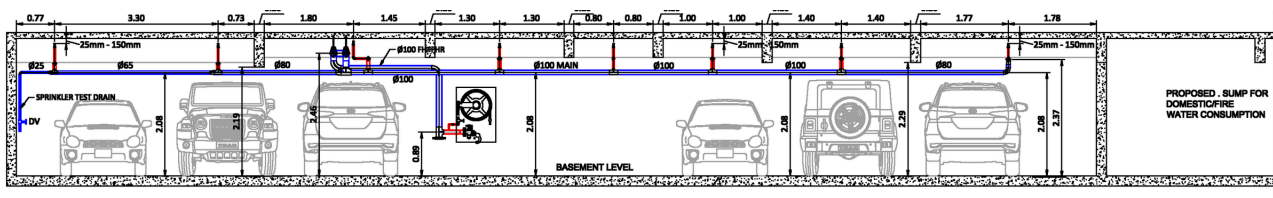
- Downcomer with Landing Valves and Hose Reels at Each Level
- Wet-Pipe Sprinklers: Ordinary Hazard in the Basement, Light Hazard in the Shops
- Terrace Fire Water Tank, Fire Pump and Bypass
- Fire Brigade Inlet and Floor Control Stations
- Hydraulic Isometrics for the Calculations
- Testing and Commissioning Notes, Standard Details





Basement Sprinkler Isometric, with Pipe Sizes and Run Lengths for the Hydraulic Calculation

Sheet FP-102



Section Through the Basement: Sprinkler Mains Coordinated Below the Beams and Clear of Parked Cars

Sheet FP-102

Coordinated with the Structure

Basement piping is exposed, so we routed the mains below the structural beams with upright sprinklers at code clearance from the slab, and checked headroom over the parking bays in section.

Mixed-Use Building with Stack Parking

P2

Vasco da Gama, Goa

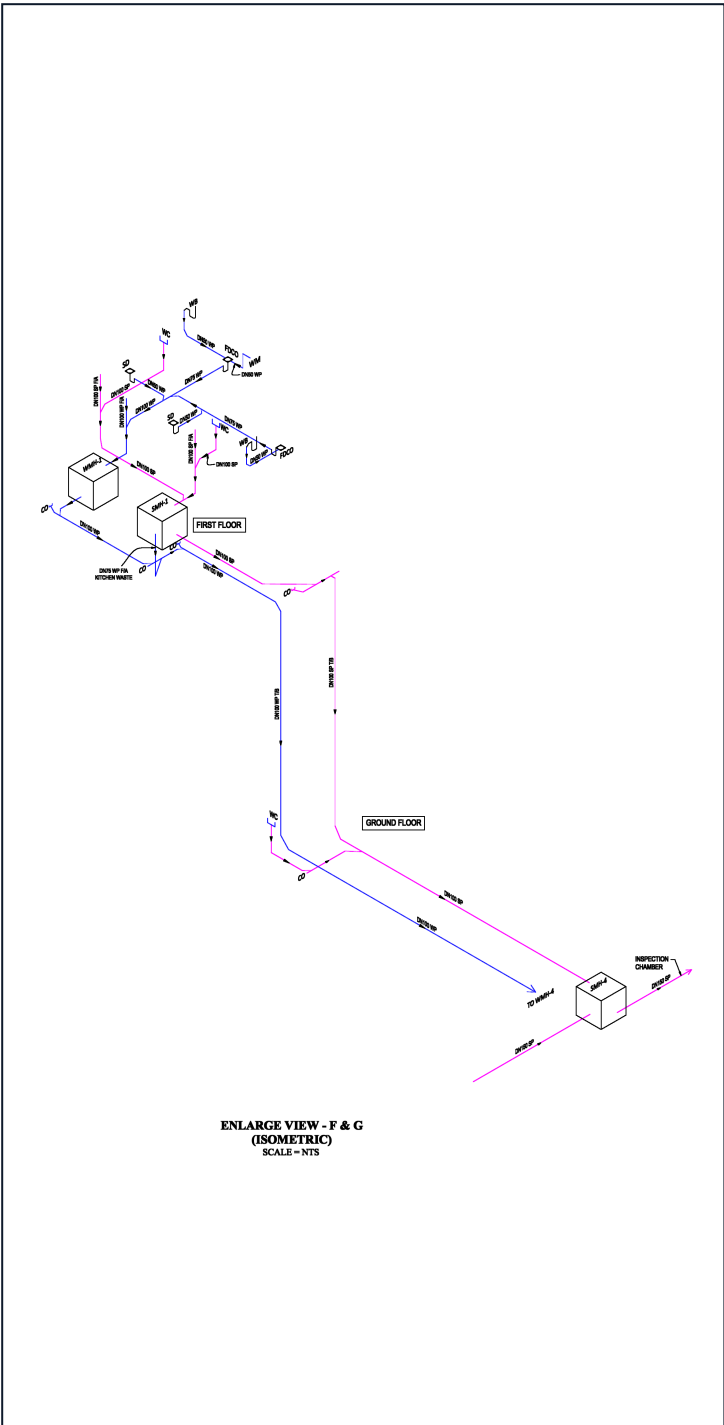
Service	Building	Storage	Codes
Plumbing: Water Supply and Drainage	Stilt and Eight Upper Floors	75,000 L Sump, 30,000 L Overhead	NBC 2016 Part 9, IS 2065, IS 1172

Shops and apartments over a stilt level with twin mechanical stack parking. We designed both plumbing systems, with drainage from the upper floors carried below the stack parking to the inspection chambers.

Pipe sizes come from fixture-unit calculations to NBC 2016. The underground sump includes a 25,000 litre reserve for fire fighting.

Scope

- Underground Sump, Transfer Pumps and Overhead Tank
- Floor-Wise Water Supply with Isolation at Every Level
- Hot Water to Showers from Electric Heaters
- Separate Grey Water and Black Water Stacks
- Rainwater Collection to Storm Drains
- Inspection Chambers and Underground Network
- Enlarged Toilet and Kitchen Details, in Plan and Isometric



Drainage Isometric, First Floor to Inspection Chamber

Sheet DR-109

IMI DESIGN	Section P2 Plumbing, Vasco Da Gama	Document Company Profile 2026	Sheet 08 / 13
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Single-Family Villa

Arossim, Mormugao, Goa

P3

Service

Plumbing: Water Supply and Drainage

Building

Reconstruction and Extension, G+1

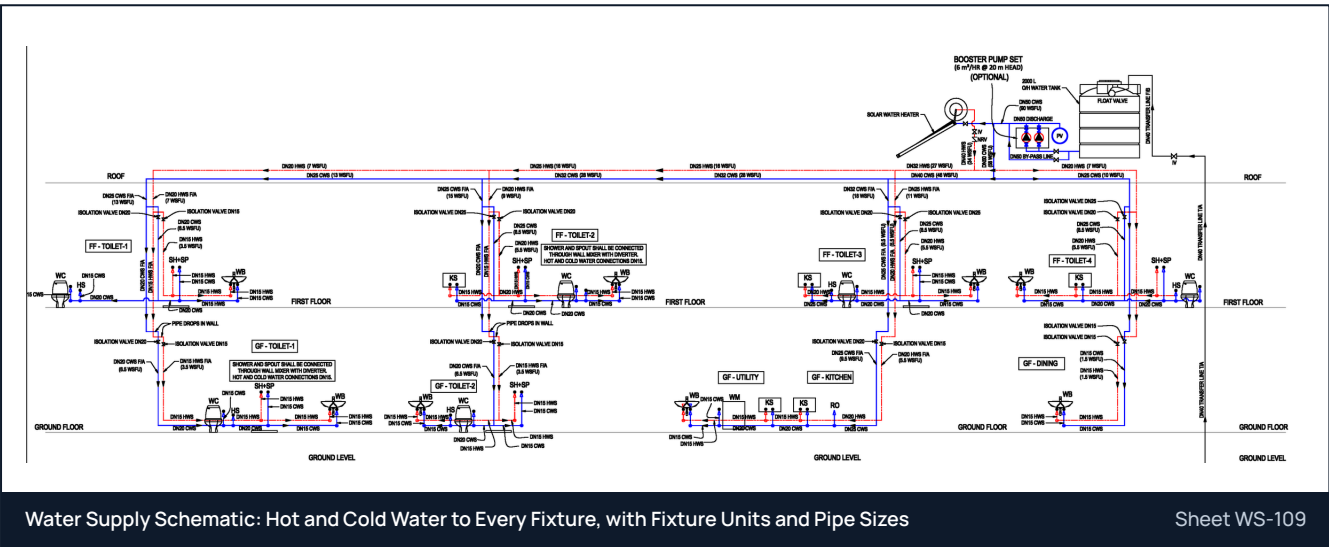
Hot Water

500 L/day Solar with 3 kW Backup

Codes

NBC 2016 Part 9, IS 2065

The reconstruction and extension of a family home. Water demand was calculated for fourteen occupants, and the system sized from it: an underground tank and transfer pump to the overhead tank, an optional duty and standby booster set with pressure control, and solar water heating with electric backup feeding every bathroom.



Water Supply

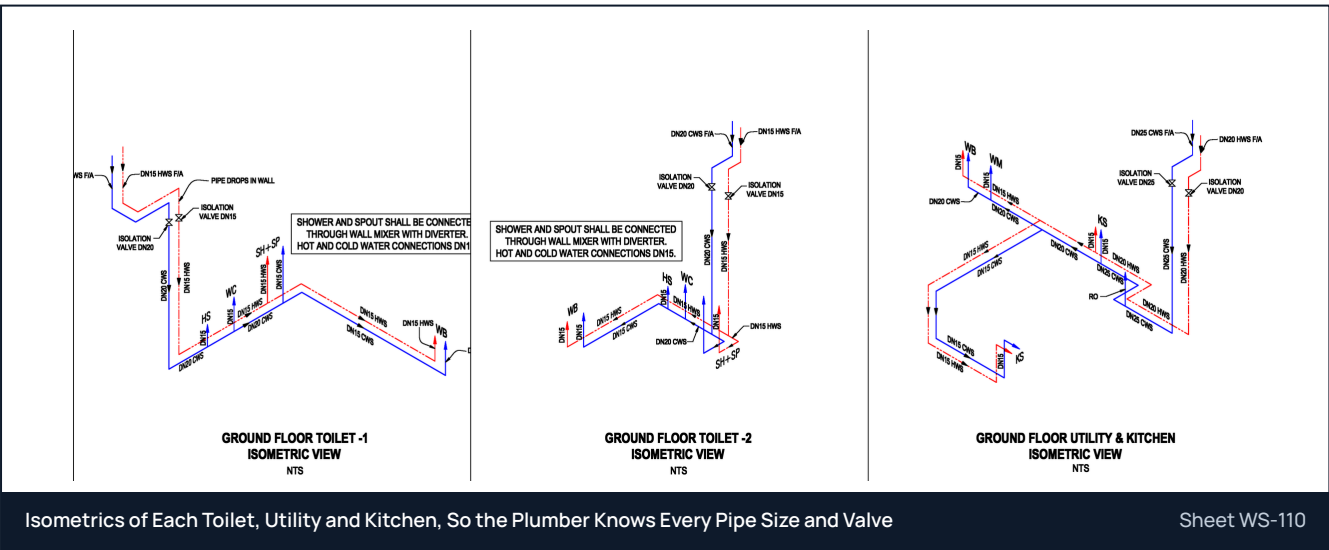
4,000 L underground tank, 2,000 L overhead tank, transfer pump at 6 m³/h and 20 m head, CPVC hot and cold water piping.

Hot Water

560 L/day demand at 40 L per person, met by a 500 L/day solar heater with 3 kW electric backup.

Drainage

Soil, waste and vent stacks, roof rainwater pipes, and a trapped gully chamber before the soak pit.



Plotted Development, 21 Plots

P4

Issorcim, Mormugao, Goa

Service	Layout	Software	Codes
Roads, Drainage, Sewer, Water, Utilities	21 Plots, Two Road Alignments	AutoCAD Civil 3D	IRC, MoRTH, CPHEEO, IS



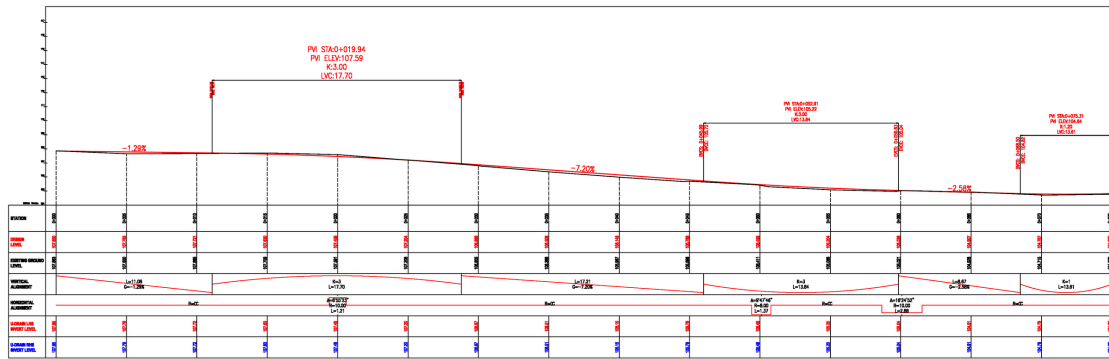
Master Plan: Road Alignment with Chainages, U-Drains, Manholes, Hydrants, Street Lights and Water Tanks Sheet 04

All the services a new layout needs before the first plot is sold, designed together in one corridor: road, storm water, sewer, potable water, fire hydrants, street lighting, and ducts for electricity, telecom and gas.

Road Plan, Profile and Services

P4 Issorcim, continued

P4



Longitudinal Profile: Design and Ground Levels, Vertical Curves and U-Drain Invert Levels

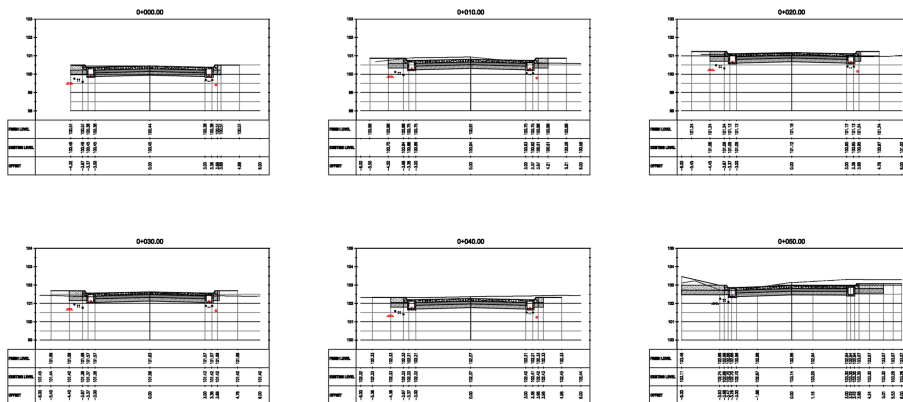
Sheet 05

Scope

- Horizontal and Vertical Road Alignment with Cross Sections
- U-Drains and Catch Pits Set to Invert Levels
- Sewer Lines, Manholes and Inspection Chambers
- Borewell, Underground Sump, Pump House and Overhead Tank
- Water Mains and Fire Hydrants
- Street Lighting and Electrical Distribution Pillars
- Utility Corridor for Electrical, Telecom and Gas
- Quantities of Material

Designed to

IRC 86 geometric design of urban roads, IRC:SP:42 road drainage, IRC 98 utilities within the right of way, MoRTH specifications, the CPHEEO manuals on water supply, sewerage and storm water drainage, and IS 4111 for manholes.



Road Cross Sections Every 10 M: Pavement Layers, U-Drains and Services in the Corridor

Sheet 37

The Standards Behind Our Drawings.

The codes referenced in our drawings, with IS 2189 for fire alarm design.

Fire Protection

NBC 2016 Part 4, fire and life safety

IS 15105:2021 sprinkler systems

IS 3844 hydrant systems

IS 13039 hose reel systems

IS 2189 fire detection and alarm

Local fire authority requirements

Plumbing

NBC 2016 Part 9, plumbing services

IS 2065 water supply in buildings

IS 1172 water supply, drainage and sanitation

IS 4985 uPVC pipes

IS 15778 CPVC pipes

Infrastructure

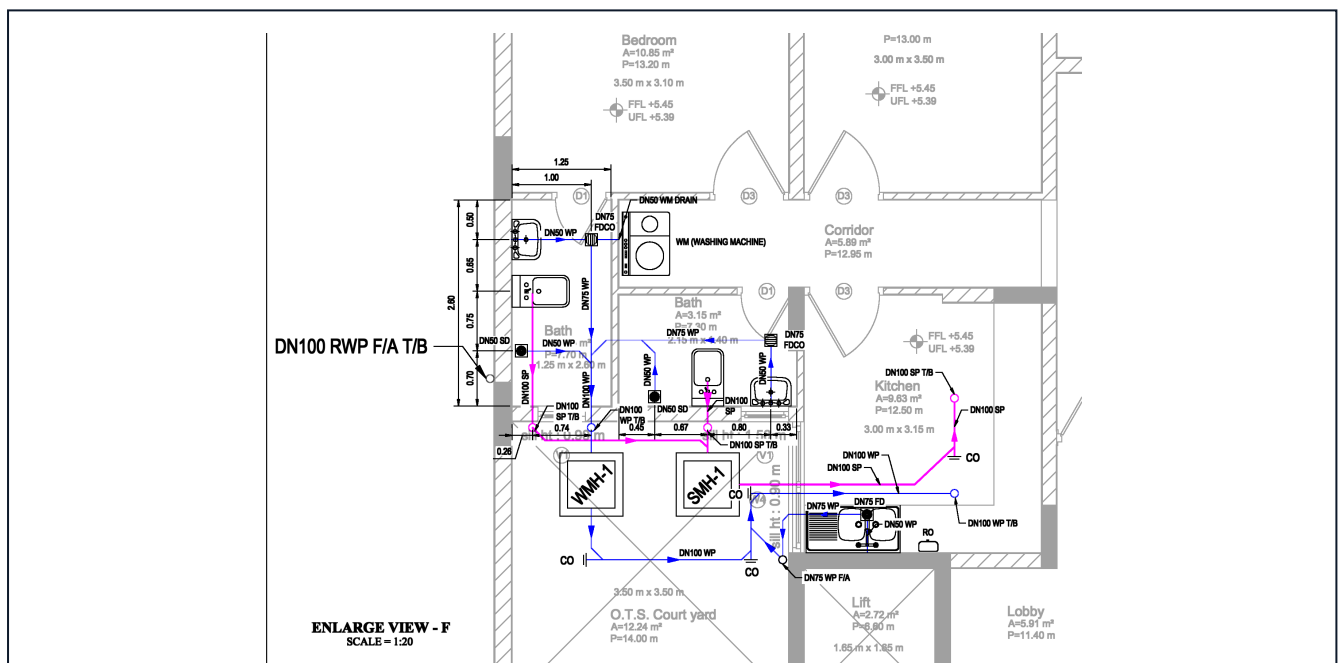
IRC 86 geometric design of urban roads

IRC:SP:42 road drainage

IRC 98 utilities in the right of way

MoRTH specifications

CPHEEO manuals; IS 4111 manholes



An Enlarged Detail at 1:20 from P2: Pipe Sizes, Floor Traps and Cleanouts Located

P2, Sheet DR-109

Send Us Your Drawings for a Quote.

Share the architectural drawings, the location and what you need.
We'll reply with any questions and a quotation for the package.

MEP Design

Plumbing, HVAC and Electrical for Villas,
Apartments and Commercial Buildings

Fire Protection

Sprinklers, Hydrants, Fire Alarm and Fire
NOC Drawings

Plotted Developments

Roads, Drains, Sewer and Water for
Layouts

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