PROFESSIONAL CERTIFICATION PROGRAM

Master Highway Design

with Civil 3D, InfraWorks, Global Mapper & Google Earth Pro

IRC · International Standards · From Survey to Deliverable

3	13	3	INR 38,500
MONTHS Duration	MODULES Topics	CAPSTONE Projects	~~INR 55,000~~ 30% OFF

Software & Tools Covered

Autodesk Civil 3D	Alignments, corridors, grading, drainage & deliverables
Autodesk InfraWorks	Conceptual BIM, 3D visualisation & model coordination
Global Mapper	LiDAR, DEM/DSM processing & terrain export to Civil 3D
Google Earth Pro	KML/KMZ workflows, imagery referencing & GIS integration

What's Included

✓ **Live Online Classes** — Streamed on BIM Mantra platform — attend from anywhere

✓ **Industry Expert Faculty** — Taught by professionals from top infrastructure firms

✓ **Live IRC Highway Project** — Work on a real project from survey data to submission

✓ **3 Capstone Projects** — Portfolio-ready DWG sets, BOQs, and 3D corridor models

✓ **Placement Assistance** · CV prep

✓ **Mock Interview Prep** — Role-specific sessions for design engineer positions

✓ **Autodesk Cert Guidance** — Full preparation and exam strategy for Autodesk certs

Curriculum — 13 In-Depth Modules Across 3 Tracks

TRACK 1 · Highway Geometry & Design

01 Advanced Highway Geometry

- IRC standards & design speed
- Horizontal & vertical curves
- Superelevation design
- Sight distance & gradients

02 Advanced Alignments & Profiles

- Complex & offset alignments
- Profile editing & design
- Design checks and criteria
- Speed-dependent geometry

+91 9960613683 • classes@bimmantra.com • www.bimmantra.com • 1st Floor, Prime Landmark Building, off NIBM Road, Kondhwa, Pune 411048

03 Custom Assemblies

- Lane, shoulder, median & ditch
- Custom subassemblies
- Code set styles
- Conditional subassemblies

04 Advanced Corridor Modelling

- Multiple baselines & regions
- Targets and daylighting
- Corridor surfaces
- Corridor quantity takeoff

05 Advanced Intersection Design

- T-intersections & four-leg
- Roundabouts
- Curb returns
- Channelized intersections

06 Sample Lines & Cross Sections

- Sample line groups
- Section views
- Material quantities
- Earthwork reports

TRACK 2 · Site, Utilities & Terrain

07 Grading & Feature Lines

- Feature line creation
- Parking & site grading
- Pad grading
- Volume balancing

08 Site & Parcel Modelling

- Site management
- Parcel creation & labels
- Area schedules
- Renumbering workflows

09 Pipe & Stormwater Networks

- Storm drain design
- Sanitary sewer networks
- Catch basins & structures
- Profile layouts

10 Terrain & Surface Analysis

- DEM import & TIN surfaces
- Contours
- Slope & watershed analysis
- Cut / fill computation

11 Global Mapper Integration

- LiDAR point cloud import
- DEM & DSM generation
- Contour extraction
- Export to Civil 3D

12 Google Earth & GIS Integration

- KML / KMZ workflows
- Coordinate transformations
- Imagery referencing
- Data import / export

TRACK 3 · Real-World Project & Capstone Delivery

Module 13 — Real-World Road Design Project · Full Workflow to Deliverables

- Existing ground model
- Horizontal & vertical alignment
- Custom assemblies & corridors
- Drainage & pipe networks
- Plan, profile & sheet production

3 Capstone Portfolio Projects

Capstone 01	**IRC-Compliant 2-Lane Rural Highway**	Full corridor, superelevation, intersections, cross-sections and earthwork quantity report.
Capstone 02	**Urban Road with Stormwater Drainage**	Pipe networks, catch basin design, profile sheets, drainage report and BOQ.
Capstone 03	**Integrated Highway from LiDAR/GIS Data**	Terrain modelling, alignment, roundabout, pipe network, plan/profile sheets and complete BOQ.

Each project delivers: DWG drawing set • 3D corridor model • Earthwork & BOQ report • PDF portfolio package

Course Fees

Master Highway Design with Civil 3D, InfraWorks, Global Mapper & Google Earth Pro	3 Months	Online / Offline	3 Portfolio Projects	**INR 38,500** ~~INR 55,000~~ **30% OFF**

EMI options available. Prerequisite: Civil 3D Basic or 2+ years field/design experience. IRC highway design knowledge recommended. ***Offer valid for limited seats — enrol at www.bimmantra.com***