## Civil Construction

### Capabilities
- Engineering, Procurement and Construction of Effluent treatment plant
- Expressways
- Piling
- Roads and Bridges
- Sewerage system
- Tollway
- Water/Waste Water System, including Maintenance and Operation

### Client and Consultant
- Airports Authority of India
- Bangalore Metro Rail Corp
- Chambal Fertilisers and Chemicals Ltd
- Dabhol Power Co.
- Delhi Metro Rail Corp Ltd
- Dighi Port Ltd
- DLF Builders and Developers Ltd
- DSIDC (Delhi State Industrial Development Corporation Ltd)
- Frischmann Prabhu (India) Pvt Ltd
- Global Health Pvt Ltd
- Housing and Infrastructure Board (HIB), Tripoli
- Inter-Continental Consultant and Technocrats
- IRCON
- Kerala Road Fund Board
- LG
- Meritec Ltd
- Metropolis Gas Co Pvt Ltd
- Ministry of Health and Family Welfare
- Municipal Corp of Delhi
- National Highways Authority of India
- Nirma Ltd
- Oil and Natural Gas Corp Ltd
- PT. Caltex
- Qatar Petroleum
- Rajiv Gandhi Institute of Petroleum Technology
- Reliance
- RITES (Rail India Technical and Economic Services)
- RIDCOR
- Skanska Cementation International Ltd
- SNC Lavalin Inc.
- Sverdrup Civil Inc.
- TCE Consulting Engineers Ltd
- Toyo Engineering India Ltd
- U P State Bridge Corp Ltd
- Vadodara-Halol Toll Road Ltd
- Voltage Engineering Ltd
- Zaidum Leeng, Malaysia and Artefact Project India

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<th>Project</th>
<th>Description</th>
<th>Client and Consultant</th>
<th>Status</th>
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<tr>
<td>1 <strong>Institute Complex, Rai Bareli</strong></td>
<td>The scope of work entails civil, structural and associated work including site development, construction of 27 buildings consisting of administration and library building, auditorium, community centre, lecture halls, commercial centre, staff housing facility, hostels and health care centre over an area of 16 lac sq ft at Rajiv Gandhi Institute of Petroleum Technology in Rai Bareli, UP.</td>
<td><strong>Rajiv Gandhi Institute of Petroleum Technology</strong></td>
<td><strong>ongoing</strong></td>
</tr>
<tr>
<td>2 <strong>Infrastructure of Arada Zone, Tripoli</strong></td>
<td>Engineering, procurement and construction of infrastructure work including gravity sewers, storm sewers, rising mains, roads and other facilities for Arada Zone, Tripoli, Libya.</td>
<td><strong>Housing and Infrastructure Board (HIB), Tripoli, Libya</strong></td>
<td><strong>ongoing</strong></td>
</tr>
<tr>
<td>3 <strong>Infrastructure of Souk Al Juma, Tripoli</strong></td>
<td>Engineering, procurement and construction of infrastructure work including sewerage, storm water main and branch lines, roads and other facilities for Souk Al Juma, Tripoli, Libya.</td>
<td><strong>Housing and Infrastructure Board (HIB), Tripoli, Libya</strong></td>
<td><strong>ongoing</strong></td>
</tr>
<tr>
<td>4 <strong>Bangalore Metro – Reach 1</strong></td>
<td>Construction of two elevated Metro stations at MG Road and Trinity Circle Terminals in Reach-1.</td>
<td><strong>Bangalore Metro Rail Corp Ltd</strong></td>
<td><strong>ongoing</strong></td>
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<tr>
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<tr>
<td><strong>5 Medical College and Hostel Complex</strong></td>
<td>Ministry of Health and Family Welfare</td>
<td>Construction of medical, dental and nursing colleges, six hostel buildings, warden residence, auditorium at AIIMS, Raipur. Civil work includes finishes, fire fighting and electrical work.</td>
<td>Ongoing Aug 2011</td>
</tr>
<tr>
<td><strong>6 Hyderabad Vijayawada section of NH-9</strong></td>
<td>National Highways Authority of India</td>
<td>Four and six laning of Hyderabad-Vijayawada section from km 40 to km 221.5 of NH-9 on BOT (Toll) basis under NHDP Phase-III in the State of Andhra Pradesh.</td>
<td>Ongoing Aug 2011</td>
</tr>
<tr>
<td><strong>7 Upgradation of Silchar to Balachera section of NH-54, Assam (AS-1)</strong></td>
<td>National Highways Authority of India</td>
<td>Four laning of Silchar to Balachera section from km 306.54 to km 275 of NH-54, construction of flexible pavement, widening of existing two lanes to four lanes, construction of road over bridge, major bridges, minor bridges and culverts, etc.</td>
<td>Ongoing May 2011</td>
</tr>
<tr>
<td><strong>8 Upgradation of Guwahati-Nalbari section of NH-31, East West Corridor, Assam (AS-4)</strong></td>
<td>National Highways Authority of India</td>
<td>Four-laning and strengthening of 28 km of NH-31 with flexible pavement including construction of ten minor bridges and 39 culverts.</td>
<td>Ongoing May 2011</td>
</tr>
<tr>
<td><strong>9 Upgradation of Guwahati-Nalbari section of NH-31, East West Corridor, Assam (AS-5)</strong></td>
<td>National Highways Authority of India</td>
<td>Four-laning and strengthening of 28 km of NH-31 with flexible pavement including construction of eight major bridges, 13 minor bridges and 23 culverts.</td>
<td>Ongoing May 2011</td>
</tr>
<tr>
<td><strong>10 Silchar to Balachera Section of NH-54, Assam</strong></td>
<td>National Highways Authority of India</td>
<td>Four-laning and strengthening of NH-54 from Silchar to Balachera. Construction of flexible pavement of 31.50 km length including ten bridges, one road over bridge, 115 culverts, ten bus laybys.</td>
<td>Ongoing May 2011</td>
</tr>
<tr>
<td><strong>11 Bangalore Metro – Reach 2</strong></td>
<td>Bangalore Metro Rail Corp Ltd</td>
<td>Construction of three elevated Metro Stations viz. Mysore Road Terminal, Deependal Nagar and Magadi Road Stations in Reach-2.</td>
<td>Ongoing Feb 2011</td>
</tr>
<tr>
<td><strong>13 Sikkim Greenfield Airport</strong></td>
<td>Airports Authority of India</td>
<td>Construction of a high altitude greenfield airport in the foothills of the Himalayas on 1,410 m involving cutting and filling earthwork, geogrid reinforced retaining wall with maximum height 80.38 m, drainage system including box culvert, cascading drains, underground tunnels and aerodrome pavements at Pakyong.</td>
<td>Ongoing Dec 2010</td>
</tr>
<tr>
<td><strong>14 Upgradation of Nalbari to Bijni section of NH-31 on East West Corridor, Assam (AS-8)</strong></td>
<td>National Highways Authority of India</td>
<td>Four-laning and strengthening of 30 km of NH-31 with rigid/flexible pavement including construction of two major bridges, eight minor bridges and 22 culverts.</td>
<td>Ongoing Dec 2010</td>
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<tr>
<td><strong>15</strong> Upgradation of Nalbari to Bijni section of NH-31 on East West Corridor, Assam (AS-9)</td>
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<tr>
<td>CLIENT/CONSULTANT</td>
<td>National Highways Authority of India</td>
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<td>SCOPE</td>
<td>Four-laning and strengthening of 21.5 km of NH-31 with rigid/flexible pavement including construction of two major bridges, eight minor bridges and ten culverts.</td>
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<td>Ongoing Dec 2010</td>
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<td><strong>16</strong> Upgradation of Lanka to Daboka section of NH 54, Assam (AS-16)</td>
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<td><strong>17</strong> Dighi Port Development</td>
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<td><strong>19</strong> Upgradation of Lalsot to Kota Road in Rajasthan (LJ-1)</td>
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<td><strong>20</strong> Construction of Elevated Viaduct with stations</td>
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<td><strong>21</strong> Upgradation of NH-76, Rajasthan (RJ-8)</td>
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<td><strong>22</strong> Medicity Phase-1</td>
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<td><strong>23</strong> Upgradation of Ratangarh to Kishangarh Road in Rajasthan (HK-2)</td>
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<tr>
<td><strong>24</strong> Upgradation of Hanumangarh to Ratangarh Road in Rajasthan (HK-1)</td>
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<tr>
<td>25 Upgradation of Baran to Jhalawar Road in Rajasthan (LJ-2)</td>
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<td>26 Upgradation of Mohania-Sasaram Section of NH-2, Bihar</td>
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<td>27 Construction of Jaipur Bypass Zone D, Rajasthan</td>
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<td>28 Upgradation of Gonthami-Diwancheru Section of NH-5, Andhra Pradesh</td>
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<tr>
<td>29 Elevated Viaduct from Barakhamba Road Connaught Place for Line No. 3</td>
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<tr>
<td>30 Upgradation of Dharmavaram-Tuni Section of NH-5, Andhra Pradesh</td>
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<td>31 Upgradation of Rajahmundry-Dharmavaram Section of NH-5, Andhra Pradesh</td>
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<tr>
<td>32 Upgradation of Belgaum-Maharashtra Border Section of NH-4, Karnataka</td>
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<td>33 Upgradation of Nasirabad-Gulabpura Section of NH-79, Rajasthan</td>
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<td>34 Infrastructure and Services to Dukhan Support Services, Qatar</td>
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<td>35 Earthwork construction, Area 10 and 11, Central Duri, Riau, Indonesia</td>
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<td>36 Development of Bawana Industrial Park</td>
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<td>37 Road Overbridge for Karur Bypass</td>
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<td>38 Earthwork construction, Area 10, Duri, Riau, Indonesia</td>
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<tr>
<td>39 Earthwork construction, Area 10, Duri, Riau, Indonesia</td>
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<tr>
<td>40 Noida-Greater Noida Expressway</td>
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| 41 Bawana Water Treatment Plant | Municipal Corp of Delhi | Construction of 91 mld capacity water treatment plant at Bawana, involving:  
- Construction of 3 Nos. clear water reservoirs of 61 m x 61 m and 3.6 m ht  
- Clarifier: 4 Nos. dia 33.5 m  
- Filter house, chemical house, sludge sumps, pump house, administrative building, annexe building, filter house and associated road work. | Completed Dec 2001 |
| 42 Emergency Water Reservoir | Dabhol Power Co/TCE Consulting Engineers Ltd | Engineering, procurement and construction of reservoir of 120,000 m³ capacity at Dabhol, Maharashtra. | Completed Mar 2001 |
| 43 Tank Excavation and Construction of Alternate Road | Metropolis Gas Co. Pvt Ltd | Excavation for Tank T-100 and construction of alternate road at Dabhol, Maharashtra:  
- Earthwork – 49,000 m³  
- Hard rock (by blasting) – 100,000 m³ | Completed Mar 2001 |
| 44 LNG Storage and Regasification Terminal | Skanska Cementation International Ltd/Enron, USA | Earthwork (Roads, Tanks, Drainage)  
- Excavation in soil: 530,000 m³  
- Excavation in rock: 320,000 m³  
- Filling:  
  - with soil: 290,500 m³  
  - with rock: 316,500 m³  
  - with select and graded material: 22,500 m³  
Concrete Work  
- Pre-stressed concrete in tank outer wall base and ring beam: 27,000 m³  
- Reinforced concrete in all structures except tanks: 19,855 m³  
- Cryogenic concrete: 1,200 m³  
- Rebar: 3,000 MT  
- Cryogenic rebar: 1,372 MT  
- Pre-stressed tendons: 1,800 MT  
- Grouting cement for pre-stressing work: 1,800 MT  
Structural Steel Fabrication 8,900 MT  
The above civil work were part of a project for the construction of 3 Nos. 160,000 m³ (79.2 m dia x 54 m ht), LNG tanks, pipework, insulation application, painting, electrical and instrumentation work, fire-fighting system, equipment erection, including unloading arms installation and commissioning assistance for LNG Storage and Regasification Terminal at Dabhol, Maharashtra. | Civil work Jan 2001 |
<p>| 45 Vadodara-Halol Tollway | Vadodara-Halol Toll Road Ltd | Construction of 32 km four-lane tollway from Vadodara to Halol, including toll operation and asset maintenance for a period of 30 years. | Completed Sep 2000 |
| 46 Peeragarhi Flyover | U P State Bridge Corp Ltd | Construction of 220 Nos. (1,200 mm dia) bored cast-in-situ piles (total length 3,750 m) and pile capping work of 2,480 m³ in New Delhi. | Completed Mar 2000 |
| 47 Soda Ash Plant | Nirma Ltd | Construction of 4,341 Nos. driven cast-in-situ piles, civil work, including tunnels, silos, sumps water retaining, structural steel work, road and other development work at Kala Talav, Bhavnagar. | Completed Oct 1999 |</p>
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<tr>
<td>48 Raja Garden Flyover</td>
<td>U P State Bridge Corp Ltd</td>
<td>Installation of 11,000 m³ (1,200 mm dia) bored piles and pile capping work (concrete 13,000 m³) for construction of grade separator at intersection of Ring Road and Najafgarh Road, New Delhi.</td>
<td>Completed Feb 1999</td>
</tr>
<tr>
<td>49 Raw Water System</td>
<td>Reliance Industries and Infrastructure Ltd</td>
<td>Construction and laying of (48&quot; dia) 20 km, raw water pipeline, approach bridge and intake well on Tapi river at Hazira.</td>
<td>Completed Feb 1996</td>
</tr>
<tr>
<td>50 Effluent Treatment Plant</td>
<td>Oil and Natural Gas Corp Ltd</td>
<td>Design, engineering, supply, erection and commissioning of 4,000 m³ per day effluent treatment plant at North Santhal.</td>
<td>Completed Dec 1994</td>
</tr>
<tr>
<td>51 Raw Water Intake System</td>
<td>Chambal Fertilisers and Chemicals Ltd</td>
<td>Design, procurement, erection and commissioning of raw water system comprising approach bridge, intake well, tunnel, pumping station and (24&quot; dia) 7 km pipeline for Gadepan plant.</td>
<td>Completed Jun 1993</td>
</tr>
<tr>
<td>52 DM Water Plant</td>
<td>Chambal Fertilisers and Chemicals Ltd/Toyo Engineering India Ltd</td>
<td>Civil work for DM Water Plant at Gadepan.</td>
<td>Completed Jun 1991</td>
</tr>
<tr>
<td>53 Sewerage and Storm Water System</td>
<td>DLF Builders and Developers Ltd</td>
<td>Development work, including overhead and underground tanks, sewerage system and storm water drains at Qutab Enclave, Gurgaon.</td>
<td>Completed Mar 1991</td>
</tr>
<tr>
<td>54 Jet Engine Test Bed and Repair Facility</td>
<td>Indian Airlines/General Electric Technical Services Co Incs, USA</td>
<td>Design, procurement and erection of total facility on turnkey basis, covering civil and mechanical work, airconditioning system, electrification, instrumentation and acoustics at IGI Airport, New Delhi.</td>
<td>Completed Oct 1989</td>
</tr>
<tr>
<td>55 Aero Engine Test Bed Facility</td>
<td>Commander Work Engineers (Projects), Kanpur</td>
<td>Complete modification, including design/engineering of test cell and ejectors for test bed facility, along with acoustic insulation at Kanpur.</td>
<td>Completed Nov 1987</td>
</tr>
<tr>
<td>56 Aero Engine Test Bed Facility</td>
<td>Hindustan Aeronautics Ltd</td>
<td>Fabrication, erection of steel structures and augmentors, including testing and commissioning of aero engine test bed facility at Koraput, Orissa.</td>
<td>Completed Nov 1985</td>
</tr>
<tr>
<td>57 Aviation Fuelling Complex</td>
<td>Bharat Petroleum Corp Ltd/Dalal Consultants</td>
<td>Mechanical erection of piping and equipment, along with associated civil work for Aviation Fuelling Complex at IGI Airport, New Delhi.</td>
<td>Completed Aug 1985</td>
</tr>
<tr>
<td>58 Foldable Acoustic Partition</td>
<td>Delhi Development Authority</td>
<td>Design, fabrication, erection and commissioning of 55 m foldable acoustic partition for indoor stadium.</td>
<td>Completed Sep 1982</td>
</tr>
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