

Rebar Contractors



pinnacleinfotech.com



Mission

Help the AEC industry optimize resources, cost and quality through innovative use of technology for:

- Sustainable and efficient design
- Collaborative pre-construction planning
- Agile construction process
- Reliable facility management

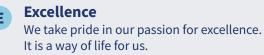
Vision

Lead the global AEC industry to certainty and efficiency using technology.

Associations:



Our Values



Agility

We are always at the edge of technology and driven by agile transformations.

Reliability

We have ISO-certified processes and workflow to produce consistent and reliable performance.

Teamwork

Pinnacle provides an environment where teams collaborate effectively to excel.

Honesty

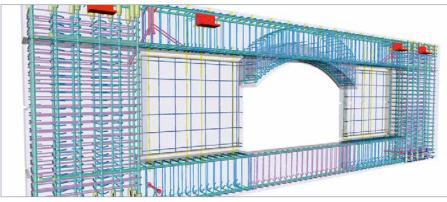
We win the trust of our stakeholders through integrity, straightforwardness, and transparency.

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1. Revolutionizing Construction



³D Rebar Model

Proper planning and coordination are the keys to the successful execution of projects in the construction industry. Advancements in 3D technology and the advent of Building Information Modeling (BIM) have revolutionized the Architectural, Engineering and Construction (AEC) industry.

BIM allows stakeholders to create and examine virtual representations of the Rebar model and other utilities of their project. The virtual construction can be used to generate accurate Rebar Shop Drawings with BBS and address all constructability issues before construction begins.

Pinnacle Infotech has been acknowledged as the global leader in providing innovative BIM solutions. We have received several awards and recognition from both industry and government. NASSCOM, the leading IT trade association, has named Pinnacle among the Top IT innovators 3 years in a row (2006, 2007, and 2008) and again in 2011. Our process orientation and quality control are per ISO standards – 9001:2015, 27001:2013, 19650-2, 19650-3, and 19650-5, plus EMS 14001:2015. As holders of **ISO 19650-5**, the esteemed international certification for BIM services, we ensure adept data management and transparent collaboration.

The successful completion of more than 15000 BIM projects in 43+ countries has provided Pinnacle with a deep understanding of international building codes and procedures. Our global delivery system allows us to maintain constant contact with our clients.

We recognize the importance of effective work process management and regular communication when outsourcing services. We have developed an ideal mix of infrastructure, experience, global presence and commitment to excellence that has led to long-term relationships with more than 2000 clients worldwide.

2. Building Information Modeling - Rebar

Building Information Modeling (BIM) for Rebar is the creation and use of coordinated 3D model via link to intelligent database for a construction project. BIM model enables seamless collaboration between Consultants/Designers, Engineers, Contractors and Sub-Contractors enabling quick decision making, accurate construction documents and better construction management. BIM offers structural engineers complete control over the design and detailing of concrete, steel and reinforcement.

Through BIM usage, we enhance Rebar detailing & shop drawings and create 'intelligent' rebar objects for incorporation in 3D models. Since BIM can easily combine pre-cast concrete with other building materials like steel and reinforced concrete, we promote efficient project management & error-free collaboration throughout the entire building value chain.

3. Rebar BIM Modeling Elements

- Pile
- Pile Cap
- Foundation
- Grade Beams
- Slab-on-grade
- Slab-on-deck
- Column

- Concrete Walls
- CMU Walls
- Stair Case
- Beams
- Slab
- Drop Panels
 - Concrete Curb

- Lintel
 - Tilt-up Panels
 - Concrete Pad
 - Corbel
- Precast Elements
- Ramp
- Site Elements

4. Benefits of Rebar Modeling & Detailing

Visualization

3D Visualization provides a three dimensional virtual representation of the whole building/structure. Real time view with owners ensured optimization of the design to reduce changes during construction.

Collaboration & Coordination

3D model enables flawless collaboration among Owners, Contractors, Engineers/Architects in a virtual environment. Collaboration takes place on real time basis leading to significant time saving.

Design Support

3D Model validates accuracy, completeness and consistency of the design even the end users being able to virtually see their facilities in real time.

Efficiency

Eliminates work stoppages, and rework by checking the accuracy and completeness of drawings before starting construction on-site/off-site.

Quality

Improving quality by producing accurate Shop Drawings directly from the 3D BIM Rebar Model which is also used for prefabrication.

Cost Control

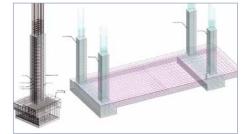
Preconstruction and prefabrication reviews mean better use of manpower, better quality of constructions, and reduced rework and wastages, all of which translate into lower costs.

Project Management

Detailed BBS and Shop Drawings with 3D Visualization enable a better look at the "Big Picture" help in the review, scheduling, and monitoring of each project.

Our clients have reported cost savings up to 15% by successfully implementing 3D Rebar in BIM.

5. 3D Rebar Model

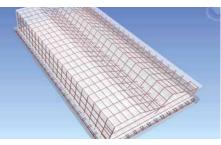


Slab with Column Rebar Model



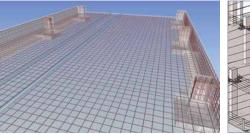
Under Ground Tunnel

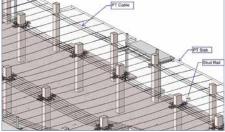




Transfer Tower Foundation for Mining Project

Equipment Pad





Raft Slab

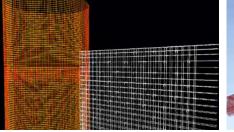
PT Tendons & Studs Rail



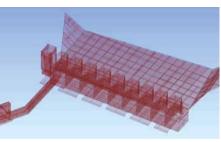


Shear Wall

Tunnel for Conveyor Belt



Retrofitted Wall



6. Constructability Review for Reinforcement

Virtual project constructions in BIM enable independent reviews of the construction plans and specifications. This identifies discrepancies in drawings and all constructability issues at preconstruction stage. During the constructability review, our BIM team generates a series of RFIs to help to identify the following types of constructability and operational issues:

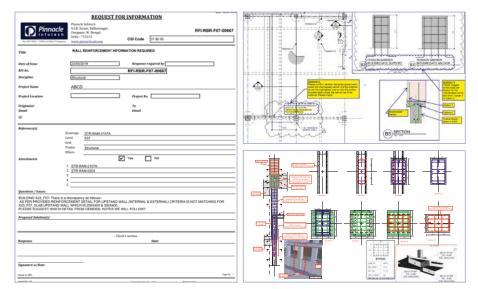
Missing information/documents

Input inconsistencies

- Conflicting data
- Other constructability issues

The 3D BIM is updated on the basis of the responses to the RFIs. Status of all RFIs are maintained in a log and follow-up is done to resolve them at the preconstruction stage. This eliminates work stoppages and reworks during construction.

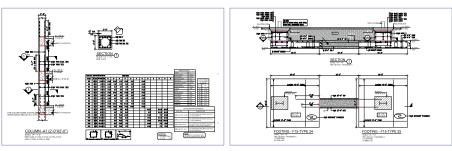
7. Request For Information



8. Rebar Estimation Services

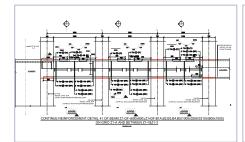
| Line | Mat | Func | Placing | Grd | Qty | Span | Spcg | Mult | Size | Cls | L1 | L2 | L3 | L4 | L5 | Lap | Stock | Lbs | Notes |
|------|-----|------|---------|-----|-----|-------|------|------|------|-----|------|------|----|------|----|-----|-------|--------|----------------|
| 10 | | TSR | | 60 | | 61-06 | 1-04 | N4 | 10/3 | L | 3-06 | 3-00 | | 0-00 | 6 | | 45CR7 | -2,450 | Ties (L0-L03) |
| 11 | TR | TSR | | 60 | | 61-06 | 1-04 | 4 | 10/3 | L | 3-10 | 3-00 | | 0-00 | 6 | | 45CR7 | 2,592 | Ties (L0-L03) |
| 12 | | TSR | | 60 | | 61-06 | 1-04 | N4 | 10/3 | L | 3-02 | 3-00 | | 0-00 | 8 | | 45CR7 | -2,394 | Ties (L03-L07) |
| 13 | TR | TSR | | 60 | | 61-06 | 1-04 | 4 | 10/3 | L | 3-06 | 3-00 | | 0-00 | 8 | | 45CR7 | 2,541 | Ties (L03-L07) |
| 14 | TR | TSR | | 60 | | 60-00 | 1-04 | N4 | 10/3 | L | 2-08 | 3-00 | | 0-00 | 8 | | 45CR7 | -2,092 | Ties (L07-L11) |
| 15 | TR | TSR | | 60 | | 60-00 | 1-04 | 4 | 10/3 | L | 3-00 | 3-00 | | 0-00 | 8 | | 45CR7 | 2,234 | Ties (L07-L11) |

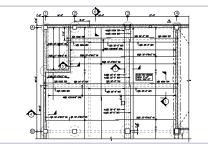
9. Reinforcement Shop Drawing



Column Reinforcement Drawing

Foundation Reinforcement Drawing





Beam Reinforcement Drawing

Slab Reinforcement Drawing

10. Bar Bending Schedule

The Bar Bending Schedule helps in the management of reinforcement bars that are needed to be cut and bent as per design intends.

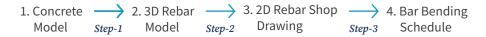
BBS provides the following details

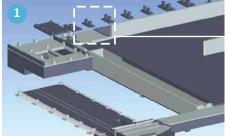
- Breakdown of bars by type, diameter and length
- Cut length, shape and weight of bars





11. Rebar Detailing Process Flow in BIM

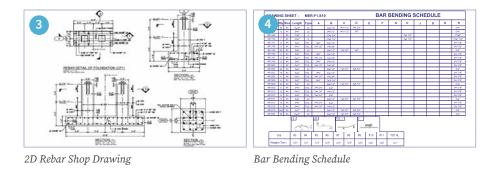






Concrete Model

3D Rebar Model



12. Software Platform and Process for Reinforcement Model & Shop Drawing Creation

Pinnacle specializes in the virtual construction of the Reinforcement 3D Models and shop drawings using various of software platforms like

- Tekla
- Bluebeam
- RebarCAD
 AutoCAD

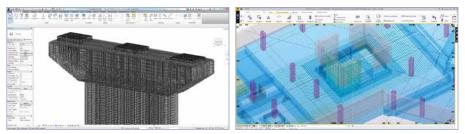
Ms-Excel

Autodesk Revit

Reinforcement Model Creation

- 1. Reviewing the Project Input Documents
- 2. Creating 3D Rebar Model
- 3. Raising Request for Information (RFI)
- 4. Constructability Review & Clash Detection

* Shop Drawing & Bar Bending Schedule Extracted From Co-ordinated Reinforcement Model



Reinforcement Model Created in Autodesk Revit

Reinforcement Model created in Tekla Structures

5. Quality Check (QC) of the model

7. Co-ordination with other Trade

6. Updating the 3D Model

Reinforcement Shop Drawing Preparation

- 1. Reviewing the Project Input Documents
- 2. Review of Standard and Reference Code
- 3. Raising Request for Information (RFI) for Missing Information
- 4. Preparing Reinforcement Layout in 2D
- 5. Annotation as per Project Requirement/Standard
- 6. Bar Bending Schedule
- 7. Quality Check (QC)



Reinforcement Shop Drawing Preparation in Rebar CAD

BBS (Quantity Take-off) sheet created from Rebar CAD

13. Why Pinnacle

Each of our employees has ingrained in themselves the core values - 'EARTH' of our organization.



Excellence

Excellence is a way of life for us. Our commitment to hard work, creativity, and innovation allows us to reach our full potential in approach, operations, and collaborations. We foster a culture of excellence from the ground up within our organization to achieve operation at the highest industry standards.

Agility

We understand that every business is different. We are highly agile and can adjust quickly to changing market conditions and client requirements. In addition, we offer a variety of business models to suit your specific needs at competitive prices.

Reliability

Pinnacalites rely on trusted processes to consistently produce excellent results. We have over 30 years of experience in the AEC industry, and our work processes are ISO-certified.

Teamwork

We work together to scale every challenge. We understand that it is only through teamwork that we can provide the best possible results for our customers. Pinnacle fosters a team-oriented culture where everyone is valued, and their contributions are encouraged and recognized.

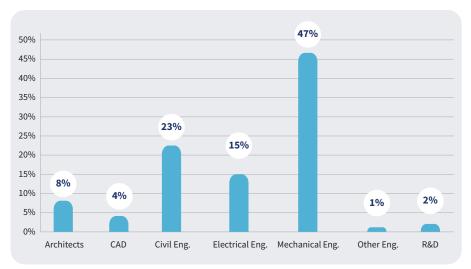
Honesty

Honesty is our key value, and we hold ourselves to the highest standards of integrity. We strive to be transparent and clear in our communication to ensure that our clients get the best value for the money.

14. Our Team

Pinnacle's significant contribution to Building Information Modeling is made possible by its highly qualified and experienced workforce, including engineers, architects, and other experienced professionals. All our employees are well-versed in handling international construction codes and standards. We are proud of the diverse team and their global experience.

Employee Background



Workforce Growth



15. Our Infrastructure

Pinnacle has large state-of-art campuses in Durgapur, Jaipur, Kolkata & Madurai, comprising facilities like High-speed Bandwidth, Blade servers, an R&D center, a Datacenter, recreational zones, playgrounds, and more.

We also have equipped global delivery centers in the US (Houston and Atlanta), Canada (Toronto), UK (London), UAE (Dubai), Singapore, Germany (Munich), and Japan (Tokyo) that allow our employees to work in the same time zone as our customers.

Pinnacle's *Construct-ability Installation Lab* gives construction site experience to employees, integrating theoretical learning with practical experience. It enables our employees to deliver BIM solutions on time and with accuracy.



16. Our Work Processes

We strongly emphasize the significance of efficient work process management and consistent communication in the context of outsourcing services. Our process orientation and quality control are per ISO standards – 9001:2015, 27001:2013, 19650-2, 19650-3, and 19650-5, plus EMS 14001:2015. As holders of **ISO 19650-5**, the esteemed international certification for BIM services, we ensure adept data management and transparent collaboration. On orders, we assign a dedicated Relationship Manager, a competent Project Delivery Head, and Project Managers for focused execution.

Relationship Management

Our relationship managers are co-located with customers, ensuring clear communication, managing timelines, and handling deliveries promptly to surpass customer expectations. They advise customers on the services Pinnacle provides and build long-term business relationships.

Production Process

Project teams report to Project Delivery Head (PDH). The PDH provides technical leadership to the team and ensures standard work processes (as per ISO norms) are followed. They oversee project delivery. Project Delivery Heads periodically communicate with the client to get regular feedback and ensure the successful completion of the project.

Project Managers handle small teams for a customer and are responsible for understanding project requirements, project standards, invoicing processes, and communication protocols. They prepare project templates per project specifications, plan resources and align project delivery schedules.

Auditing Process

The COE team is an independent body in the company for Process and quality management and monitors the process and quality through various audit parameters, sets up feedback management processes, carries out investigations in case of any complaints/concerns, and provides action items. This way, Pinnacle ensures consistency in the final deliverables throughout the company.

Quality Control Process

Pinnacle's efficient processes and stringent quality control mechanisms have added certainty to 15000+ projects worldwide. Our process orientation and quality control are per ISO 9001:2015, ISO/IEC 27001:2013, ISO 19650-2, ISO 19650-3, and **ISO 19650-5** standards and are managed by an independent QC team.

17. Our Projects

Clackamas County Courthouse (US-OR) Oregon City, USA



Msheireb Downtown Phase 4 Doha, Qatar



Kidbrooke Station Square Complex London, UK



The Avenues Mall Riyadh, Saudi Arabia



Taoyuan International Airport Taiwan



Google Mass Timber Sunnyvale, USA



18. Clients Speak

"My experience in working with Pinnacle has been very good. Pinnacle assisted Baker on a very complex and demanding project and Pinnacle's hard work, dedication and attention to detail really contributed to our team's success on the project. Thanks to the Pinnacle team members for their hard work, dedication, and quality work that they provided to Baker on this project."

Baker Concrete Construction, Inc., USA

"So far, the experience has been a positive one. Pinnacle has done a great job of creating RFIs when they're needed; learning from and applying feedback on all aspects of the project; and following up on issues."

Ceco Concrete Construction LLC, USA

"Overall good experience. Complicated Job with keeping track of many design changes and RFIs that were issued on the job. Pinnacle preformed very well with the large amount of changes on this hospital project. All the section views and keys/legends provided on the shop drawings meet expectations and were outstanding. The most important thing is that when it came to the end of the project Pinnacle stepped up to and produce the needed changes in a timely manner."

Urata & Sons, USA

"Great clean work. RFIs for the most part are clean and to the point."

Pacific Structures, USA

"Based upon the working relationship that Pinnacle Infotech has established with me, I have recommended your services to all of our team.Your hard work and timely responses have been integral in establishing this recommendation. I am confident that you will reap the benefits of your professional services no matter what type of construction that we send your way... Communication is critical to minimizing any problems and I pride myself on being a problem solver to the benefit of all parties. Looking forward to working with your team in the future."

Tyler Reinforcing LLC, USA

"I am a returning client following the good experience I had with Pinnacle at the Guam Naval Hospital. Pinnacle completes their work in an efficient and expedient manner and I appreciate that meetings are scheduled to discuss questions. The volume of RFIs has been relatively low and Pinnacle has presented several good questions for the designer to help resolve discrepancies."

Guam MACC Builders, USA

"It has been a pleasure working with Pinnacle. We dealt with a very complicated, poorly designed project and Pinnacle's modeling service was able to help point out several discrepancies during the modeling process. The scope of work was updated, revised, and changed so many times and Pinnacle was happy to continue working with us."

S. M. Wilson & Co., USA

"The team has been excellent to deal with and has responded to requests very quickly. I am extremely happy with Pinnacle's performance and would use your company again if the need arises."

ASI Constructors, USA

"Would like to pass onto your team. Our customer is very happy with the speedy returns on shop drawings, and attention to detailing. They are very impressed with the drawings. Keep up the good work."

Tyler Reinforcing LLC, USA

"Drawing review comments were regularly incorporated into revised drawings properly. The timely incorporation of updates was good. When the AutoCAD glitch occurred and line weights and dimensions were pixelated, your team worked to find a solution. Weekly design meetings worked very well to ensure comments were fully understood."

Pacific Structures, USA

India Office Locations

Durgapur - HQ

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Technology

