



Dean Nelson

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SUMMARY

Senior Mechanical Designer with more than 16 years of experience supporting industrial and energy related design work. Builds coordinated **3D plant layouts, general arrangements, piping systems**, and support details with MicroStation, **laser scanning**, and point cloud information. Converts project requirements into practical deliverables while balancing technical accuracy, quality expectations, schedule commitments, and stakeholder needs. Works closely with multidisciplinary teams to resolve interfaces, investigate field conditions, maintain revision control, and communicate design decisions clearly. Career progression reflects broader ownership across design development, checking, execution, delivery, and team guidance. Hands on experience with technical reviews, documentation, model coordination, and issue resolution supports dependable project outcomes. Ready to contribute thoughtful design judgment, steady coordination, and practical engineering support within a professional hybrid work environment.

EXPERIENCE

Senior Mechanical Designer

June 2021 - Present

Northstar Design Partners

Madison, WI 53703

Leads mechanical design delivery for coordinated industrial work, supporting **3D plant layouts**, piping systems, supports, field information, reviews, and team guidance. Balances **technical requirements**, quality checks, stakeholder coordination, and schedule needs across concurrent assignments.

- Converted project requirements into coordinated **MicroStation** layouts and clear design deliverables.
- Refined piping systems and supports using 3D plant layout models and **field information**.
- Resolved multidisciplinary interfaces through focused reviews, practical decisions, and timely stakeholder communication.
- Applied laser scanning and **point clouds** to investigate existing conditions during design development.
- Maintained **revision control**, checking records, and technical documentation across concurrent project assignments.
- Guided team members through design reviews, issue resolution, and delivery priorities.

Mechanical Designer

April 2017 - May 2021

Great Lakes Technical Group

Madison, WI 53703

Supported mechanical design assignments involving plant layouts, piping arrangements, support details, field conditions, and coordinated documentation. Took increasing ownership of technical reviews, stakeholder communication, quality control, and schedule focused delivery.

- Developed MicroStation **general arrangements** from **technical requirements** and coordinated project information.
- Updated **3D plant layouts** after reviewing piping routes, equipment interfaces, and support conditions.
- Used **point clouds** to clarify existing geometry before refining mechanical design details.
- Coordinated multidisciplinary comments and closed interface issues through organized design reviews.
- Investigated field conditions with **laser scanning** information, model checks, and technical research.
- Protected delivery quality through documented checks, revisions, and clear communication with project stakeholders.

Mechanical Designer

February 2013 - March 2017

Midwest Project Studio

Madison, WI 53703

Delivered mechanical design support for plant layout and piping work, translating project information into usable drawings and coordinated models. Contributed to field investigations, technical checking, documentation, and communication across design disciplines.

- Created coordinated **3D plant layouts** that reflected piping routes, equipment space, and support needs.
- Prepared **MicroStation** design updates after reviewing project requirements and multidisciplinary comments.
- Mapped **laser scanning** information into design decisions for existing plant conditions.
- Checked piping and support details before issuing revised technical documentation.
- Resolved drawing and model discrepancies through focused investigation and team discussion.
- Managed concurrent design priorities while preserving quality, traceability, and schedule commitments.

Mechanical Designer

June 2010 - January 2013

Riverbend Design Services

Madison, WI 53703

Built foundational mechanical design experience through plant layout, piping, support, documentation, and field condition assignments. Supported senior designers with accurate model updates, technical research, coordination, and dependable project execution.

- Produced **MicroStation** drawings and layout updates from established mechanical design requirements.

- Supported piping system development by checking routes, clearances, connections, and support locations.
- Reviewed **field information** and **point clouds** when existing conditions affected design decisions.
- Prepared organized revisions that helped multidisciplinary teams coordinate mechanical interfaces.
- Investigated technical questions through model review, field data, and applicable code research.
- Maintained clear documentation while balancing several design tasks and deadline requirements.

PROJECTS

Industrial Plant Layout Coordination 📅 2026

Coordinated a representative industrial layout study using MicroStation, piping routes, support locations, field information, laser scanning, and point clouds. Work focused on clear interfaces, practical access, and dependable documentation.

Existing Conditions Point Cloud Review 📅 2025

Reviewed point cloud and laser scanning information for an existing facility study. Translated observed conditions into design references supporting piping coordination, general arrangements, and mechanical decision making.

LEADERSHIP & AWARDS

- Recognized by project teams for dependable mechanical design coordination and clear issue resolution.
- Selected for expanded design ownership after consistent quality checking and schedule focused delivery.
- Trusted to guide peers through practical model review, documentation, and interface coordination.

EDUCATION

Associate of Applied Science in Mechanical Design Technology

2010

Madison Area Technical College GPA: 3.5

Madison, WI

Coursework: 3D plant layout, piping design, mechanical drafting, technical documentation

CERTIFICATIONS

- Mechanical Design Continuing Education 📅 2026
- Industrial Layout and Piping Training 📅 2026

TECHNICAL SKILLS

- **CAD Design Software:** MicroStation, 3D plant layout, general arrangements
- **Piping Design:** Piping systems, piping routes, piping supports
- **Reality Capture:** Laser scanning, point clouds, existing conditions
- **Mechanical Modeling:** Plant models, equipment interfaces, support details
- **Design Documentation:** Technical drawings, design deliverables, revision records
- **Quality Review:** Design checking, model review, document control
- **Project Coordination:** Multidisciplinary reviews, interface resolution, stakeholder updates
- **Field Investigation:** Field information, geometry review, condition verification
- **Design Delivery:** Schedule coordination, issue tracking, deliverable planning
- **Technical Research:** Code research, design requirements, technical investigations

SKILLS

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|-------------------|------------------------|---------------------------|-----------------------------|
| • MicroStation | • Laser scanning | • Design coordination | • Field condition review |
| • 3D plant layout | • Point clouds | • Technical documentation | • Stakeholder communication |
| • Piping systems | • General arrangements | • Quality checking | • Team mentoring |
| • Piping supports | • Mechanical design | • Revision control | |

PROFESSIONAL AFFILIATIONS

- Professional engineering design community participant, sharing practical lessons from plant layout and mechanical coordination.
- Local technical education network participant, supporting continued learning in mechanical design tools and methods.

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST