



STAFF REPORT

Report To: Board of Supervisors

Meeting Date: October 19, 2017

Staff Contact: Nick Marano, City Manager

Agenda Title: For Possible Action: To acknowledge and support an application from Symmetrix Composite Tooling, Inc. for State incentives through the Governor's Office of Economic Development (GOED). (Andrew Haskin, NNDA)

Staff Summary: Northern Nevada Development Authority (NNDA) will present Symmetrix Composite Tooling, Inc. and their application for State incentives.

Agenda Action: Formal Action/Motion

Time Requested: 10 mins

Proposed Motion

I move to acknowledge and support an application from Symmetrix Composite Tooling, Inc. for State incentives through the Governor's Office of Economic Development (GOED).

Board's Strategic Goal

Economic Development

Previous Action

N/A

Background/Issues & Analysis

N/A

Applicable Statute, Code, Policy, Rule or Regulation

N/A

Financial Information

Is there a fiscal impact? ☐ Yes ☒ No

If yes, account name/number:

Is it currently budgeted? ☐ Yes ☐ No

Explanation of Fiscal Impact:

Alternatives

Board Action Taken:

Motion: _____

1) _____

2) _____

Aye/Nay

(Vote Recorded By)

October 3, 2017

Nick Marano
Carson City Manager
201 North Carson Street, Suite 2
Carson City, Nevada 89701

Subject: Agenda Request – Economic Incentives for Symmetrix Composite Tooling

Dear Mr. Marano,

NNDA is requesting to be placed on the agenda for the Carson City Board of Supervisors' meeting to be held on Thursday, October 19, 2017.

NNDA will be presenting Symmetrix Composite Tooling, Inc. and their application for State incentives through the Governor's Office of Economic Development (GOED), which should take between five and ten minutes total. NNDA will be requesting a letter of support for the application following the presentation.

Symmetrix Composite Tooling is a Rhode Island based manufacturing company specializing in the fabrication of composite molds used in the transportation, renewable energy, and aerospace and defense industries. The company is seeking approval of their incentive application from the State for their planned expansion to Carson City. Detailed information, company overview, and supporting documents are attached.

If you have any questions, please let me know.

Best Regards,



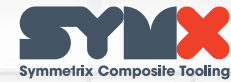
Andrew Haskin
Director of Business Development
Northern Nevada Development Authority

Summary of Information for Economic Incentives for Carson City Supervisors

Meeting on October 19, 2017

Business Name:	Symmetrix Composite Tooling, Inc.
Business Category:	Composite Mold Manufacturing
Type:	New operation in Carson City
Incentives Requested:	Sales and Use Tax Abatement; Personal Property Tax Abatement; Modified Business Tax Abatement
Number of New Jobs:	10
Average Wage:	\$19.08
Equipment Investment:	\$680,700.00
Estimated Annual Payroll:	\$384,000.00 (New Jobs)
Five Year Payroll Projection:	\$1,456,000.00 (Total Payroll)

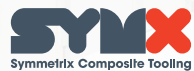
Symmetrix Composite Tooling



Contact Us

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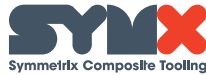


symmetrixcomposites.com



Shape your next design with us.

As a center of composite innovation, we've crafted high-performing composite forms, molds and prototype surfaces for some of the world's most innovative designs.



Our process at Symmetrix helps you bring your complex shape to life. Whether you are making one or one hundred, our plugs and molds can help your design reach its potential across several key industries.



The Poseidon 5-Axis CNC Machining Center at Symmetrix provides unprecedented precision and repeatability over large surfaces.

We Bring Complex Shapes To Life

Symmetrix Composite Tooling's CNC digital fabrication center is a purpose built 40,000 square foot facility. It features our large format CMS Poseidon 5-axis Machining Center, climate controlled spray booth, and steel fabrication/carpentry shop as well as an extensive array of pattern and tool making essentials such as our resin impregnator, gel coat spray and CSM guns, 2KM meter-mix paste machines, vacuum pumps, and hydronic post curing equipment.

No machine runs itself. Our experienced engineering and production teams plan, fabricate, finish, polish and adjust any necessary detail throughout our building process. This ensures that your project results in a unique, high-performing, composite form, mold, prototype, or plug that is engineered specifically for you.

CNC Machining Capabilities

Large format CNC machining is made possible by our CMS Poseidon 5-axis Machining Center. Optimized for durability, reliability, and precision machining, the Poseidon manages large machine projects as well as it does small. It never compromises rigidity or stability over an impressively large work envelope. Further improving its overall structural stability, the Poseidon's A & C axes are equipped with a pneumatic breaking system, locking either or both the A or C axes when their interpolated movement is not required, resulting in greater 3 axis rigidity.

The CMS Machining Center at Symmetrix delivers the tight tolerance needed for your job. Our machining center is certified to an overall volumetric tolerance of 0.1mm, or .004". Whether it's curved composite roof columns, or the exacting requirements of a 56m wind turbine blade, we can maintain tolerances within millimeters over a 26 meter surface and in a fraction of the time.

Axis Strokes and Performances

Axis Strokes	Quick Positioning Speeds	Quick Accelerations
X = 26 m (83.3')	85 meters/min (3,346"/min)	2.5 meters/sec (98.42"/sec ²)
Y = 6.2m (20.34')	85 meters/min (3,346"/min)	2.5 meters/sec (98.42"/sec ²)
Z = 3m (9.84')	45 meters/min (1,771"/min)	3.0 meters/sec (118.1"/sec ²)
A° = +/- 120°	9,000°/min	500°/sec ²
C° = +/- 270°	9,000°/min	500°/sec ²

Accuracy and Repeatability

Axis	Positioning Accuracy	Repeatability
X	0.665 mm (0.02618")	0.040 mm (0.00157")
Y	0.170 mm (0.00669")	0.039 mm (0.00154")
Z	0.090 mm (0.00354")	0.029 mm (0.00114")
A	60 arcseconds	25 arcseconds
C	60 arcseconds	25 arcseconds

Note: The numbers above are absolute numbers

Siemens NX11

Our use of Siemens NX11 CAD/CAM software is a quantum leap forward in delivering tooling quickly and accurately. Siemens NX11 is "the industry's most integrated, flexible and efficient solution for product design, engineering and manufacturing," providing Symmetrix with tighter control over manufacturing processes, allowing us to work to higher tolerances. Adopted across many industries, and used at companies like Boeing, SpaceX, and MacDonnell Douglas, NX11 gives Symmetrix complete surface model control and simulation in either 3+2 optimized or full 5-axis machining instruction.

Patterns and Plugs: Materials Selection

Master patterns and plug projects start with a simple steel framework optimized to meet the project needs. The frame is designed and fabricated for a stiff and ridged base structure, conscious of weight, and without problematic moisture absorption issues found with wooden base structures.

Substrate material specific to the application is typically of foam and fiberglass construction. Epoxy resin and multi axis fabrics are combined to support the technical requirements of the project. Epoxy seamless modeling paste is applied by our experienced technicians with 2KM metering, mixing, and dispensing equipment. This combination of material selection and a strict process control reduces the possibility of shrinkage and insures vacuum integrity for infusion optimized processing.

Spray coating is applied in our purpose-built climate controlled spray booth in (30m x 9m, 100' x 30'). The Symmetrix finishing team has the skill and experience to finish to any grit required, from rough to high polish mirror finish.

DTM Limited Production

Limited use composite tooling (also known as Direct To Mold) bypasses the pattern making step by machining the mold side of the surface to support direct composite part making. This can cut valuable time out of a limited run program or facilitate a prototyping initiative. We support a variety processes such as:

- Gel-coat / CSM contact laminates
- Vacuum bag consolidation
- Closed molding vacuum assisted tooling, i.e., Infusion, VARTM and SCRIMP
- Processing temperature options from ambient to 140F/60C or Med/HT range of 185F/85C

FRP Production Tooling

The Symmetrix approach to developing tooling is centered on the specific process requirements of the finished part and key factors of the project. We consciously consider project details such as expected number of pulls, the finish requirements, the anticipated temperature range of the project, and suitable materials. Shop aids, plants, tooling ball locations and scribes are all considered in an effort to provide a high quality finished product.

Light RTM Tooling

Accurate plug and pattern machining is the ideal first step in Light RTM tooling. At Symmetrix Composite Tooling we'll machine both the A side and the B side geometry simultaneously allowing for faster processing of Light RTM mold making while allowing confidence regarding the cavity shape and thickness. We can also add important alignment features and resin and vacuum port fixtures.

Accurate Flexibility

The high accuracy of the CAD/CAM process gives our customers production flexibility and significant cost savings by allowing separate components of a common assembly to be built individually with complete confidence of final fit and finish. A series of smaller molds, or adjustable features within mold assemblies can be consolidated into a master mold set. The end result is precise fit and consistency.

Confidentiality

Our customers have complete confidence that advanced prototyping projects will remain confidential and out of the public eye. Regardless of the project, Symmetrix applies the same discretion and sensitivity to confidential materials as required by the client.



CARSON CITY, NEVADA

CONSOLIDATED MUNICIPALITY AND STATE CAPITAL

October 19, 2017

Michael Dang
Governor's Office of Economic Development
Director of Business Operations &
Business Development
555 E Washington Ave, Ste 5400
Las Vegas, NV 89101

Dear Mr. Dang:

At the October 19, 2017 meeting, the Carson City Board of Supervisors took action to support an application from Symmetrix Composite Tooling, Inc. for State incentives through the Governor's Office of Economic Development.

Please feel free to contact me if you have any questions or need additional information.

Sincerely,

Robert L. Crowell
Mayor

C: Mr. Robert Hooper, Executive Director, Northern Nevada Development Authority, 704
W. Nye Lane #201, Carson City, NV, 89703

Robert L. Crowell, Mayor

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