

Oregon OSHA Worksite Redesign Grant Final Quarterly and Project Report

Company: **Gunderson Inc.**
Contract Number: **#97/99-13**
Project Name: **Mobile Lift**

Date: 11/31/01

Project accomplishments and effectiveness:

As you know, this project has gone through 2 phases to get to the final product. It started with Gunderson Inc. designing and constructing a mobile scissor lift prototype with spring loaded retractable wheels at the four corners of the device. Through a post ergonomic review of that device, it was determined that it had some significant ergonomic issues that needed to be addressed. Included in these were:

1. It had a manually indexing top that was almost impossible to turn with a load on it.
2. The retractable wheels were mounted outside the frame perimeter, which cause tripping and leg impact hazards.
3. The lift was only able to handle about 6,000 pounds of load.
4. It had to be manually pushed around, which was like pushing a small car.

In July of 2000, OMEP was contacted to project manage a phase 2 design and build of a solution with monies left over on the project. It was much like starting from scratch with some added insight as to the results required. We hired a concept engineer who after reviewing the ergonomic reports, had a series of meeting with Gunderson staff. It was decided that we would buy an off the shelf 10,000 lb. lift with a powered indexer top. We designed a subframe with air flotation rear retractable wheels. The front of the lift can be attached to a castored lifting hitch, which is removed when the device is in use. This allows for close access to the pallets of work when in use. The hitch is coupled to a small two wheeled, battery powered tow unit that has a built in charging system for easy maintenance. The tow unit and lifting hitch can be attached to the front of the subframe and the entire unit can be moved to the working location. After movement, the lifting hitch is unhitched and parked for storage until required again. This new design meets or exceeds all the needs as outlined in the original grant plus addresses all the shortcoming of the phase 1 design. The employees like the device and are eager to use it. The post ergonomic assessment has been included in this report to quantify the ergonomic improvements. Productivity and quality in the process has been maintained or improved with the use of this device

Project evaluation data:

The post ergonomic report has been attached to the back of this report, which shows the evaluation data.

A synopsis of the project evaluation:

We have also included the one page “executive overview” of the project for your review. It is a synopsis of the project and included a brief evaluation.

A plan to continue evaluating the project:

The plan for continued evaluation will be in the form of using the device. Greg Miller from Gunderson Inc. will continue to monitor the use and effectiveness of the device, and will be available for information on an ongoing basis.

How have other employers been informed of the results of the project?

A detailed story outlining the project and its benefits was written. It has been submitted for publication to the Small Business Administration (SBA) periodic newsletter, which goes out to thousands of small businesses in Oregon. It was also submitted to Liberty Northwest Insurance and the Association of Oregon Industries for their periodical publications. It will also be posted on the pending Or-OSHA website, which will disseminate information on this and other finished projects.

List of deliverables supplied for posting to the Oregon OSHA website:

The list agreed to in project close meetings has been supplied below. This has been supplied in electronic format, and includes:

1. VRML Solid Model.
Readable with Cortona VRML software
2. Solid Model CAD File:
 - A. Original CAD File Format from creation.
 - B. DXF Format (wire frame).
 - C. Any other available CAD outputs you wish to deliver.
3. One page executive overview with digital photo of device.
Microsoft Word
4. Vendor list with cross ref. code.
Excel
5. Bill of material with vendor cross ref. code and estimated costs.
Excel
6. Published article.
Microsoft Word
7. Ergonomic Original and Final reports.
Microsoft Word

Additionally, a VHS Video of the device has been supplied as outlined in the contract.

Cost of project:

The Or-OSHA dollars spent on this project total **\$98,823**. Through adjustments in the spending categories as approved, it was completed within the cost scope budgeted.

The attached Exhibit C reflects a billing totaling **\$10,345** for this final quarter.

OMEP has e-mailed a final category expenditure adjustment request on this project. Our records indicate that Or-OSHA is due back a rebate check totaling **\$2337** from this project fund. Please contact Pat Kraft from OMEP to confirm this amount.

Customer match overview:

Gunderson Inc. has documented **\$74,420** dollars in matching engineering services. These were reviewed by Mike Lulay in the summer of 2000. He concurred that the minimal 10% required match was easily met.

In closing, I would like to thank Oregon OSHA and the Department of Consumer and Business Services for their support and encouragement in this project. It is hoped that other businesses will benefit from this project's results.

Patrick Kraft
OMEP Manufacturing Consultant
And Project Manager for Gunderson Inc.