

*Presented to:*



## **Northwest Refinery Labor Study**

**By: Larry M Atles, Jacobs  
West Coast Manager of Construction Services**

**May 29, 2008**

**Jacobs  
5757 Plaza Drive, Suite 100  
Cypress, CA 90630 USA  
Phone: 714-503-3400  
<http://www.jacobs.com>**



# Safety Minute

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# What is Beyond Zero<sup>SM</sup>?

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It is a:

Personal stand that no one be injured on or off the job

Organizational commitment to create an existence free of incident and injury

Mind set intolerant of any level, frequency or severity of incident or injury

Belief in the possibility of being Beyond Zero<sup>SM</sup>

Culture where people go beyond learning how to avoid what they do not want, and learn how to generate what they do want

It is not:

A metric or goal

Motivated by compliance to some requirement or standard or to avoid punishment

# Agenda

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Scope of Study

General State of the Construction Labor Market

Labor Market Conditions in the Pacific Northwest

Ferndale Local Labor Market

Craft Resource Mitigation Options

Craft Resource Attraction and Retention

Labor Incentive Market Conditions

Infra-Structure Capabilities

# Scope of Study

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To provide labor information based on a preliminary market survey for the Northwest

Provide a preliminary market survey which will indicate labor requirements for the area

Market survey included all the refiners in the area and any major industrial projects in the area which would use the same resources that the refiners would use (i.e. industrial pipefitters, electricians, millrights, iron workers, concrete masons, etc.)

## Scope of Work (cont.)

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Individual project craft labor was determined using algorithms based on project total installed cost

Provide Union Labor rates for the area and determine labor contract expiration dates

Determine labor requirements based on preliminary market survey of spending by the refiners and major industrial labor users

Determine local available industrial labor force within a 50 mile radius of Ferndale, WA. This will be defined as local resources

## Scope of Work (cont.)

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Determine if and what, the deficit in labor would be based on the market survey of ongoing projects during the anticipated construction period of 2010-2012

Provide preliminary analysis of the available local housing to determine if it could handle the anticipated increase in labor

Review the need for craft incentive programs to attract and maintain labor

## Scope of Work (cont.)

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Determine if local contractor base is capable of handling a major capital project based on the work load anticipated in the 2010-2013 time frame

Provide rates for the Gulf and LA area which will be competing for refinery traveling labor



# General State of Construction Labor Market

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Until recently all evidence has pointed to a very strong demand for skilled construction labor through 2011

The Reed Construction data three year look ahead forecasts suggested that national spending on the construction will rise by 7.3% in 2008 and by an additional 10.3% in 2009

# General State of Construction Labor Market

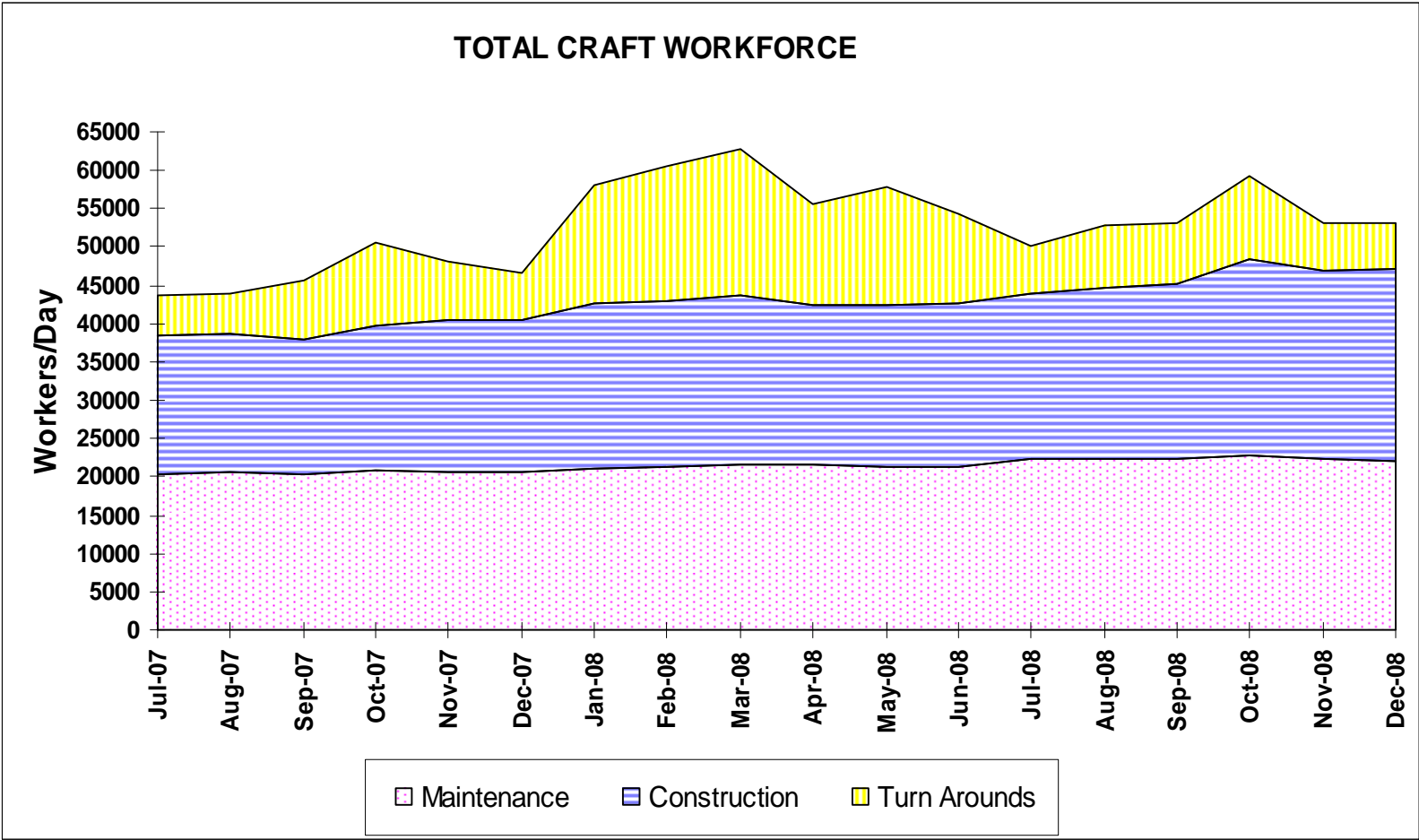
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More recent McGraw Hill forecasts indicate a slowdown in all but public construction in 2008

The Houston Based Roundtable advised they see skilled labor demand will be high for a very long time

The forecast for the Gulf Coast area for the next year continues strong

# Gulf Area Craft Workforce



# General State of Construction Labor Market

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API estimates refining capacity will increase over 1 million barrels per day by 2012

SEMTA estimate 30,000 more craft workers needed in the next 4 years. Primary craft needs are PF, Welders, MW and Elect

50% of the 400,000 electric utility workers will be eligible for retirement in 5-10 years

CLRC estimates 185,000 new construction workers needed nationally to replace 185,000 retiring and for the increased demand over the next 10 years

# Labor Market Conditions In the Pacific Northwest

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The Federal Reserve Beige Book ranks Washington, Idaho and Montana among the fastest growing states

Labor markets are generally tight and unemployment rates are low

While the national unemployment rate was 4.7% in August of 2007 Washington State was 4.3%

# Labor Market Conditions In the Pacific Northwest

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It is estimated that there are 209,000 construction workers in the state of Washington

In contrast to other parts of the country, where the construction labor forces is declining, there continues to be steady growth in Washington state

The “Workforce Explorer” indicates steady growth of 2 to 3% annually with slower growth until mid 2008 and a more rapid growth after until 2014

# Ferndale Local Labor Market

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The Seattle-Tacoma, Bellingham metropolitan areas had an unemployment rate of 4.1% vs the national of 4.7%

Available local refinery craftsmen within 50 miles of Bellingham is estimated to be 1100-1250

Most contractors we spoke to were unaware of major capital projects at several of the local refineries

# Ferndale Local Labor Market

Company	Type of Firm	Employees
Haskell Corp, Bellingham Washington,	Union Shop, pipe and metal shop fabrication; General Contractor specializing in mechanical projects	600/700 employees
Diamond B, Bellingham Washington,	Union Shop, pipe, and metal shop fabrication, General Contractor, Commercial and Industrial projects	400 employees
JH Kelly, Longview Washington,	Union Shop, large pipe fabrication shop, General Contractor, specializing in mechanical projects	800 employees
Starcon, Mt Vernon Washington,	Open Shop, Maintenance and Turnaround work, General Contractor Mechanical projects	275 employees
Matrix, Bellingham Washington,	Open Shop, pipe fabrication shop, General Contractor, specializing in mechanical projects	400/600 employees



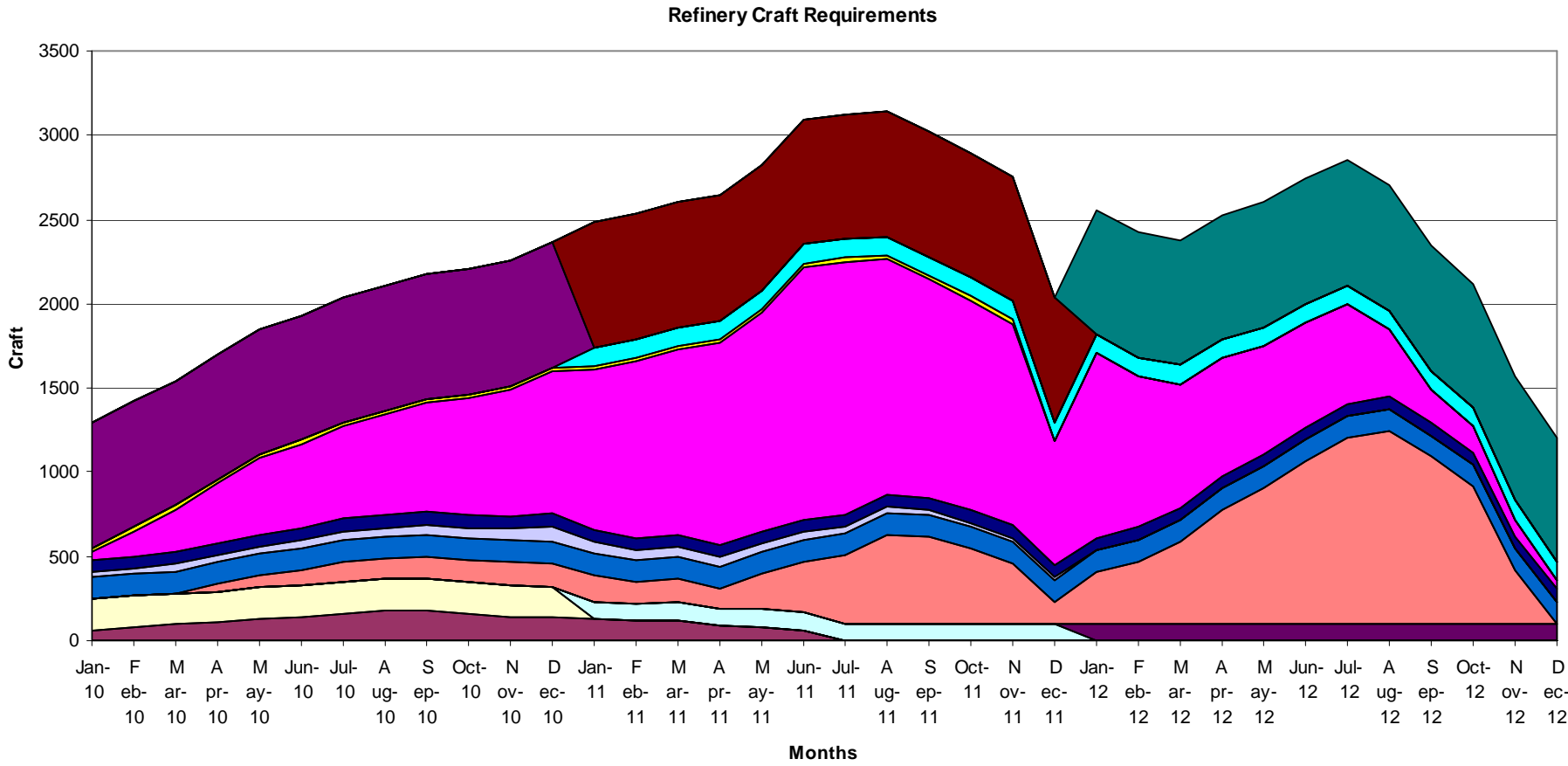
# Ferndale Local Labor Market

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The data to determine the demand for refinery craftsmen in the Ferndale area was projected based on:

- Preliminary project data (i.e. spending, P & IDs, maintenance and capital small project spends and major capital projects)
- All projects were assumed to be funded as planned. Obviously some projects will not be funded, but some may not be shown due the refineries wish to remain confidential

# Regional Refinery Craft Requirements



# Ferndale Local Labor Market

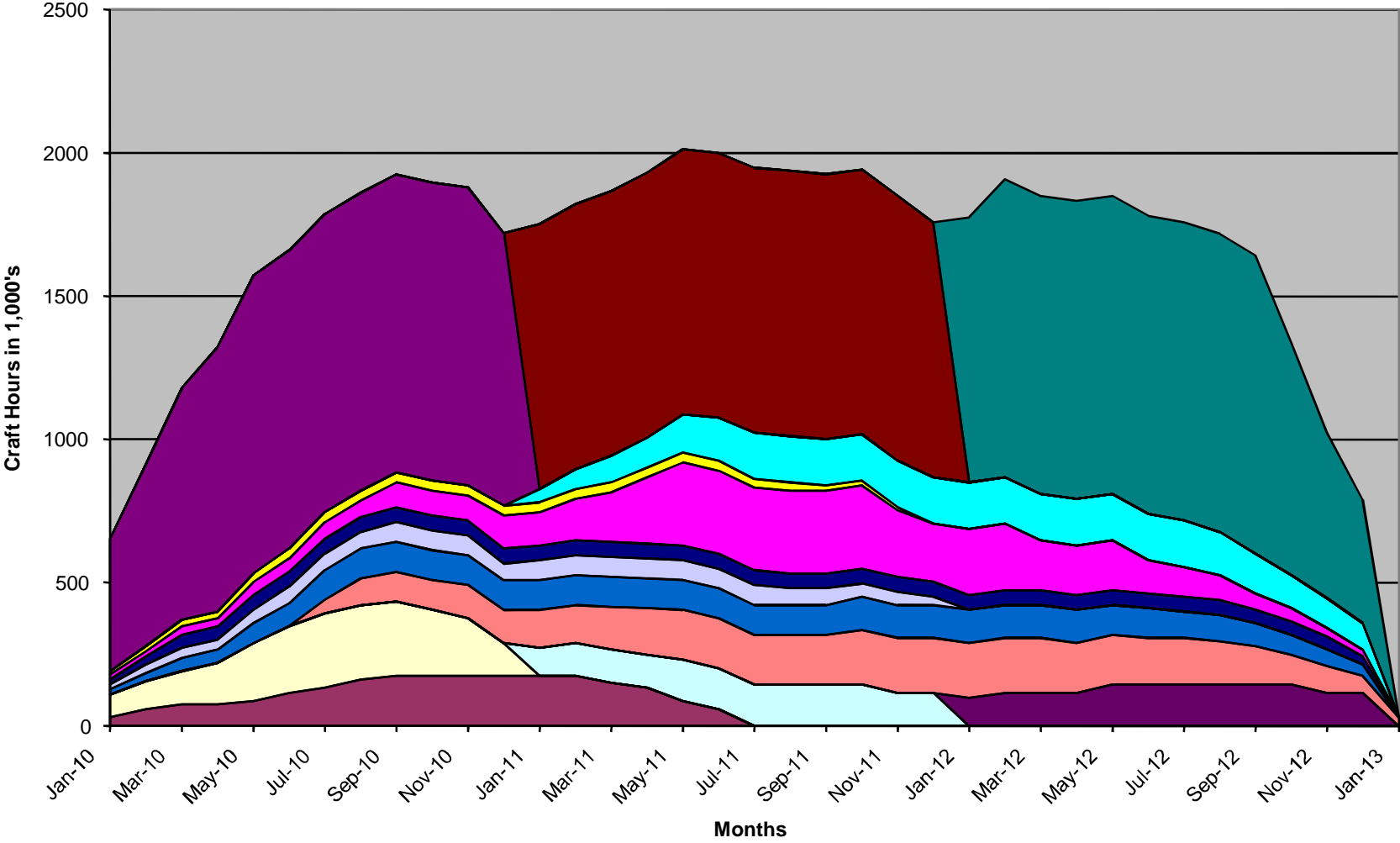
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If you compare the previous graph indicating the requirements for craft labor versus the local available labor, a large deficit is noted

The deficit is between 1500-2000 craftsmen which would have to be brought in to provide the craft staffing needed

A review of recent spending indicates that the refineries have postponed many of their major projects due to the large increases in costs of labor and material

# Ferndale Local Labor Market



# Craft Resource Mitigation Options

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While some projects have been postponed it will be very important to develop strategies to mitigate importing large amounts of labor into the area to accommodate anticipated labor shortages for the projects to come

In order to make these projects feasible it will require construction methods which reduce the number of onsite crafts

# Craft Resource Mitigation Options

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Modularization of process units and piperacks

Import foreign labor- presently being done for projects in the Gulf and LA Basin (NCCER certified before they arrive)

Attract recently retired crafts back into the industry

Make use of “Helmets to Hardhats” program (AFL-CIO)

Establish Roundtable where owners and construction firms can frankly discuss upcoming labor needs

# Craft Resource Mitigation Options

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Work with local high schools to recruit and establish more industrial arts classes:

- High School dropout rate is over 30%
- 28% of 9th graders will achieve a 4 year college degree but only 20% of U.S. jobs require this level of education
- 32% of 9th graders go on to enter an associate degree program at a community college but, 65% of U.S. jobs require this level of education (HBR Sept 13th, 2007 meeting)

# Craft Resource Attraction and Retention

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A national contractor HR and Compensation group recently completed a survey of the construction managers and craftsmen. They reviewed preferences among standard incentives used in large open shop construction firms.



# Craft Resource Attraction and Retention

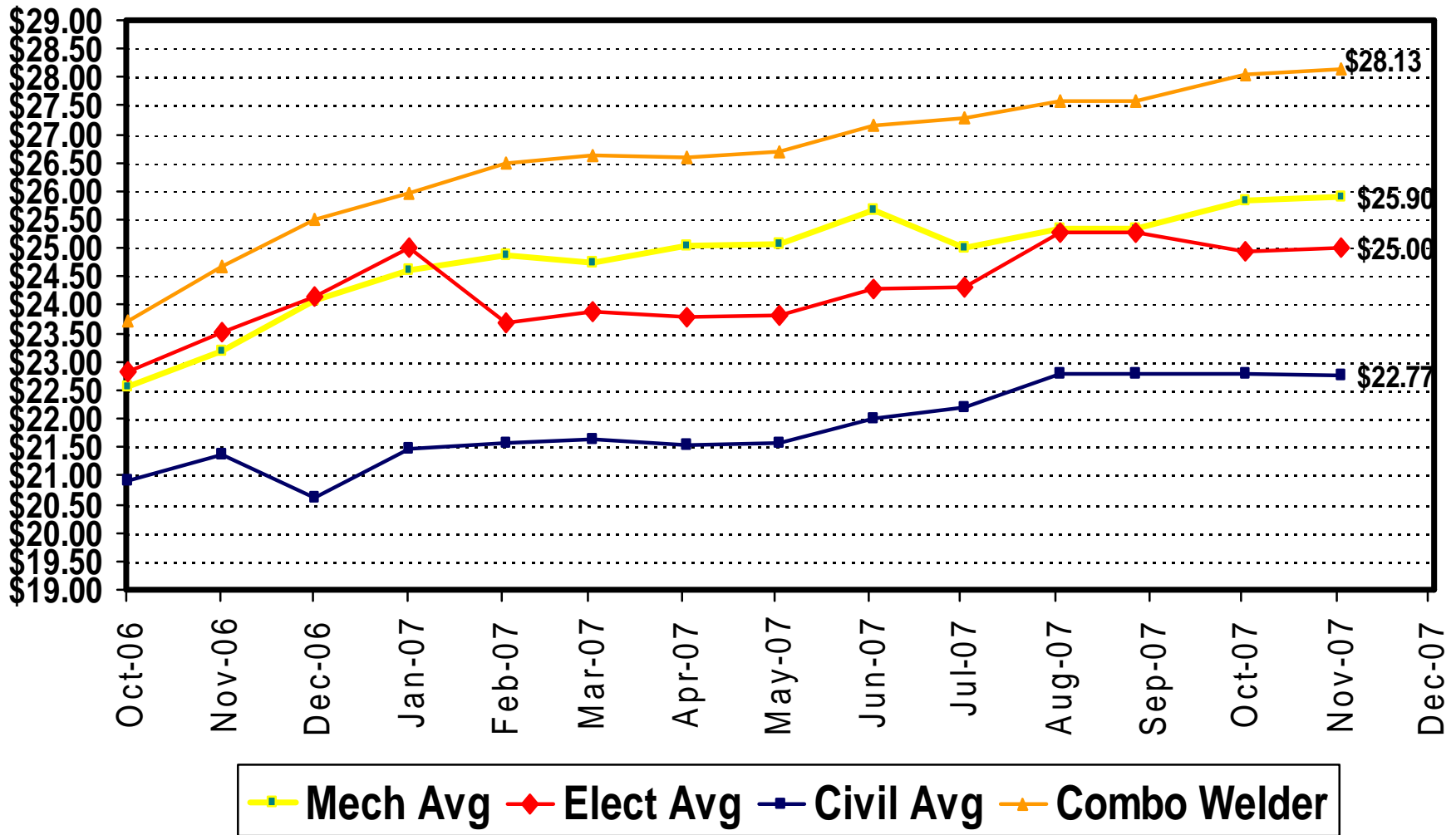
<b>Craft Worker Ranking</b>	<b>Contractor Utilization</b>	<b>Contractor Cost Effectiveness</b>	<b>Contractor Value</b>
Hourly Pay	Per diem	Hourly Pay	Hourly Pay
Scheduled Overtime	Travel Pay	Per Diem	Overtime
Per Diem	Welder Differential	Overtime	Per Diem
Travel Pay	Safety Bonus	Work Schedule	Travel Pay
Work Schedule	Certification Differential	Travel Pay	Work Schedule
Health/Life Benefits	Completion Bonus	Job Location	Health/Life Benefits
Completion Bonus	Attendance Bonus	Safety Bonus	Completion Bonus
Safety Bonus	Overtime	Health/Life Benefits	Job Location
Job Location		Completion Bonus	Safety Bonus
		401(k)	401(k)

# Craft Resource Attraction and Retention

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On recent projects in the LA Basin the most successful incentive bonus was a combination of safety and completion bonuses to the craftsmen

# Craft Resource Attraction and Retention



# Incentive Market Conditions

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INCENTIVES	GULF COAST	LA	NORTHWEST
Scheduled	50 -60 hrs/wk	50-60 hrs/wk	40-50 hrs/wk
Per Diem *	\$60-\$100 /day	\$75-\$100 /day	\$60-\$75/day
Safety Bonus	\$1-2 /hr	Very Limited	None Known
Completion Bonus	\$2-\$5 /hr	Very Limited	None Known

# Infra-Structure Capabilities

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There appears to be sufficient if not plentiful housing in the Anacortes, Mount Vernon and Bellingham areas as of last spring

As housing surveys of apartments with over 5 units indicated sufficient vacancies while other infra-structure such as schools were assumed to be adequate

# Summary

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Even with the present postponement of some major projects a slow steady increase of craft will be required over the next 12 months with a more rapid increase to follow

The time is right to start recruiting crafts into the trade to prepare (Partnering)

Modularization will soften the impact and will allow these projects to be feasible