Building Louisiana's Craft Workforce



A project of the Craft Workforce Development Task Force of the Louisiana Workforce Investment Council

LOUISIANA WORKFORCE COMMISSION

Presented by:

LED LOUISIANA ECONOMIC DEVELOPMENT

LCTCS Louisiana Community & Technical College System

DEPARTMENT of EDUCATION Louisiana Believes

REGENTS

ABC Associated Builders and Contractors, Inc.

Louisiana's plant operators and industrial construction employers

Table of Contents

Table of Contents 2
Executive Summary 4
The Task Force 5
Background 6
Craft Supply and Demand Analysis 7
Demand 7
Supply 9
Sources of Labor 10
Training 15
Total Capacity 15
Community and Technical Colleges 16
Associated Builders and Contractors 18
High Schools 19
Apprenticeship 20
Gap Analysis 21
Recruitment 25
Funding 27
Community and Technical Colleges 27
Institutional Funding 27
Funding Available to Students for LCTCS Tuition 28
Department of Education 30
ABC 30
Future State Funding 30
Task Force Progress 31
Next Steps 32
Appendix A: Projected Demand Craft Splits 33
Appendix B: Unemployment Benefits Claimants by Craft Occupations 34
Appendix C: Location of Craft Unemployment Claimants 35
Appendix D: Total Annual Training Capacity by Institution and Craft 36

Appendix E: Training Timelines 37
Appendix F: LCTCS Annual Capacity by Campus and Craft 38
Appendix G: LCTCS Instructor Recruitment Flyer 39
Appendix H: Baton Rouge Region High School Capacity 40
Appendix I: New Orleans Region High School Capacity 41
Appendix J: Lake Charles Region High Schools 42
Appendix K: Build Your Future, Build Louisiana 43
Appendix L: Craft Flyer for High School Students 45
Appendix M: Summary of LCTCS Funding Sources 46
Appendix N: Wage Levels upon Completion of Training 47

Executive Summary

This plan addresses two issues: the immediate need for construction workers, beginning in 2013, and the need for a framework for continued expansion of the education and training pipeline to meet future skilled industrial construction labor demands. The Task Force that conducted this analysis believes that starting wages of around $15 an hour that can grow to $28 an hour within two years will be a powerful draw to attract that workforce.

This plan is driven primarily by industry demand for an additional 86,300 skilled craft workers needed to construct the $60 billion worth of new plants and plant expansions already announced in Louisiana. An estimated 35,000 of these workers are needed to grow the industrial construction workforce and 51,300 are needed to replace construction workers who are expected to leave the industry through 2016.

Producing a skilled craft worker takes time and money. For Louisiana to efficiently meet the industrial construction labor demand, the state must accurately project future demand, identify gaps in supply, and ensure that enough people are recruited or begin training programs with sufficient lead time. A thorough analysis of the state's education and training capacity, curriculum timelines, and funding availability was conducted during the development of this plan, and that analysis must be kept current. The state also must support a partnership with industry to recruit instructors and to recruit individuals to industrial construction jobs to fill immediate openings and the pipeline to careers in the future.

The analysis conducted for this plan shows Louisiana can reasonably expect to recruit about 50,000 additional people from within the state to construction careers through 2016. Those people would be recruited from among high school graduates, the unemployed, under-employed, veterans and so forth.

The analysis also shows that the state has the capacity to train about 64,000 construction workers through 2016. Any training capacity beyond that needed to train new recruits will be used to develop existing workers into journeymen. The analysis illustrates that the industry's demand for entry-level helpers can be met each year, with 26,000 helpers produced by 2016. The residual training capacity targeted towards producing journeymen will fall short of industry's demand in the next few years. The remaining demand for workers must be met through two sources:

- Union training and recruitment of craft workers.
- The recruitment of already-skilled Louisianans and others who are among the mobile industrial construction workforce that has been the backbone of the industry across the Gulf South and other parts of the country.

The primary funding model for much of the training called for in this plan is tuition-based through the Louisiana Community and Technical College System, and the numerous sources of funding that are

available to help individuals offset their costs for tuition. The funding model also relies heavily on industry continuing its funding of Associated Builders and Contractors training programs.

In addition to recruitment, business and industry must focus on two critical goals: 1) Reducing the typically high rate of attrition of workers from this industry, to lower costs, to reduce avoidable pressure on the state's education and training systems, and to reduce the need to recruit workers from outside Louisiana, and 2) Continually upgrading the skills of its workers, partly to address attrition and partly to make the workforce more productive.

The Task Force

The Craft Workforce Development Task Force is a partnership of business and industry, government and organized labor that formed to address workforce demand driven by the coming industrial construction boom. The Task Force held its inaugural meeting on March 19, 2013, and presented its initial report to the Workforce Investment Council on June 7, 2013. This document represents the written version of that report, with some adjustments based on feedback from the WIC and members of its audience. This report will be updated as needed over the next few years.

History of the Task Force

Industry user groups began meeting in February 2012 to discuss the demand for craft workers over the next four or five years. An industry group, the Craft Workforce Development Board, formed with membership from the user groups in late 2012, modeled after a similar group that formed in 2005 in response to the workforce needs created by hurricanes Katrina and Rita. This board and other private groups agreed to aggregate their efforts in the Task Force, a public-private partnership appointed under the auspices of the state Workforce Investment Council.

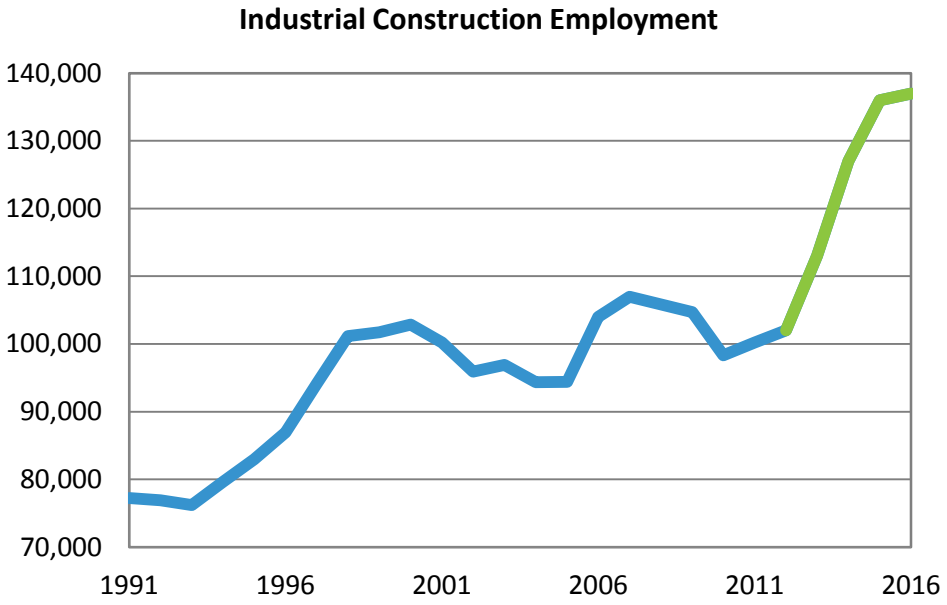
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Background

The state of Louisiana is beginning to experience a major surge in industrial construction projects. In addition to several significant recruiting wins by the Department of Economic Development (LED), the state's improved business climate and the low price of natural gas are prompting companies to invest in new plant construction and expansions of existing plants. Estimates place the dollar value of the new plants and announced expansions at $60 billion statewide, with approximately 35,000 new industrial construction jobs required by 2016. These impressive numbers do not account for projects or additional expansions which have yet to be announced.

Chart 1: A Coming Boom in Demand for Craft Workers



Source: LSU Division of Economic Development, Louisiana Workforce Commission and Louisiana Economic Development

The potential for a shortage of skilled industrial construction workers to build and maintain these plants has prompted public and private groups from around the state to convene to try to address the issue. The Craft Workforce Development Task Force, a work group of the Louisiana Workforce Commission's (LWC) Workforce Investment Council, was formed to consolidate the work of these various groups and stakeholders and to develop one comprehensive plan. Creating and executing an actionable and unified plan requires the commitment and collaboration of industry and multiple state agencies.

Craft Supply and Demand Analysis

The LWC, LSU Division of Economic Development (LSU), and LED have worked together with industry associations and representatives over the past several months to accurately forecast the supply and demand for industrial construction labor by craft and by region through 2016.

As a starting point for the projections, Dr. Stephen Barnes of LSU prepared a special report on the demand for skilled labor in the industrial construction industry cluster through 2016. This cluster is composed of Heavy and Civil Engineering Construction and Specialty Trade Contractors, as defined by the North American Industry Classification System (NAICS) sub-sectors 237 and 238. LSU's report was accepted by the Workforce Investment Council on March 18th as an augmentation to the standard short- and long-term projections which LSU and the LWC develop for all industries. From this baseline of annual total industry employment, the Craft Taskforce applied a craft split analysis performed by LED to determine the number of workers in demand by specific craft.

Demand

For the demand side of the craft splits, LED weighted the historical staffing patterns with input provided by industry directly and through the Construction Labor Market Analyzer (CLMA) developed by the national Construction Users Roundtable. LED took this approach after studying data from various organizations, such as Safety Alliance employment reports, recently conducted surveys of Louisiana contractors, LWC's industry staffing pattern surveys, the life cycles of similar projects in CLMA, and the list of major projects used to forecast overall demand. The mix by crafts is available in Appendix A.

For 2013 and beyond, the task force analyzed demand for construction workers that is driven by two separate factors: growth and attrition.

Growth

Many new jobs will be created by the $60 billion or so of new projects that have been announced. Table 1 below shows the projected number of new workers that will be need for each year. The demand for new workers is a total of about 35,000 additional workers through 2016. This number will change over time as projects are added, completed, or delayed.

Table 1: Growth Demand

New Workers Required for Growth				
	2013	2014	2015	2016
New Orleans	2,915	3,388	(188)	0
Baton Rouge	2,185	3,153	52	(2,000)
Lake Charles	2,279	6,315	8,789	3,000
Other	3,621	1,144	347	0
Statewide	11,000	14,000	9,000	1,000
NEW GROWTH THROUGH 2016				**35,000**

Attrition

In addition to new jobs, there is also a need to replace existing workers who leave the industry through 2016. The task force chose an attrition rate of 10%. Typical attrition rates in this industry are often as high as 20% per year, with a national average of 14%. However, industry members of the task force indicated workers are likely to delay their departure during a period of potentially higher wages, which they anticipate through at least 2016. Table 2 illustrates the number of workers needed each year to replace industry attrition, which at 51,300 workers, represents a greater number than new growth.

Table 2: Replacement Demand

Workers Required by Attrition				
	2013	2014	2015	2016
New Orleans	2,680	3,019	3,000	3,000
Baton Rouge	3,980	4,295	4,300	4,100
Lake Charles	990	1,621	2,500	2,800
Other	3,651	3,765	3,800	3,800
Statewide	11,300	12,700	13,600	13,700
ATTRITION THROUGH 2016				**51,300**

Total demand for additional workers through 2016

Based on current data, the total number of new workers required to construct the announced projects is the sum of those required for growth and those required as a result of attrition. These totals displayed in Table 3 show that more than 20,000 new workers will be required by the industrial construction industry in each of the next three years and a total of 86,300 additional workers will be needed by 2016.

Table 3: Total Demand

Total Additional Workers Required				
	2013	2014	2015	2016
New Orleans	5,595	6,407	2,812	3,000
Baton Rouge	6,165	7,448	4,352	2,100
Lake Charles	3,269	7,936	11,289	5,800
Other	7,272	4,909	4,147	3,800
Statewide	22,300	26,700	22,600	14,700
TOTAL REQUIRED THROUGH 2016				**86,300**

Supply

The baseline employment of industrial construction labor is based upon actual employment numbers statewide in 2012. LED applied historical staffing pattern data provided by the LWC to determine the existing workforce by craft. The statewide supply of craft workers in 2013, the existing craft workforce, is estimated at 113,000 people.

In addition to comprising the major supply of labor, the existing work force also is the initial basis for estimating the number of replacement workers needed (see above.)

The gap between supply and demand is reflected in Table 3: Total Demand.

Sources of Labor

As the labor supply and demand analysis indicates, there is a massive demand for skilled workers this year and for several years to come. All potential sources of labor supply should be targeted to find workers with the skillsets required to fill jobs in the next year and beyond, and to recruit people for training so that they can take advantage of rapidly growing career opportunities in industrial construction.

Individuals who could transition to industrial construction jobs immediately or with limited training are likely to come from the following groups:

Unemployment insurance claimants

6,810 people who were receiving weekly unemployment insurance benefits indicated in their claims that their last job was in a craft occupation as of the week ending April 28, 2013. Detailed information on the number of claimants by occupation as well as the parish locations of these claimants is available in Appendices B and C. Industry representatives on the Task Force said that during a period of full employment in industrial construction, which is anticipated beginning later this year, one can assume that only about 15 percent of the number currently on unemployment would remain on unemployment at any point. That would indicate the unemployment rolls could produce 5,800 construction workers. Many would be hired this year and next year, and the numbers available from unemployment rolls would reduce quickly after that.

The LWC and industry both have critical rolls to play in ensuring unemployed construction workers return to work as soon as possible. Employers must:

- Post their open jobs with the LWC so that the agency can immediately refer claimants to work.
- Notify the LWC when a qualified UI claimant refuses a bona fide job offer.

The LWC will:

- Immediately refer qualified claimants to open construction jobs.
- Immediately disqualify claimants who refuse bona fide job offers. Claimants lose eligibility for benefits if they refuse work for which they are qualified, which pays close to their prior wage and is within a reasonable commute of their homes.
- Ensure that all claimants be assisted and held accountable for actively searching and interviewing for work throughout their claim.

Long-term unemployed

Approximately 2,000 people exhaust benefits each month and most of them remain unemployed for long periods beyond that. Given that about one-third of all claimants come from construction industries, roughly 2,000 people with construction-related skills are among the 6,000 long-term unemployed who have exhausted benefits in the past three months. The Task Force estimates

conservatively that one-fifth of these people, or 400 individuals, are qualified for work in the coming industrial construction boom. It is likely that this pool will be hired early in the construction boom.

Discharged veterans

Approximately 4,000 troops will be released this year through Fort Polk, Barksdale, and Belle Chase military bases. The Task Force estimates conservatively that one in eight of these veterans, or 500 people per year, will transition into industrial construction jobs in Louisiana, many requiring little training.

Workers in similar occupations

Market forces naturally pull workers from lower-paying industries to higher-paying industries when the skill requirements are similar. Residential and commercial construction workers and many shipbuilders already possess at least some of the skillsets necessary to build plants.

Current wages don't support this migration across industries, but as the industrial construction boom sets in and wages increase, this migration will begin. Short-term, specialized training will allow these workers to transition quickly into jobs building industrial plants.

Industry representatives on the Task Force said they typically don't see this migration occurring until industrial construction wages exceed wages in the other industries by at least $5 per hour, or $200 per week. Table 4 below shows that this level of wage disparity is not present today.

Table 4: Industry Sector Employment and Wages

Industry & Select Subsectors	Employment	Average Weekly Wages
Construction	**130,391**	**$962**
Heavy and Civil Engineering Construction	48,838	$1,063
Specialty Trade Contractors	60,125	$867
Construction of Buildings	21,427	$999
Manufacturing	**139,688**	**$1,201**
Transportation Equipment Manufacturing	16,375	$1,151
Petroleum & Coal Products Manufacturing	11,128	$1,971
Chemical Manufacturing	23,255	$1,761

Source: LWC Labor Market Statistics, Quarterly Census of Employment and Wages, 2011

The LWC's Quarterly Census of Employment and Wages provides insight into the numbers of workers in similar industries as well as the types of wages required to recruit workers into industrial construction. These data show that plant construction wages would have to increase by $300-$500 per week, or $7.50 to $12.50 per hour, for this migration to begin. Because of this, workers from this migration are factored into this analysis more in the later years of the industrial construction boom than in the early years.

Data for the most recent full year shows 21,427 workers in residential and commercial construction (NAICS 236) and 139,688 workers in the manufacturing industry (NAICS 31), with 16,735 workers in the

shipbuilding sub-sector of manufacturing (NAICSS 336). It is unknown how many of these workers may consider changing industries for higher wages, or at what point wages in these industries may reach new equilibriums. The Task Force is anticipating, perhaps conservatively, that 15 percent of the workers in building construction and ship building may migrate through 2016.

It is important to note that the state (LWC or partner agencies) will not actively recruit from other industries, some of which also face tight labor pools. However, workers in these industries will notice messaging aimed at other populations and word will spread when new construction projects begin hiring and what those jobs will pay. It is also important to note that the training plan developed for the industrial construction workers also will produce workers qualified to replace those who will migrate away from the ship building and building construction sectors.

In addition to the sources of workers who likely require little training, other available sources of workers will require much more training:

High school students

The state, industry and non-profit partners will actively recruit high school students to enter careers in industrial construction. According to the Southern Regional Education Board, about 30,000 high school graduates from public and private schools enter post-secondary education each year, but others drop out or enter the workforce after graduation, and these will be targets of recruitment efforts. As Louisiana's educational reforms are implemented, the Task Force anticipates that the dropout rate will continue to diminish, while conversely, the number of students graduating high school with industry based credentials ready for entry-level craft work will continue to rise.

Each year, approximately 12,000 students enter the workforce directly following high school graduation.
Recruitment target: 3,000 per year (25 percent)

Each year, roughly 8,000 high school students drop out. Most are too young to qualify for plant construction jobs, and many others are likely to have other insurmountable barriers to employment in these careers. However, the lure of good jobs and a bright future will be sufficiently appealing to some of these recent students for them to enroll in WorkReady U (adult education) to pursue a GED and construction training.
Recruitment target: 400 per year (Assumes 25 percent are old enough and about 1 in 5 of those can be recruited.)

Underemployed

About 600,000 adults in Louisiana do not have a GED or high school diploma. Many of them have barriers to employment in the demanding fields in industrial construction that they cannot overcome. However, others are able and interested in seeking GEDs and other training to become financially independent and support themselves and their families without government assistance. The wages

likely to be paid to people in industrial construction jobs make this possible. Appendix N provides the industry's current pay levels for entry-level workers as well as journeymen.

The Task Force estimates 10 percent are interested and physically able to do the work and able to participate in 10-12 weeks of training. The Task Force further estimates that half of these remaining individuals will meet the other eligibility requirements of this work, such as passing a pre-employment drug screen.
Recruiting target: 7,500 per year

Ex-offenders

The Louisiana Department of Public Safety and Corrections has approximately 110,000 offenders in its custody and control, of which 70,000 are under probation or parole supervision and 40,000 are serving a sentence in prisons or local jails. Annually, 15,000 offenders are released from Louisiana prisons and jails having served their sentence. Many of these individuals, despite having received certification through NCCER, AWS, ASE, and other bodies are either unemployed or underemployed. While they face obstacles with the stigma associated with being an ex-offender, many are motivated to change and become productive, law-abiding, taxpayers. If given the opportunity, they could compete for vacant jobs and add to the skilled craft workforce. Additionally, the less-skilled ex-offenders and those whose criminal records present a barrier to their employment on plant sites will be excellent candidates to replace building construction workers who migrate to plant construction.

People receiving government assistance

Several hundred thousand other people receive government assistance each year. However, most of them are women and children or they have disabilities which pose barriers to employment in these jobs. However, many spinoff jobs will develop in our labor markets as a result of the plant construction and increased manufacturing operations that will follow for which these individuals are well-suited. Those who are willing and able to build plants among this section of potential worker supply are already accounted for among the underemployed.

College dropouts

It is anticipated that at least some of the many college students who drop out before graduation will pursue training and work in industrial construction. At least one large Louisiana specialty contracting firm has indicated it has a lot of success recruiting these students. The Task Force will study this potential source of labor in greater detail before estimating how many people it could contribute to the training pipeline.

Table 5: Summary of estimated labor supply

		2013*	2014	2015	2016	TOTAL
Little training required	Unemployed	2,000	3,000	800	0	5,800
	Long-term unemployed	300	100	0	0	400
	Veterans	250	500	500	500	1,750
	Similar occupations	500	1,000	2,000	2,000	5,500
Full training required	Under-employed	3,750	7,500	7,500	7,500	26,250
	High school graduates	1,500	3,000	3,000	3,000	10,500
	High school dropouts	200	400	400	400	1,225
	TOTAL	8,500	15,500	14,200	13,400	51,600
	TOTAL NEEDED	**22,300**	**26,700**	**22,600**	**14,700**	**86,300**
	GAP	**13,800**	**11,200**	**8,400**	**1,300**	**34,700**

**Some 2013 estimates are reduced because only half the year remains.*

Table 5, shown above, illustrates the number of potential recruits from each of the different sources of labor discussed previously. Despite using what the Task Force considered to be conservative estimates, the sum of the sources of labor amounts to over 51,000 recruits through 2016.

Training

The Task Force has defined the minimum training requirements for each craft occupation, identified training capacity across various public and private institutions, and begun to align this capacity to produce workers ready for entry-level jobs in industrial construction.

To standardize the minimum acceptable training requirements, the Task Force agreed that most of the craft occupations will require Levels 1 and 2 of the standardized construction and maintenance curricula developed by the National Center for Construction Education and Research (NCCER) or a union equivalent training program. Completion of these first two levels of training will provide workers with a portable credential which industry accepts for entry level work. For certain occupations, such as welding, industry leaders requested alternative curricula and credentials, such as those developed by the American Welding Society (AWS). Industry leaders also indicated that workers in the "soft skills" occupations of painting, insulating, and scaffolding would be ready for hire with less training than NCCER Level 2.

The State has committed to redesigning its training pipeline to meet these industry requirements. By itself, this basic training of two levels of NCCER will not be sufficient to meet industry's demand for skilled workers. Industry must provide on-the-job training and at least two additional levels of classroom training are also necessary to develop a helper into a skilled journeyman.

In addition to providing on-the-job training, industry must ensure that employers are hiring students immediately after they complete basic training programs and are certified. Absent hiring commitments from employers, students will be leery to enroll into training. The industry representatives on the Task Force have committed to providing these assurances to training recruits.

Total Capacity

A preliminary evaluation of training providers including LCTCS, Associated Builders and Contractors, and high schools, indicates that Louisiana could produce over 18,000 workers with basic craft training each full year and over 9,000 in the remainder of 2013 if each institution is producing at maximum capacity. Table 6 below gives a summary of various training providers' potential annual capacity. Appendix D provides greater details on training capacity by craft and by institution. In the sections that follow, each training institution will be examined thoroughly.

In addition, about 5,000 apprentices are enrolled at any one time, and about 1,000 complete each year. The Task Force anticipates that union training capacity also will increase to help meet demand.

Table 6: Training Capacity and Cost

College	Current Annual Capacity
LCTCS	11,024
ABC-Baton Rouge	1,622
ABC-Baton Rouge (night)	556
ABC-Lake Charles	1,260
ABC-Lake Charles (night)	468
ABC-New Orleans	374
Baton Rouge area High Schools	1,379
Lake Charles area High Schools	705
New Orleans area High Schools	1,049
Totals	**18,437**

Community and Technical Colleges

Capacity

In response to the demand for skilled workers, LCTCS has transformed the way it will provide training leading to industry-based credentials. Beginning this summer, LCTCS will begin to use compressed schedules which quickly result in a credential. This innovative scheduling constitutes a major departure from the campuses' traditional academic semesters and is a result largely of the work of the Craft Task Force and the willingness of LCTCS to respond to the demand.

Currently, LCTCS provides Certificate, Diploma, and Associates Degree education with Industry Based Certification (IBC) embedded within traditional semester training. Colleges do provide customized, IBC, and clock hour training to meet industry demand, yet IBCs traditionally are provided via embedded offerings. The philosophy is students would be able to earn LCTCS certificates, diplomas, and associates degrees that serve the dual purpose of LCTCS credential while preparing to successfully pass a respective stackable IBC credential.

Due to the emerging 86,000 construction careers, it is incumbent upon LCTCS colleges to build new scalable and sustainable capacity. Above and beyond the current embedding of IBCs and limited customized training, LCTCS has now opened greater capacity in concentrated offerings:

Compressed Schedule Industry Based Certification (NCCER & AWS) Training

LCTCS Colleges, especially those nearest to the Interstate 10 Corridor, are now offering daytime NCCER & AWS training in a compressed schedule. Due to construction industry demand, construction training will be offered on a daily basis in consecutive weeks until students have achieved the appropriate level of NCCER or AWS training. For example, if NCCER Pipefitting requires 315 clock hours, the training would be offered daily in consecutive weeks, 5 days per week, 6 hours per day, for 11 weeks. Within

one calendar year, four cohorts could complete. Information on the training timeline for each craft and the estimated number of cohorts possible in a year is provided in Appendix E.

Evening and Weekend Industry Based Certification (NCCER & AWS) Training

In addition to daytime compressed schedule training, evening and weekend offerings also will build capacity. Though not as compressed as daily offerings, these trainings serve a significant outreach to the unemployed and underemployed. The working individual who is employed during the day can attend evening and weekend offerings to earn NCCER & AWS certifications. Also, it is important to note that evening and weekend classes will be used to train incumbent construction workers to earn IBC levels beyond the entry-level levels 1 & 2. This will respond to the so called 'greying' of the industry which causes a demand due to attrition.

LCTCS will begin offering compressed schedules for craft training this July. A survey of current capacity at each campus showed that approximately 1,231 students could receive craft training this summer, with much of the training directed towards welding, pipefitting, and electricians. A rigorous study conducted by LED and LCTCS, including individual visits to each campus to verify training facilities, will validate the results of this survey and establish the exact training capacity of LCTCS.

Pending that validation, LCTCS is prepared to train approximately 11,000 students in craft occupations annually. Included in this number would be around 2,000 each of welders, pipefitters, and electricians, as well as 2,500 trained in scaffolding. Full LCTCS capacity details are available in Appendix F.

Increasing Capacity through Partnerships

The Louisiana Workforce Investment Council's Craft Task Force has requested multiple partnerships across Louisiana in response to the surge in construction work over the next five years. LCTCS colleges along the Interstate 10 Corridor have opened dialogue with ABC's Pelican Chapter (Baton Rouge & Lake Charles) and Bayou Chapter (New Orleans) to respond to demand by partnering to blend existing resources. The Colleges include SOWELA Technical Community College, Baton Rouge Community College, River Parishes Community College, Delgado Community College, and South Central Louisiana Technical College. Following initial discussions, all parties understand the charge at hand and are enthusiastic. This initiative is awaiting review of legacy Memorandums of Understanding and may be adopted by all parties or respectively depending on terms of agreement.

Recruiting Qualified Instructors

As LCTCS expands its construction training, additional instructional capacity will be necessary. Industry leaders on the Task Force have offered assistance in identifying qualified journeyman instructional staff via various networks across the state. LCTCS, in conjunction with these statewide partners, is planning to hire 70 or more instructors statewide and has already begun advertising for these vital positions. A flyer recruiting instructors to these new positions was created by LCTCS and circulated by industry leaders through their various networks and industry alliances. A copy of the flyer is included in Appendix G.

Cost

LCTCS tuition rates vary from campus to campus, and as the compressed schedules for construction curricula are new for many campuses, final tuition rates are not available for all of the offerings. For illustration purposes, Table 7 below shows the estimated tuition by course offered by Baton Rouge Community College (BRCC). In this model, all costs are covered by tuition.

Table 7: LCTCS Training Costs

Craft	Total Capacity	LCTCS Student Tuition
Carpentry	802	$1,500
Electrician	1,917	$1,100
Heavy Equipment Operations	381	$1,500
Instrumentation	347	$1,300
Insulation	132	$1,300*
Millwright	567	$1,300
Pipefitting	2,208	$1,200
Welding (AWS)	2,016	$2,990
Scaffolding	2,542	$1,100*
Sheet Metal Worker	60	$1,300*
Concrete Finisher	52	$1,300*
Total	**11,024**	

**Tuition rates estimated without input by BRCC.*

Associated Builders and Contractors

Capacity

ABC facilities have traditionally been used only for night classes for workers who have already worked a full day. The night classes generally were offered twice a week over spring and fall semesters. Understanding the need to ramp up training, ABC is open to offering day-time training classes over compressed schedules similar to LCTCS' new model. Information provided by the Pelican and Bayou chapters of ABC shows that their Baton Rouge, New Orleans, and Lake Charles training facilities can train up to 3,256 individuals annually. This figure is an estimate based on their current capacity, length of each class, and number of cohorts possible each year. These day-time classes are in addition to basic training which the facilities will continue to offer at night. Between day and night classes, the Bayou and Pelican chapters can produce 4,280 workers with basic craft training each year. Details by facility and craft are available in Table 8 below.

Cost

Table 8 below illustrates the ABC tuition per student in Baton Rouge, Lake Charles, and New Orleans. The rates per student are based on a 10-week accelerated program of 320 total hours. This day-time capacity is new to the craft workforce development system and will represent new costs to ABC.

Table 8: ABC Day-Time Capacity and Costs

Facility	Carpentry	Electrician	Heavy Equipment Operations	Instrumentation	Millwright	Pipefitting	Welding	Concrete Finishing	Total
Baton Rouge	50	75	100	50	50	75	72	0	**472**
Cost	$1,475	$1,475	$1,475	$1,475	$1,475	$1,475	$3,325		
Lake Charles	48	72	48	48	48	48	60		**372**
Cost	$1,475	$1,475	$1,475	$1,475	$1,475	$1,475	$3,325		
NOLA	12	20	0	20	0	20	58	15	**145**
Cost	$1,800	$1,800		$1,800		$1,800	$2,200	$1,800	
Total Summer Capacity	**110**	**167**	**148**	**118**	**98**	**143**	**190**	**15**	**989**
Cohorts per Year	3	4	4	3	5	4	1	4	
Annual Day Capacity	**330**	**668**	**592**	**354**	**490**	**572**	**190**	**60**	**3,256**

High Schools

Capacity

Through existing partnerships with high schools, there is currently capacity to train around 3,100 students in the Baton Rouge, Lake Charles, and New Orleans areas. Details on each participating school are available in Appendices H, I, and J.

The Department of Education will be working with school districts across the state to create a Career Diploma Pathway that delivers students who are literate, numerate and advanced problem solvers, with adult workplace skills and are drug free.

The Career Diploma Pathway will be both more rigorous and more flexible:

1. A strong academic base (two years); and
2. Industry-defined course work, internships and training, including post-secondary coursework (two years).

The Career Diploma Pathway should include enhanced levels of career / life counseling that involve students and parents.

Goals	Challenges / Opportunities
• Align K – 12 career and technical education (CTE) with the State's economic development strategies • Involve a regional consortium of stakeholders (LCTCS, third party training organizations, regional industry, etc.) in developing and implementing a dynamic system of career and technical education • Prepare students for high-wage careers available to them in regional high-growth job sectors	• Align CTE funding and technical training resources with relevant career training • Enhance the school and district accountability system to reward student career success in ways similar to student academic success • Communicate with parents and grandparents on how the career pathway prepares students for *both* employment and life-long learning

The Department of Education's goal is to work with stakeholders statewide to create – by the fall of 2016 – regionally-relevant career packages that align with the new Career Diploma Pathway policy.

Many districts and industry leaders have expressed interest in implementing these changes sooner. The **Career Diploma Pathway Jump Start** option is for districts capable of producing these regionally-relevant career packages in time for the 2013-14, 2014-15, or 2015-16 school years.

Apprenticeship

Capacity

Each year, approximately 1,300 individuals enter into Registered Apprenticeship programs in which they receive a combination of classroom and paid on-the-job training. These joint labor-management apprenticeship programs work in partnership with LCTCS and follow nationally-approved standards which articulate to associates degrees. The number of active registered apprentices, which is composed of union and non-union individuals, has been steadily around 5,000 over the last few years. Many, though not all, of these individuals are learning craft occupations.

Louis Reine, president of Louisiana AFL-CIO and a member of the Task Force, has pledged that the unions are capable of providing training to as many apprentices as companies are willing to hire.

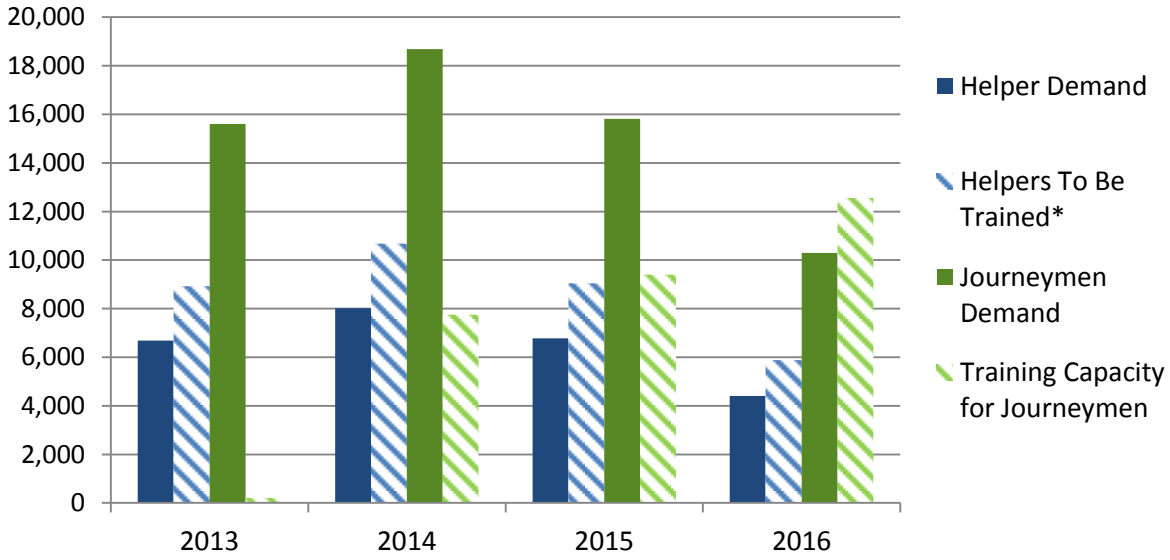
Gap Analysis

The preceding analysis and projections indicate that Louisiana expects to be able to recruit and train enough entry-level candidates to meet industry demand for that skill level each year through 2016. However, without immigration of highly skilled workers to Louisiana, industry will face a shortfall in journeymen.

It takes at least two years of training *and work experience* to develop a helper into a journeyman, and about 70 percent of the workforce on any of the announced industrial construction projects must be journeymen. Because of the work experience requirement, helpers cannot be developed into journeymen in sufficient numbers until the surge in work begins. And because most of the work must be done by journeymen, a short-term shortage of in-state journeymen will inevitably result.

Supplying all the helpers who could be hired is critical for the long-term development of the workforce pipeline for industrial construction careers. That strategy ensures Louisiana will meet part of the immediate need for workers and also produces the largest hiring pool possible for journeyman recruits. This strategy results in less capacity being available to train candidates in advanced levels of NCCER or AWS curricula in the early years of the boom. By 2016, with the current list of projects and anticipated start dates, peak employment and end dates, Louisiana will continue to meet the demand for helpers and have extra capacity to train journeymen if more are needed as additional projects are announced. Chart 1 below demonstrates that there is sufficient capacity to train helpers every year, but not enough capacity remaining in early years for the necessary advanced training to produce journeymen.

Chart 2: Helpers and Journey: Demand and Training Capacity



Several factors could impact the demand for journeymen and reduce the number who may need to be recruited from outside Louisiana. Among them are:

Greater success by industry in reducing attrition of skilled crafts workers.

35,000 of the 86,300 construction jobs (40 percent) this plan is intended to fill will be new jobs created through 2016. The remainder, about 51,000 jobs, is driven by the need to replace workers who are expected to leave industrial construction for any reason over the same period. The attrition rate is estimated at 10 percent per year, which is less than typical rates because of the assumption that higher wages during the boom will delay many workers' department for retirement, other occupations or other reasons.

To the extent that industrial contractors and plant owners can reduce their construction workforce attrition rate, the gap in gross numbers between trained recruits and demand for workers will be reduced. For instance, a 5 percentage point change per year will change demand by 25,650 workers through 2016. That means a 5 percentage point decline in attrition rate will come close to eliminating the need for out-of state journeymen, particularly in the later years of the boom.

Ratio of helpers to journeymen

Typically, about 80 percent of the workforce on a construction project is made up of journeymen and 20 percent is made up of lesser-skilled people, such as helpers. That means in every year of the construction boom, Louisiana is able to recruit and train more entry-level craft workers than industry would typically be willing to hire, and that industry would be faced with a critical shortage of journeymen.

To partially address this mismatch in skills demanded compared to those that can be produced through training alone, *industry has agreed to hire helpers at greater rates than is typical today—30 percent helpers instead of the more typical 20 percent*. This is necessary so that helpers can gain the experience that is a requirement for them to develop into journeymen. Industry also must do what it can to encourage or entice existing crafts workers to continue their education at night through additional levels of NCCER training required for them to become journeymen and to reach the high wages that fully skilled crafts workers command.

A helper on the kinds of projects that are driving the boom typically can develop into a journeyman with two years of work experience and night school. That means the earliest that helpers hired in 2013 can qualify as journeymen will be 2015, and so forth for each successive year. The craft workforce development system (LCTCS, ABC and industry, working together) can produce helpers and journeymen in the numbers in Table 9 if the following conditions are true:

1. Industry hires helpers at a rate of 30 percent per project, rather than the typical 20 percent.
2. In 2013, the system will recruit and train helpers only in the numbers likely to be hired, plus an additional number to account for dropouts from training. Residual training capacity must be filled with existing crafts workers to begin to fill the pipeline for journeyman training.
3. All those who begin continuing education in one year will complete as journeymen by the end of the following year.

Table 9: Summary Table of annual demand, supply, and training capacity

	Total Demand	Journeymen Demand	Helper Demand	Helper training requirement	Total Annual Training Capacity	Training Capacity for Journeymen	Production of Journeymen
2013	22,300	15,610	6,690	8,920	9,128	208	
2014	26,700	18,690	8,010	10,680	18,437	7,757	208
2015	22,600	15,820	6,780	9,040	18,437	9,397	7,757
2016	14,700	10,290	4,410	5,880	18,437	12,557	9,397
2017							12,557
Totals	86,300	60,410	25,890	34,520	64,439	29,919	29,919

Under this model, candidates for entry-level jobs will be over-recruited, accounting for dropouts and the need to expand the overall supply of crafts workers. It also begins to grow the development pipeline for fully qualified journeymen. However, members of the Task Force have been very clear that people who go through training and do not get a job quickly will discourage others from enrolling in training.

Under this model, Louisiana conceivably could supply nearly 26,000 helpers and approximately 30,000 journeymen. Additional journeymen would have to be recruited from out of state.

Sliding project timelines

It is not uncommon for large projects to start later or take longer than initially planned. Both of these factors are expected to impact at least some of the projects used to forecast demand in this analysis.

A nationwide shortage of engineers to design projects of this size and type and a backlog of large vessel construction also have the potential of delaying the start of some projects.

Sliding timelines will have the effect not only of reducing demand initially, but also of extending the construction boom for additional years. Sliding timelines also have the potential to reduce the total new demand because more workers may be able to work on multiple projects.

The Task Force has not estimated the impact of this potential yet, but will monitor project announcements and update the plan periodically.

Increasing skid construction

The potential also exists for the plants to move more of the construction of components off-site and out of state, thereby reducing the demand for construction workers in Louisiana. The Task Force raises this issue because one large project already is considering a significant increase in the amount of its construction that would be done elsewhere.

Louisiana expatriates

Despite a very tight hiring market for construction workers in Louisiana, Louisiana is a great provider of well-trained construction workers for project in other states. Thousands of Louisiana workers are involved in industrial construction projects across the Gulf South and further afield and also are involved

in massive fracking operations in the Dakotas, Pennsylvania and other states. Industry members of the Task Force anticipate that many of these workers will migrate back to Louisiana once our projects ramp up, demand increases and wages rise.

Many of these expatriates are well-trained construction workers and will be able to go right to work. Others, particularly those working in mining and extraction fields, are more likely to need at least some training.

Foreign labor

To the extent that additional journeymen are needed at any one time, the lure of good jobs with high wages is likely to also attract foreign workers. Louisiana's experience, particularly after Hurricanes Katrina and Rita in 2005, indicates that this is likely.

Recruitment

Several state agencies, industrial contractors, and plant owners each will play important roles in recruiting individuals into current job openings and training programs. The LWC and its partners will implement a scalable public relations plan tailored to reach the two targeted tiers of potential industrial construction workers: those who already possess skills and those who might be interested but need training.

The LWC will first conduct a messaging campaign to boost awareness about the industrial construction boom in general, and specifically with details such as number, location and type of jobs. The campaign will include calls to action for prospective jobseekers to learn about construction careers through Build Your Future (BYF.org), get training for construction jobs (LCTCS web site and campuses), apply for jobs (Louisiana Star Jobs/HiRE) or to visit any LWC Business & Career Solutions Center for help with any of the above.

The State's partnership with NCCER's Build Your Future, which is the first of its kind in the nation, will result in national online marketing with links to Star Jobs, Louisiana training institutions, and hiring events. Drafts of Louisiana-specific materials produced by Build Your Future are available in Appendix K.

The LWC and its partners will use a number of communications channels to execute this messaging. Press releases, agency and corporate websites, social media, media interviews, and news conferences all offer effective opportunities for publicity at little to no cost.

In early May, a partnership of the LWC, LCTCS, Career Compass, LED FastStart, and BYF.org, developed a flyer for distribution to high school seniors which allows them to scan a QR code on their smartphone to link directly to jobs, training, and additional information about careers in construction. More specifically, the links lead to: (1) Louisiana Star Jobs, where they can learn about occupations, connect to training or apply for work; (2) an LCTCS landing page with all of the community and technical colleges in our state to learn about training opportunities near to them and to enroll in training; and (3) Build Your Future, a non-profit web site dedicated to informing people about the construction trades and recruiting them to great careers. A copy of the flyer is available in Appendix L.

The LWC also will host or support specific events: General Recruiting Events and Hiring Events. The General Recruiting Events will be open to the public, but Hiring Events will be held only after employers identify the number of workers and specific skill sets they require. In other words, the employer has a contract to begin work and is hiring. In these cases, LWC staff will pre-screen candidates and schedule them for appointments with employers for interviews. In addition to its general communications channels, the LWC will also communicate directly with jobseekers through the Message Center in its HiRE system.

In addition, Career Compass has agreed to market job opportunities and required dual enrollment or post-secondary training to high school students in the districts in which it has contracts. By developing a

partnership with Career Compass, the Craft Task Force has direct access to high school students while they are in school. This past year, about 12,500 students in 116 high schools across the state received college and career coaching from Career Compass.

On an ongoing basis, Career Compass will echo the calls to action in the broader campaigns to students who are interested in construction careers. They also will direct students to Louisiana Connect, where information on construction careers, links to Star Jobs and connections to all education and training institutions and participating employers will be available.

The state must focus on reaching individuals suitable for training in enough time to complete full curriculums before the jobs become available. Just-in-time training is the goal. The LWC and LCTCS will use broad messaging to reach diverse audiences of individuals who lack qualifications but are likely to be interested in careers in industrial construction. The LWC, training providers, and employers will hold news conferences, issue news releases, and public service announcements to recruit individuals to training programs. Marketing LWC's Star Jobs system and Louisiana Connect directly to high school students will illustrate career opportunities and link students to training and employers. The Department of Education will also support the promotion of LCTCS training to high school students.

LWC and employers will search HiRE for job seekers with whom the LWC and its partners are already in contact but who may not possess the right skills today to be qualified for industrial construction careers. The LWC will use Community Action Agencies and other local networks and community and faith-based organizations (who already serve the under-employed) to reach people who may be persuaded to consider these careers. The LWC will work with other state agencies, such as the Departments of Corrections and Children and Family Services, to communicate the benefits of the new opportunities to the underemployed and potential job seekers.

The LWC will target high school students who are not bound for college through a number of channels. Business & Career Solutions Center staff will speak at PTA meetings, meet with guidance counselors and set up appearances at career day events by skilled crafts workers so they can meet students face to face to talk about their jobs. At these events, staff and current workers will discuss the jobs that are in demand, the wages, and the training required.

The LWC will also conduct outreach to at-risk populations such as students at alternative high schools, juvenile correctional facilities, youth organizations with a focus on at-risk youth, foster care populations, Job Corps and wayward youth, as well as through faith-based organizations.

Funding

Funding for craft training is available in two major categories: institutional and individual.

Community and Technical Colleges

Institutional Funding

LCTCS and its partners have attempted to locate new and existing sources of funds to respond to construction and other industry demands. In addition, some LCTCS Colleges have identified funds, in-kind services, and other resources to respond to local construction demand. The following is a sampling of college-recognized funding sources to impact the summer of 2013 and possibly beyond. A summary table of LCTCS funds is provided in Appendix

Carl D. Perkins Vocational and Technical Education Act Funding Grant

The Carl D. Perkins Act defines career and technical education as organized educational programs offering sequences of courses directly related to preparing individuals for employment in current or emerging occupations within the two-year college arena. Programs include competency-based applied learning which contributes to an individual's academic knowledge, higher-order reasoning, problem solving skills, and the occupational-specific skills necessary for economic independence.

As per the state plan, LCTCS Colleges and LDE Secondary entities are to partner and identify three mutually agreed-upon High Wage, High Skill, and High Demand areas to respond to local industries. All colleges have been provided necessary data to justify Construction training as appropriate within the Louisiana Carl Perkins State Plan. LCTCS has researched and received favorable guidance towards the opportunity of funding new and existing Construction Training capacity specifically for NCCER and AWS trainings. Funding for construction training has been strongly encouraged for LCTCS colleges. The State of Louisiana is anticipating $21 million for Fiscal Year 2014, with LCTCS receiving $10,720,791 and the Louisiana Department of Education receiving the balance. Colleges are slated to receive $7,082,718 to respond to all eligible career & technical education training initiatives statewide from the LCTCS portion.

Workforce Training Rapid Response

The state Workforce Training Rapid Response Grant is provided for two-year Louisiana Higher Education institutions (Member colleges of the LCTCS, Louisiana State University at Eunice, and Southern University at Shreveport). Other entities may participate via partnership in application for funding, yet, can only do so via an eligible college or eligible entity. Each year's allocation is $10 Million Dollars to be invested across these colleges.

Carrying out this responsibility requires the development of strategies that will upgrade the skills of our existing workforce and prepare new workers with the skills for a constantly changing economy. This initiative should supplement the cost of high demand workforce training programs in order to fill urgent market needs, as determined by economic and employment projections. Each year the areas of training

and awarding of grants is approved by a five member panel of the chief executives of the Louisiana Workforce Commission, Louisiana Board of Regents, Louisiana Economic Development, Louisiana Community & Technical College System and the chairman of the Louisiana Workforce Investment Council. This year, $4.7 million already has been allotted to craft training, a 20% increase over the previous year.

Occasionally, a grant will accomplish its mission and have a small balance of the original budget. Colleges have been encouraged since early 2013 to repurpose any such funds towards construction training to build capacity including equipment, supplies, instructors, etc. Based on projected demand, construction will remain as an area of focus and eligibility.

Trade Adjustment Assistance Community College and Career Training Grant Application

LCTCS is presently writing a grant to assist with the offering of construction training. Approximately 10 colleges of LCTCS have expressed interest and will seek federal funding through one consortia application, due to the U.S. Department of Labor (USDOL) by July 3, 2013. Partnerships will be sought in accordance with USDOL guidelines.

The U.S. Departments of Education (ED) and USDOL have announced the availability of $474.5 million for the third round of grants under the Trade Adjustment Assistance Community College and Career Training (TAACCT) program. The goal of the TAACCT grant program is to provide employment opportunities for students by establishing partnerships between community colleges and the business community. The TAACCT program is administered by US DOL and was created under the American Recovery and Reinvestment Act (ARRA) in 2009.

The FY 2013 grants include a new requirement that applicants emphasize six core elements:

- Evidence-based design;
- Stacked and latticed credentials;
- Transferability and articulation of credit;
- Advanced online and technology-enabled learning;
- Strategic alignment; and
- Alignment with previously funded TAACCT projects.

Funding Available to Students for LCTCS Tuition

The following funds are available to students to offset tuition or other living expenses. It is difficult to estimate the total amounts that will be available or used because these funds are based on the number of individuals who are eligible and which types of training they choose.

Pell Grants

A Pell Grant is money the U.S. federal government provides for students who need it to pay for college. Federal Pell Grants are limited to students with financial need, who have not earned their first bachelor's degree, or who are not enrolled in certain post-baccalaureate programs, through participating institutions.

A Federal Pell Grant, unlike a loan, does not have to be repaid. Federal Pell Grants usually are awarded only to undergraduate students who have not earned a bachelor's or a professional degree.

LCTCS is presently researching two potential options for providing Pell Grants to prospective students. Bear in mind the outcome of an NCCER or AWS will remain the same. The two options are as follows:

Converting Clock-Hour or Non-Credit training to Credit Hour

This is the more familiar method and would have each college applying for consideration per program. This could spell over one hundred applications and colleges would be encouraged to collaborate to reduce duplication of effort.

Emerging Initiative to have Pell Grants for Clock Hour or Non-Credit training

Encouraging news has emerged in recent months towards higher education entities providing Pell grants to students enrolled in competency based and/or Industry Based Certification training. Colleges can now award federal student aid based on measured competencies, not just credit hours. In a letter sent to colleges, the U.S. Education Department indicated colleges may apply to provide federal student aid to students enrolled in competency-based programs and spelled out a process for doing so.

LCTCS is actively pursuing each of these options for possible implementation in fall 2013 or soon thereafter.

TOPS Tech

Tops Tech is funding provided through the State of Louisiana for students graduating from a Louisiana High School and entering a technical degree program. Louisiana Office of Student Financial Assistance (LOSFA) manages the funds and provides oversight. There are two types of TOPS Tech funds: TOPS Tech for college students and Tops Tech Early Start for high schools students. Currently, funding for both TOPS Tech and TOPS Tech Early Start remains stable. Developing a marketing strategy from secondary and post-secondary would aid students and parents understand the opportunity to get funding for college that will lead to a career.

The requirements of Tops Tech for college students are a high school GPA of 2.5, 17 Tech Core Units for Option 1 and 19 Tech Core Units for Option 2, minimum ACT of 17 or a obtain a Silver grade on the WorkKeys Assessment, must be enrolled full-time in the first semester after anniversary of high school graduation, and must meet residency requirements. The maximum funding a student may receive through TOPS Tech is $1,186 per semester or $2,371 annually.

TOPS Tech Early Start

TOPS Tech Early Start is funding designed for students still in high school who are dually-enrolled in high school and a college level technical program of study. TOPS Tech Early Start funds can be used for IBC's that will lead to a technical credential prior to or at the same time as the student completes a high school diploma. Students are awarded funds based on qualifications similar to TOPS Tech for technical coursework. The award amount is capped at $600 per student per academic year.

Workforce Investment Act

Individuals are eligible to for Workforce Investment Act (WIA) funding only if they are unable to obtain grant assistance from other sources to pay the costs of training, including Welfare-to-Work, State-funded training funds, Trade Adjustment Assistance and Federal Pell Grants. Furthermore, each individual must have already received WIA Core and Intensive services and have a case manager determine that they are in need of training services directly linked to employment opportunities.

Each year, approximately 3,000 individuals in Louisiana use WIA funds to pay for training. Individual awards are enough to cover two levels of NCCER or AWS training.

Department of Education

The Department of Education will be working with school districts to align career and technical education funding with regionally-relevant high-wage career opportunities available for students in high-growth job sectors like construction crafts. Details of this potential funding realignment are addressed as part of the Career Diploma Pathway work described earlier in this report.

ABC

The cost of training individuals through ABC classes has been borne by industry. Funds are collected in each area through an hourly assessment on direct man hours at the plants. The assessment rates vary by area with Baton Rouge collecting 7-cents per hour, New Orleans collecting 9-cents per hour, and Lake Charles collecting 12-cents per hour. These assessments provide for approximately $1,200,000 in training in Baton Rouge and $800,000 in Lake Charles.

Future State Funding

State leaders have committed to considering additional funding for craft training among other priorities in the 2014-2015 State budget and beyond.

Task Force Progress

In the few months since its formation, the Task Force has made much progress:

1) Intensive public-private partnership to identify and pursue innovation solutions to develop tens of thousands of new crafts workers
2) Comprehensive, detailed forecast of industrial construction workforce demand and supply through 2016
3) Statewide standardization of construction training curriculums to industry specifications (same as at ABC)
4) Prioritization of craft training at LCTCS campuses statewide – facilities and funding, including redirecting millions of dollars to high wage, high demand craft training
5) Independent validation of LCTCS training capacity at South Louisiana campuses
6) LCTCS partnerships with other training institutions to
    a. Leverage training capacity at willing high schools
    b. Leverage private funding and facilities (ABC and labor unions)
    c. Enable private students to take advantage of publicly funded tuition programs
7) Compressed schedule of industry-based certification (NCCER & AWS) training
    a. Allows fast training and multiple cohorts during the year. Classes start in July
8) Evening and weekend industry-based certification (NCCER & AWS) training
    a. Allows multiple cohorts at the same time. Enables training of existing workforce with day jobs
9) LCTCS curriculum redesign to qualify eligible craft students for Pell Grants
10) Web enhancements by LCTCS and LWC
11) Partnership with NCCER's Build Your Future to create Build Louisiana subdomain as its first state-specific web site with links back to Star Jobs, Louisiana training institutions and hiring events.
12) Louisiana Star Jobs mobile app launched in May. Now accessible by smart phone.
13) Sent out a flyer to the High Schools announcing potential of high paying jobs to generate interest in craft training.

Next Steps

- WIC and LWC
  - Oversee plan and implement tracking and reporting mechanisms
  - WIC must re-emphasize the importance of career and technical education in high schools
- Governor and Legislature
  - Consider craft training for additional funding in the 2014-15 State budget and beyond
- Louisiana Office of Student Financial Aid
  - Continue to enhance LA Connect to provide a user-friendly experience with connections to Louisiana Star Jobs
- Department of Education
  - Prioritize Carl Perkins funding specifically to include craft training
  - Continue to drive development and adoption of enhanced career track diploma
  - Catalyze the continued adoption of Louisiana Connect
  - Ensure career coaching is provided to all middle and high school students
- Congressional delegation
  - Enact changes in law, specifically related to Pell Grants, to enable greater flexibility
- Plant owners, contractors and their associations
  - Drive training of existing workforce: helpers to journeymen
  - Work to drive down high attrition rates
  - Maintain or enhance existing levels of funding for craft training
  - Post all jobs with LWC in HiRE/Star Jobs
  - Ramp up outreach to high school students in person and in Louisiana Connect
- LCTCS
  - Continue momentum at campus level to ensure LCTCS meets the demand for quality training to industry specifications by prioritizing funding and leveraging training capacity at ABC, high schools and unions
- Schools and school boards
  - Make NCCER or the equivalent training available to every Louisiana high school student through alliances with LCTCS campuses and other training organizations
  - Provide career coaching to all middle and high school students, from staff or through partnerships with Career Compass or similar entities, to make students aware of high-wage, high-demand career opportunities and pathways to success
  - Ensure full use of Louisiana Connect to expose students to employers, colleges, education and training, and financial aid
- Local elected officials
  - Work with Workforce Investment Boards and other stakeholders to ensure alignment with the needs of your parishes
  - Grow local employment by engaging business and industry in Star Jobs and LA Connect to recruit, train, and hire local residents

Appendix A: Projected Demand Craft Splits

Occupation	%
Boilermaker	3.20%
Boilermaker Welder	2.10%
Carpenter	5.30%
Concrete Finisher	1.46%
Electrician	6.91%
Helpers - Carpenters	3.00%
Helpers - Electricians	1.82%
Helpers - Painters	2.30%
Helpers - Pipefitters	1.77%
Instrumentation Tech	6.00%
Insulator	1.70%
Ironworker (Reinforcing)	2.30%
Ironworker / Welder	1.15%
Laborer	11.76%
Millwright	1.30%
Crane Operator	2.20%
Heavy Equipment	3.48%
Painter	3.50%
Pipefitter	5.80%
Welder	2.85%
Pipelayer	0.60%
Sheet Metal Worker	3.50%
Other	26.00%

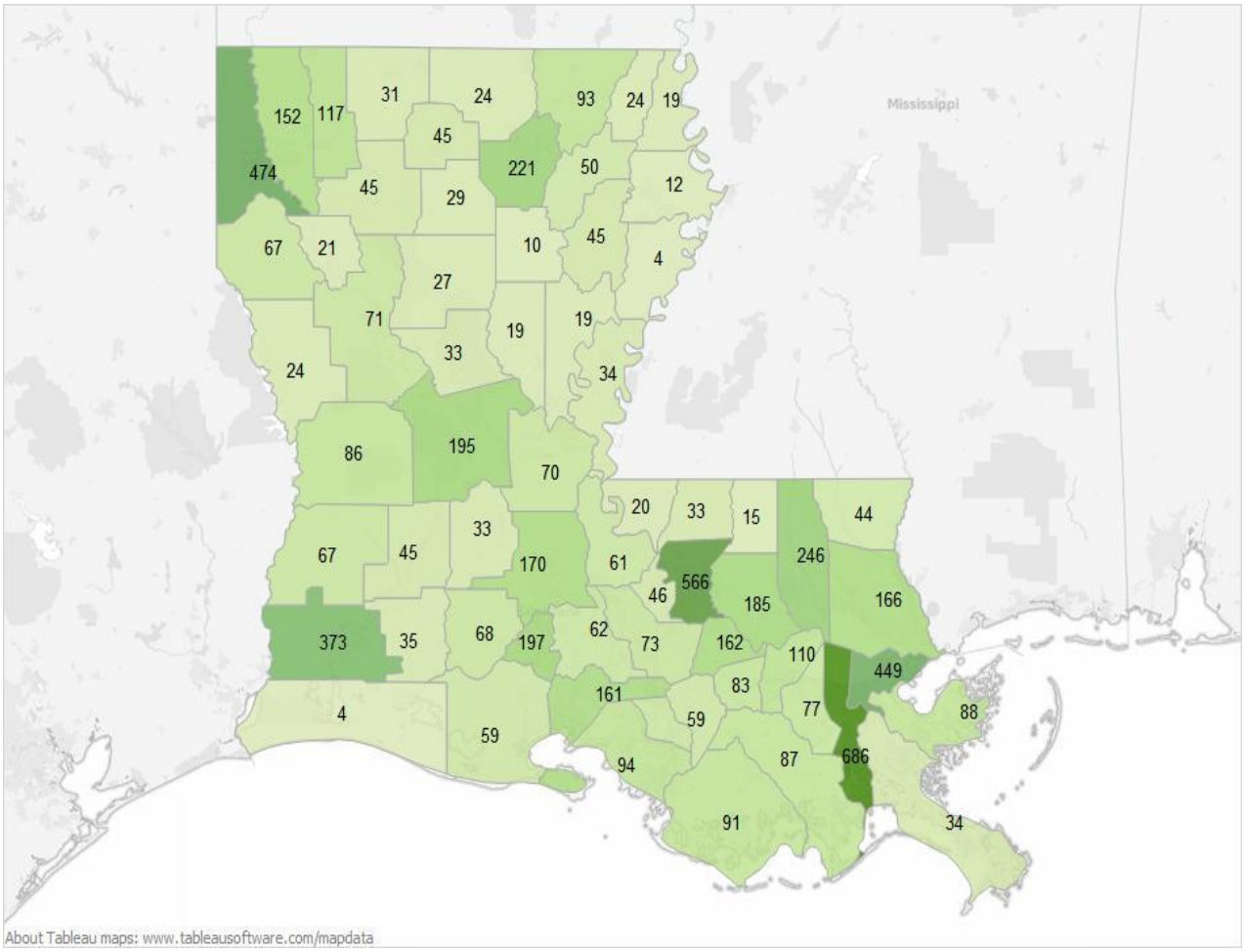
Appendix B: Unemployment Benefits Claimants by Craft Occupations

The table below shows the number of unemployment claims by craft occupation for the week ending April 28, 2013.

Occupational Title	Number of Claimants
Construction and Related Workers, All Other	489
Construction Laborers	485
Production Workers, All Other	323
Helpers, Construction Trades, All Other	316
Carpenters	241
Electricians	227
First-Line Supervisors/Managers of Construction and Extraction	221
Truck Drivers, Heavy and Tractor-Trailer	219
Helpers--Production Workers	212
Plumbers, Pipefitters, and Steamfitters	204
Laborers and Freight, Stock, and Material Movers, Hand	189
Installation, Maintenance, and Repair Workers, All Other	174
Maintenance and Repair Workers, General	169
Operating Engineers and Other Construction Equipment Operators	146
Transportation Workers, All Other	140
Captains, Mates, and Pilots of Water Vessels	132
First-Line Supervisors/Managers of Production and Operations	120
Boilermakers	117
Assemblers and Fabricators, All Other	115
Painters, Construction and Maintenance	106
Structural Iron and Steel Workers	106
Welders, Cutters, Solderers, and Brazers	104
Other Occupational Titles	2,997
Total	**7,552**

Appendix C: Location of Craft Unemployment Claimants

The map below indicates the number of craft unemployment claims by parish for the week ending April 28, 2013.



Appendix D: Total Annual Training Capacity by Institution and Craft

College	LCTCS	ABC-BR	ABC-BR (night)	ABC-LC	ABC-NOLA	ABC-LC (night)	BR High Schools	Lake Charles High Schools	NOLA High Schools	Totals
Carpentry	802	150		144	36		520	90	460	2,202
Electrician	1,917	300	50	288	80	97	320	120	147	3,319
Heavy Equipment Operations	381	400	100	192		68				1,141
Instrumentation	347	150	50	144	60	30		20		801
Insulation	132									132
Millwright	567	250	100	240		59				1,216
Pipefitting	2,208	300	50	192	80	50	60	140	8	3,088
Welding	2,016	72	206	60	58	164	459	195	434	3,664
Scaffolding	2,542						20	140		2,702
Sheet Metal Worker	60									60
Concrete Finisher	52				60					112
Total	11,024	1,622	556	1,260	374	468	1,379	705	1,049	**18,437**

Appendix E: Training Timelines

The table below illustrates LCTCS estimates for number of basic training hours required by each occupation, the number of weeks for each curriculum based on an assumption of 30 hours per week, and the number of cohorts that would be possible each year under this compressed schedule. Generally, the curricula will be comprised of NCCER Core and Levels 1 and 2. According to industry leaders, the main exceptions to the NCCER curricula should include Welding, which will follow the AWS curriculum, and the "soft skills" occupations such as Painting, Insulating, and Scaffolding, which will require less training than NCCER Level 2.

Occupation	Curriculum Hours	Number of weeks	Cohorts Per Year
Boilermaker	368	12	4.1
Carpenter (Scaffold Builder)	440	15	3.4
Concrete Finisher / Cement Mason	325	11	4.6
Electrician	330	11	4.5
Instrumentation Technician	395	13	3.8
Insulator	318	11	4.7
Ironworker (Reinforcing)	218	7	6.9
Ironworker (Structural)	398	13	3.8
Millwright	298	10	5.0
Operator (Heavy Crane)	293	10	5.1
Operator (Heavy Equipment)	333	11	4.5
Painter	298	10	5.0
Pipefitter	316	11	4.7
Scaffolding *(Hours Pending)*	60	2	25.0
Sheet Metal Worker	340	11	4.4
Welder *(AWS)*	1,050	35	1.4
Average	**361**	**11**	**5.7**

Appendix F: LCTCS Annual Capacity by Campus and Craft

College	Carpentry	Electrician	Heavy Equipment Operations	Instrumentation	Insulation	Millwright	Pipefitting	Welding (AWS)	Scaffolding	Sheet Metal Worker	Concrete Finisher	Total
BPCC	91	130					143					**364**
BRCC		52		52	41	108	52					**305**
CATC	261	452	114			104	590	208	2,022	60		**3,811**
CLTCC		220	150	100		230	955	425				**2,080**
Delgado	117	169			91		78	65				**520**
Fletcher		15						75				**90**
LDCC		99		69				215				**383**
Northshore	169	169						247				**585**
Nunez								15				**15**
NWLTC		325	91	52			260	325				**1,053**
RPCC	60					60		49				**169**
SCLTC		78		74				132				**284**
SLCC	26	78	26					208				**338**
SOWELA	78	130				65	130	52	520		52	**1,027**
Total	**802**	**1,917**	**381**	**347**	**132**	**567**	**2,208**	**2,016**	**2,542**	**60**	**52**	**11,024**

LCTCS Summer 2013 Capacity by Campus and Craft

College	Pipefitting	Electrician	Millwright	Carpentry	Insulation	Instrumentation	Welding	Heavy Equipment Operations	Scaffolding	Total
BPCC	13	13		13						**39**
BRCC	7	7	11		4	9				**36**
CATC	65	85	10	39			52	13	39	**303**
CLTCC	94	25	20			7	110	15		**270**
Delgado	7	16		17	10		26			**76**
Fletcher										**0**
LDCC		10				13	59			**82**
Northshore		13		17			52			**82**
Nunez							15			**15**
NWLTC	16	33				4	65	7		**125**
RPCC			12	20			40			**72**
SCLTC		13				13	15			**41**
SLCC								7		**7**
SOWELA	13	13	10	13			13		21	**83**
Total	**214**	**227**	**64**	**120**	**14**	**46**	**447**	**41**	**60**	**1,231**

Appendix G: LCTCS Instructor Recruitment Flyer

CONSTRUCTION INSTRUCTORS NEEDED



Louisiana employers are expected to fill over 80,000 skilled industrial construction jobs through 2016. In today's market, there are not enough qualified welders, pipefitters, carpenters, scaffold builders, electricians and other trade crafts people in the state to meet the demand. That's where you come in. LCTCS, in conjunction with several Statewide Partners, is now hiring an estimated 70 instructors statewide. You can be a significant factor in Louisiana being ready for the coming wave of 21st Century Construction.

INSTRUCTORS IN THE FOLLOWING FIELDS ARE NEEDED:

- Boilermaker
- Boilermaker Welder
- Carpenter
- Concrete Finisher
- Crane Operator
- Electrician
- Helpers
- Heavy Equipment
- Instrumentation Tech
- Insulator
- Ironworker
- Millwright
- Painter
- Pipefitters
- Pipefitter Helpers
- Pipe Layer
- Sheet Metal Worker
- Welder

If you are interested in a rewarding Construction Instruction Career, Contact LCTCS Colleges at the following:

Baton Rouge Community College:
Will Seaman, 225-216-8436

Bossier Parish Community College
Lisa Wargo, 318-678-6371 or
Alisha Crowder, 318-678-6339

Capital Area Technical College
LaMoyne Williams, 225-359-9465

Central Louisiana Technical Community College
Marvinette Holly, 318-487-5443 ext.1148

Delgado Community College, City Park Campus
Kim Tubre, 504-671-6465 or
Barbara A. Waiters, 504-671-6733

L.E. Fletcher Community College
Catherine Barber, 985-858-5746

Louisiana Delta Community College
Margie Mixon, 318-345-9029

Northshore Technical Community College
Amanda Tervalon, 985-732-6640 ext. 155

Northwest Louisiana Technical College
Amber Saunders, 318-371-3035

Nunez Community College
Ernest Frazier, 504-874-6469

River Parishes Community College
Donna Whittington, 225-675-8270 ext. 226

South Central Louisiana Technical College
Caleb Verrett, 985-380-2957 ext. 307

South Louisiana Community College
Margaret Beard, 337-373-5105

SOWELA Technical Community College
William Mayo, 337-491-2684

For additional information, contact Jawan Ross, LCTCS Workforce Solutions Office, 225-308-4420

Appendix H: Baton Rouge Region High School Capacity

The table below details the training capacity of Baton Rouge area High Schools, as reported by ABC.

School	Carpentry	Electrician	Pipefitting	Welding	Scaffolding	Total
Accel Transition School (SLATS)				11		11
Albany High School		20		10		30
Assumption High School	20	20	20	30		90
Baker High School		20		19		39
Belaire High School	20					20
Broadmoor High School	20					20
Capitol High	20					20
Career Academy/Capitol High				16		16
Central High School	20	20		34		74
Denham Springs Freshman High		20				20
Denham Springs High School	20	20		8		48
Donaldsonville High School	20			9		29
Doyle High School	20			10		30
East Ascension High School	20			15		35
East Feliciana High School	20					20
Eunice Career Center	20			15		35
French Settlement High School	20			15		35
Glen Oaks High School				18		18
Holden High School		20				20
Istrouma High School				20		20
LA Sch Agri Sciences (LaSAS)				10		10
Live Oak High School	20	20		12		52
Livonia High School	20			15		35
Maurepas High School	20	20		7		47
Northeast High School	20	20		15		55
Plaquemine High School				28		28
Pointe Coupee Central High	20					20
Port Allen High School				12		12
Port Barre	20	20		4		44
S.J. Career and Technology	20	20	20	16		76
Springfield High School	20	20		15		55
St. Amant High School	20	20	20	11		71
St. Helena High					20	20
Tara High School	20					20
Walker High School	20			9		29
Walker Options III				20		20
Washington Career Center	20	20		10		50
West Feleciana High School				8		8
Woodlawn High School	20	20		20		60
Zachary High School	20			17		37
Total	**520**	**320**	**60**	**459**	**20**	**1,379**

Appendix I: New Orleans Region High School Capacity

The table below details the training capacity of New Orleans area High Schools, as reported by ABC.

School	Electrician	Carpentry	Pipefitting	Welding	Total
Amite High School		9		28	37
Bogalusa High School		18		19	37
Bonnabel Magnet Academy High School		23			23
Central Lafourche High School		22		15	37
Chalmette High School		34			34
Covington High School		15			15
Destrehan High School	23	9		38	70
East Jefferson High School		16		1	17
East St. John High School		26		20	46
Fontainebleau High School				32	32
Franklinton High School	20	21		21	62
Grace King High School		1			1
Hahnville High School	13			14	27
Helen Cox High School		4			4
Independence High School				18	18
Jefferson Chamber Foundation Academy	2				2
John Ehret High School	29	36			65
Kentwood High Magnet School		25		21	46
L.W. Higgins High School		29			29
LA Technical College-Lafourche Campus	5			10	15
LA Technical College-Sullivan Campus		7			7
LA Technical College-Young Memorial Campus				14	14
Loranger High School		12		11	23
Lutcher High School			8	6	14
Mandeville High School	12	14			26
Morgan City High School		9			9
Mt. Hermon School	2			5	7
Patterson High School				2	2
Pearl River High School		17		17	34
Pine School				34	34
Ponchatoula High School		23		40	63
Riverdale High School		16			16
Slidell High School	21			1	22
South Lafourche High School		21		27	48
Terrebonne Career and Technical High School	20	19		32	71
Thibodaux High School		22			22
Varnado High School		6			6
West Jefferson High School		6			6
West St. Mary High School				8	8
Total	**147**	**460**	**8**	**434**	**1,049**

Appendix J: Lake Charles Region High Schools

The table below details the training capacity of Lake Charles area High Schools, as reported by ABC.

College	Carpentry	Electrician	Instrumentation	Pipefitting	Welding	Scaffolding	Total
College St. Voc Cent	45	25			20	45	135
DeQuincy High					15		15
Deridder		25		25	15		65
East Beauregard					10		10
Elton HS					3		3
Hathaway HS					3		3
Iowa High					10		10
Jefferson Davis					3		3
Jennings HS		30		30	10	15	85
Lacassine HS					3		3
Lake Arthur HS		15		15	10	10	50
LCB Academy			20				20
Merryville					10		10
Sam Houston High					15		15
Singer					5		5
South Beauregard		25		25	15	25	90
Starks High					15		15
Sulphur High					15	45	60
Welsh HS					3		3
Westlake Voc Cent.	45			45	15		105
Totals	**90**	**120**	**20**	**140**	**195**	**140**	**705**

Appendix K: Build Your Future, Build Louisiana

The following mock-ups provided by Build Your Future offer a preview of potential marketing campaign materials.










SHEET-METAL WORKER
$46,721
IRONWORKER
$53,291
MOBILE CRANE OPERATOR
$57,559
CARPENTER
$48,756
ELECTRICIAN
$53,294
YOUR LOGO HERE
*Salary information from the 2012 Craft Professional Wage Survey Results, published by NCCER
1.5 MILLION CRAFT PROFESSIONALS
THE NUMBER OF NEW SKILLED WORKERS NEEDED in the construction industry by the year 2014. Support the industry by preparing your students now.
BUILD YOUR FUTURE. BUILD AMERICA®
LIKE /byfcampaign
FOLLOW @byfcampaign
Learn how you can help close the skills gap. Visit the Build Your Future website at www.BYF.org.
BYF
BUILD YOUR FUTURE

Appendix L: Craft Flyer for High School Students



Appendix M: Summary of LCTCS Funding Sources

Career & Technical Education Funding	Source	Purpose	Amount	Funds
Carl D. Perkins	U.S. Department of Education	Fund two-year Career & Technical Education in High Wage, High Demand, High Skill areas. Responsible for training of multiple sectors of the economy.	$21 Million to The State of Louisiana, divided between Secondary and Post-Secondary	• Instructors • Equipment & Supplies • Career Counseling • Professional Development • Administration/Other
Workforce Training Rapid Response	State of Louisiana	Provide employment opportunities for students by establishing partnerships between colleges and businesses. Responsible for training of multiple sectors of the economy.	$10 Million Annually	• Instructors • Equipment & Supplies • Building of Capacity • Professional Development • Other
Trade Adjustment Assistance Community College and Career Training	U.S. Department of Labor	Provide employment opportunities for students by establishing partnerships between community colleges and the business community. Responsible for training of multiple sectors of the economy.	$475 Million available nationwide. LCTCS submitting 3 applications. The largest participation being a consortium specifically for construction.	• Instructors • Equipment & Supplies • Building of Capacity • Evidence-based design • Stacked and latticed credentials • Transferability and articulation of credit • Advanced online and technology-enabled learning
TOPS Tech Award	State of Louisiana	For students graduating from a Louisiana High School and entering a technical/occupational degree program.	Up to $1,421 (Technical Colleges); $2,371 (Community Colleges)	• Tuition
Pell Grants	U.S. Department of Education	Provided on a sliding-scale amount (based on credit hours and Expected Family Contribution) to low income students who are enrolled in a Pell-eligible program of study.	Up to $5,550 for a full-time student attending two semesters, August through May	• Tuition & Fees • Books & Supplies • Transportation • Support of Training
TOPS Tech Early Start of Louisiana	Louisiana Office of Student Financial Assistance	Available to Public High School 11th and 12th grade students dually-enrolled in up to six credit hours at a public college in a technical program.	$600 per academic year	• Tuition and Fees

Appendix N: Wage Levels upon Completion of Training

The table below illustrates the base wage ranges which workers can expect following the completion of different levels of training courses. This information was provided by industry and Baton Rouge ABC.

ABC COURSES	FIELD CLASSIFICATION	BASE WAGE RANGES (hourly)
Earthmoving Level 1	Trainee	$15.00-$20.00
Earthmoving Level 2	Journeyman B	$21.00-$24.00
Earthmoving Graduate	Journeyman A	$26.00-$28.00
Mobile Crane Level 1	Trainee	$15.00-$20.00
Mobile Crane Level 2	Journeyman B	$21.00-$24.00
Mobile Crane Graduate	Journeyman A	$26.00-$28.00
Millwright Level 1	Trainee	$15.00-$20.00
Millwright Level 2	Trainee	$15.00-$20.00
Millwright Level 3	Trainee	$15.00-$20.00
Millwright Level 4	Journeyman B	$21.00-$24.00
Millwright Graduate	Journeyman A	$26.00-$28.00
Pipefitting Level 1	Trainee	$15.00-$20.00
Pipefitting Level 2	Trainee	$15.00-$20.00
Pipefitting Level 3	Trainee	$15.00-$20.00
Pipefitting Level 4	Journeyman B	$21.00-$24.00
Pipefitting Graduate	Journeyman A	$26.00-$28.00
Electrical Level 1	Trainee	$15.00 - $20.00
Electrical Level 2	Trainee	$15.00 - $20.00
Electrical Level 3	Trainee	$15.00 - $20.00
Electrical Level 4	Journeyman B	$21.00 - $24.00
Electrical Graduate	Journeyman A	$26.00 - $28.00
Instrumentation 1	Trainee	$15.00 - $20.00
Instrumentation 2	Trainee	$15.00 - $20.00
Instrumentation 3	Trainee	$15.00 - $20.00
Instrumentation 4	Journeyman B	$21.00 - $24.00
Instrumentation Graduate	Journeyman A	$26.00 - $28.00
Welding Level 1	Trainee	$15.00-$20.00
Welding Level 2	Structural Welder	$24.00-$26.00
Welding Level 3	Pipe-Stick Welder	$27.00-$28.00
Welding Level 4	Combo-Pipe Welder	$29.00-$32.00
Welding Level 5	Combo-Pipe Welder	$29.00-$32.00