

# Proposal For New Instructional Program: Heavy Equipment Operator For Central Community College

## I. Descriptive Information

**Institution Proposing Program:** Central Community College (CCC)

**Program (Major) Proposed:** Heavy Equipment Operator

**Degrees/ Credentials To Be Awarded Graduates Of The Program:** Diploma options

**Other Programs Offered In This Field By This Institution:** None

**CIP Code:** 49.0202 Construction/ Heavy Equipment/ Earthmoving Equipment Operation

**Administrative Units For The Program:** Business, Skilled & Technical Sciences

**Proposed Delivery Site(s) And Type(s) Of Delivery:** Hastings Campus of Central Community College

**Date Approved By Governing Board:** November 19, 2015

**Proposed Date The Program Will Be Initiated:** August 2016

### **Description And Purpose Of The Proposed Program:**

Heavy Equipment Operators are skilled technicians who operate large equipment for the construction of roads, land leveling, pipe laying, and other operations requiring the movement of large volumes of materials. The students would develop the skills and abilities to operate earth-moving equipment in a safe and efficient manner using technical drawings and field markers. Equipment operations would include excavators, scrapers, motor graders, backhoes, front-end loaders, forklifts, skid steers and dump trucks. A Class B CDL license would be earned by each student. An optional course in Crane Operations would also be provided.

The program will utilize National Center for Construction Education and Research (NCCER) curriculum and assessments that provide national recognized and portable credentials. NCCER offers a complete series of entry- and journey-level written assessments as part of its National Craft Assessment and Certification Program (NCACP). These assessments evaluate the knowledge of an individual in a specific craft area and provide a prescription for upgrade training when needed. All assessments are based upon the NCCER Curriculum and have been developed in conjunction with Subject Matter Experts from the industry and Prov™, NCCER's test development partner. The proposed Heavy Equipment Operations program will offer a 37-hour diploma. The diploma will require 9 hours of general education courses and 26 hours of Heavy Equipment Operations courses and a 2 credit Class B CDL course. Some theory course work can be offered via distance.

In the future training opportunities will be developed in response to the survey in areas such as single piece of equipment, pipe laying and cement finishing.

The instructors will be NCCER certified.

## Proposed Curriculum

The proposed Heavy Equipment Operations program will offer a 35-hour diploma. The diploma will require 9 hours of general education courses and 26 hours of Heavy Equipment Operations courses.

Course	Course Title	Credits
HEOT 100	Introduction to Craft Skills	2
HEOT 110	Field Safety and Orientation	2
HEOT 120	Site Layout I	2
HEOT 125	Site Layout II	2
HEOT 140	Introduction to Heavy Highway Equipment	4
HEOT 150	Heavy Equipment Operations I	4
HEOT 160	Heavy Equipment Operations II	5
HEOT 170	Heavy Equipment Applications	5
TRUC	Class B CDL *	2
	General Studies	9
<b>TOTAL</b>		<b>37</b>

\* Needs to be developed – two week program

### Course Descriptions

#### HEOT 1000 Introduction to Craft Skills 2

This course is an introduction to the Heavy Equipment Construction trades. The course covers shop and job site safety, basic communications skills, and basic employability skills. Topics will include selection and use of personal protective equipment, hand and power tools, basic rigging, and blueprint reading. An over view of the construction industry and typical job sites will also be presented. (NCCER Modules will include, Basic safety, Introduction to Construction Math, Introduction to Hand Tools, Introduction to Power Tools, Introduction to Blueprints, Basic Rigging, Basic Communications Skills, and Basic Employability Skills.) (15/45/0/0)

- NCCER Orientation to the Trade Module 22101-12 (5 hrs.)
- OSHA 10 Hour Safety Course (25 Hrs.)
- NCCER Identification of Heavy Equipment Module 22103-2 (5 hrs.)
- NCCER Basic Operational Techniques Module 22104-12 (25 hrs.)

#### HEOT 1100 Field Safety and Orientation 2

Topics will include hazard recognition, signs, signals, barricades, work permits, material handling, specialty work and health issues related to the industry. An emphasis will be placed on work zone safety, electric and high voltage issues, fall protection, confined space safety, fall protection, ladders, and scaffolding, permitting, digger's hotline, and how to report and document an accident. (15/45/0/0)

- NCCER Heavy Equipment Safety Module 22102-12 (15 hrs.)
- NCCER Utility Tractors Module 22105-12 (18 hrs.)
- CCC Confined Space Mobile Training Center (15 hrs.)
- CCC Open Lab Time (12 hrs.) Instructor designated additional Skill Development.

## **HEOT 1200 Site Layout I**

**2**

An introduction to site layout and how it applies to commercial building sites for building pads, and other site work. Site layout equipment will be introduced. (15/45/0/0)

- NCCER Excavation Math Module 2207-13 (18 hrs.)
- NCCER Interpreting Civil Drawings Module 2209-13 (20 hrs.)
- NCCER Soils Module 22308-13 (10 Hrs.)
- CCC Open Lab Time (12 hrs.) Instructor designated additional Skill Development.

## **HEOT 1250 Site Layout II**

**2**

This course will include surveying math, the metric system and conversion between English and Metric systems. Reading of blueprints and site layout specifications will be covered. Students will learn the proper use and care of site layout equipment and a number of layout projects will be completed. (15/45/0/0/)

- NCCER Grades Module 22106-12 (15 hrs.)
- NCCER Site Work Module 2210-13 (20 hrs.)
- NCCER Introduction to Earth Moving Module 22201-12 (15 hrs.)
- CCC Open Lab Time (10 hrs.) Instructor designated additional Skill Development.

## **HEOT 1400 Introduction to Heavy Highway Equipment 4**

In this course students will be introduced to the heavy highway trade and the equipment used in the construction of transportation systems. Topics include procedures and components of trucks and other heavy equipment. Subjects will include earthmoving, below grade construction, plant operations, paving, and structures. Pre-operations inspections, startup, and basic equipment movements will be conducted on a variety of heavy equipment. (15/135/0/0/)

- NCCER Basic Operational Techniques Module 22104-12 (30 hrs.)
- NCCER Rough Terrain Forklifts Module 2206-13 (25 hrs.)
- NCCER On-Road Dump Trucks Module 22202-13 (20 hrs.)
- NCCER Skid Steers Module 22212-13 (25 hrs.)
- CCC Open Lab Time (50 hrs.) Instructor designated additional Skill Development.

## **HEOT 1500 Heavy Equipment Operations I**

**4**

This course will include instructions and practical operation experience in bulldozers, backhoes, track excavators, skid loaders, motor graders, and dump trucks. Students will obtain a working understanding of grade reading, laser level operation, engineering stake interpretations, safety procedures and equipment maintenance. (15/135/0/0)

- NCCER Loaders Module 2205-13 (18 hrs.)
- NCCER Scrapers Module 22204-13 (18 hrs.)
- NCCER Backhoes Module 22303-14 (30 hrs.)
- NCCER Compaction Equipment Module 22203-14 (25 hrs.)
- CCC Open Lab Time (30 hrs.) Instructor designated additional Skill Development.

## HEOT 1600 Heavy Equipment Operations II

5

This course will include more extensive operating procedures and increased complexity of projects. Students will be required to perform simulations to demonstrate their skilled achievements. Students will be introduced to more extensive operating procedures at an intermediate level. (15/180/0/0)

- NCCER Motor Graders Module 22305-14 (40 hrs.)
- NCCER Excavators Module 22304-14 (35 hrs.)
- NCCER Dozers Module 22302-14 (30 hrs.)
- CCC Open Lab Time (45 hrs.) Instructor designated additional skill development.

## HEOT 1700 Heavy Equipment Applications

5

Technical knowledge covered in HEOT 150 and HEOT 160 will be applied in this advanced laboratory course. Students will complete a series of increasing complex tasks using bulldozers, backhoes, loaders, track hoes, uni-loaders off road trucks etc. (15/180/0/0 Hours)

- NCCER Finishing and Grading Module 22307-14 (25 hrs.)
- \*CCC Open Lab Time (45 hrs.) Instructor designated additional skill development.

Possible -Instructor Designated Special Projects and Assessment (125 hrs.)

## II. Review Criteria

### A. Centrality To Role And Mission

The proposed program is consistent with Central Community College's mission and vision and the Comprehensive Statewide Plan for Postsecondary Education.

**Mission:** *Central Community College maximizes student and community success*

**Vision:** *The Best Choice for students to achieve their educational goals, for developing a skilled workforce, and for advancing communities.*

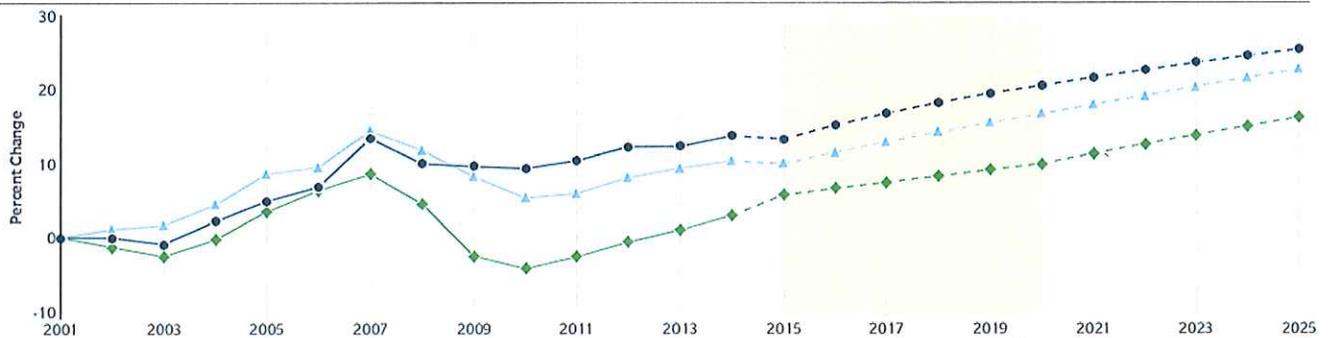
The proposed Heavy Equipment Operator program will help students achieve their educational goals while developing a skilled workforce for not only Central Nebraska, but the entire state.

### B. Evidence Of Need And Demand

**1. Need for the program – in the institution, the community, the region, the state, or the nation**  
Employment forecast data was obtained from Economic Modeling Specialists International (EMSI) Analyst, which updates labor market information and job posting analytics from more than 90 data sources quarterly. There were 14 occupations identified for this proposed program of study as being directly related to heavy equipment operators: paving, surfacing, and tamping equipment operators; pile-driver operators; operating engineers and other construction equipment operators; pipelayers; highway maintenance workers; segmental pavers; heavy and tractor-trailer truck drivers; conveyor operators and tenders; crane and tower operators; dredge operators; excavating and loading machine and dragline operators; loading machine operators, underground mining; hoist and winch operators; and industrial truck and tractor operators. The graphic below depicts the percent change of jobs in the 14 occupations identified above from 2001 to 2025 for the

nation, the State of Nebraska, and Central Community College’s 25-county service area. The 2015 to 2020 time period is highlighted in yellow.

**Chart 1. Projected Growth Of 14 Occupations Identified For Heavy Equipment Operators For The Nation, State Of Nebraska And Central Community College’s Service Area, 2001 To 2025**



Region	2015 Jobs	2020 Jobs	% Change (2015-2020)	Ranking Against National Average	Median Hourly Earnings
● CCC Service Area	7,277	7,739	6.3%	79% above national average	\$16.20
● State of Nebraska	42,674	45,282	6.1%	68% above national average	\$18.04
● Nation	3,737,063	3,885,288	4.0%		\$17.72

Source: EMSI Q2 2015 Data Set; 2015.2 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

As seen in the graphic above, there is forecasted to be a steady increase of jobs to 2025. In reviewing the percent change in jobs between 2015 and 2020, the jobs from the 14 occupations identified for heavy equipment operators is forecasted to increase by six percent in the state of Nebraska and six percent in Central Community College’s service area from 2015 to 2020. This is above the forecast of four percent for the nation. The median hourly earnings for the state of Nebraska is \$18.04, which is above the nation at \$17.72.

**Chart 2. Projected Growth Of 14 Occupations Identified For Heavy Equipment Operators, 2015 To 2020**

Occupation (SOC Code)	CCC Service Area				State of Nebraska			
	2015 Jobs	2020 Jobs	# Change (2015-2020)	% Change (2015-2020)	2015 Jobs	2020 Jobs	# Change (2015-2020)	% Change (2015-2020)
Heavy and Tractor-Trailer Truck Drivers (53-3032)	4,508	4,801	293	6%	30,928	32,953	2,025	7%
Operating Engineers and Other Construction Equipment Operators (47-2073)	480	531	51	11%	2,703	2,894	191	7%
Industrial Truck and Tractor Operators (53-7051)	796	816	20	3%	3,137	3,282	145	5%
Conveyor Operators and Tenders (53-7011)	531	580	49	9%	1,258	1,333	75	6%
Highway Maintenance Workers (47-4051)	605	621	16	3%	2,720	2,782	62	2%
Pipelayers (47-2151)	61	70	9	15%	352	386	34	10%
Crane and Tower Operators (53-7021)	52	57	5	10%	328	360	32	10%
Excavating and Loading Machine and Dragline Operators (53-7032)	63	67	4	6%	540	566	26	5%
Paving, Surfacing, and Tamping Equipment Operators (47-2071)	120	132	12	10%	541	555	14	3%
Segmental Pavers (47-4091)	2	2	0	0%	16	18	2	13%
Pile-Driver Operators (47-2072)	5	5	0	0%	20	22	2	10%
Loading Machine Operators, Underground Mining (53-7033)	1	1	0	0%	7	8	1	14%
Hoist and Winch Operators (53-7041)	6	6	0	0%	25	26	1	4%
Dredge Operators (53-7031)	49	49	0	0%	99	97	-2	-2%
<b>TOTAL</b>	<b>7,277</b>	<b>7,739</b>	<b>462</b>	<b>6.30%</b>	<b>42,674</b>	<b>45,282</b>	<b>2,607</b>	<b>6.10%</b>

Source: EMSI Q2 2015 Data Set; 2015.2 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

The projected growth of the 14 occupations identified for Heavy Equipment Operators between 2015 and 2020 is shown in Chart 2 above. As expected, the top producer for the state of Nebraska was the heavy and tractor-trailer truck drivers with an increase of 2,025 jobs and an increase of 293 jobs for CCC’s service area. The next top producers include: operating engineers and other construction equipment operators; industrial truck and tractor operators; conveyor operators and tenders; and highway maintenance workers, which account for an increase of 473 jobs in the state of Nebraska and an increase of 136 jobs in CCC’s service area.

**Chart 3. Job Postings For 14 Occupations Identified For Heavy Equipment Operators, May 2015**

Postings For 14 Identified Occupations	State of Nebraska	Service Area
Unique Postings (May 2015)	8,667	2,075
Total Postings	68,175	16,472
Posting Intensity (May 2015)	8 : 1	8 : 1

As seen in Chart 3 above, the unique job postings for heavy equipment operators in the state of Nebraska in May 2015 was 8,667 and 2,075 of those in CCC’s service area.

**Chart 4. Top Counties Employing 14 Occupations Identified For Heavy Equipment Operators, 2020**

State Of Nebraska		CCC Service Area	
County	2020 Jobs	County	2020 Jobs
Douglas County, NE	7,761	Hall County, NE	1,588
Sarpy County, NE	7,405	Buffalo County, NE	1,139
Lancaster County, NE	6,816	Platte County, NE	781
Hall County, NE	1,588	Adams County, NE	702
Dakota County, NE	1,541	Dawson County, NE	559

Source: EMSI Q2 2015 Data Set; 2015.2 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

As expected, the top counties in the state employing the 14 occupations identified for the heavy equipment operator program cover Omaha and Lincoln – Douglas, Sarpy, and Lancaster counties, as seen in Chart 4 above. The next top county is at the center of CCC’s service area – Hall County with 1,588 jobs projected for 2020. Besides Hall County, the other top counties in the College’s service area include Buffalo, Platte, Adams, and Dawson counties.

**Chart 5. Demographics Of 14 Occupations Identified For Heavy Equipment Operators, 2015**

Characteristics	CCC Service Area		State Of Nebraska	
	2015 Jobs	2015 Percent	2015 Jobs	2015 Percent
<b>GENDER</b>				
Male	6,970	95.8%	40,979	96.0%
Female	307	4.2%	1,695	4.0%
<b>TOTAL</b>	<b>7,277</b>	<b>100.0%</b>	<b>42,674</b>	<b>100.0%</b>
<b>AGE</b>				
14-18	26	0.4%	130	0.3%
19-24	350	4.8%	2,160	5.1%
25-34	1,141	15.7%	6,848	16.0%
35-44	1,465	20.1%	8,645	20.3%
45-54	2,077	28.5%	12,396	29.0%
55-64	1,566	21.5%	9,434	22.1%
65+	654	9.0%	3,061	7.2%
<b>TOTAL</b>	<b>7,277</b>	<b>100.0%</b>	<b>42,674</b>	<b>100.0%</b>
<b>RACE/ ETHNICITY</b>				
White	6,697	92.0%	36,524	85.6%
Black or African American	398	5.5%	2,952	6.9%
Hispanic or Latino	112	1.5%	2,491	5.8%
American Indian or Alaska Native	30	0.4%	256	0.6%
Two or More Races	24	0.3%	226	0.5%
Asian	15	0.2%	200	0.5%
Native Hawaiian or Other Pacific Islander	1	0.0%	24	0.1%
<b>TOTAL</b>	<b>7,277</b>	<b>100.0%</b>	<b>42,674</b>	<b>100.0%</b>

Source: EMSI Q2 2015 Data Set; 2015.2 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

The demographics of the positions identified for Heavy Equipment Operators is shown in Chart 5 above. The item to notice is that the largest percentage are in the 45-54 age group at 29 percent, with 22 percent in the 55-64 age group and seven percent in the 65+ age group. That means more than a quarter of the current Heavy Equipment Operators will be retiring in the next 10 years.

To supplement the EMSI data, in Summer 2015 Central Community College conducted a statewide online survey of the construction industry with the assistance of four associations in Nebraska – the National Utility Contractors Association of Nebraska, Nebraska Building Chapter of Associated General Contractors (AGC), AGC Heavy Highway Nebraska Chapter, and Nebraska Land Improvement Contractors Association. There were 72 responses collected across the state from 69 unique companies. For the three companies with multiple responses, an average of the two responses was taken. These 69 companies currently employ 1,069 full-time Heavy Equipment Operators, for an average of 16 per company. They hired 348 Heavy Equipment Operators in the last year and plan to hire 394 operators in the next year. That equates to each company hiring an average of five Heavy Equipment Operators per year.

Even though nine companies did not report having any full-time heavy equipment operators, 20 companies did not hire any operators last year and 11 companies do not plan to hire any next year, these companies still expressed a need for training on heavy equipment as much as those companies employing full-time heavy equipment operators.

The respondents were asked to rate the importance of specific equipment operator needs for filling current and planned job openings statewide. The equipment reporting the highest need (ranked as very important or important) included: 86% skid steer, 85% CDL licensed truck drivers, 75% excavator, 75% front end loader, 71% dump trucks, 54% motor grader, 51% forklift, and 51% roller compactor. For those companies with employees in the Grand Island MSA and the Central Nebraska region, the numbers mirror statewide pretty closely with an addition of 69% important/very important need for a backhoe operator.

The respondents cited a high likelihood of hiring Central Community College graduates from a Heavy Equipment Operator program with 88 percent likely or very likely to hire those with a diploma, 86 percent a certificate, 86 percent an associate degree, and 76 percent an equipment-specific one-week workshop. Those percentages are even a little higher for the Grand Island MSA and Central Nebraska region.

Those likely or very likely to send current employees to a one-week heavy equipment certification included: 78% CDL licensed truck drivers, 69% excavator, 67% dump trucks, 64% skid steer, 63% front end loader, 54% forklift, and 52% back hoe. Again, the numbers for the Central Nebraska region and Grand Island MSA mirror pretty closely to the statewide numbers with the numbers the same or slightly higher for the same equipment for a one-week certification.

## **2. Demand for the program – the extent of student interest in the proposed program**

For each of the first five years of operation, it is expected that in each cohort group will have 16 students annually. Since no colleges in the state currently offer a Heavy Equipment Operator program, students would have to go to college in either Kansas or Iowa to obtain any formalized education in heavy equipment. Providing a program in the state of Nebraska will allow students to reduce their costs by paying in-state tuition vs. out-of-state tuition. If students stay in the state for training, they are more likely to take jobs in-state as well, helping Nebraska's economy. Being in the center of the state provides Central Community College with a unique opportunity to provide training in heavy equipment for Nebraskans. Since one of the instructors will only be teaching part-

time, they will be able to devote the other half of their time on recruiting students and creating interest in the program.

The four associations the College worked with to conduct the survey of employers indicated the need for this program is high and are willing to work with Central Community College to create and grow this program. The survey indicated the employers' support of students was high with 88% of respondents indicating they would be likely or very likely to allow students to job shadow their employees, 86% to provide internships to students, 75% to participate in career fairs, and 67% to make presentations to high school and college students about job requirements and general career field information. Those companies in the Grand Island MSA and Central Nebraska regions indicated an even higher level of support in all four areas.

Respondents also reported their likelihood of supporting Central Community College by giving time or money to create a new training or certificate for Heavy Equipment Operators. The percent indicating either likely or very likely included: 75% willing to pay employee tuition reimbursement, 59% willing to give their time to participate in developing the program or serve on a committee, 56% willing to provide scholarships, 42% willing to pay contract fees for instructors, 31% willing to provide program start-up costs, 24% willing to loan equipment to the College, and nine percent willing to purchase equipment for the College. Again, the level of support by employers in the Grand Island MSA and Central Nebraska regions were even higher than the statewide support.

## **C. Adequacy Of Resources**

### **1. Faculty and Staff Resources**

The program will require two full-time instructors. Clerical support will be provided by the existing administrative assistant for the Truck Driving program. The current associate dean and dean for skilled and technical sciences will supervise the program. Students will be given the opportunity to obtain a CDL over the road truck driving certification using the existing CDL program. The CCC truck-driving program has sufficient faculty, facilities, and equipment to accommodate student from the Heavy Equipment Operator program.

### **2. Physical Facilities**

Central Community College has existing classrooms and land space to accommodate the program on the Hastings Campus. Approximately 10 acres have been identified to complete field work training with the actual equipment. (See Appendix 3) The Harlan building is a 25,806 sq. ft. facility building that currently accommodates Truck Driving and Diesel Technology programs. There is sufficient space in the existing facility to accommodate office space for two full-time personnel and shared classroom space. (See Appendix 1) A portable trailer would be used to house the simulation center. This trailer would also be used for recruiting. The existing confined space portable lab at the College can also be used to train in the safety coursework. In addition, a 100' x 208' building will be installed to house safety check meetings and demonstrations. The building will have dirt floor and be unheated. (See Appendix 2)

### **3. Instructional Equipment and Informational Resources**

The program is equipment intensive and will require an equipment investment of \$500,000 for simulators, two skid steers, a backhoe, and front-end loader. An annual budget of \$50,000 for equipment leasing will also be required. Annual fuel cost are estimated at \$6,000. Even though

there is a huge need up front for this program, there was support from the employers that participated in the survey. Thirty-one percent of the respondents indicated they would be likely or very likely to provide start-up costs for the program, 24 percent likely/ very likely to loan equipment to the College and nine percent were likely/ very likely to purchase equipment for the College. Being able to utilize these resources will reduce the initial cost of the program.

Currently (as of December 1, 2015) the College has pledges from business and industry of \$878,000 to start the program.

#### **D. Avoidance Of Unnecessary Duplication**

There are currently no Heavy Equipment operations programs in the state of Nebraska.

#### **E. Consistency With The Comprehensive Statewide Plan For Postsecondary Education**

The proposed Heavy Equipment Operator program is designed to be consistent with the statewide goals featured in Nebraska's Comprehensive Statewide Plan for Postsecondary Education by:

- *Meeting the needs of students:* The availability of this program in Nebraska will meet students' needs statewide or high skill, high wage employment.
- *Meeting the needs of the state:* The proposed Heavy Equipment Operator program is being initiated by Central Community College in direct response to an industry request. The program will serve the industries utilizing heavy equipment.
- *Meeting needs by building exemplary institutions:* By responding to industry needs and providing training for high skill high wage jobs Central Community College will continue to be an exemplary institution.
- *Meeting educational needs through partnerships and collaboration:* This program will be supported and partially funded by industry partners.
- *Facilities planning to meet educational needs:* Central Community College has an established master facilities plan of which this program is not identified as industry brought this request to CCC in the spring of 2015. The instructional program will utilize existing space that has been identified for classrooms and land that has been identified for lab space. An additional dirt floor building will be erected to accommodate certain lab activities and harsh weather.

**TABLE 1: PROJECTED EXPENSES - NEW INSTRUCTIONAL PROGRAM**

Heavy Equipment Operator

Personnel	FY16 Year 1		FY17 Year 2		FY18 Year 3		FY19 Year 4		FY20 Year 5		Total	
	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost
Faculty <sup>1</sup>	2	\$140,000	2	\$144,200	2	\$148,526	2	\$152,982	2	\$157,571	2	\$743,279
Professional <sup>2</sup>											0	\$0
Graduate assistants											0	\$0
Support staff											0	\$0
Subtotal	2	\$140,000	2	\$144,200	2	\$148,526	2	\$152,982	2	\$157,571	2	\$743,279
<b>Operating</b>												
General Operating <sup>3</sup>		\$64,000 (Fuel \$6,000; faculty development \$3,000; supplies \$4,000; travel \$1,000; equipment leasing \$50,000)		\$64,000		\$64,000		\$66,000		\$66,000		\$324,000
Equipment <sup>4</sup>		\$500,000 (5 simulators \$390,000; skid steer \$25,000 ea; Back Hoe attachment \$10,000; skid steer front end loader \$50,000)								\$150,000		\$730,000
New or renovated space <sup>5</sup>		\$580,000 (Building \$500,000; trailer \$80,000)		\$0		\$0		\$0		\$0		\$500,000
Library/Information Resources <sup>6</sup>		\$5,000		\$1,000		\$1,000		\$1,000		\$1,000		\$9,000
Other <sup>7</sup>												\$0
Subtotal		\$1,149,000		\$65,000		\$65,000		\$67,000		\$217,000		\$1,563,000
<b>Total Expenses</b>	2	\$1,289,000	2	\$209,200	2	\$213,526	2	\$219,982	2	\$374,571	2	\$2,306,279

**FOOTNOTES are for guidance only. Please provide your own footnotes where appropriate and delete ours.**

<sup>1</sup> Show the number of additional full-time equivalent faculty and related salary and fringe benefit expenditures needed to implement and maintain the program.

- <sup>2</sup> Show the number of additional full-time equivalent professional staff (post-docs, non-faculty academic administrators, etc.) and related salary and fringe benefit expenditures needed to implement and maintain the program.
- <sup>3</sup> Include allowances for faculty development, laboratory supplies, travel, memberships, office supplies, communications, data processing, equipment maintenance, rentals, etc.
- <sup>4</sup> Show anticipated expenditures for the acquisition of new or upgrades or replacement of existing equipment necessary for the implementation and/or operation of the program.
- <sup>5</sup> Show projected expenditures for any facilities (general classroom, laboratory, office, etc.) that will be required. Include renovation of existing facilities and construction of new facilities.
- <sup>6</sup> Show anticipated expenditures for library materials or other informational resources directly attributable to the new program.
- <sup>7</sup> Additional Other Expenses: Show other expenses not appropriate to another category.

TABLE 2: REVENUE SOURCES FOR PROJECTED EXPENSES - NEW INSTRUCTIONAL PROGRAM  
Heavy Equipment Operator

	FY(16) Year 1	(FY17) Year 2	(FY18) Year 3	(FY19) Year 4	(FY20) Year 5	Total
1 Reallocation of Existing Funds	\$140,000	\$144,200	\$148,526	\$152,982	\$157,571	\$743,279
Required New Public Funds <sup>2</sup>						\$0
1. State Funds						\$0
2. Local Tax Funds (community colleges)						\$0
Tuition and Fees						
Year 1 - 16 students x 37 credits @ \$94	\$55,648	\$55,648	\$55,648	\$55,648	\$55,648	\$278,240
Other Funding <sup>4</sup>	\$1,000,000	\$25,000	\$25,000	\$25,000	\$25,000	1,100,000
1						\$0
2						\$0
3						\$0
Total Revenue <sup>5</sup>	\$1,195,648	\$224,848	\$229,174	\$233,630	\$238,219	\$2,121,519

**FOOTNOTES are for guidance only. Please provide your own footnotes, where appropriate, and delete ours.**

<sup>1</sup> Show the total amount of dollars the institution will reallocate from its budget to support this program. Identify the source of funding and provide an explanation of the impact that the redistribution of funds will have on existing programs.

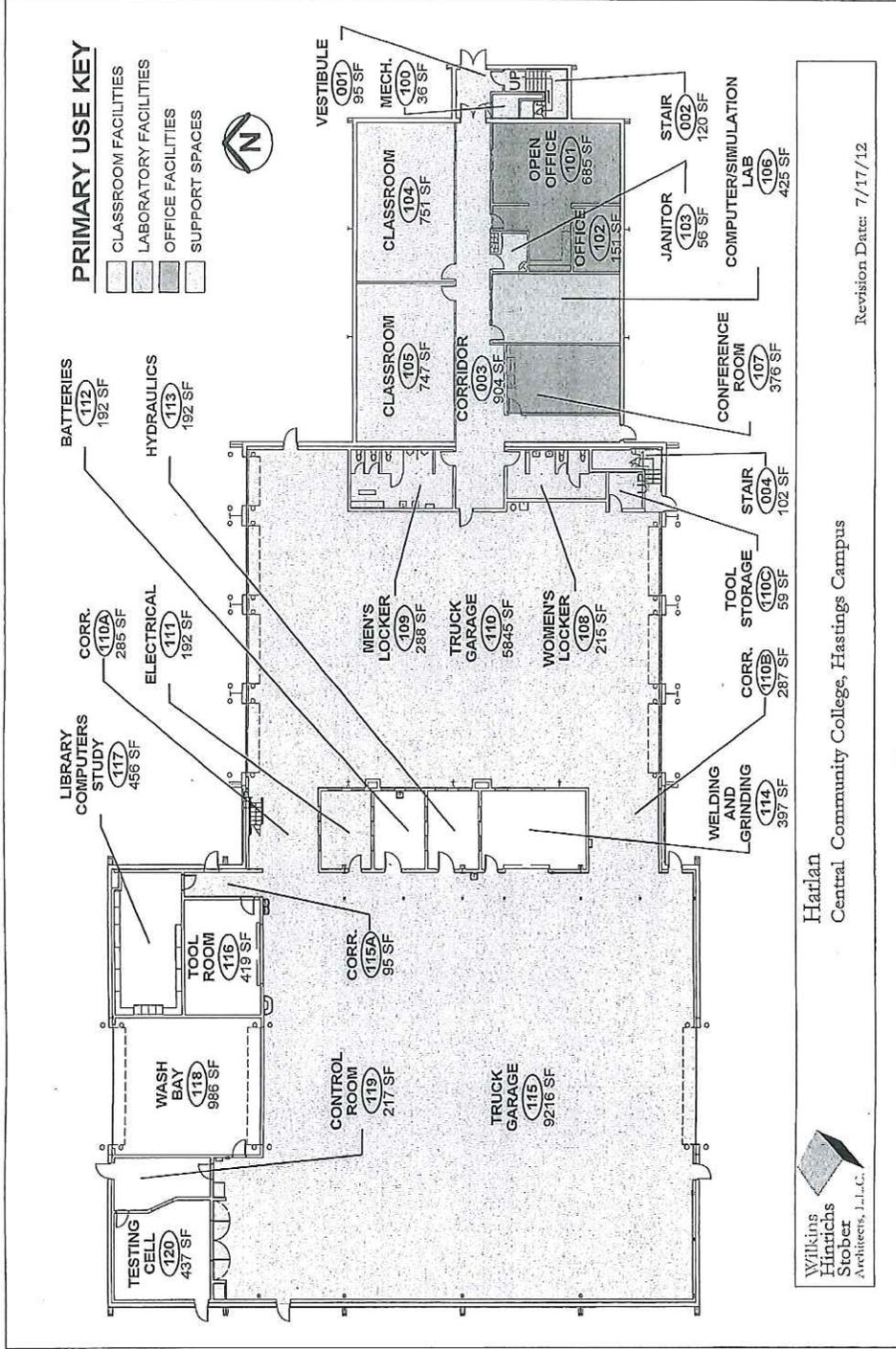
<sup>2</sup> This represents a requirement for additional public funds to support this program. If additional state funds are required, this request will have to be included in the institution's budget request. Separately detail all sources for additional funds. For community colleges, this would include local tax funds.

<sup>3</sup> Show additional tuition and fee revenues that will be generated by this program (not expecting annual increases).

<sup>4</sup> Show the amount of external funding or donations which the institution anticipates will become available each year to support this program. Include a brief explanation of the nature of these resources including their specific source and the term of the commitment.

<sup>5</sup> **Revenues are not expected to match expenses.**

NOTE: Where appropriate, show calculations and/or formulas that were used to project new revenue; e.g. number of new students projected multiplied by tuition and fees.



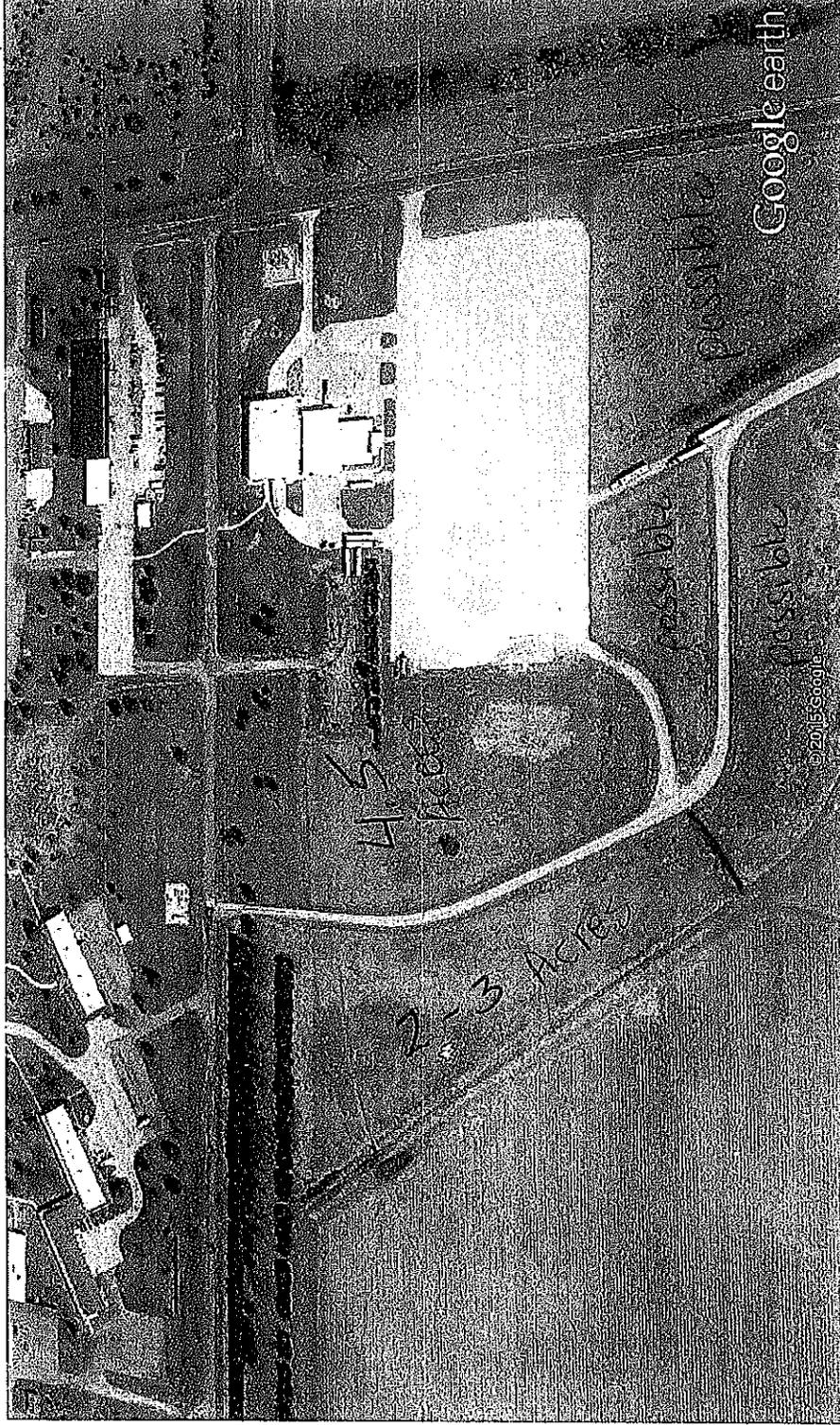
Appendix 1 Harlan Building – currently houses Diesel Technology and Truck Driving programs. Heavy Equipment Operator program will share the classrooms (104 and 105), Computer/Simulation Lab (106) and office space.

**Appendix 2 -Possible Building Type**

Materials cost for a 100' X 208' building would run around \$130,000. Estimate from Donoghue Ag Sales in Columbus. Whole package would be less than \$500,000 with footings, electrical, installation, etc. The picture is an example of what is available.



Appendix 3 - CCC land to be used 7-10 acres



Google earth

feet  
meters

1000  
300

