







Unit/Standard Number	 pennsylvania DEPARTMENT OF EDUCATION	<u>High School Graduation Years 2014, 2015 and 2016</u>
	Construction Trades C.I.P. 46.9999 Task Grid	
	Secondary Competency Task List	
100	DEMONSTRATE SAFETY RULES FOR THE CONSTRUCTION TRADES	
101	Demonstrate knowledge of OSHA and its mission of safety in the work place.	
102	Demonstrate knowledge of hazard communications.	
103	Demonstrate knowledge of working safely with hazardous materials.	
104	Describe and demonstrate the use of personal protective equipment.	
105	Follow rules and regulations for fire protection.	
106	Safely handle and store construction materials.	
107	Perform safe operations with hand and power tools.	
108	Perform safe operations with welding and cutting equipment.	
109	Demonstrate knowledge and skill to ensure electrical safety.	
110	Demonstrate knowledge of "stuck-by" and "caught-in-between" hazards.	
111	Demonstrate and follow procedures that protect workers from falling from elevated structures.	
112	Describe and demonstrate safety procedures to follow when working around excavations.	
113	Explain safety rules to follow when working around excavations.	
114	Describe and follow safety rules for working with concrete and masonry construction.	
115	Demonstrate safe use of ladders and scaffolding.	
116	Explain and follow safety procedures for working in confined spaces.	
117	Explain safety procedures to follow when using explosive or powder-actuated tools.	
200	DEMONSTRATE PROPER USE OF HAND TOOLS	
201	Identify and follow all basic safety rules for using hand tools.	
202	Identify and demonstrate the proper use of layout tools.	
203	Identify and demonstrate the proper use cutting tools.	
204	Identify and demonstrate the proper use shaping tools.	
205	Identify and demonstrate the proper use fastening tools.	
206	Identify and demonstrate the proper use dismantling tools.	

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300	OPERATE PORTABLE POWER TOOLS AND EQUIPMENT	
301	Operate a circular saw safely and accurately.	
302	Operate battery and electric drills safely and accurately	
303	Operate belt and hand sanders safely and accurately	
304	Operate reciprocating saws safely and accurately	
305	Operate routers safely and accurately	
306	Operate a pneumatic nailer safely and accurately	
307	Operate a power miter box safely and accurately	
308	Operate a table saw safely and accurately.	
309	Operate an electric planer safely and accurately	
400	READ PLANS AND BLUEPRINTS	
401	Demonstrate the ability to references building codes as needed.	
402	Demonstrate a need to know zoning regulations.	
403	Read and interpret plans, sketches and blueprints.	
404	Recognize and identify basic blueprint terms, components, abbreviations and symbols.	
405	Interpret architectural specifications.	
406	Use Architect scale.	
407	Identify structural components	
500	PERFORM SITE AND BUILDING LAYOUT	
501	Use a builder's level, transit and/or laser level to determine site and building elevations.	
502	Square a building using the "3-4-5 rule" or by measuring diagonals.	
600	DEMONSTRATE SKILL IN PLACING CONCRETE	
601	Describe modern concrete materials and renewal methods.	
602	Associate trade terms with the appropriate concrete finishing processes and equipment.	
603	Estimate the amount of concrete needed for footers and slabs.	
604	Lay out and build concrete forms.	
605	Describe the use of equipment and tools for placing concrete.	

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606	Describe the process of depositing, spreading, consolidating, and striking off concrete.	
607	Describe and demonstrate the basic concrete finishing processes.	
608	Describe the tools used to edge, groove, and cut concrete.	
700	LAY BLOCK AND BRICK MASONRY UNITS	
701	Describe the most common types of masonry units.	
702	Identify concrete block by size and type.	
703	Estimate masonry units needed for block construction	
704	Demonstrate masonry cutting techniques.	
705	Lay out and construct a block laying project to specifications	
706	Describe various masonry positions and bonds.	
707	Lay block to a line.	
708	Describe the function of wall ties.	
709	Describe installation of anchor bolts.	
710	Mix mortar to proper proportions and consistency.	
711	Describe different mortar types and applications.	
712	Demonstrate proper brick and block laying techniques.	
713	Demonstrate the installation of lintels in block or brick walls.	
800	DEMONSTRATE SKILL IN FRAME FLOORS	
801	Identify different types of framing materials and systems.	
802	Describe how to install girders and sills.	
803	Demonstrate and perform layout of floor joists and openings.	
804	Demonstrate how to install various floor joists and band joists.	
805	Demonstrate how to install various types of bridging.	
806	Demonstrate how to install various types of columns and supports.	
807	Demonstrate how to install various types of subfloor materials.	
900	DEMONSTRATE SKILL IN WALL FRAMING	
901	Describe and demonstrate how to install various components of interior and exterior walls.	
902	Describe and demonstrate how to install various ceiling joists.	
903	Describe and demonstrate how to install various steel framing components.	

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1000	DEMONSTRATE SKILL IN ROOF FRAMING	
1001	Describe how to identify various roof types.	
1002	Describe how to install various roof components for gable roofs.	
1003	Describe how to install various types of roof trusses.	
1004	Describe how to install various types of roof sheathing materials.	
1005	Estimate various roof component materials.	
1100	INSTALL ROOF COVERINGS	
1101	Describe how to install various types of asphalt shingles.	
1102	Describe and demonstrate how to install various types of underlayment materials.	
1103	Describe how to install various types of flashing.	
1104	Estimate various roof covering materials.	
1200	INSTALL INSULATION MATERIALS	
1201	Describe how to install various types of insulation and ventilation.	
1202	Estimate quantities of insulation and ventilation materials.	
1300	APPLY EXTERIOR FINISHES	
1301	Describe how to install various types of horizontal sidings.	
1302	Describe how to install various types of vertical sidings.	
1303	Describe how to install various types of cornices.	
1304	Estimate various exterior finish materials	
1305	Identify how to install various types of windows.	
1306	Identify how to install various types of exterior doors.	
1307	Describe how to install various types of soffit and fascia/windows and doors.	
1400	INSTALL BASIC PLUMBING	
1401	Describe and demonstrate plumbing hand tools and basic safe use.	
1402	Identify and demonstrate plumbing power tools and basic safe use.	
1403	Identify various types of pipe	
1404	Identify various types of fittings.	
1405	Describe how to install various types of valves and devices.	
1406	Describe how to install faucets and drain assemblies.	
1407	Describe how to install various appliances.	
1408	Describe how to interpret blueprints and specifications.	

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1409	Describe how to install water distribution systems.	
1410	Describe how to correctly size drain, waste and vent systems.	
1411	Describe how to install fixtures and equipment.	
1412	Describe how to troubleshoot and repair various common plumbing problems.	
1500	INSTALL RESIDENTIAL ELECTRIC CIRCUITS AND COMPONENTS	
1501	Identify electrical hazards and practice electrical safety.	
1502	Apply the National Electric Code (NEC) to common residential installations.	
1503	Read and interpret electrical drawings.	
1504	Understand and apply electrical theory.	
1505	Describe basic electrical circuits.	
1506	Describe and identify various wire types and sizes.	
1507	Identify and use electrical tools.	
1508	Identify and install ground fault circuit interrupters.	
1509	Identify and install arc fault circuit interrupters.	
1510	Identify and install over current protection devices.	
1511	Install a junction box.	
1512	Rough in a ceiling fan box.	
1513	Install light fixtures.	
1514	Install various receptacle circuits.	
1515	Install various switch circuits.	
1516	Install a 220-volt circuit.	
1517	Install a recessed light.	
1518	Trim out and finish electrical circuits.	
1519	Describe service entrance installation.	
1520	Describe low voltage electrical circuits.	
1521	Describe panel installation.	
1600	DEMONSTRATE KNOWLEDGE AND SKILL IN WALL INTERIOR FINISHES	
1601	Describe how to install various wall surfaces.	
1602	Describe and demonstrate how to install various interior moldings.	
1603	Estimate various materials for wall surfaces.	
1604	Estimate various types of interior moldings.	
1700	DEMONSTRATE KNOWLEDGE OF INTERIOR FINISHES	

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	1701	Describe how to apply different types of paints and their uses.	
	1702	Describe how to apply different paints and stains to different surfaces.	
	1703	Clean painting tools.	
	1705	Describe and apply various types of caulking.	
	1706	Describe and demonstrate how to install ceramic tile.	
	1800	INSTALL STAIRWAYS	
	1801	Describe various types of stairways and components.	
1802	Calculate, layout and cut stair stringers.		

