

# Red Seal Occupational Standard

## Floorcovering Installer



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Employment and  
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Canada 

# **Red Seal Occupational Standard**

## **Floorcovering Installer**



Title: Floorcovering Installer

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**PDF**

Cat. No.: Em15-3/44-2023E-PDF

ISBN/ISSN: 978-0-660-67645-6

# Foreword

***The Canadian Council of Directors of Apprenticeship (CCDA) recognizes this Red Seal Occupational Standard (RSOS) as the Red Seal standard for the Floorcovering Installer trade.***

## **Background**

The first National Conference on Apprenticeship in Trades and Industries, held in Ottawa in 1952, recommended that the federal government be requested to cooperate with provincial and territorial apprenticeship committees and officials in preparing analyses of a number of skilled occupations. Employment and Social Development Canada (ESDC) funds the Red Seal Program, which, under the guidance of the CCDA, develops a national occupational standard for each of the Red Seal trades.

Standards have the following objectives:

- to describe and group the tasks performed by skilled workers;
- to identify which tasks are performed in every province and territory;
- to develop instruments for use in the preparation of Interprovincial Red Seal Examinations and assessment tools for apprenticeship and certification authorities;
- to develop common tools for apprenticeship on-the-job and technical training in Canada;
- to facilitate the mobility of apprentices and skilled workers in Canada;
- to supply employers, employees, associations, industries, training institutions and governments with occupational standards.

Any questions, comments, or suggestions for changes, corrections, or revisions to this standard or any of its related products may be forwarded to:

Trades and Apprenticeship Division  
Apprenticeship and Sectoral Initiatives Directorate  
Employment and Social Development Canada  
140 Promenade du Portage, Phase IV  
Gatineau, Quebec K1A 0J9

# Acknowledgements

The CCDA and ESDC wish to express sincere appreciation for the contribution of the many tradespersons, industrial establishments, professional associations, labour organizations, provincial and territorial government departments and agencies, and all others who contributed to this publication.

Special thanks are offered to the following representatives who contributed greatly to the original draft of the standard and provided expert advice throughout its development:

Jeff Jensen	British Columbia
Kelly Lesperance	Nova Scotia
Mike McLaughlin	Ontario
Kjell Nymark	British Columbia
John Okopien	Quebec
Scott Spicer	Ontario
Anthony Terhaar	British Columbia
Stephen Zizek	United Brotherhood of Carpenters and Joiners of America (UBCJA)

This standard was prepared by the Apprenticeship and Sectoral Initiatives Directorate of ESDC. The coordinating, facilitating and processing of this standard were undertaken by employees of the standards development team of the Trades and Apprenticeship Division and of Alberta, the host jurisdiction for this trade

# Structure of the Occupational Standard

This standard contains the following sections:

**Methodology:** an overview of the process for development, review, validation and weighting of the standard

**Description of the Floorcovering Installer Trade:** an overview of the trade's duties, work environment, job requirements, similar occupations and career progression

**Trends in the Floorcovering Installer Trade:** some of the trends identified by industry as being the most important for workers in this trade

**Skills for Success Summary:** an overview of how each of the skills for success (formerly called essential skills) is applied in this trade

**Roles and Opportunities for Skilled Trades in a Sustainable Future:** an overarching description of how in the context of climate change, skilled trades play a large role in implementing solutions and adjusting to changes in the world. In addition to highlighting the importance of this awareness, the standard may also contain more details on activities, skills and knowledge elements that are specific to the trade

**Industry Expected Performance:** description of the expectations regarding the level of performance of the tasks, including information related to specific codes, regulations and standards that must be observed

**Language Requirements:** description of the language requirements for working and studying in this trade in Canada

**Pie Chart of Red Seal Examination Weightings:** a graph which depicts the national percentages of exam questions assigned to the major work activities

**Task Matrix and Weightings:** a chart which outlines graphically the major work activities, tasks and sub-tasks of this standard and the national percentages of exam questions assigned to the major work activities and tasks

**Harmonization of Apprenticeship Training:** the aspects of apprenticeship training that participating provinces and territories have agreed upon to substantively align apprenticeship systems across Canada

**Major Work Activity (MWA):** the largest division within the standard that is comprised of a distinct set of trade activities

**Task:** distinct actions that describe the activities within a major work activity

**Task Descriptor:** a general description of the task

**Sub-task:** distinct actions that describe the activities within a task

**Skills:**

**Performance Criteria:** description of the activities that are done as the sub-task is performed

**Evidence of Attainment:** proof that the activities of the sub-task meet the expected performance of a tradesperson who has reached journeyperson level

**Range of Variables:** elements and examples (not all inclusive) that provide a more in-depth description of a term used in the performance criteria and evidence of attainment

**Knowledge:**

**Learning Outcomes:** describes what should be learned relating to a sub-task while participating in technical or in-school training

**Learning Objectives:** topics to be covered during technical or in-school training in order to meet the learning outcomes for the sub-task

**Range of Variables:** elements and examples (not all inclusive) that provide a more in-depth description of a term used in the learning outcomes and learning objectives

**Appendix A – Acronyms:** a list of acronyms used in the standard with their full name

**Appendix B – Tools and Equipment / Outils et équipement:** a bilingual non-exhaustive list of tools and equipment used in this trade

**Appendix C – Glossary / Glossaire:** bilingual definitions or explanations of selected technical terms used in the standard

# Methodology

## Development of the Standard

A draft standard is developed by a broad group of trade representatives, including tradespeople, instructors and employers at a National Workshop led by a team of facilitators. This draft standard breaks down all the tasks performed in the occupation and describes the knowledge and abilities required for a tradesperson to demonstrate competence in the trade.

## Harmonization of Apprenticeship Training

An analysis of all provinces' and territories' apprenticeship programs is performed and recommendations are made on harmonizing the name of the trade, the hours of training required and the number of levels of training. Provinces and territories consult with their respective industry stakeholders on these elements and revisions are discussed until consensus is reached. Following the development of the workshop draft of the RSOS, participants discuss and come to consensus on the sequence of training topics, as expressed in the new standard. Their sequencing recommendations are reviewed by stakeholders in participating provinces and territories and further discussions are convened to reach consensus and to identify any exceptions.

## Online Survey

Stakeholders are asked to review and validate the activities described in the new standard via an online survey. These stakeholders are invited to participate in this consultation through apprenticeship authorities, as well as national stakeholder groups.

## Draft Review

The RSOS development team forwards a copy of the standard to provincial and territorial authorities who consult with industry representatives to review it. Their recommendations are assessed and incorporated into the standard.

## Validation and Weighting

Participating provinces and territories also consult with industry to validate and weight the document for the purpose of planning the makeup of the Red Seal Interprovincial Examination for the trade. They validate and weight the major work activities (MWA), tasks and sub-tasks, of the standard as follows:

<b>MWA</b>	Each jurisdiction assigns a percentage of questions to each MWA for an examination that would cover the entire trade.
<b>Tasks</b>	Each jurisdiction assigns a percentage of exam questions to each task within a MWA.
<b>Sub-tasks</b>	Each jurisdiction indicates, with a "yes" or "no", whether or not each sub-task is performed by skilled workers within the occupation in its jurisdiction.

The results of this exercise are submitted to the RSOS development team who then analyzes the data and incorporates it into the document. The RSOS provides the individual jurisdictional validation results as well as the national averages of all responses. The national averages for MWA and task weighting guide the Interprovincial Red Seal Examination plan for the trade.

The validation of the RSOS is used to identify common core sub-tasks across Canada for the occupation. If at least 70% of the responding jurisdictions' industry performs a sub-task, it shall be considered common core. Interprovincial Red Seal Examination questions are limited to the common core sub-tasks identified through this validation process.

## Definitions for Validation and Weighting

<b>yes</b>	sub-task performed by qualified workers in the occupation in that province or territory
<b>no</b>	sub-task not performed by qualified workers in the occupation in that province or territory
<b>NV</b>	standard <u>N</u> ot <u>V</u> alidated by that province or territory
<b>ND</b>	trade <u>N</u> ot <u>D</u> esignated in a province or territory
<b>Not Common Core (NCC)</b>	sub-task, task or MWA performed less than 70% of responding jurisdictions; these will not be tested by the Interprovincial Red Seal Examination for the trade
<b>National Average %</b>	average percentage of questions assigned to each MWA and task in Interprovincial Red Seal Examination for the trade

## Provincial/Territorial Abbreviations

<b>NL</b>	Newfoundland and Labrador
<b>NS</b>	Nova Scotia
<b>PE</b>	Prince Edward Island
<b>NB</b>	New Brunswick
<b>QC</b>	Quebec
<b>ON</b>	Ontario
<b>MB</b>	Manitoba
<b>SK</b>	Saskatchewan
<b>AB</b>	Alberta
<b>BC</b>	British Columbia
<b>NT</b>	Northwest Territories
<b>YT</b>	Yukon Territory
<b>NU</b>	Nunavut

# Description of the Floorcovering Installer Trade

“Floorcovering Installer” is this trade’s official Red Seal occupational title approved by the CCDA.

Floorcovering installers install, replace and repair a variety of floorcoverings. They work with cushion, carpeting, vinyl, resilient tile, sheet flooring and seasonal carpet. In some jurisdictions, floorcovering installers may also install and repair pre-finished wood, unfinished wood, engineered wood, laminate and artificial turf. Floorcovering installers install and repair floorcoverings in residential and industrial/commercial/institutional (ICI) settings.

In new building construction, floorcovering is one of the final procedures to be carried out. Floorcovering installers ideally begin their work after services (water, electricity, light, heat) are installed and walls are painted.

When replacing or repairing pre-existing floorcoverings, the work area must be cleared of furniture and appliances. Existing flooring, cushion and trim must often be removed. When repairing damaged areas, floorcovering installers perform tasks such as matching patterns and inserting pieces using specialty tools and equipment.

The preparation for floorcovering installation involves inspecting, measuring and cleaning surfaces onto which the floorcovering is to be installed. Preparation normally includes correcting surface imperfections such as cracks, chips and small holes, and sanding and filling wood substrates and/or underlayment panels.

Floorcovering installers may be responsible for site visits, planning, scheduling and estimating of jobs. They use blueprints, freehand drawings, scaled drawings, layout plans, shop drawings, work orders and finish schedules.

Self-employment is common in this trade. Some floorcovering installers are employed by flooring businesses (retail or wholesale), construction companies and contractors.

Floorcovering installers need to know about a wide variety of flooring, though some may specialize in certain types of applications, depending on where they work. Floorcovering installers may work closely with designers, engineers, architects and other tradespeople such as carpenters, painters and decorators, lathers (interior systems mechanics), drywall finishers and plasterers, and cabinetmakers.

Key attributes for people entering this trade are: good colour vision, hand-eye coordination, problem solving skills, mathematical skills, communication skills and organizational skills. Good physical condition is important because the work often requires considerable kneeling, stretching, twisting, and lifting heavy and awkward loads. Floorcovering installers must be aware of the ergonomic hazards of the trade and appropriate work practices.

Health and safety are important for these tradespeople as they are frequently in contact with chemical (e.g., paints, adhesives and other toxic materials) and physical (e.g., cutting tools, fastening tools and silica dust) hazards. Ongoing safety awareness and a good knowledge of safety standards and regulations are important.

With experience, journeypersons may move into supervisory, management, sales and instructional positions.

# Trends in the Floorcovering Installer Trade

## **Technology:**

Floorcovering installers now use electronic devices such as phones and tablets to receive and read job plans. This helps ensure that the plans are up-to-date and applicable to the job.

## **Tools and Equipment:**

Many tools used for floorcovering, such as heat welders for resilient flooring, gauges, and measuring tools now have digital reading rather than dials. Equipment such as laser measuring tools, temperature gauges and moisture meters are more accurate and easy to use.

There are significant improvements in personal protective equipment such as knee pads that are more ergonomic and prevent long-term knee injuries.

There is an increased emphasis on the importance of preparing concrete floors thoroughly, especially those that had previously had coverings or adhesives. This requires the use of specialized preparation tools and equipment such as grinders and scarifiers. There is also an increase in the use of self-levelling products that are easier to apply and keep the installer off of their knees as much as possible.

## **Products/Materials:**

Tension flooring products are less commonly installed compared to wall-to-wall adhesive flooring. Hygienic wall protection materials are increasingly being used in hospital operating rooms and commercial kitchens for infection prevention.

Glues are no longer solvent-based; they are better performing and less harmful to the environment.

Manufacturers are becoming more stringent about their instructions for proper mixing, preparation and application in order to warranty their products.

Many products and materials have easily available information online for access by phones or tablets.

## **Health and Safety:**

The trade is increasingly using PPE such as respirators, HEPA filter vacuums, gloves and masks. This is highly regulated and enforced.

There is a greater awareness of hazardous products and safe work methods.

## **Environmental:**

It is important for floorcovering installers to separate materials in appropriate bins for disposal or recycling.

There is increasingly widespread use of recycled products and environmental guidelines such as Leadership in Energy and Environmental Design (LEED), Canadian Green Building Council (CaGBC), Carpet America Recovery Effort (CARE), Carpet and Rug Institute (CRI), American National Standards Institute (ANSI) 140, Green Label Plus (for adhesives), Environmental Product Declarations, and Building for Environmental and Economic Stability (BEES).

## **Work Environment:**

Increasingly, this trade is working alongside other trades. This requires close coordination and awareness of one another's workspace and time requirements and safety considerations.

# Skills for Success Summary

Skills for Success are needed in a quickly changing world for work, learning and life. They are foundational for building other skills and important for effective social interaction. Everyone benefits from having these skills as they help individuals get a job, progress at their current job and change jobs. They also help individuals become active members of their community and succeed in learning.

Through extensive research and consultations, the Government of Canada launched the new Skills for Success model renewing the previous Essential Skills framework to better reflect the needs of the current and future labour market.

The summary presented here is based on existing Essential Skills profiles and will be updated to align with the new Skills for Success model over time.

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## Reading

Floorcovering installers read a variety of texts. They read notes from contractors or supervisors on issues ranging from noise restrictions to special floor preparation requirements, or from architects and designers on topics such as product substitutions and timeline adjustments. They also read warranty procedures, cleaning instructions, product information sheets, safety data sheets (SDS) and equipment installation manuals.

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## Document Use

Floorcovering installers read signs, labels and lists. They complete various forms such as estimate forms to calculate labour and material costs, and they locate data on completed forms such as work orders to confirm locations and details of work to be completed. They also review specifications to identify sizes and shapes of floor spaces, types of flooring to be installed and installation procedures to be followed. Floorcovering installers interpret scale drawings such as blueprints or maps and take measurements from these drawings. They also draw to scale and make sketches.

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## Writing

Floorcovering installers write notes on work orders and floor layout plans to indicate additional services provided or to record mistakes and the use of substitute materials. They may also write notes to co-workers, customers or other tradespeople.

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## Oral Communication

Floorcovering installers discuss ongoing work with co-workers, contractors and other tradespeople to review task sequences and project timelines and to confirm flooring substitutions or changes to specifications. They may provide direction to apprentices or new employees. They may also speak to customers to suggest changes in flooring designs and product options, or to explain warranties and proper maintenance of installed flooring.

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## **Numeracy**

The math skills involved in the floorcovering installer trade include handling money, scheduling, budgeting and accounting, measurement and calculation, data analysis, and estimation.

Floorcovering installers may prepare and verify invoices by itemizing prices and costs of materials and calculating labour charges and applicable taxes. They create work schedules based on project size, availability of workers and materials, and clients' timelines. They take measurements such as floor length and width using a variety of tools such as tapes and rulers, or the moisture content of concrete floors using hygrometers. They also calculate the area of rooms and determine the quantity of carpet, vinyl, tiles or hardwood required. They use geometric construction methods to lay out lines and to create patterns. They also estimate amounts of products required, sizes of rooms and time required to complete an installation.

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## **Thinking**

Floorcovering installers use their problem solving skills to resolve issues such as missing materials, faulty tools, delays created by other trades or incorrect drawings and specifications. They may plan sequence of staging, order new supplies, adjust their work schedules or ask for direction from supervisors.

They use decision making skills to select equipment, materials and installation methods, sequences and layouts to complete various flooring installations. They also use critical thinking skills to assess the suitability of materials and products selected. For example, when laying floorcovering products, they visually check for defects and they inspect the sub-floors for flaws to ensure that the quality of the finished installation is not compromised. They also consider factors such as manufacturers' specifications, traffic flow patterns and exposure to extreme temperatures, high moisture levels and direct sunlight.

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## **Working with Others**

Floorcovering installers coordinate tasks with small crews and other trades to ensure efficient use of time and to meet installation timelines. They may work with apprentices and they may participate in supervisory or leadership activities.

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## **Digital Technology**

Floorcovering installers may use the Internet to search suppliers' or manufacturers' websites for information on flooring tools, products and specifications. They may also use computer programs for business applications such as invoicing and estimating.

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## **Continuous Learning**

Floorcovering installers learn on the job and through their daily interactions with co-workers. They may attend courses offered by product manufacturers. They also read manufacturers' product manuals, information sheets and trade magazines to stay current on technological advancements in the trade.

# Roles and Opportunities for Skilled Trades in a Sustainable Future

Climate change affects all of us. Trades play a large role in implementing solutions and adjusting to changes in the world.

Throughout this standard, there may be specific references to tasks, skills and knowledge that clearly show this trade's role in a more sustainable future. Each trade has different roles to play and contributions to make in their own way.

For example:

- Construction tradespeople need to consider the materials they are using, building methods, and improvements to mechanical and electrical installations. There are important changes to codes and standards to help meet the climate change goals and commitments set for 2030 and 2050. Retrofits and new construction of low-energy buildings provide enormous opportunities for workers in this sector. Concepts, such as energy efficiency and regarding buildings as systems are foundational.
- Automotive and mechanical trades are seeing a shift towards the electrification of vehicles and equipment. As a result, new skills and knowledge will be required for tradespeople working in this sector. There are mandates for sales of new light-duty zero-emission vehicles (ZEV) in Canada, with the goal of achieving 100% ZEV sales by 2035. Due to this mandate, the demand for these vehicles is growing quickly among consumers and fleets. With this escalating demand, the need for skilled workers to maintain and repair these vehicles is also increasing.
- In industrial and resource sectors, there is pressure to move towards increased electrification of industrial processes. Many industrial and commercial facilities are also being upgraded to improve energy efficiency in areas such as lighting systems, and new production processes and technologies. There are also opportunities in carbon capture, utilization and storage (CCUS), as well as the production and export of low-carbon hydrogen.
- Trades in the service sector may also need to be aware of responsible sourcing, as well as efficient use of products and materials. New ways of working better are always a part of the job.

There are fast-moving changes in guidelines, codes, regulations and specifications. Many are being implemented for the purpose of energy efficiency and climate change. Those that affect specific trades may be mentioned within the standard. Examples of these guidelines and legislation include:

- The National Energy Code of Canada for Buildings (NECB).
- The Canadian Net-Zero Emissions Accountability Act (CNZEAA).
- programs that encourage sustainable building design and construction such as Leadership in Energy and Environmental Design (LEED) and the Zero Carbon Building (ZCB) standards.
- the Montreal Protocol for phasing out R22 refrigerants.

- energy efficiency programs such as ENERGY STAR.
- principles of the United Nations Declaration for the Rights of Indigenous Peoples pertaining to energy sector development.

Apprentices and tradespeople need to increase their climate literacy and reinforce their own understanding of energy issues and environmental practices. It is important for them to understand why these changes are happening and their effect on trades' work. While individual tradespeople and apprentices may not be able to choose certain elements like; the architectural design of buildings, building material selection, regulatory requirements, use of electric vehicles and technologies, they must understand the impact of using these elements in their work. Impacts include using environmentally friendly products and following requirements related to the disposal and recycling of materials.

In apprenticeship, as well as in ongoing professional development, employers and instructors should encourage learning about these concepts, why they are important, how they are implemented, and the overarching targets they are aiming to achieve.

All in all, it's about doing the work better and building a better world.

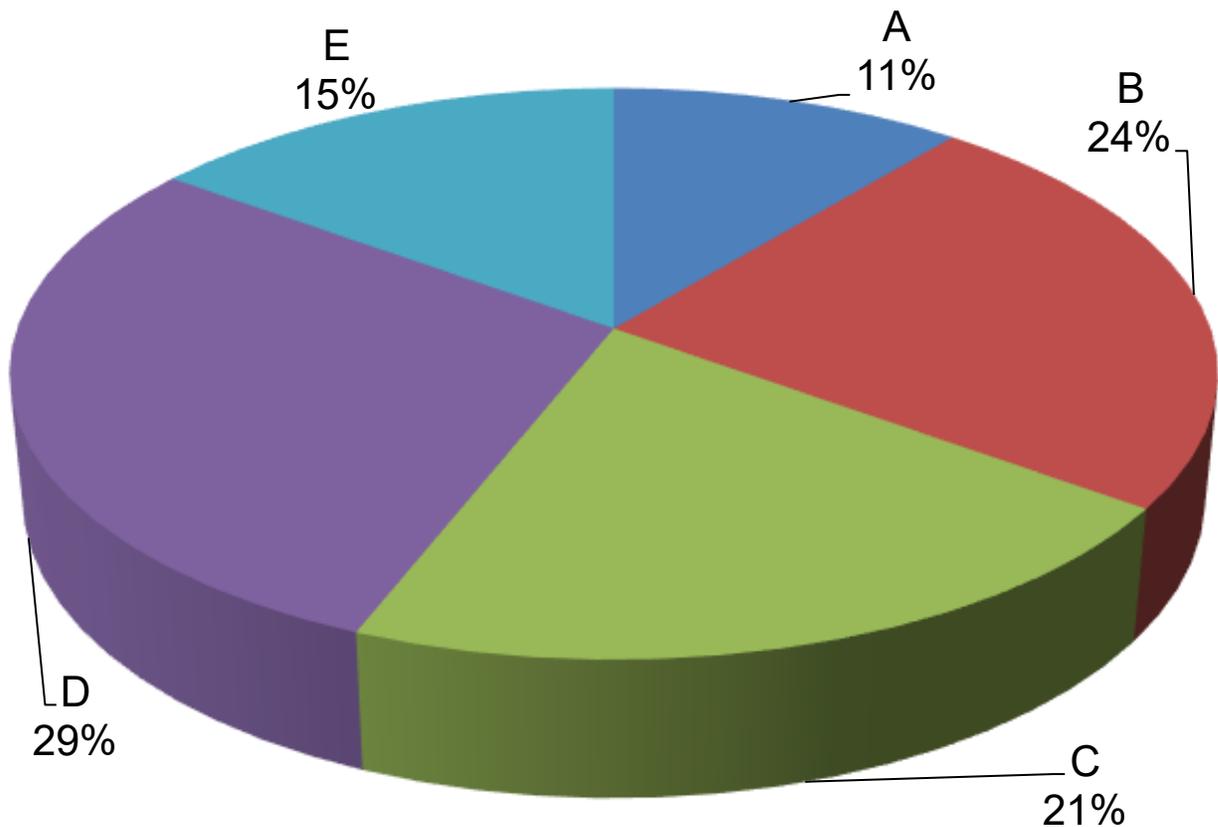
# Industry Expected Performance

All tasks must be performed according to the applicable jurisdictional codes and standards. All health and safety standards must be respected and observed. Work should be performed efficiently and to a high quality without material waste or environmental damage. All requirements of employers, architects, designers, manufacturers, clients and quality control policies must be met. At a journeyperson level of performance, all tasks must be done with minimal direction and supervision. As a journeyperson progresses in their career there is an expectation they continue to upgrade their skills and knowledge to maintain pace with industry and promote continuous learning in their trade through mentoring of apprentices.

# Language Requirements

It is expected that journeypersons are able to understand and communicate in either English or French, which are Canada's official languages. English or French are the common languages of business as well as languages of instruction in apprenticeship programs.

# Pie Chart of Red Seal Examination Weightings



MWA A	Performs common occupational skills	11%
MWA B	Prepares floor	24%
MWA C	Installs and repairs carpet	21%
MWA D	Installs and repairs resilient flooring	29%
MWA E	Installs and services wood, laminate and floating vinyl plank flooring	15%

This pie chart represents a breakdown of the interprovincial Red Seal examination. Percentages are based on the collective input from workers from the trade from across Canada. The Task Matrix on the next pages indicates the breakdown of tasks and sub-tasks within each Major Work Activity and the breakdown of questions assigned to the Tasks. The Interprovincial examination based on the RSOS for this trade has 120 questions.

# Floorcovering Installer

## Task Matrix and Weightings

### A – Performs common occupational skills

**11%**

<p><b>Task A-1</b> Performs safety-related functions <b>17%</b></p>	<p><b>A-1.01</b> Uses personal protective equipment (PPE) and safety equipment</p>	<p><b>A-1.02</b> Maintains safe work environment</p>	
<p><b>Task A-2</b> Uses and maintains tools and equipment <b>18%</b></p>	<p><b>A-2.01</b> Uses hand tools</p>	<p><b>A-2.02</b> Uses power and pneumatic tools</p>	<p><b>A-2.03</b> Uses measuring and layout tools</p>
<p><b>Task A-3</b> Assesses floor and jobsite conditions <b>24%</b></p>	<p><b>A-3.01</b> Performs quality control</p>	<p><b>A-3.02</b> Assesses floor and sub-floor conditions and deficiencies</p>	<p><b>A-3.03</b> Conducts field tests</p>
<p><b>Task A-4</b> Organizes work <b>17%</b></p>	<p><b>A-4.01</b> Plans sequence of installation</p>	<p><b>A-4.02</b> Handles material</p>	<p><b>A-4.03</b> Determines layouts and materials needed for job</p>
	<p><b>A-4.04</b> Uses documentation</p>		
<p><b>Task A-5</b> Installs transitions, trims and wall bases <b>19%</b></p>	<p><b>A-5.01</b> Installs transitions and trims</p>	<p><b>A-5.02</b> Installs resilient wall base</p>	<p><b>A-5.03</b> Installs carpet wall base</p>
	<p><b>A-5.04</b> Installs wood wall base</p>		
<p><b>Task A-6</b> Uses communication and mentoring techniques <b>5%</b></p>	<p><b>A-6.01</b> Uses communication techniques</p>	<p><b>A-6.02</b> Uses mentoring techniques</p>	

## B – Prepares floor

24%

<b>Task B-7</b> Removes existing floorcovering and accessories <b>31%</b>	B-7.01 Removes transitions, trims and wall bases	B-7.02 Removes carpet	B-7.03 Removes resilient flooring
	B-7.04 Removes wood, laminate flooring, tiles and underlayment		
<b>Task B-8</b> Prepares substrate <b>69%</b>	B-8.01 Removes contaminants	B-8.02 Prepares concrete floors and underlayment	B-8.03 Prepares wood floors and underlayment
	B-8.04 Prepares specialty floors	B-8.05 Installs trowelled underlayment	B-8.06 Installs rigid underlayment panels

## C – Installs and repairs carpet

21%

<b>Task C-9</b> Installs carpet <b>42%</b>	C-9.01 Cuts carpet for installation	C-9.02 Installs carpet by conventional method	C-9.03 Installs carpet by direct glue-down method
	C-9.04 Installs carpet by double glue-down method	C-9.05 Installs modular carpet tiles	C-9.06 Completes carpet installation
<b>Task C-10</b> Performs custom carpet procedures <b>33%</b>	C-10.01 Installs borders and insets	C-10.02 Binds carpet	C-10.03 Upholsters with carpet
	C-10.04 Assembles area rugs and runners	C-10.05 Installs carpet and runners on stairs	

<b>Task C-11</b> <b>Installs artificial turf</b> <b>6%</b>	<b>C-11.01 Establishes layout and grid lines for artificial turf</b>	<b>C-11.02 Assembles artificial turf sections</b>	<b>C-11.03 Completes artificial turf installation</b>
	<b>C-12.01 Repairs carpet installed by conventional method</b>	<b>C-12.02 Repairs carpet installed by direct glue-down method</b>	<b>C-12.03 Repairs carpet installed by double glue-down method</b>
<b>Task C-12</b> <b>Repairs carpet</b> <b>19%</b>	<b>C-12.04 Repairs artificial turf</b>		

## D – Installs and repairs resilient flooring

**29%**

<b>Task D-13</b> <b>Installs resilient flooring</b> <b>50%</b>	<b>D-13.01 Establishes layout and grid lines</b>	<b>D-13.02 Installs resilient tiles</b>	<b>D-13.03 Installs resilient sheet goods</b>
	<b>D-13.04 Cuts seams to fit</b>	<b>D-13.05 Seals seams chemically</b>	<b>D-13.06 Heat welds seams</b>
	<b>D-13.07 Completes resilient flooring installation</b>		
<b>Task D-14</b> <b>Performs custom resilient flooring procedures</b> <b>33%</b>	<b>D-14.01 Performs coving operations</b>	<b>D-14.02 Installs tread, riser and stringer materials</b>	<b>D-14.03 Installs resilient flooring on stairs</b>
	<b>D-14.04 Installs insets, borders and feature strips</b>	<b>D-14.05 Installs specialty wall covering products</b>	
<b>Task D-15</b> <b>Repairs resilient flooring and accessories</b> <b>17%</b>	<b>D-15.01 Repairs resilient flooring</b>		
	<b>D-15.02 Repairs accessories</b>		

# E – Installs and services wood, laminate and floating vinyl plank flooring

**15%**

**Task E-16**  
**Installs pre-finished solid, engineered, laminate and floating vinyl plank flooring**  
**56%**

**E-16.01 Undercuts jambs and trims**

**E-16.02 Installs vapour retarders and underlayment cushion**

**E-16.03 Establishes layout**

**E-16.04 Fits materials**

**E-16.05 Mechanically fastens pre-finished solid and engineered hardwood flooring**

**E-16.06 Glues down solid and engineered hardwood flooring**

**E-16.07 Assembles floating floors**

**Task E-17**  
**Installs custom wood and laminate flooring**  
**23%**

**E-17.01 Installs borders, insets and custom fabrications in wood**

**E-17.02 Installs wood and laminate flooring on stairs**

**Task E-18**  
**Services pre-finished solid, engineered, laminate and floating vinyl plank flooring**  
**21%**

**E-18.01 Repairs boards**

**E-18.02 Replaces boards and accessories**

**E-18.03 Refinishes hardwood flooring**

# Harmonization of Apprenticeship Training

Provincial and territorial apprenticeship authorities are each responsible for their respective apprenticeship programs. In the spirit of continual improvement, and to facilitate mobility among apprentices in Canada, participating authorities have agreed to work towards harmonizing certain aspects of their programs where possible. After consulting with their stakeholders in the trade, they have reached consensus on the following elements. Note that implementation of these elements may vary from jurisdiction to jurisdiction, depending on their own circumstances. For more information on the implementation in any province and territory, please contact that jurisdiction's apprenticeship authority.

## 1. Trade name

The official Red Seal name for this trade is Floorcovering Installer.

## 2. Number of Levels of Apprenticeship

The number of levels of technical training recommended for this trade is three (3).

## 3. Total Training Hours

The total hours of training, including both on-the-job and in-school training for this trade is 5400.

## 4. Sequencing Topics and Related Sub-tasks

The topic titles in the table below are placed in a column for each apprenticeship level for technical training. Each topic is accompanied by the sub-tasks and their reference number. The topics in the grey shaded cells represent those that are covered "in context" with other training in the subsequent years.

Level 1	Level 2	Level 3
	Context	Context
	Safety-Related Functions	Safety-Related Functions
<b>Safety-Related Functions</b> 1.01 Uses personal protective equipment (PPE) and safety equipment 1.02 Maintains safe work environment		
<b>Tools and Equipment</b> 2.01 Uses hand tools 2.02 Uses power and pneumatic tools 2.03 Uses measuring and layout tools	<b>Tools and Equipment</b> 2.01 Uses hand tools 2.02 Uses power and pneumatic tools 2.03 Uses measuring and layout tools	<b>Tools and Equipment</b> 2.01 Uses hand tools 2.02 Uses power and pneumatic tools 2.03 Uses measuring and layout tools
<b>Floor and Jobsite Conditions</b> 3.01 Performs quality control 3.02 Assesses floor and sub-floor conditions and deficiencies 3.03 Conducts field tests	<b>Floor and Jobsite Conditions</b> 3.02 Assesses floor and sub-floor conditions and deficiencies 3.03 Conducts field tests	<b>Floor and Jobsite Conditions</b> 3.01 Performs quality control 3.02 Assesses floor and sub-floor conditions and deficiencies

**Organizes Work**

4.02 Handles material  
 4.03 Determines layouts and materials needed for job  
 4.04 Uses documentation

**Organizes Work**

4.02 Handles material  
 4.03 Determines layouts and materials needed for job  
 4.04 Uses documentation

**Organizes Work**

4.01 Plans sequence of installation  
 4.02 Handles material  
 4.03 Determines layouts and materials needed for job  
 4.04 Uses documentation

**Transitions, Trims and Wall Bases**

5.01 Installs transitions and trims  
 5.02 Installs resilient wall base  
 5.03 Installs carpet wall base  
 5.04 Installs wood wall base

**Transitions, Trims and Wall Bases**

5.02 Installs resilient wall base  
 5.04 Installs wood wall base

**Communication Techniques**

6.01 Uses communication techniques

**Mentoring Techniques**

6.02 Uses mentoring techniques

**Removal of Existing Floorcovering and Accessories**

7.01 Removes transitions, trims and wall bases  
 7.02 Removes carpet  
 7.03 Removes resilient flooring  
 7.04 Removes wood, laminate flooring, tiles and underlayment

**Substrate Preparation**

8.01 Removes contaminants  
 8.02 Prepares concrete floors and underlayment  
 8.03 Prepares wood floors and underlayment  
 8.04 Prepares specialty floors  
 8.05 Installs trowelled underlayment  
 8.06 Installs rigid underlayment panels

**Substrate Preparation**

8.03 Prepares wood floors and underlayment  
 8.04 Prepares specialty floors  
 8.05 Installs trowelled underlayment  
 8.06 Installs rigid underlayment panels

**Substrate Preparation**

8.03 Prepares wood floors and underlayment  
 8.05 Installs trowelled underlayment  
 8.06 Installs rigid underlayment panels

**Carpet Installation**

9.01 Cuts carpet for installation  
 9.02 Installs carpet by conventional method  
 9.03 Installs carpet by direct glue-down method  
 9.04 Installs carpet by double glue-down method  
 9.05 Installs modular carpet tiles  
 9.06 Completes carpet installation

**Carpet Installation**

9.02 Installs carpet by conventional method

**Carpet Installation**

9.02 Installs carpet by conventional method  
 9.03 Installs carpet by direct glue-down method  
 9.06 Completes carpet installation

**Custom Carpet Procedures**

10.01 Installs borders and insets  
 10.02 Binds carpet  
 10.03 Upholsters with carpet  
 10.04 Assembles area rugs and runners  
 10.05 Installs carpet and runners on stairs

**Artificial Turf**

11.01 Establishes layout and grid lines for artificial turf  
 11.02 Assembles artificial turf sections  
 11.03 Completes artificial turf installation

**Repairs Carpet**

12.01 Repairs carpet installed by conventional method  
 12.02 Repairs carpet installed by direct glue-down method  
 12.03 Repairs carpet installed by double glue-down method  
 12.04 Repairs artificial turf

**Installing Resilient Flooring**

13.01 Establishes layout and grid lines  
 13.02 Installs resilient tiles  
 13.03 Installs resilient sheet goods  
 13.04 Cuts seams to fit

**Installing Resilient Flooring**

13.01 Establishes layout and grid lines  
 13.02 Installs resilient tiles  
 13.03 Installs resilient sheet goods  
 13.04 Cuts seams to fit  
 13.05 Seals seams chemically  
 13.06 Heat welds seams  
 13.07 Completes resilient flooring installation

**Installing Resilient Flooring**

13.06 Heat welds seams

**Custom Resilient Flooring Procedures**

14.04 Installs insets, borders and feature strips

**Custom Resilient Flooring Procedures**

14.01 Performs coving operations  
 14.02 Installs tread, riser and stringer materials  
 14.03 Installs resilient flooring on stairs  
 14.05 Installs specialty wall covering products

**Repairs Resilient Flooring**

15.01 Repairs resilient flooring  
 15.02 Repairs accessories

**Pre-finished Solid, Engineered, Laminate and Floating Vinyl Plank Flooring Installation**

16.01 Undercuts jambs and trims  
 16.02 Installs vapour retarders and underlayment cushion  
 16.03 Establishes layout  
 16.04 Fits materials  
 16.05 Mechanically fastens pre-finished solid and engineered hardwood flooring  
 16.07 Assembles floating floors

**Pre-finished Solid, Engineered, Laminate and Floating Vinyl Plank Flooring Installation**

16.01 Undercuts jambs and trims  
 16.02 Installs vapour retarders and underlayment cushion  
 16.03 Establishes layout  
 16.04 Fits materials  
 16.05 Mechanically fastens pre-finished solid and engineered hardwood flooring

**Pre-finished Solid, Engineered, Laminate and Floating Vinyl Plank Flooring Installation**

16.01 Undercuts jambs and trims  
 16.02 Installs vapour retarders and underlayment cushion  
 16.03 Establishes layout  
 16.04 Fits materials  
 16.05 Mechanically fastens pre-finished solid and engineered hardwood flooring  
 16.06 Glues down solid and engineered hardwood flooring

**Services Pre-Finished Solid,  
Engineered, Laminate and  
Floating Vinyl Plank Flooring**

- 18.01 Repairs boards
- 18.02 Replaces boards and accessories

**Installs Custom Wood and  
Laminate Flooring**

- 17.01 Installs borders, insets and custom fabrications in wood
- 17.02 Installs wood and laminate flooring on stairs

**Services Pre-Finished Solid,  
Engineered, Laminate and  
Floating Vinyl Plank Flooring**

- 18.01 Repairs boards
- 18.02 Replaces boards and accessories
- 18.03 Refinishes hardwood flooring

# Major Work Activity A

## Performs common occupational skills

### Task A-1 Performs safety-related functions

#### Task Descriptor

Attention to safety is very important in the floorcovering trade. It includes using PPE and safety equipment and maintaining a safe work environment.

#### **A-1.01** Uses personal protective equipment (PPE) and safety equipment

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

<b>Skills</b>		
	<b>Performance Criteria</b>	<b>Evidence of Attainment</b>
A-1.01.01P	select PPE and safety equipment	PPE and safety equipment are selected according to task and worksite conditions
A-1.01.02P	fit PPE	PPE is fit according to manufacturers' specifications
A-1.01.03P	identify and tag faulty and defective PPE and safety equipment	faulty and defective PPE and safety equipment are identified and tagged
A-1.01.04P	insert filters	filters are inserted according to environment and type of respirator
A-1.01.05P	perform PPE and safety equipment <b><i>maintenance</i></b>	PPE and safety equipment <b><i>maintenance</i></b> is performed according to manufacturers' specifications
A-1.01.06P	store PPE	PPE is stored in clean and dry location according to manufacturers' specifications

#### Range of Variables

***maintenance*** includes: checking expiration dates, cleaning components, replacing components

## Knowledge

	Learning Outcomes	Learning Objectives
A-1.01.01L	demonstrate knowledge of PPE and safety equipment, their characteristics and applications	identify types of PPE and safety equipment, and describe their characteristics and applications
A-1.01.02L	demonstrate knowledge of procedures to select and use PPE and safety equipment	describe procedures to select and use PPE and safety equipment describe procedures to locate PPE and safety equipment describe procedures to inspect PPE and safety equipment
A-1.01.03L	demonstrate knowledge of training and certification requirements for PPE and safety equipment	identify training and certification requirements for PPE and safety equipment
A-1.01.04L	demonstrate knowledge of regulatory requirements pertaining to PPE and safety equipment	identify standards and regulations pertaining to PPE and safety equipment

### Range of Variables

**maintenance** includes: checking expiration dates, cleaning components, replacing components

## A-1.02 Maintains safe work environment

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
A-1.02.01P	place guard rails and barricades around potentially hazardous areas	guard rails and barricades are placed around potentially hazardous areas according to company policies and procedures
A-1.02.02P	identify <b>hazards</b>	<b>hazards</b> are identified by performing visual inspection
A-1.02.03P	report <b>hazards</b> and refuse unsafe work conditions	<b>hazards</b> are reported and unsafe work conditions are refused
A-1.02.04P	attend toolbox safety meetings	toolbox safety meetings are attended to identify safe work practices, near misses and changing worksite conditions
A-1.02.05P	maintain clean and obstruction-free work environment	clean and obstruction-free work environment is maintained
A-1.02.06P	create positive ventilation	positive ventilation is created to ensure hazardous gases and particles are ventilated from working area

A-1.02.07P	ensure tools are used for their intended purpose	tools are used for their intended purpose
A-1.02.08P	apply <b>WHMIS procedures</b>	<b>WHMIS procedures</b> are applied
A-1.02.09P	review and comply with <b>standards and regulations</b>	<b>standards and regulations</b> are reviewed and complied with
A-1.02.10P	keep worksite clean	worksite is kept clean according to company policies, <b>standards and regulations</b> to ensure a safe and organized worksite environment

## Range of Variables

**hazards** include: products which may contain asbestos, silica dust, lead-based paint, propane heaters, flammable adhesives, open holes, loose clothing, working at heights, overhead hazards

**WHMIS procedures** include: record keeping of safety data sheets (SDS), product identification, handling, disposal

**standards and regulations** include: Canadian Standards Association (CSA), Occupational Health and Safety (OH&S), site-specific (company or client), jurisdictional regulations

Knowledge		
	Learning Outcomes	Learning Objectives
A-1.02.01L	demonstrate knowledge of procedures to maintain safe work environment	identify guard rails and barricades, and describe their characteristics and applications
		describe procedures to install temporary lighting, environmental protection and hoarding
		identify safe work procedures, and describe their characteristics and applications
		identify <b>hazards</b> and describe associated reporting procedures
		describe <b>WHMIS procedures</b> , and describe their characteristics and applications
		identify and describe elements of pre-task safety instructions and hazard assessments (field level risk assessment [FLRA])
		identify safe lifting practices to meet ergonomic requirements
		identify evacuation and emergency procedures
		identify first aid requirements and location of supplies

A-1.02.02L	demonstrate knowledge of training and certification requirements for maintaining safe work environment	identify training and certification requirements for maintaining safe work environment
A-1.02.03L	demonstrate knowledge of regulatory requirements for maintaining safe work environment	identify <b>standards and regulations</b> for maintaining safe work environment

## Range of Variables

**hazards** include: products which may contain asbestos, silica dust, lead-based paint, propane heaters, flammable adhesives, open holes, loose clothing, working at heights, overhead hazards

**WHMIS procedures** include: record keeping of safety data sheets (SDS), product identification, handling, disposal

**standards and regulations** include: Canadian Standards Association (CSA), Occupational Health and Safety (OH&S), site-specific (company or client), jurisdictional regulations

## Task A-2 Uses and maintains tools and equipment

### Task Descriptor

Floorcovering installers use and maintain tools and equipment to perform tasks efficiently and safely.

### A-2.01 Uses hand tools

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
A-2.01.01P	organize and store hand tools	hand tools are organized and stored in clean, dry, ventilated and secure area to prevent damage
A-2.01.02P	inspect hand tools	hand tools are inspected according to manufacturers' specifications to prevent damage to tools and injury to workers
A-2.01.03P	sharpen hand tools	hand tools are sharpened according to industry standards and manufacturers' specifications

A-2.01.04P	identify, tag and remove worn, damaged and defective hand tools from service	worn, damaged and defective hand tools are recognized, tagged and removed from service according to project requirements and company policies and procedures
A-2.01.05P	clean hand tools	hand tools are cleaned for ease of operation and longevity according to manufacturers' specifications

## Knowledge

Learning Outcomes		Learning Objectives
A-2.01.01L	demonstrate knowledge of hand tools, their characteristics and applications	identify types of hand tools, and describe their characteristics and applications
A-2.01.02L	demonstrate knowledge of operating procedures for hand tools	describe procedures to operate hand tools
A-2.01.03L	demonstrate knowledge of procedures to maintain hand tools	describe procedures to maintain hand tools identify hand tools requiring sharpening
A-2.01.04L	demonstrate knowledge of safety practices for hand tools	describe safety practices for hand tools

## A-2.02 Uses power and pneumatic tools

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

Performance Criteria		Evidence of Attainment
A-2.02.01P	organize and store power and pneumatic tools	power and pneumatic tools are organized and stored in clean, dry, ventilated and secure area to prevent damage
A-2.02.02P	lubricate power and pneumatic tools	power and pneumatic tools are lubricated according to manufacturers' specifications to prevent rusting and corrosion, and to protect internal components
A-2.02.03P	identify, tag and remove worn, damaged and defective power and pneumatic tools from service	worn, damaged and defective power and pneumatic tools are identified, tagged and removed from service according to company policies and procedures
A-2.02.04P	charge batteries	batteries are charged according to manufacturers' specifications to avoid damage to battery
A-2.02.05P	clean power and pneumatic tools	power and pneumatic tools are cleaned for ease of operation and longevity according to manufacturers' specifications

A-2.02.06P	inspect power and pneumatic tools, cords, hoses and connections	power and pneumatic tools, cords, hoses and connections are inspected according to manufacturers' specifications to prevent damage to tools and injury to workers
A-2.02.07P	change oil and filter of pneumatic tools	oil and filter of pneumatic tools are changed according to manufacturers' specifications
A-2.02.08P	drain compressor tank after use	compressor tank is drained after use according to manufacturers' specifications to prevent corrosion of tank and damage to tools

## Knowledge

Learning Outcomes		Learning Objectives
A-2.02.01L	demonstrate knowledge of power and pneumatic tools, their characteristics and applications	identify types of power and pneumatic tools, and describe their characteristics and applications
A-2.02.02L	demonstrate knowledge of operating procedures for power and pneumatic tools	describe procedures to operate power and pneumatic tools
A-2.02.03L	demonstrate knowledge of procedures to maintain power and pneumatic tools	describe procedures to maintain power and pneumatic tools
		describe procedures to sharpen and maintain power tool blades
A-2.02.04L	demonstrate knowledge of safety practices for power and pneumatic tools	describe safety practices for power and pneumatic tools

## A-2.03 Uses measuring and layout tools

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

Performance Criteria		Evidence of Attainment
A-2.03.01P	organize and store measuring and layout tools	measuring and layout tools are organized and stored in clean, dry, ventilated and secure area to prevent damage
A-2.03.02P	inspect measuring and layout tools	measuring and layout tools are inspected according to manufacturers' specifications to prevent damage to tools and injury to workers
A-2.03.03P	transport, set up, secure and level measuring and layout tools	measuring and layout tools are transported, set up, secured and leveled to ensure accuracy of layout and access for operator according to site requirements and conditions

A-2.03.04P	check for accuracy of measuring and layout tools	measuring and layout tools are checked for accuracy according to manufacturers' specifications
A-2.03.05P	determine elevations and angles	elevations and angles are determined according to drawings and project requirements
A-2.03.06P	record <b>layout information</b>	<b>layout information</b> is recorded according to drawings and project requirements

## Range of Variables

**layout information** includes: elevations, grid lines, direction of material, seam layout

<b>Knowledge</b>		
	<b>Learning Outcomes</b>	<b>Learning Objectives</b>
A-2.03.01L	demonstrate knowledge of measuring and layout tools, their characteristics and applications	identify types of measuring and layout tools, and describe their characteristics and applications
A-2.03.02L	demonstrate knowledge of operating procedures for measuring and layout tools	describe procedures to operate measuring and layout tools
A-2.03.03L	demonstrate knowledge of procedures to maintain measuring and layout tools	describe procedures to maintain measuring and layout tools
A-2.03.04L	demonstrate knowledge of safety practices for measuring and layout tools	describe safety practices for measuring and layout tools

## Task A-3 Assesses floor and jobsite conditions

### Task Descriptor

Assessing the floor and jobsite conditions is important to ensure a correct and fully warranted installation according to manufacturers' specifications.

#### A-3.01 Performs quality control

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
A-3.01.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
A-3.01.02P	assess <b>environmental conditions</b>	<b>environmental conditions</b> are assessed according to flooring temperature and site conditions
A-3.01.03P	inspect product quality before and during installation	product quality is inspected before and during installation to identify pole buckle/stove bar/hanger mark (linoleum), and product deficiencies and <b>defects</b>
A-3.01.04P	resolve discrepancies before installation	discrepancies between industry standards, salespeople commitments and customer expectations are resolved before installation

### Range of Variables

**tools and equipment** include: moisture meters, infrared thermometer

**environmental conditions** include: temperature, humidity, ventilation, dust, light

**defects** include: pattern run-off, trueness of edge, deviation, bow and skew, discolouration, shading

## Knowledge

	Learning Outcomes	Learning Objectives
A-3.01.01L	demonstrate knowledge of product quality control practices, their characteristics and applications	identify product quality control practices, and describe their characteristics and applications
A-3.01.02L	demonstrate knowledge of procedures to perform quality control of products	identify <b>tools and equipment</b> used to perform quality control of products, and describe their procedures for use
		describe procedures to perform quality control of products before and during installation
		describe impact of <b>environmental conditions</b> on installations

### Range of Variables

**tools and equipment** include: moisture meters, infrared thermometer

**environmental conditions** include: temperature, humidity, ventilation, dust, light

## A-3.02 Assesses floor and sub-floor conditions and deficiencies

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
A-3.02.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
A-3.02.02P	identify above-grade, on-grade and below-grade sub-floors	above-grade, on-grade and below-grade sub-floors are identified according to manufacturers' specifications
A-3.02.03P	determine <b>substructure</b>	<b>substructure</b> is determined
A-3.02.04P	determine structural soundness of <b>substrates</b>	structural soundness of <b>substrates</b> is determined according to engineers' specifications
A-3.02.05P	identify in-floor radiant heating and requirements needed to complete job	in-floor radiant heating and requirements needed to complete job are identified according to project drawings
A-3.02.06P	identify <b>signs of asbestos, mold, mildew</b> and lead-based paint	<b>signs of asbestos, mold, mildew</b> and lead-based paint are identified by performing visual inspection
A-3.02.07P	check floor tolerances	floor tolerances are checked according to project drawings
A-3.02.08P	identify <b>wood floor deficiencies</b>	<b>wood floor deficiencies</b> are identified by performing visual inspection

A-3.02.09P	identify <b>types of contaminants</b>	<b>types of contaminants</b> are identified by performing visual inspection
A-3.02.10P	determine <b>floor preparation</b>	<b>floor preparation</b> is determined according to industry practices and manufacturers' specifications
A-3.02.11P	identify number of layers on existing floor	number of layers on existing floor are identified by performing visual inspection

## Range of Variables

**tools and equipment** include: straightedges, measuring tapes, string line, levels

**substructures** include: floor joists, carriage supports for stairs, concrete

**substrates** include: tile, existing vinyl, existing linoleum, wood, concrete

**signs of asbestos** include: age of material, size of material, colour of adhesives

**signs of mold and mildew** include: substrate/wall discoloration, smell, mold growth

**wood floor deficiencies** include: delamination, open joints, squeaks, loose areas

**types of contaminants** include: oil, ink, paint, dust, varnish, concrete sealer, adhesives

**floor preparation** includes: levelling floor, patching, replacing sub-floor, grinding, removing contaminants

## Knowledge

	Learning Outcomes	Learning Objectives
A-3.02.01L	demonstrate knowledge of <b>substructures</b> and <b>substrates</b> , their characteristics and applications	identify <b>substructures</b> , and describe their characteristics and applications
		identify <b>substrates</b> , and describe their <b>characteristics</b> and applications
A-3.02.02L	demonstrate knowledge of procedures to assess floor and sub-floor conditions and deficiencies	identify <b>tools and equipment</b> used to assess floor and sub-floor conditions and deficiencies, and describe their procedures for use
		describe procedures to assess floor and sub-floor conditions and deficiencies
		describe procedures to identify <b>signs of asbestos</b>
		describe procedures to identify <b>signs of mold and mildew</b>
		describe procedures to identify signs of lead-based paint
		describe effects of grade level on various floorcoverings
		identify <b>types of contaminants</b> found on floors

A-3.02.03L	demonstrate knowledge of training and certification requirements to remove asbestos	identify training and certification requirements to remove asbestos
A-3.02.04L	demonstrate knowledge of regulatory requirements pertaining to asbestos removal	identify codes, standards and regulations pertaining to asbestos removal

### Range of Variables

**substructures** include: floor joists, carriage supports for stairs, concrete

**substrates** include: tile, existing vinyl, existing linoleum, wood, concrete

**substrate characteristics** include: porous, non-porous, pH levels, moisture levels

**tools and equipment** include: straightedges, measuring tapes, string line, levels

**signs of asbestos** include: age of material, size of material, colour of adhesives

**signs of mold and mildew** include: substrate/wall discoloration, smell, mold growth

**types of contaminants** include: oil, ink, paint, dust, varnish, concrete sealer, adhesives

### A-3.03 Conducts field tests

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
A-3.03.01P	select and use tools and equipment	tools and equipment are selected and used according to task
A-3.03.02P	perform <b>moisture tests</b>	<b>moisture tests</b> are performed according to manufacturers' specifications to identify moisture level in substrate
A-3.03.03P	perform polyethylene sheet and bond tests	polyethylene sheet and bond tests are performed according to manufacturers' specifications to verify effectiveness of adhesive on substrate
A-3.03.04P	perform temperature readings	temperature readings are performed according to manufacturers' specifications to allow for product <b>processes</b>
A-3.03.05P	interpret field results	field results are interpreted according to industry standards

### Range of Variables

**moisture tests** include: calcium chloride tests, mat tests, meters and relative humidity (RH) tests

**processes** include: curing, setting, acclimation

## Knowledge

	Learning Outcomes	Learning Objectives
A-3.03.01L	demonstrate knowledge of field tests, their characteristics and applications	identify <b>types of field tests</b> , and describe their characteristics and applications
A-3.03.02L	demonstrate knowledge of procedures to conduct field tests	identify tools and equipment used to conduct field tests, and describe their procedures for use
		describe procedures to conduct field tests and interpret their results
A-3.03.03L	demonstrate knowledge of training and certification requirements to identify asbestos	identify training and certification requirements to identify asbestos
A-3.03.04L	demonstrate knowledge of regulatory requirements pertaining to asbestos	identify codes, standards and regulations pertaining to asbestos

### Range of Variables

**types of field tests** include: moisture tests, alkalinity tests (pH), polyethylene sheet tests, bond tests

## Task A-4 Organizes work

### Task Descriptor

Floorcovering installers demonstrate organizational skills to ensure the project's success from start to finish. They must make good use of time and materials in a cost-efficient way.

#### A-4.01 Plans sequence of installation

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
A-4.01.01P	select and use tools and equipment	tools and equipment are selected and used according to task
A-4.01.02P	coordinate work with other <b>tradespeople</b>	work is coordinated with other <b>tradespeople</b>
A-4.01.03P	coordinate work with site supervisor	work is coordinated with site supervisor
A-4.01.04P	identify product sequencing <b>information</b>	product sequencing <b>information</b> is identified according to manufacturers' specifications

A-4.01.05P	identify start point and organize time	start point is identified and time is organized to allow for tasks to be performed during <b>wait times</b>
A-4.01.06P	follow and adjust schedule	schedule is followed and adjusted accounting for <b>factors</b>

### Range of Variables

**tradespeople** include: tilers, painters and decorators, plumbers, electricians, lathers (interior systems mechanics), carpenters

**information** includes: dye lots, batch numbers, roll sequencing numbers

**wait times** include: adhesive setting, floor patch drying time, primer drying time

**factors** include: acclimation requirements, material delivery, other trade delays

Knowledge		
	Learning Outcomes	Learning Objectives
A-4.01.01L	demonstrate knowledge of procedures to plan sequence of installations	identify tools and equipment used to plan sequence of installations, and describe their procedures for use
		interpret <b>information</b> pertaining to sequence of installation found on product manufacturers' specifications
		describe procedures to plan sequence of installations
		describe procedures to coordinate installations with site supervisor and other <b>tradespeople</b>
		identify <b>factors</b> to consider when planning installations
		identify floorcovering operations and time required to complete each operation

### Range of Variables

**information** includes: dye lots, batch numbers, roll sequencing numbers

**tradespeople** include: tilers, painters and decorators, plumbers, electricians, lathers (interior systems mechanics), carpenters

**factors** include: acclimation requirements, material delivery, other trade delays

## A-4.02 Handles materials

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
A-4.02.01P	select and use tools and equipment	tools and equipment are selected and used according to task
A-4.02.02P	determine materials for disposal or recycling	materials for disposal or recycling are determined according to jurisdictional regulations and <b>industry guidelines</b>
A-4.02.03P	lift material	material is lifted using <b>material handling equipment</b>
A-4.02.04P	package and dispose of <b>hazardous materials</b>	<b>hazardous materials</b> are packaged and disposed of according to jurisdictional regulations
A-4.02.05P	store material	material is stored according to manufacturers' recommendations to prevent damage and safety hazards
A-4.02.06P	ensure delivery is completed with sufficient time	delivery is completed with sufficient time to allow for acclimation
A-4.02.07P	plan access to worksite	access to worksite is planned through tight and awkward spaces
A-4.02.08P	store materials in designated location during installation	materials are stored in designated location during installation
A-4.02.09P	salvage materials for reinstallation	materials for reinstallation are salvaged according to overage requirements

### Range of Variables

**industry guidelines** include: LEED, LBC (Living Building Challenge – Red List Free), Canadian Green Building Council (CaGBC), Carpet America Recovery Effort (CARE), Carpet and Rug Institute (CRI), American National Standards Institute (ANSI) 140, Green Label Plus (for adhesives), Environmental Product Declarations, Building for Environmental and Economic Stability (BEES), American Society for Testing and Materials (ASTM)

**material handling equipment** includes: pallet jacks, dollies, hand carts, forklifts

**hazardous materials** include: adhesives, silica dust, asbestos-containing products, lead-based paint

## Knowledge

	Learning Outcomes	Learning Objectives
A-4.02.01L	demonstrate knowledge of procedures to handle materials	describe procedures to order, receive, organize and store materials describe procedures to protect product integrity describe acclimatization requirements of materials identify <b>material handling requirements</b> identify materials that can be reconditioned, reused or recycled identify practices that reduce material waste
A-4.02.02L	demonstrate knowledge of <b>hazardous materials</b>	describe types, classifications and symbols of <b>hazardous materials</b> describe storage and handling requirements for <b>hazardous materials</b>
A-4.02.03L	demonstrate knowledge of <b>training and certification requirements</b> for storing and handling <b>hazardous materials</b>	identify <b>training and certification requirements</b> for storing and handling <b>hazardous materials</b>
A-4.02.04L	demonstrate knowledge of regulatory requirements pertaining to <b>hazardous materials</b>	identify standards and regulations pertaining to <b>hazardous materials</b>

### Range of Variables

**material handling requirements** include: individual lifting weight restrictions

**hazardous materials** include: adhesives, silica dust, asbestos-containing products, lead-based paint

**training and certification requirements** include: Workplace Hazardous Materials Information System (WHMIS), Transport of Dangerous Goods (TDG), company training programs

### A-4.03 Determines layouts and materials needed for job

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
A-4.03.01P	select and use tools and equipment	tools and equipment are selected and used according to task
A-4.03.02P	determine amount of material required for room dimensions	amount of material required for room dimensions is determined according to product to be installed and project drawings

A-4.03.03P	take measurements of room dimensions	measurements of room dimensions are taken
A-4.03.04P	sketch seaming diagram	seaming diagram is sketched to allow for minimal waste, overlap and fills
A-4.03.05P	allow extra material for pattern matching and seam allowance	extra material for pattern matching and seam allowance is allowed according to manufacturers' specifications
A-4.03.06P	determine seam locations	seam locations are determined to minimize seam visibility, cross seams, high traffic areas, natural light and waste factors
A-4.03.07P	determine fill sizes	fill sizes are determined according to product to be installed

## Knowledge

<b>Learning Outcomes</b>		<b>Learning Objectives</b>
A-4.03.01L	demonstrate knowledge of procedures to determine layouts	identify tools and equipment used to determine layouts, and describe their procedures for use
		describe procedures to determine layouts
		describe pattern matching principles
A-4.03.02L	demonstrate knowledge of procedures to determine materials needed for job	identify tools and equipment used to determine materials needed for job, and describe their procedures for use
		identify calculations performed to determine required quantities of materials
		describe procedures to determine required quantities of materials using project drawings, specifications and on-site measurements

## A-4.04 Uses documentation

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
A-4.04.01P	locate and interpret <b>documentation</b>	<b>documentation</b> is located and interpreted
A-4.04.02P	complete <b>work-related documents</b>	<b>work-related documents</b> are completed according to company policies and procedures
A-4.04.03P	document <b>jobsite problems</b>	<b>jobsite problems</b> are documented for future reference in case of deficiencies

### Range of Variables

**documentation** includes: manufacturers' specifications, site-specific documents, drawings (including revisions), permits, work orders, contracts, safety documentation (SDS and WHMIS symbols)

**work-related documents** include: work orders, material lists, job task analysis forms, time and materials sheets (T&M), schedules

**jobsite problems** include: environmental conditions (relative humidity, wind, temperature, dew point, ultraviolet [UV]), contaminants (dust, animal waste), congestion, confined space, scheduling delays

### Knowledge

	Learning Outcomes	Learning Objectives
A-4.04.01L	demonstrate knowledge of <b>documentation</b> and <b>work-related documents</b> , their characteristics and applications	identify types of <b>documentation</b> and <b>work-related documents</b> , and describe their characteristics and applications
A-4.04.02L	demonstrate knowledge of procedures to use and complete <b>work-related documents</b>	describe procedures to use and complete <b>work-related documents</b>
A-4.04.03L	demonstrate knowledge of regulatory requirements pertaining to <b>documentation</b> and <b>work-related documents</b>	identify and interpret <b>standards</b> and regulations pertaining to <b>documentation</b> and <b>work-related documents</b>

### Range of Variables

**documentation** includes: manufacturers' specifications, site-specific documents, drawings (including revisions), permits, work orders, contracts, safety documentation (SDS and WHMIS symbols)

**work-related documents** include: work orders, material lists, job task analysis forms, time and materials sheets (T&M), schedules

**standards** include: Association for Materials Protection and Performance (AMPP), International Organization for Standardization (ISO)

# Task A-5 Installs transitions, trims and wall bases

## Task Descriptor

Installing transitions, trims and wall bases is done as part of flooring installations to achieve a finished look. It is also done to protect raw edges and provide transitions between surfaces.

### A-5.01 Installs transitions and trims

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

Skills		
	Performance Criteria	Evidence of Attainment
A-5.01.01P	select and use tools and equipment	tools and equipment are selected and used according to task
A-5.01.02P	identify <b>types of transitions</b> and <b>trims</b> required for installation	<b>types of transitions</b> and <b>trims</b> required for installation are identified according to project drawings
A-5.01.03P	measure and cut transitions and trims	transitions and trims are measured and cut according to installation requirements
A-5.01.04P	mitre transitions and trims	transitions and trims are mitred to fit and provide smooth transition from one finish to another
A-5.01.05P	prepare surfaces of transitions and trims	surfaces of transitions and trims are prepared using <b>methods</b>
A-5.01.06P	fasten transitions and trims	transitions and trims are fastened in place according to manufacturers' specifications

## Range of Variables

**types of transitions** include: vinyl reducers, nosing, edge strips, wood, metal

**types of trims** include: quarter rounds, shoe moulds, bull-nosed pieces, capping, door stops

**methods** include: sanding, scraping, cleaning, priming

Knowledge		
	Learning Outcomes	Learning Objectives
A-5.01.01L	demonstrate knowledge of transitions and trims, their characteristics and applications	identify <b>types of transitions</b> , and describe their characteristics and applications
		identify <b>types of trims</b> , and describe their characteristics and applications

A-5.01.02L	demonstrate knowledge of procedures to install transitions and trims	identify tools and equipment used to install transitions and trims, and describe their procedures for use
		identify hazards and describe safe work practices to install transitions and trims
		describe procedures to measure, cut and miter transitions and trims
		describe procedures to install transitions and trims
		identify <b>methods</b> used to prepare surfaces of transitions and trims
		identify transition and trim fastening techniques and materials
		identify materials that can be reconditioned, reused or recycled
		identify practices that reduce material waste
A-5.01.03L	demonstrate knowledge of regulatory requirements pertaining to installation of transition and trims	identify codes, standards and regulations pertaining to installation of transition and trims

## Range of Variables

**types of transitions** include: vinyl reducers, nosing, edge strips, wood, metal

**types of trims** include: quarter rounds, shoe moulds, bull-nosed pieces, capping, door stops

**methods** include: sanding, scraping, cleaning, priming

## A-5.02 Installs resilient wall base

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
A-5.02.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
A-5.02.02P	dry fit and cut wall base	wall base is dry fit and cut along wall perimeter according to task
A-5.02.03P	mitre wall base	wall base is mitred to fit and provide a smooth transition from one finish to another
A-5.02.04P	fabricate and groove back of wall base	back of wall base is fabricated and grooved

A-5.02.05P	select and apply adhesive	adhesive is selected and applied according to manufacturers' specifications ensuring complete adhesion
A-5.02.06P	smooth wall base	wall base is smoothed using <b>methods</b>
A-5.02.07P	maintain consistent floor-to-wall transition	consistent floor-to-wall transition is maintained to ensure bottom of base stays in contact with floor

## Range of Variables

**tools and equipment** include: dividers, squares, base groovers, scribes, utility knives, profile base cutter

**methods** include: wiping with wet cloth, hand rolling

Knowledge		
	Learning Outcomes	Learning Objectives
A-5.02.01L	demonstrate knowledge of resilient wall bases, their characteristics and applications	identify <b>types of resilient wall bases</b> , and describe their characteristics and applications
	demonstrate knowledge of adhesives, their characteristics and applications	identify types of adhesives, and describe their compatibility with flooring and substrate
A-5.02.02L	demonstrate knowledge of procedures to install resilient wall bases	identify <b>tools and equipment</b> used to install resilient wall bases, and describe their procedures for use
		identify hazards and describe safe work practices to install resilient wall bases
		describe procedures to cut and mitre resilient wall bases
		describe procedures to install resilient wall bases
		describe procedures to apply adhesives to resilient wall bases
		identify <b>methods</b> used to smooth resilient wall bases

## Range of Variables

**types of resilient wall bases** include: flat, coved, profiled, vented, rubber, vinyl

**tools and equipment** include: dividers, squares, base groovers, scribes, utility knives, profile base cutter

**methods** include: wiping with wet cloth, hand rolling

## A-5.03 Installs carpet wall base

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
A-5.03.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
A-5.03.02P	cut and fit wall base	wall base is cut and fit to pre-determined height according to project drawings
A-5.03.03P	fasten wall base	wall base is fastened using <b>mechanical fasteners</b> according to installation conditions and industry practices
A-5.03.04P	select and apply adhesive	adhesive is selected and applied according to manufacturers' specifications ensuring complete adhesion
A-5.03.05P	smooth wall base	wall base is smoothed using <b>methods</b>
A-5.03.06P	maintain consistent floor-to-wall transition	consistent floor-to-wall transition is maintained to ensure bottom of base stays in contact with floor
A-5.03.07P	complete wall base installation	wall base installation is completed by performing return cut at exposed ends (open ends) and grooming

### Range of Variables

**tools and equipment** include: knife, electric tacker, hammer, carpet base cutter, cushion back cutter, hand roller

**mechanical fasteners** include: glue, staples, two-faced tape

**methods** include: rubbing with hand, using rollers

### Knowledge

	Learning Outcomes	Learning Objectives
A-5.03.01L	demonstrate knowledge of carpet wall bases, their characteristics and applications	identify types of carpet wall bases, and describe their characteristics and applications
A-5.03.02L	demonstrate knowledge of adhesives, their characteristics and applications	identify types of adhesives, and describe their characteristics and applications
A-5.03.03L	demonstrate knowledge of procedures to install carpet wall bases	identify <b>tools and equipment</b> used to install carpet wall bases, and describe their procedures for use
		identify safe work practices to install carpet wall bases
		describe procedures to cut and fit carpet wall bases

	describe procedures to install carpet wall bases
	describe procedures to fasten carpet wall bases
	describe procedures to apply adhesives to carpet wall bases
	identify <b>methods</b> used to smooth carpet wall base

## Range of Variables

**tools and equipment** include: knife, electric tacker, hammer, carpet base cutter, cushion back cutter, hand roller

**methods** include: rubbing with hand, using rollers

### A-5.04 Installs wood wall base

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
A-5.04.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
A-5.04.02P	dry fit and cut base	base is dry fit and cut along wall perimeter
A-5.04.03P	mitre base	base is mitred to fit and provide a smooth transition from one finish to another
A-5.04.04P	fabricate and cope back of base	back of base is fabricated and coped to ensure tight joints
A-5.04.05P	prepare base for installation on curved walls	base is prepared for installation on curved walls using <b>procedures</b>
A-5.04.06P	nail wall base to studs for secure fastening	wall base is nailed to studs in wall for secure fastening using compressor and nailer
A-5.04.07P	select and apply adhesive	adhesive is selected and applied according to manufacturers' specifications ensuring complete adhesion
A-5.04.08P	maintain consistent floor-to-wall transition	consistent floor-to-wall transition is maintained to ensure that bottom of base stays in contact with floor

A-5.04.09P	complete wall base installation	wall base installation is completed by performing return cut at exposed ends (open ends)
A-5.04.10P	apply coloured wood filler to hide <b>imperfections</b>	coloured wood filler is applied to hide <b>imperfections</b>
A-5.04.11P	apply bead of caulking to top of <b>moulding</b>	bead of caulking is applied to top of <b>moulding</b>

## Range of Variables

**tools and equipment** include: mitre saws, coping saws, dividers, squares, scribes, compressor, electric and pneumatic nailers

**procedures** include: soaking, back cutting

**imperfections** include: nail holes, gaps, wood filler

**moulding** includes: bases, quarter rounds, shoes, door stops

Knowledge		
	Learning Outcomes	Learning Objectives
A-5.04.01L	demonstrate knowledge of wood wall bases, their characteristics and applications	identify types of wood wall bases, and describe their characteristics and applications
A-5.04.02L	demonstrate knowledge of adhesives and fasteners, their characteristics and applications	identify types of adhesives and fasteners, and describe their characteristics and applications
A-5.04.03L	demonstrate knowledge of procedures to install wood wall bases	identify <b>tools and equipment</b> used to install wood wall bases, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install wood wall bases
		describe procedures to cut and mitre wood wall bases
		describe procedures to install wood wall bases
		describe <b>procedures</b> to install wood wall bases on curved walls
		describe procedures to fasten wood wall bases
		describe procedures to apply adhesives and fasteners to wood wall bases
		identify materials that can be reused

## Range of Variables

**tools and equipment** include: mitre saws, coping saws, dividers, squares, scribes, compressor, electric and pneumatic nailers

**hazards** include: hidden facilities, punctures, sharps, electrocution

**procedures** include: soaking, back cutting

## Task A-6 Uses communication and mentoring techniques

### Task Descriptor

Learning in the trades is done primarily in the workplace with tradespeople passing on their skills and knowledge to apprentices, as well as sharing knowledge among themselves. Apprenticeship is, and always has been about mentoring – learning workplace skills and passing them on. Because of the importance of this to the trade, this task covers the activities related to communication in the workplace and mentoring skills.

#### A-6.01 Uses communication techniques

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
A-6.01.01P	demonstrate communication practices with individuals or in a group	instructions and messages are interpreted by all parties involved in communication
A-6.01.02P	listen using <b>active listening</b> practices	<b>active listening</b> practices are used
A-6.01.03P	speak clearly using correct industry terminology to ensure understanding	understanding of message is confirmed by both parties
A-6.01.04P	receive and respond to instructions	response to instructions indicates understanding
A-6.01.05P	receive and respond to feedback on work completed or performed	response to feedback indicates understanding and corrective measures are taken
A-6.01.06P	explain and provide feedback	explanation and feedback are provided and task is carried out as directed
A-6.01.07P	use questions to improve communication	questions are used to enhance understanding, on-the-job training and goal setting
A-6.01.08P	participate in safety and information meetings	meetings are attended, information is relayed to employees, and is applied
A-6.01.09P	send and receive <b>electronic messages</b>	<b>electronic messages</b> are sent and received using professionalism, plain language and clear expressions according to company policies and procedures

### Range of Variables

**active listening** includes: hearing, interpreting, reflecting, responding, paraphrasing

**electronic messages** include: email, text messages

## Knowledge

	Learning Outcomes	Learning Objectives
A-6.01.01L	demonstrate knowledge of trade terminology	define terminology used in trade
A-6.01.02L	demonstrate knowledge of effective communication practices	describe importance of using effective verbal and non-verbal communication with <b>people in the workplace</b>
		identify <b>sources of information</b> to effectively communicate
		identify communication and <b>learning styles</b>
		describe effective listening and speaking skills
		describe how to receive and give instructions effectively
		identify <b>personal responsibilities and attitudes</b> that contribute to on-the-job success
		identify value of equity, diversity and inclusion in workplace
		identify communication that constitutes bullying, <b>harassment</b> and <b>discrimination</b>
		identify communication styles appropriate to different systems and applications of <b>electronic messages</b>

### Range of Variables

**people in the workplace** include: other tradespeople, colleagues, apprentices, supervisors, clients, jurisdictional representatives, manufacturers, public

**sources of information** include: regulations, codes, occupational health and safety requirements, jurisdictional requirements, prints, drawings, specifications, company and client documentation

**learning styles** include: visual, auditory, reading, writing, kinesthetic

**personal responsibilities and attitudes** include: asking questions, working safely, accepting constructive feedback, time management and punctuality, respect for authority, good stewardship of materials, tools and property, efficient work practice

**harassment**: as defined by the Canadian and jurisdictional Human Rights Commissions

**discrimination**: as defined by the Canadian Human Rights Act and jurisdictional human rights laws

**electronic messages** include: email, text messages

## A-6.02 Uses mentoring techniques

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
A-6.02.01P	identify and communicate learning objective and point of lesson	apprentice or learner can explain objective and point of lesson
A-6.02.02P	link lesson to other lessons and project	lesson order and unplanned learning opportunities are defined
A-6.02.03P	demonstrate performance of a skill to an apprentice or learner	<b>steps required to demonstrate a skill</b> are performed
A-6.02.04P	set up conditions required for apprentice or learner to practice a skill	<b>practice conditions</b> are set up so that skill can be practiced safely by apprentice or learner
A-6.02.05P	assess apprentice or learner's ability to perform tasks with increasing independence	performance of apprentice or learner improves with practice to a point where skill can be done with little supervision
A-6.02.06P	give supportive and constructive feedback	apprentice or learner adopts best practice after having been given supportive or constructive feedback
A-6.02.07P	support apprentices or learners in pursuing technical training opportunities	technical training is completed within timeframe prescribed by apprenticeship authority
A-6.02.08P	support anti- <b>harassment</b> and anti- <b>discrimination</b> practices in workplace	workplace is <b>harassment</b> and <b>discrimination</b> -free
A-6.02.09P	assess apprentice or learner suitability to trade during probationary period	apprentice or learner is given constructive feedback that helps them identify their own strengths and weaknesses and suitability for the trade

### Range of Variables

**steps required to demonstrate a skill** include: understanding who, what, where, when, why, and how, explaining, showing, giving encouragement, following up to ensure skill is performed correctly

**practice conditions** mean: guided, limited independence, full independence

**harassment**: as defined by the Canadian and jurisdictional Human Rights Commissions

**discrimination**: as defined by the Canadian Human Rights Act and jurisdictional human rights laws

### Knowledge

	Learning Outcomes	Learning Objectives
A-6.02.01L	demonstrate knowledge of strategies for learning skills in workplace	describe importance of individual experience describe shared responsibilities for workplace learning

		determine one's own learning preferences and explain how these relate to learning new skills
		describe importance of different types of skills in workplace
		describe importance of <b>skills for success (essential skills)</b> in workplace
		identify different <b>learning styles</b>
		identify different <b>learning needs</b> and strategies to meet them
		identify <b>strategies to assist in learning a skill</b>
A-6.02.02L	demonstrate knowledge of strategies for <b>teaching</b> workplace <b>skills</b>	identify different roles played by workplace mentor
		describe <b>teaching skills</b>
		explain importance of identifying point of lesson
		identify how to choose a good time to present lesson
		explain importance of linking lessons
		identify context for learning skills
		describe considerations in setting up opportunities for skill practice
		explain importance of providing feedback
		identify techniques for giving effective feedback
		describe a skills assessment
		identify methods of assessing progress
		explain how to adjust lesson to different situations

## Range of Variables

**skills for success (essential skills)** are: adaptability, collaboration, communication, creativity and innovation, digital, numeracy, problem solving, reading, writing

**learning styles** include: visual, auditory, reading, writing, kinesthetic

**learning needs** include: learning disabilities, learning preferences, language proficiency

**strategies to assist in learning a skill** include: understanding the basic principles of instruction, developing coaching skills, being mature and patient, providing feedback

**teaching skills** include: identifying point of lesson, linking lesson, demonstrating skill, providing practice, giving feedback, assessing skills and progress

# Major Work Activity B

## Prepares floor

### Task B-7 Removes existing floorcovering and accessories

#### Task Descriptor

This task includes removal of existing wall bases, trims, floorcoverings and accessories in a safe manner with required tools without damaging any surrounding surfaces. Safe disposal and recycling of materials is important.

#### **B-7.01** Removes transitions, trims and wall bases

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
B-7.01.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
B-7.01.02P	score top of base and trim	top of base and trim is scored to prevent damage to wall finish
B-7.01.03P	pry and peel transitions, trims and bases	transitions and trims are pried and peeled, and bases are pried and peeled downward, preventing damage to wall finishes to prepare for new material installation
B-7.01.04P	remove existing adhesives and <b>mechanical fasteners</b> from wall	existing adhesives and <b>mechanical fasteners</b> are removed from wall to accept new finish
B-7.01.05P	remove existing adhesives and <b>mechanical fasteners</b> from transitions, trims and bases	existing adhesives and <b>mechanical fasteners</b> are removed from transitions, trims and bases to prevent damage and to salvage for reinstallation
B-7.01.06P	number wall, and back of wall base and trim	wall, and back of wall base and trim are numbered using non-bleeding medium for ease of reinstallation

#### Range of Variables

**tools and equipment** include: putty knives, quarter round lifters, pry bars, utility knives

**mechanical fasteners** include: staples, nails, glue

## Knowledge

Learning Outcomes	Learning Objectives	
B-7.01.01L	demonstrate knowledge of transitions, trims and wall bases, and their characteristics and applications	identify types of transitions, trims and wall bases, and describe their characteristics and applications
		interpret information pertaining to transitions, trims and wall bases found on drawings and specifications
		identify types of <b>mechanical fasteners</b> , and describe their characteristics and applications
		identify types of adhesives, and describe their characteristics and applications
B-7.01.02L	demonstrate knowledge of procedures to remove transitions, trims and wall bases	identify <b>tools and equipment</b> used to remove transitions, trims and wall bases, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to remove transitions, trims and wall bases
		describe procedures to remove transitions, trims and wall bases
		identify materials that can be reconditioned, reused or recycled
		identify practices that reduce material waste
B-7.01.03L	demonstrate knowledge of regulatory requirements to dispose of and recycle transitions, trims and wall bases	identify standards and regulations to dispose of and recycle transitions, trims and wall bases

### Range of Variables

**mechanical fasteners** include: staples, nails, glue

**tools and equipment** include: putty knives, quarter round lifters, pry bars, utility knives

**hazards** include: flying debris, hidden hazards (blades, electrical wiring), sharp edges

## B-7.02 Removes carpet

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
B-7.02.01P	select and use tools and equipment	tools and equipment are selected and used according to task
B-7.02.02P	cut carpet into strips, and pry and peel off floor	carpet is cut into strips using <b>cutting tools</b> and carpet is pried and peeled off floor
B-7.02.03P	lift pad and <b>fasteners</b>	pad and <b>fasteners</b> are lifted, while preventing damage to existing finished surfaces
B-7.02.04P	dispose of carpet	carpet is disposed of according to jurisdictional regulations
B-7.02.05P	recycle carpet tile	carpet tile is recycled through original manufacturer according to industry practices
B-7.02.06P	salvage carpet for reinstallation	carpet is salvaged for reinstallation
B-7.02.07P	scrape residue from existing substrate	residue is scraped from existing substrate

### Range of Variables

**cutting tools** include: utility knife, cushion back cutter, stand-up cutter

**fasteners** include: tackless strips, transitions, staples, glue

### Knowledge

	Learning Outcomes	Learning Objectives
B-7.02.01L	demonstrate knowledge of carpets, their characteristics and applications	identify types of carpets, and describe their characteristics, applications and <b>installation methods</b>
		interpret information pertaining to carpets found on drawings and specifications
		identify types of <b>fasteners</b> and describe their characteristics and applications
		identify pads, and describe their characteristics and applications

B-7.02.02L	demonstrate knowledge of procedures to remove carpets	identify tools and equipment used to remove carpets, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to remove carpets
		describe procedures to remove pads, <b>fasteners</b> and carpets
		identify materials that can be reconditioned, reused or recycled
		identify practices that reduce material waste
B-7.02.03L	demonstrate knowledge of regulatory requirements to dispose of and recycle pads, <b>fasteners</b> and carpets	identify codes, standards and regulations to dispose of and recycle pads, <b>fasteners</b> and carpets
		identify and describe manufacturers' reclamation programs

### Range of Variables

**installation methods** include: conventional, direct glue-down, double glue-down

**fasteners** include: tackless strips, transitions, staples, glue

**hazards** include: sharp edges, debris, dust, body strains and pulls, mold, biological waste

## B-7.03 Removes resilient flooring

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
B-7.03.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
B-7.03.02P	cut, pry and scrape <b>resilient flooring</b>	<b>resilient flooring</b> is cut, pried and scraped using <b>tools and equipment</b> , while preventing damage to existing finished surfaces
B-7.03.03P	dispose of <b>resilient flooring</b>	<b>resilient flooring</b> is disposed of according to industry practices

### Range of Variables

**tools and equipment** include: scrapers, stripping machines, utility knife, chipping gun, hammer, chisel

**resilient flooring** includes: linoleum, sheet vinyl, vinyl composite tile (VCT), rubber

## Knowledge

	Learning Outcomes	Learning Objectives
B-7.03.01L	demonstrate knowledge of <b>resilient flooring</b> , their characteristics and applications	identify types of <b>resilient flooring</b> , and describe their characteristics and applications
		interpret information pertaining to <b>resilient flooring</b> found on drawings and specifications
B-7.03.02L	demonstrate knowledge of procedures to remove <b>resilient flooring</b>	identify <b>tools and equipment</b> used to remove <b>resilient flooring</b> , and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to remove <b>resilient flooring</b>
		describe procedures to remove <b>resilient flooring</b> using <b>techniques</b>
B-7.03.03L	demonstrate knowledge of regulatory requirements to dispose of <b>resilient flooring</b>	identify codes, standards and regulations to dispose of <b>resilient flooring</b>

### Range of Variables

**resilient flooring** includes: linoleum, sheet vinyl, vinyl composite tile (VCT), rubber

**tools and equipment** include: scrapers, stripping machines, utility knife, chipping gun, hammer, chisel

**hazards** include: sharp edges, body strains and pulls, asbestos

**techniques** include: chipping, heating, stripping manually, by machine

## B-7.04 Removes wood, laminate flooring, tiles and underlayment

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
B-7.04.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
B-7.04.02P	score, cut and lift wood, laminate flooring and underlayment	wood, laminate flooring and underlayment are scored, cut and lifted, while preventing damage to existing finished surfaces
B-7.04.03P	pull up pads, barriers and fasteners	pads, barriers and fasteners are pulled up
B-7.04.04P	dispose of wood, laminate flooring, tiles and underlayment	wood, laminate flooring, tiles and underlayment are disposed of according to jurisdictional regulations
B-7.04.05P	salvage wood, laminate flooring and underlayment for reinstallation	wood, laminate flooring and underlayment are salvaged for reinstallation

## Range of Variables

**tools and equipment** include: circular saws, toe-kick saws, crowbars, pliers, pry bars, claw hammers, jack hammer, stripping machine

Knowledge		
	Learning Outcomes	Learning Objectives
B-7.04.01L	demonstrate knowledge of wood, laminate flooring, tiles and underlayment, their characteristics and applications	identify types of wood, laminate flooring, tiles and underlayment, and describe their characteristics and applications  interpret information pertaining to wood, laminate flooring, tiles and underlayment found on drawings and specifications  identify pads, barriers and fasteners, and describe their characteristics and applications
B-7.04.02L	demonstrate knowledge of procedures to remove wood, laminate flooring, tiles and underlayment	identify <b>tools and equipment</b> used to remove wood, laminate flooring, tiles and underlayment, and describe their procedures for use  identify <b>hazards</b> and describe safe work practices to remove wood, laminate flooring, tiles and underlayment  describe procedures to remove wood, laminate flooring, tiles and underlayment  identify materials that can be reconditioned, reused or recycled  identify practices that reduce material waste

## Range of Variables

**tools and equipment** include: circular saws, toe-kick saws, crowbars, pliers, pry bars, claw hammers, jack hammer, stripping machine

**hazards** include: sharps, flying debris, dust, lifting heavy materials, body strains and pulls

# Task B-8 Prepares substrate

## Task Descriptor

This task includes the installation of trowelled and rigid underlayments, and the preparation of substrates for installation of various floorcoverings. The removal of floor contaminants is an important first step in this task.

### B-8.01 Removes contaminants

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
B-8.01.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
B-8.01.02P	remove <b>contaminants</b>	<b>contaminants</b> are removed using <b>methods</b> , while preventing damage to finished surfaces
B-8.01.03P	remove <b>residues</b>	floor is rinsed to remove <b>residues</b>

## Range of Variables

**tools and equipment** include: grinders, scrapers, floor maintainers, sanders, patch trowel

**contaminants** include: oil, ink, paint, stain, dust, varnish, parting compounds, adhesives

**methods** include: scraping, chipping, sanding, vacuuming, sweeping, damp mopping of floor

**residues** include: degreasers, trisodium phosphate (TSP), muriatic acid, adhesive removers

#### Knowledge

	Learning Outcomes	Learning Objectives
B-8.01.01L	demonstrate knowledge of <b>contaminants</b> , their characteristics and applications	identify <b>contaminants</b> , and describe their characteristics and applications
		identify <b>residues</b> , and describe their characteristics
B-8.01.02L	demonstrate knowledge of procedures to remove <b>contaminants</b>	identify <b>tools and equipment</b> used to remove <b>contaminants</b> , and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to remove <b>contaminants</b>

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describe procedures and **methods** to remove **contaminants**

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describe procedures to dispose of **contaminants**

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### Range of Variables

**contaminants** include: oil, ink, paint, stain, dust, varnish, parting compounds, adhesives

**residues** include: degreasers, trisodium phosphate (TSP), muriatic acid, adhesive removers

**tools and equipment** include: grinders, scrapers, floor maintainers, sanders, patch trowel

**hazards** include: sharp edges, dust, noxious odours

**methods** include: scraping, chipping, sanding, vacuuming, sweeping, damp mopping of floor

## B-8.02 Prepares concrete floors and underlayment

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
B-8.02.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
B-8.02.02P	check and mark concrete	concrete is checked and marked for cracks, low spots and deviations by performing visual inspection
B-8.02.03P	apply primers and bonding agents	primers and bonding agents are applied according to manufacturers' specifications
B-8.02.04P	encapsulate <b>contaminants</b>	<b>contaminants</b> are encapsulated by applying patching compounds for scratch coat and skim coat
B-8.02.05P	apply patching and levelling compounds	patching and levelling compounds are applied according to manufacturers' specifications to achieve a smooth, flat floor
B-8.02.06P	scarify floor	floor is scarified according to industry standards
B-8.02.07P	remove dust	dust is removed by vacuuming, sweeping, brushing and tacking

### Range of Variables

**tools and equipment** include: paint rollers, paint trays, patching trowels, levelling tools, mixing drills, paddles, broom, straightedges, lasers, levels, string line

**contaminants** include: oil, ink, paint, stain, dust, varnish, parting compounds, adhesives

## Knowledge

	Learning Outcomes	Learning Objectives
B-8.02.01L	demonstrate knowledge of concrete floors and underlayments, their characteristics and applications	identify concrete floors and underlayments, and describe their characteristics and applications
B-8.02.02L	demonstrate knowledge of primers and bonding agents, their characteristics and applications	identify types of primers and bonding agents, and describe their characteristics and applications
B-8.02.03L	demonstrate knowledge of patching and levelling compounds, their characteristics and applications	identify types of patching and levelling compounds, and describe their characteristics and applications
B-8.02.04L	demonstrate knowledge of procedures to prepare concrete floors and underlayment	identify <b>tools and equipment</b> used to prepare concrete floors and underlayment, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to prepare concrete floors and underlayment
		describe procedures to prepare concrete floors and underlayment
		describe procedures to inspect concrete floors and underlayment
		describe procedures to apply primers and bonding agents
		describe procedures to apply patching and levelling compounds

### Range of Variables

**tools and equipment** include: paint rollers, paint trays, patching trowels, levelling tools, mixing drills, paddles, broom, straightedges, lasers, levels, string line

**hazards** include: dust, debris, silica dust

## B-8.03 Prepares wood floors and underlayment

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
B-8.03.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
B-8.03.02P	fill and sand wood panel joints	wood panel joints are filled and sanded to achieve a flush finish

B-8.03.03P	secure loose and squeaking boards or panels	loose and squeaking boards or panels are secured using <b>fasteners and adhesives</b>
B-8.03.04P	reinforce structural soundness	structural soundness is reinforced by adding more sub-floor or fasteners
B-8.03.05P	apply primers and bonding agents	primers and bonding agents are applied according to manufacturers' specifications
B-8.03.06P	apply sealers	sealers are applied to block moisture, stains and biologicals
B-8.03.07P	encapsulate <b>contaminants</b>	<b>contaminants</b> are encapsulated by applying patching compounds for scratch coat and skim coat
B-8.03.08P	apply patching and levelling compounds	patching and levelling compounds are applied according to manufacturers' specifications to achieve a smooth, flat floor
B-8.03.09P	sand and vacuum floor	floor is sanded and vacuumed according to industry practices

## Range of Variables

**tools and equipment** include: sanders, patch trowels, levelling tools, drills varnish, parting

**fasteners and adhesives** include: staples, nails, screws, wood glues, construction adhesives

**contaminants** include: oil, ink, paint, stain, dust, compounds, adhesives

Knowledge		
	Learning Outcomes	Learning Objectives
B-8.03.01L	demonstrate knowledge of wood floors and underlayments, their characteristics and applications	identify types of wood floors and underlayments, and describe their characteristics and applications
B-8.03.02L	demonstrate knowledge of primers, sealers and bonding agents, their characteristics and applications	identify types of primers, sealers and bonding agents, and describe their characteristics and applications
B-8.03.03L	demonstrate knowledge of patching and levelling compounds, their characteristics and applications	identify types of patching and levelling compounds, and describe their characteristics and applications
B-8.03.04L	demonstrate knowledge of <b>fasteners and adhesives</b> , their characteristics and applications	identify types of <b>fasteners and adhesives</b> , and describe their characteristics and applications
B-8.03.05L	demonstrate knowledge of procedures to prepare wood floors and underlayments	identify <b>tools and equipment</b> used to prepare wood floors and underlayments, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to prepare wood floors and underlayments
		describe procedures to inspect wood floors and underlayments
		describe procedures to prepare wood floors and underlayments

describe procedures to apply primers, sealers and bonding agents

describe procedures to apply patching and levelling compounds

## Range of Variables

**fasteners and adhesives** include: staples, nails, screws, wood glues, construction adhesives

**tools and equipment** include: sanders, patch trowels, levelling tools, drills

**hazards** include: sharp edges, dust, debris, lifting heavy materials, body strains and pulls

## B-8.04 Prepares specialty floors

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
B-8.04.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
B-8.04.02P	strip and abrade surface	surface is stripped and abraded to accept patching and levelling compounds and bonding agents
B-8.04.03P	lay down specialty <b>sheeting</b>	specialty <b>sheeting</b> is laid down
B-8.04.04P	apply primers and sealers over metal and ceramic floors	primers and sealers are applied over metal and ceramic floors according to manufacturers' specifications
B-8.04.05P	apply patching and levelling compounds	patching and levelling compounds are applied according to manufacturers' specifications

## Range of Variables

**tools and equipment** include: grinder, shot blaster

**sheeting** includes: suspended sub-floor, fibreglass, cement board

### Knowledge

	Learning Outcomes	Learning Objectives
B-8.04.01L	demonstrate knowledge of specialty floors, their characteristics and applications	identify types of specialty floors, and describe their characteristics and applications
B-8.04.02L	demonstrate knowledge of primers, sealers and bonding agents, their characteristics and applications	identify types of primers, sealers and bonding agents, and describe their characteristics and applications

B-8.04.03L	demonstrate knowledge of patching and levelling compounds, their characteristics and applications	identify types of patching and levelling compounds, and describe their characteristics and applications
B-8.04.04L	demonstrate knowledge of procedures to prepare specialty floors	identify <b>tools and equipment</b> used to prepare specialty floors, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to prepare specialty floors
		describe procedures to inspect specialty floors
		describe procedures to prepare specialty floors
		describe procedures to apply primers, sealers and bonding agents
		describe procedures to apply patching and levelling compounds

### Range of Variables

**tools and equipment** include: grinder, shot blaster

**hazards** include: dust, debris

## B-8.05 Installs trowelled underlayment

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
B-8.05.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
B-8.05.02P	abrade or scarify surface	surface is abraded or scarified according to manufacturers' specifications for mechanical bond
B-8.05.03P	apply <b>bonding agents</b>	<b>bonding agents</b> are applied according to manufacturers' specifications
B-8.05.04P	apply patching and levelling compounds	patching and levelling compounds are applied according to manufacturers' specifications

### Range of Variables

**tools and equipment** include: trowels, mixing drills, paddles, buckets, brooms, vacuums, rollers

**bonding agents** include: primers, sealers

## Knowledge

	Learning Outcomes	Learning Objectives
B-8.05.01L	demonstrate knowledge of trowelled underlayments, their characteristics and applications	identify types of trowelled underlayments, and describe their characteristics and applications
B-8.05.02L	demonstrate knowledge of <b>bonding agents</b> , their characteristics and applications	identify types of <b>bonding agents</b> , and describe their characteristics and applications
B-8.05.03L	demonstrate knowledge of patching and levelling compounds, their characteristics and applications	identify types of patching and levelling compounds, and describe their characteristics and applications
B-8.05.04L	demonstrate knowledge of procedures to install trowelled underlayments	identify <b>tools and equipment</b> used to install trowelled underlayments, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install trowelled underlayments
		describe procedures to install trowelled underlayments
		describe procedures to apply <b>bonding agents</b>
		describe procedures to apply patching and levelling compounds

### Range of Variables

**bonding agents** include: primers, sealers

**tools and equipment** include: trowels, mixing drills, paddles, buckets, brooms, vacuums, rollers

**hazards** include: dust, debris, silica dust

## B-8.06 Installs rigid underlayment panels

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
B-8.06.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
B-8.06.02P	undercut jambs and trims	jambs and trims are undercut to allow for expansion and contraction according to manufacturers' specifications
B-8.06.03P	lay sheets	sheets are laid perpendicular to sub-floor sheets

B-8.06.04P	stagger joints	joints are staggered according to manufacturers' specifications
B-8.06.05P	measure, cut and fit underlayment	underlayment is measured, cut and fit, allowing for expansion and contraction, according to manufacturers' specifications
B-8.06.06P	apply <b>adhesives</b>	<b>adhesives</b> are applied according to manufacturers' specifications
B-8.06.07P	select, apply and space mechanical fasteners	mechanical fasteners are selected, applied and spaced according to manufacturers' specifications
B-8.06.08P	sand and patch seams	seams are sanded and patched according to industry standards

## Range of Variables

**tools and equipment** include: circular saw, jig saw, jamb saw, drill, screw gun, oscillating tool

Knowledge		
	Learning Outcomes	Learning Objectives
B-8.06.01L	demonstrate knowledge of rigid underlayment panels, their characteristics and applications	identify types of rigid underlayment panels, and describe their characteristics and applications
B-8.06.02L	demonstrate knowledge of <b>adhesives</b> , their characteristics and applications	identify types of <b>adhesives</b> , and describe their characteristics and applications
B-8.06.03L	demonstrate knowledge of fasteners, their characteristics and applications	identify types of fasteners, and describe their characteristics and applications
B-8.06.04L	demonstrate knowledge of procedures to install rigid underlayment panels	identify <b>tools and equipment</b> used to install rigid underlayment panels, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install rigid underlayment panels
		describe procedures to install rigid underlayment panels
		describe fastening techniques for rigid underlayment panels
		identify layout practices that reduce material waste

## Range of Variables

**adhesives** include: construction adhesives, wood floor adhesives

**tools and equipment** include: circular saw, jig saw, jamb saw, drill, screw gun, oscillating tool

**hazards** include: dust, debris, electrocution, lifting heavy materials, body strains and pulls

# Major Work Activity C

## Installs and repairs carpet

### Task C-9 Installs carpet

#### Task Descriptor

This task involves cutting, positioning, seaming, stretching and gluing carpet and cushion using tools and equipment such as cutters, spreaders, power stretchers, seaming irons and a wide selection of adhesives. The methods used include conventional, direct glue-down, double glue-down as well as modular and peel-and-stick tiles. The task covers carpets such as indoor/outdoor, woven, tufted, fusion-bonded, flocked, needle-punched and turf.

#### C-9.01 Cuts carpet for installation

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
C-9.01.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-9.01.02P	square end cuts of roll	end cuts of roll are squared using <b>squaring techniques</b> , taking patterns into consideration to avoid waste and shortages, and according to project drawings and specifications
C-9.01.03P	make multiple square cuts from roll	multiple square cuts are made from roll, taking into consideration sequence of cuts in order to maintain consistent shading and pattern, and according to project drawings and specifications

#### Range of Variables

**tools and equipment** include: T-square, knives, measuring tape, carpet cutting machine

**squaring techniques** include: T-square, 3-4-5 method, lapping back

## Knowledge

	Learning Outcomes	Learning Objectives
C-9.01.01L	demonstrate knowledge of carpets, their characteristics and applications	identify <b>types of carpet</b> , and describe their characteristics and applications
		identify <b>types of carpet backings</b> , and describe their <b>characteristics</b> and applications
		identify <b>carpet layout considerations</b>
C-9.01.02L	demonstrate knowledge of procedures to cut carpet	identify <b>tools and equipment</b> used to cut carpet, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to cut carpet
		describe procedures to cut carpet
		identify <b>squaring techniques</b>
		identify practices that reduce material waste

### Range of Variables

**types of carpet** include: woven, tufted, fusion-bonded, flocked, needle-punched, walk off mats, turf, indoor/outdoor

**types of carpet backings** include: primary and secondary, unitary, reinforced fleece, thermal plastic, bonded/laminated

**characteristics** (of carpet backing) include: pic count, composition (rubber, jute, latex, thermoplastic)

**carpet layout considerations** include: dye lot sequence, direction of pile lay, traffic patterns, direct sunlight, location of seams, fill and cross seams

**tools and equipment** include: T-square, knives, measuring tape, carpet cutting machine

**hazards** include: cutting hazards, lifting heavy materials

**squaring techniques** include: T-square, 3-4-5 method, lapping back

## C-9.02 Installs carpet by conventional method

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
C-9.02.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-9.02.02P	cut and fit tackless strips and carpet cushion	tackless strips and carpet cushion are cut and fit according to industry practices

C-9.02.03P	install tackless strips	tackless strips are installed, with gully around all vertical surfaces according to carpet thickness, using <b>fastening techniques</b> according to substrate
C-9.02.04P	install carpet cushion	carpet cushion is installed using <b>fastening techniques</b> according to substrate, and avoiding overlapping of seams and waste
C-9.02.05P	position carpet	carpet is positioned taking into consideration pile direction, pattern match, traffic patterns, sunlight exposure and seam placement
C-9.02.06P	determine stretch sequence	stretch sequence is determined according to layout of floor, pattern of carpet and manufacturers' specifications to avoid carpet failures
C-9.02.07P	determine and adjust <b>seaming method</b>	<b>seaming method</b> is determined and adjusted according to <b>type of carpet</b>
C-9.02.08P	cut and seam carpet	carpet is cut and seamed according to manufacturers' recommendations and <b>type of carpet</b> using <b>seam cutting methods</b>
C-9.02.09P	stretch carpet	carpet is stretched according to manufacturers' specifications, taking into consideration pattern alignment along walls
C-9.02.10P	trim and fit carpet	carpet is trimmed and fit against vertical surfaces according to <b>type of carpet</b>

## Range of Variables

**tools and equipment** include: cutters, aviation snips, knives, power stretchers, mini-stretchers, knee-kickers, wall trimmers, tucking tools, seam sealers, seaming iron, seaming board, seam weights, measuring tape, straightedge, carpenter square

**fastening techniques** include: tape, stapling, adhesives, concrete or wood nails

**seaming methods** include: hand sewing, iron induction heating (thermoplastic seaming tape)

**types of carpet** include: woven, tufted, fusion-bonded, needle-punched, walk-off mats, turf, indoor/outdoor

**seam cutting methods** include: row-to-row cutting, trace cutting, double cutting, serpentine cutting, cutting from backing (woven)

## Knowledge

	Learning Outcomes	Learning Objectives
C-9.02.01L	demonstrate knowledge of carpets, tackless strips and carpet cushions, their characteristics and applications	identify <b>types of carpet</b> , and describe their characteristics, construction and applications  identify types of tackless strips, and describe their characteristics and applications

		identify <b>types of carpet cushions</b> , and describe their characteristics and applications
		identify <b>types of seam sealers</b> , and describe their characteristics and applications
		identify carpet seam and cushion seam placement
		identify carpet pattern repeats
C-9.02.02L	demonstrate knowledge of procedures to install carpets by conventional method	identify <b>tools and equipment</b> used to install carpets by conventional method, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install carpets by conventional method
		describe acclimation requirements of carpets
		describe <b>carpet layout considerations</b>
		describe procedures to install tackless strips and carpet cushions
		identify fastening methods for carpet cushion and accessories
		describe procedures to install carpets by conventional method
		identify <b>seaming methods</b>

## Range of Variables

**types of carpet** include: woven, tufted, fusion-bonded, needle-punched, walk-off mats, turf, indoor/outdoor

**types of carpet cushions** include: foam, polyurethane, rubber, fiber

**types of seam sealers** include: latex, acrylic, thermal plastics

**tools and equipment** include: cutters, aviation snips, knives, power stretchers, mini-stretchers, knee-kickers, wall trimmers, tucking tools, seam sealers, seaming iron, seaming board, seam weights, measuring tape, straightedge, carpenter square

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching

**carpet layout considerations** include: dye lot sequence, direction of pile lay, traffic patterns, direct sunlight, location of seams (staggered between cushion and carpet seams), fill and cross seams

**seaming methods** include: hand sewing, iron induction heating (thermoplastic seaming tape)

## C-9.03 Installs carpet by direct glue-down method

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
C-9.03.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-9.03.02P	position and cut carpet	carpet is positioned and cut taking into consideration pile direction, pattern match, traffic patterns, sunlight exposure and seam placement
C-9.03.03P	prepare seams	seams are prepared by cutting carpet using <b>seam cutting methods</b> according to manufacturers' specifications
C-9.03.04P	apply adhesive	adhesive is applied using <b>adhesive application methods</b> , while maintaining consistent spread rate throughout application, according to manufacturers' specifications
C-9.03.05P	seal seams	seams are sealed using seam sealer according to manufacturers' recommendations to avoid fraying of pile or tufts
C-9.03.06P	manipulate pattern alignment after installation	pattern alignment is manipulated after installation by power stretching, using double-headed crab and stay nailing
C-9.03.07P	trim and fit carpet	carpet is trimmed and fit against vertical surfaces according to <b>type of carpet</b>
C-9.03.08P	roll glue-down materials	glue-down materials are rolled according to manufacturers' recommendations

### Range of Variables

**tools and equipment** include: wall trimmers, tucking tools, knives, adhesive spreaders, knee-kicker, double-headed crab, star-wheeled roller, weighted rollers, knapping shears, measuring tape, straightedge, carpenter square

**seam cutting methods** include: row-to-row cutting, trace cutting, double cutting, serpentine cutting

**adhesive application methods** include: spraying, rolling, trowelling

**types of carpet** include: woven, tufted, fusion-bonded, flocked, needle-punched, walk-off mats, turf, indoor/outdoor

## Knowledge

	Learning Outcomes	Learning Objectives
C-9.03.01L	demonstrate knowledge of carpets and adhesives, their characteristics and applications	identify <b>types of carpet</b> , and describe their characteristics and applications
		identify types of adhesives used to glue carpets, and describe their characteristics and applications
C-9.03.02L	demonstrate knowledge of procedures to install carpets by direct glue-down method	identify <b>tools and equipment</b> used to install carpets by direct glue-down method, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install carpets by direct glue-down method
		describe acclimation requirements of carpets
		describe <b>carpet layout considerations</b>
		describe procedures to install carpets by direct glue-down method
		identify <b>seam cutting methods</b>
		identify <b>adhesive application methods</b>
		identify seaming and seam sealing methods used for <b>types of carpets</b>

### Range of Variables

**types of carpet** include: woven, tufted, fusion-bonded, flocked, needle-punched, walk-off mats, turf, indoor/outdoor

**tools and equipment** include: wall trimmers, tucking tools, knives, adhesive spreaders, knee-kicker, double-headed crab, star-wheeled roller, weighted rollers, knapping shears, measuring tape, straightedge, carpenter square

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching, dangerous fumes and solvents

**carpet layout considerations** include: dye lot sequence, direction of pile lay, traffic patterns, direct sunlight, location of seams, fill and cross seams

**seam cutting methods** include: row-to-row cutting, trace cutting, double cutting, serpentine cutting

**adhesive application methods** include: spraying, rolling, trowelling

## C-9.04 Installs carpet by double glue-down method

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
C-9.04.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-9.04.02P	install carpet cushion	carpet cushion is installed according to manufacturers' specifications avoiding overlapping of seams and waste
C-9.04.03P	position carpet	carpet is positioned taking into consideration pile direction, pattern match, traffic patterns, sunlight exposure and seam placement
C-9.04.04P	cut carpet seams	carpet seams are cut using <b>seam cutting methods</b> according to manufacturers' specifications
C-9.04.05P	prepare seams	seams are prepared using latex, acrylic or thermoplastic seam sealers to avoid fraying of pile and tufts
C-9.04.06P	apply adhesive	adhesive is applied using <b>adhesive application methods</b> , while maintaining consistent spread rate throughout application and allowing open time, according to manufacturers' specifications
C-9.04.07P	apply hot melt seam tape	hot melt seam tape is applied to ensure that seams are kept even according to manufacturers' specifications
C-9.04.08P	manipulate pattern alignment during installation	pattern alignment is manipulated during installation by power stretching, using double-headed crab and stay nailing
C-9.04.09P	trim and fit carpet	carpet is trimmed and fit against vertical surfaces according to <b>type of carpet</b>
C-9.04.10P	roll glue-down materials	glue-down materials are rolled according to manufacturers' recommendations

### Range of Variables

**tools and equipment** include: wall trimmers, tucking tools, knives, adhesive spreaders, knee-kicker, double-headed crab, star-wheeled roller, weighted rollers, knapping shears, measuring tape, straightedge, carpenter square

**seam cutting methods** include: row-to-row cutting, trace cutting, double cutting, serpentine cutting

**adhesive application methods** include: spraying, rolling, trowelling

**types of carpet** include: woven, tufted, fusion-bonded, flocked, needle-punched, walk-off mats, turf, indoor/outdoor

## Knowledge

	Learning Outcomes	Learning Objectives
C-9.04.01L	demonstrate knowledge of carpets, and carpet cushions and adhesives, their characteristics and applications	identify <b>types of carpet</b> , and describe their characteristics, construction and applications
		identify types of carpet cushions, and describe their characteristics and applications
		identify <b>types of seam sealers</b> , and describe their characteristics and applications
		identify carpet cushion compatibility for double glue-down carpet installation
		identify types of adhesives used for carpets, and describe their characteristics and applications
C-9.04.02L	demonstrate knowledge of procedures to install carpets by double glue-down method	identify <b>tools and equipment</b> used to install carpets by double glue-down method, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install carpets by double glue-down method
		describe acclimation requirements of carpets
		describe <b>carpet layout considerations</b>
		identify fastening methods for carpet cushion and accessories
		identify <b>seam cutting methods</b>
		identify <b>adhesive application methods</b>
		describe procedures to install carpets by double glue-down method

### Range of Variables

**types of carpet** include: woven, tufted, fusion-bonded, flocked, needle-punched, walk-off mats, turf, indoor/outdoor

**types of seam sealers** include: latex, acrylic, thermal plastics

**tools and equipment** include: wall trimmers, tucking tools, knives, adhesive spreaders, knee-kicker, double-headed crab, star-wheeled roller, weighted rollers, knapping shears, measuring tape, straightedge, carpenter square

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching, dangerous fumes and solvents

**carpet layout considerations** include: dye lot sequence; direction of pile lay; traffic patterns; direct sunlight; location of seams (staggered between cushion and carpet seams), fill and cross seams

**seam cutting methods** include: row-to-row cutting, trace cutting, double cutting, serpentine cutting

**adhesive application methods** include: spraying, rolling, trowelling

## C-9.05 Installs modular carpet tiles

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
C-9.05.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-9.05.02P	apply adhesive	adhesive is applied using <b>adhesive application methods</b> , while maintaining consistent spread rate throughout application and allowing open time, according to manufacturers' specifications
C-9.05.03P	place modular carpet tiles	modular carpet tiles are placed in pyramid formation while maintaining working line consistency and according to specified <b>patterns</b>
C-9.05.04P	trim and fit modular carpet tiles	modular carpet tiles are trimmed and fit against vertical surfaces according to <b>type of carpet</b>

### Range of Variables

**tools and equipment** include: carpenter square, wall trimmers, tucking tools, knives, weighted rollers, measuring tape

**adhesive application methods** include: spraying, rolling, trowelling

**patterns** include: quarter-turn, monolithic, ashlar, brick, random, basketweave, herringbone

**types of carpet** include: tufted, fusion-bonded, flopped, needle-punched

### Knowledge

	Learning Outcomes	Learning Objectives
C-9.05.01L	demonstrate knowledge of modular carpet tiles and adhesives, their characteristics and applications	identify types and sizes of modular carpet tiles, and describe their characteristics and applications  identify types of adhesives used for modular carpet tiles, and describe their characteristics and applications
C-9.05.02L	demonstrate knowledge of procedures to install modular carpet tiles	identify <b>tools and equipment</b> used to install modular carpet tiles, and describe their procedures for use  identify <b>hazards</b> and describe safe work practices to install modular carpet tiles  identify <b>adhesive application methods</b>

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describe procedures and methods to install modular carpet tiles

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describe acclimation requirements of modular carpet tiles

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describe **carpet layout considerations**

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### Range of Variables

**tools and equipment** include: carpenter square, wall trimmers, tucking tools, knives, weighted rollers, measuring tape

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching, dangerous fumes and solvents

**adhesive application methods** include: spraying, rolling, trowelling

**carpet layout considerations** include: pyramid formation, working from lay line, dye lot sequence

## C-9.06 Completes carpet installation

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
C-9.06.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-9.06.02P	remove excess adhesive from surface fibres	excess adhesive is removed from surface fibres using <b>cleaning products</b>
C-9.06.03P	trim loose backing fibre and tufts	loose backing fibre and tufts are identified by performing visual inspection and are trimmed
C-9.06.04P	tuck and finish carpet at doorways and trims	carpet at doorways and trims is tucked and finished
C-9.06.05P	re-roll glue-down material	glue-down material is re-rolled according to manufacturers' recommendations to ensure transfer and bonding of adhesive

### Range of Variables

**tools and equipment** include: shears, tucking tools, weighted roller, measuring tape, knives

**cleaning products** include: water, solvent-based cleaners, mineral spirits

## Knowledge

	Learning Outcomes	Learning Objectives
C-9.06.01L	demonstrate knowledge of procedures to complete carpet installations	identify <b>tools and equipment</b> used to complete carpet installations, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to complete carpet installations
		identify <b>cleaning products</b> used to clean adhesive from carpets
		describe procedures to complete carpet installations

### Range of Variables

**tools and equipment** include: shears, tucking tools, weighted roller, measuring tape, knives

**hazards** include: hazardous cleaning materials, cutting hazards

**cleaning products** include: water, solvent-based cleaners, mineral spirits

## Task C-10 Performs custom carpet procedures

### Task Descriptor

This task involves installing borders and insets, binding, upholstering, constructing and installing area rugs and runners, and installing carpet and runners on stairs. The methods used include conventional, direct glue-down, double glue-down as well as installing modular and peel-and-stick tiles.

Proper stretching and seaming is important especially for stairs due to high liability issues. Knowledge of proper fastening techniques according to the job to be done is also important.

### C-10.01 Installs borders and insets

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
C-10.01.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-10.01.02P	establish <b>layout of design</b>	<b>layout of design</b> is established according to drawings or end-users' preferences
C-10.01.03P	lay out carpet pieces	carpet pieces are laid out ensuring pile lay direction and pattern flow with main carpet or other border pieces

C-10.01.04P	cut mitres where borders and insets meet and intersect	mitres where borders and insets meet and intersect are cut using <b>cutting methods</b>
C-10.01.05P	attach pieces (taken from rolls, carpet tiles or runners) to field carpet	pieces (taken from rolls, carpet tiles or runners) are attached to field carpet using <b>carpet installation methods</b> , while maintaining consistent lines and required stretch according to manufacturers' specifications

## Range of Variables

**tools and equipment** include: row-finder, cutters, straightedge, square, utility knife, measuring tape

**layout of design** includes: narrow multi-coloured borders and insets, geometric shapes

**cutting methods** include: trace cutting, cutting from the back, row-to-row

**carpet installation methods** include: conventional, direct glue-down, double glue-down

Knowledge		
	Learning Outcomes	Learning Objectives
C-10.01.01L	demonstrate knowledge of carpet borders and insets, their characteristics, construction and applications	identify types of carpet borders and insets, and describe their characteristics, construction and applications
		identify <b>types of carpets</b> used in borders and insets
		interpret information pertaining to carpet borders and insets found on drawings and specifications
C-10.01.02L	demonstrate knowledge of procedures to install carpet borders and insets	identify <b>tools and equipment</b> used to install carpet borders and insets, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install carpet borders and insets
		identify <b>cutting methods</b> to cut mitres in carpet
		describe procedures to install carpet borders and insets
		describe procedures and <b>carpet installation methods</b> to attach borders and insets to field carpet

## Range of Variables

**types of carpet** include: woven, tufted, fusion-bonded, flocked, needle-punched, walk-off mats, turf, indoor/outdoor

**tools and equipment** include: row-finder, cutters, straightedge, square, utility knife, measuring tape

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching, dangerous fumes and solvents

**cutting methods** include: trace cutting, cutting from the back, row-to-row

**carpet installation methods** include: conventional, direct glue-down, double glue-down

## C-10.02 Binds carpet

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	no	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
C-10.02.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-10.02.02P	prepare carpet edge	carpet edge is prepared by cutting to size and trimming loose tufts
C-10.02.03P	attach binding tape to carpet edge	binding tape is attached to carpet edge using <b>binding methods</b>
C-10.02.04P	complete binding	binding is completed by wrapping binding tape and sealing loose ends with latex or hot melt glue

### Range of Variables

**tools and equipment** include: binding stapler, latex bottle, straightedge, knife, sewing tools, hot melt glue gun, clamps, measuring tape

**binding methods** include: binding, stapling, hand sewing

### Knowledge

	Learning Outcomes	Learning Objectives
C-10.02.01L	demonstrate knowledge of carpets, their characteristics, construction and applications	identify <b>types of carpet</b> that can be bound, and describe their characteristics, construction and applications
C-10.02.02L	demonstrate knowledge of procedures to bind carpets	identify <b>tools and equipment</b> and binding products used to bind carpets, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to bind carpets
		describe procedures to prepare carpets for binding
		describe <b>binding methods</b> and procedures

## Range of Variables

**types of carpet** include: woven, tufted, fusion-bonded, flocked, needle-punched

**tools and equipment** include: binding stapler, latex bottle, straightedge, knife, sewing tools, hot melt glue gun, clamps, measuring tape

**hazards** include: cutting hazards, dangerous fumes and solvents

**binding methods** include: binding, stapling, hand sewing

### C-10.03 Upholsters with carpet

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
C-10.03.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-10.03.02P	finish inside and outside corners on posts, walls and other three-dimensional objects	inside and outside corners on posts, walls and other three-dimensional objects are finished
C-10.03.03P	wrap carpet around corners and odd shapes, and join	carpet is wrapped under corners and odd shapes, and joined using <b>fastening methods</b>
C-10.03.04P	fasten carpet to structure	carpet is fastened to structure using <b>fasteners</b>

## Range of Variables

**tools and equipment** include: electric stapler/tacker, knapping shears, stair tool, hammer, utility knife, hot melt glue gun, measuring tape

**fastening methods** include: gluing, stapling

**fasteners** include: staples, nails, adhesives

#### Knowledge

	Learning Outcomes	Learning Objectives
C-10.03.01L	demonstrate knowledge of carpet used for upholstery, their characteristics, construction and applications	identify <b>types of carpet</b> used for upholstery, and describe their characteristics, construction and applications
		identify types of <b>fasteners</b> used to fasten carpets to structures

C-10.03.02L	demonstrate knowledge of procedures to upholster with carpet	identify <b>tools and equipment</b> used to upholster with carpet, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to upholster with carpet
		describe procedures and methods to upholster with carpet

### Range of Variables

**types of carpet** include: woven, tufted, fusion-bonded, flocked, needle-punched

**fasteners** include: staples, nails, adhesives

**tools and equipment** include: electric stapler/tacker, knapping shears, stair tool, hammer, utility knife, hot melt glue gun, measuring tape

**hazards** include: cutting hazards, dangerous fumes and solvents

### C-10.04 Assembles area rugs and runners

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	no	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
C-10.04.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-10.04.02P	assemble area rugs and runners to specified shape, design and dimension	area rugs and runners are assembled to specified shape, design and dimension using borders and insets, according to seaming method
C-10.04.03P	finish edges of area rugs and runners	edges of area rugs and runners are finished using <b>edge finishing methods</b>
C-10.04.04P	position area rugs and runners over cushion	area rugs and runners are positioned over cushion to ensure durability of carpet and to limit movement

### Range of Variables

**tools and equipment** include: binding stapler, industrial sewing machine, measuring tape

**edge finishing methods** include: using binding tape, serging, fringing

## Knowledge

	Learning Outcomes	Learning Objectives
C-10.04.01L	demonstrate knowledge of cushions (underpads), area rugs and runners, their characteristics and applications	identify types of cushions (underpads) used for area rugs and runners, and describe their characteristics and applications
		identify <b>types of carpet</b> used for area rugs and runners, and describe their characteristics and applications
C-10.04.02L	demonstrate knowledge of procedures to assemble area rugs and runners	identify <b>tools and equipment</b> used to assemble area rugs and runners, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to assemble area rugs and runners
		describe procedures to assemble area rugs and runners
		describe procedures and <b>edge finishing methods</b> for area rugs and runners

### Range of Variables

**types of carpet** include: woven, tufted

**tools and equipment** include: binding stapler, industrial sewing machine, measuring tape

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching

**edge finishing methods** include: using binding tape, serging, fringing

## C-10.05 Installs carpet and runners on stairs

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
C-10.05.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-10.05.02P	measure and cut carpet to fit stair dimensions	carpet is measured and cut to fit stair dimensions, to maintain pattern integrity, and taking into consideration pile direction and seam placement around spindles
C-10.05.03P	fit carpet and runners to contour of stairs	carpet and runners are fit to contour of stairs using <b>fastening methods</b> to maintain joint and pattern alignment

C-10.05.04P	install stair rods and eyes into crotch of stair	stair rods and eyes are installed into crotch of stair to achieve decorative appearance
C-10.05.05P	join carpet edges using <b>seaming methods</b>	carpet edges are joined using <b>seaming methods</b>

## Range of Variables

**tools and equipment** include: knee kicker, rubber mallet, electric stapler/tacker, stair tool, hammer, utility knife, measuring tape

**fastening methods** include: glues, tackless strips, nails, staples, seam sealers

**seaming methods** include: hand sewing, gluing, stapling, binding, turn-and-tack

Knowledge		
	Learning Outcomes	Learning Objectives
C-10.05.01L	demonstrate knowledge of carpets used for stairs and runners, their characteristics, construction and applications	identify <b>types of carpets</b> used for stairs and runners, and describe their characteristics, construction and applications
		identify types of stair rods and eyes, and describe their characteristics and applications
		explain product limitations for stair applications
C-10.05.02L	demonstrate knowledge of stairs, their characteristics, construction and applications	identify <b>types of stair construction</b> , and describe their characteristics and applications
C-10.05.03L	demonstrate knowledge of procedures to install carpet and runners on stairs	identify <b>tools and equipment</b> used to install carpet and runners on stairs, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install carpet and runners on stairs
		describe procedures to measure and cut carpet for stairs
		identify <b>types of stair finishes</b>
		explain importance of sequencing and maintaining carpet pattern integrity during installation
		describe alignment techniques for regular and irregular stairs
		describe procedures and <b>fastening methods</b> to install carpet and runners on stairs

		identify <b>seaming methods</b> to join carpet edges
C-10.05.04L	demonstrate knowledge of regulatory requirements pertaining to installing carpet on stairs	identify building codes, standards and regulations pertaining to installing carpet on stairs

## Range of Variables

**types of carpet** include: woven, tufted

**types of stair construction** include: boxed, open-ended, double-ended, bullnose, spiral, curved, Hollywood, floating, winder

**tools and equipment** include: knee kicker, rubber mallet, electric stapler/tacker, stair tool, hammer, utility knife, measuring tape

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching

**types of stair finishes** include: waterfall, cap and band, full wrap, upholstered

**fastening methods** include: glues, tackless strips, nails, staples, seam sealers

**seaming methods** include: hand sewing, gluing, stapling, binding, turn-and-tack

## Task C-11 Installs artificial turf

### Task Descriptor

This task involves the installation of artificial turf including borders, insets and logos for use in sports fields, playgrounds and golf facilities. For large installations, working as part of a team is crucial at all times.

### **C-11.01** Establishes layout and grid lines for artificial turf

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	no	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
C-11.01.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-11.01.02P	lay out design	design is laid out according to engineer's control points, design and drawings
C-11.01.03P	determine centre point for installation	centre point for installation is determined according to field type and drawings
C-11.01.04P	mark grid lines	grid lines are marked according to substrate, and engineer's control points, design and drawings

## Range of Variables

**tools and equipment** include: transits, lasers, dry line

Knowledge		
Learning Outcomes	Learning Objectives	
C-11.01.01L	demonstrate knowledge of artificial turf, their characteristics and applications	identify types of artificial turf, and describe their characteristics and applications
		interpret information pertaining to artificial turf found on drawings and specifications
C-11.01.02L	demonstrate knowledge of procedures to establish layout and grid lines for artificial turf	identify <b>tools and equipment</b> used to establish layout and grid lines for artificial turf, and describe their procedures for use
		describe procedures to establish layout and grid lines for artificial turf

## Range of Variables

**tools and equipment** include: transits, lasers, dry line

### C-11.02 Assembles artificial turf sections

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	no	yes	NV	NV	NV

Skills		
Performance Criteria	Evidence of Attainment	
C-11.02.01P	select and use <b>specialized turf tools and equipment</b>	<b>specialized turf tools and equipment</b> are selected and used according to task
C-11.02.02P	measure widths of turf sections and shear off tufts to top of backing	widths of turf sections are measured, and tufts are sheared off to top of backing to ensure consistent widths
C-11.02.03P	hand stretch turf sections using turf clamps	turf sections are hand stretched using turf clamps
C-11.02.04P	maintain straight lines and proper tension	straight lines and proper tension are maintained while rolling with motorized turf roller
C-11.02.05P	shear tufts to create <b>markings</b>	tufts are sheared to create <b>markings</b>
C-11.02.06P	trace cut desired logo and shape through turf and backing	desired logo and shape are trace cut through turf and backing

C-11.02.07P	place and secure logos, shapes and other markings	logos, shapes and other markings are placed and secured using adhesive according to manufacturers' specifications
C-11.02.08P	seam sections	sections are seamed using <b>seaming methods</b> according to manufacturers' specifications

## Range of Variables

**specialized turf tools and equipment** include: turf sewing machine, turf clamps, turf shears, turf line cutter, circle cutter, loop pile cutter, glue trowels, breakaway blade knife, turf roller

**markings** include: lines, shapes, numbers

**seaming methods** include: gluing, sewing

Knowledge		
	Learning Outcomes	Learning Objectives
C-11.02.01L	demonstrate knowledge of artificial turf, their characteristics and applications	identify types of artificial turf, and describe their characteristics and applications interpret information pertaining to artificial turf found on drawings and specifications
C-11.02.02L	demonstrate knowledge of procedures to assemble artificial turf sections	identify <b>specialized turf tools and equipment</b> used to assemble artificial turf sections, and describe their procedures for use identify <b>hazards</b> and describe safe work practices to assemble artificial turf sections describe procedures to measure artificial turf sections describe procedures to create <b>markings</b> identify shearing techniques describe procedures to place and secure artificial turf insets describe procedures to assemble artificial turf sections identify <b>seaming methods</b>

## Range of Variables

**specialized turf tools and equipment** include: turf sewing machine, turf clamps, turf shears, turf line cutter, circle cutter, loop pile cutter, glue trowels, breakaway blade knife, turf roller

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching, heavy machinery

**markings** include: lines, shapes, numbers

**seaming methods** include: gluing, sewing

## C-11.03 Completes artificial turf installation

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	no	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
C-11.03.01P	select and use <b>specialized turf tools and equipment</b>	<b>specialized turf tools and equipment</b> are selected and used according to task
C-11.03.02P	lift pile	pile is lifted by brushing turf with mechanical sweeper
C-11.03.03P	fill turf area with sand and rubber granules	turf area is filled with sand and rubber granules using spreader according to manufacturers' specifications while maintaining consistent rate of spread
C-11.03.04P	finish installation	installation is finished by raking around markings and cutting uneven tufts

### Range of Variables

**specialized turf tools and equipment** include: motorized fill spreader, power sweeper, rakes, shovels, turf shears, forklift

### Knowledge

	Learning Outcomes	Learning Objectives
C-11.03.01L	demonstrate knowledge of artificial turf, their characteristics and applications	identify types of artificial turf, and describe their characteristics and applications
		interpret information pertaining to artificial turf found on drawings and specifications
C-11.03.02L	demonstrate knowledge of procedures to complete artificial turf installation	identify <b>specialized turf tools and equipment</b> used to complete artificial turf installation, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to complete artificial turf installation
		describe procedures to complete artificial turf installation
		identify brushing, raking and spreading techniques

### Range of Variables

**specialized turf tools and equipment** include: motorized fill spreader, power sweeper, rakes, shovels, turf shears, forklift

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching, heavy machinery

## Task C-12 Repairs carpet

### Task Descriptor

This task involves the repair of damaged materials (carpet, carpet tiles, cushion, accessories, artificial turf) using repair techniques consistent with the installation method used. Pattern match and pile direction should be maintained to achieve a visually pleasing repair.

#### C-12.01 Repairs carpet installed by conventional method

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
C-12.01.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-12.01.02P	cut out damaged area	damaged area is cut out, using stay nails around repair area to maintain carpet stretch, and cutting row-to-row where possible
C-12.01.03P	replace cut out area	cut out area is replaced to match existing carpet, taking into consideration pile direction and pattern
C-12.01.04P	re-stretch and refit carpet that has buckled	carpet that has buckled is re-stretched and refit
C-12.01.05P	re-tuft carpet	carpet is re-tufted
C-12.01.06P	repair and refit damaged or unsatisfactory seams	damaged or unsatisfactory seams are repaired and refit
C-12.01.07P	reapply delaminated secondary backing of carpets	delaminated secondary backing of carpets is reapplied using adhesives according to manufacturers' specifications
C-12.01.08P	repair or replace damaged cushion (underpad) sections	damaged cushion (underpad) sections are repaired or replaced
C-12.01.09P	repair or replace damaged <b>accessories</b>	damaged <b>accessories</b> are repaired or replaced

## Range of Variables

**tools and equipment** include: cutters, aviation snips, knives, power stretchers, mini-stretchers, knee-kickers, wall trimmers, tucking tools, seam sealers, seaming iron, seaming board, seam weights, measuring tape, straightedge, carpenter square, cookie cutter repair kit

**accessories** include: transition strips, baseboards, tackless strips

Knowledge		
Learning Outcomes	Learning Objectives	
C-12.01.01L	demonstrate knowledge of carpets, their characteristics, construction and applications	identify <b>types of carpet</b> , and describe their characteristics, construction and applications
C-12.01.02L	demonstrate knowledge of procedures to repair carpet installed by conventional method	identify <b>tools and equipment</b> used to repair carpet installed by conventional method, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to repair carpet installed by conventional method
		describe <b>carpet repair methods</b> and procedures to repair and replace carpet installed by conventional method

## Range of Variables

**types of carpet** include: woven, tufted, fusion-bonded, needle-punched, walk-off mats, turf, indoor/outdoor

**tools and equipment** include: cutters, aviation snips, knives, power stretchers, mini-stretchers, knee-kickers, wall trimmers, tucking tools, seam sealers, seaming iron, seaming board, seam weights, measuring tape, straightedge, carpenter square, cookie cutter repair kit

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching

**carpet repair methods** include: cutting, re-stretching, seaming, patching, tufting, burling

## C-12.02 Repairs carpet installed by direct glue-down method

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

Skills		
Performance Criteria	Evidence of Attainment	
C-12.02.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-12.02.02P	cut out damaged area	damaged area is cut out, cutting row-to-row where possible

C-12.02.03P	replace cut out area	cut out area is replaced to match existing carpet, taking into consideration pile direction and pattern
C-12.02.04P	reapply adhesive and seam sealer	adhesive and seam sealer is reapplied
C-12.02.05P	inject adhesive	adhesive is injected according to industry practices
C-12.02.06P	refit carpet	carpet is refit
C-12.02.07P	re-tuft carpet	carpet is re-tufted
C-12.02.08P	repair and refit damaged or unsatisfactory seams	damaged or unsatisfactory seams are repaired and refit
C-12.02.09P	reapply delaminated secondary backing of carpet	delaminated secondary backing of carpet is reapplied using adhesives specified by manufacturer
C-12.02.10P	replace damaged modular carpet tiles	damaged modular carpet tiles are replaced
C-12.02.11P	repair or replace damaged <b>accessories</b>	damaged <b>accessories</b> are repaired or replaced

## Range of Variables

**tools and equipment** include: wall trimmers, tucking tools, knives, adhesive spreaders, knee-kicker, double-headed crab, star-wheeled roller, weighted rollers, knapping shears, measuring tape, straightedge, carpenter square

**accessories** include: transition strips, baseboards

Knowledge		
	Learning Outcomes	Learning Objectives
C-12.02.01L	demonstrate knowledge of carpets, their characteristics, construction and applications	identify <b>types of carpet</b> , and describe their characteristics, construction and applications
C-12.02.02L	demonstrate knowledge of procedures to repair carpet installed by direct glue-down method	identify <b>tools and equipment</b> used to repair carpet installed by direct glue-down method, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to repair carpet installed by direct glue-down method
		describe <b>carpet repair methods</b> to repair and replace carpet installed by direct glue-down method

## Range of Variables

**types of carpet** include: woven, tufted, fusion-bonded, flocked, needle-punched, walk-off mats, turf, indoor/outdoor

**tools and equipment** include: wall trimmers, tucking tools, knives, adhesive spreaders, knee-kicker, double-headed crab, star-wheeled roller, weighted rollers, knapping shears, measuring tape, straightedge, carpenter square

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching, dangerous fumes and solvents

**carpet repair methods** include: cutting, seaming, patching, tufting, burling, replacing modular carpet tiles

### C-12.03 Repairs carpet installed by double glue-down method

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
C-12.03.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-12.03.02P	cut out damaged area, including cushion (underpad)	damaged area, including cushion (underpad), is cut out, cutting row-to-row where possible
C-12.03.03P	replace cut out area, including cushion (underpad), to match existing carpet	cut out area, including cushion (underpad), is replaced to match existing carpet, taking into consideration pile direction and pattern
C-12.03.04P	reapply adhesive to cushion (underpad) and carpet, and seam sealer to carpet	adhesive is reapplied to cushion (underpad) and carpet, and seam sealer to carpet
C-12.03.05P	inject adhesive between cushion (underpad) and carpet	adhesive is injected between cushion (underpad) and carpet
C-12.03.06P	re-tuft carpet	carpet is re-tufted
C-12.03.07P	repair and refit damaged or unsatisfactory seams	damaged or unsatisfactory seams are repaired and refit
C-12.03.08P	reapply delaminated secondary backing of carpets	delaminated secondary backing of carpets is reapplied using adhesives according to manufacturers' specifications
C-12.03.09P	repair or replace damaged <b>accessories</b>	damaged <b>accessories</b> are repaired or replaced

## Range of Variables

**tools and equipment** include: wall trimmers, tucking tools, knives, adhesive spreaders, knee-kicker, double-headed crab, star-wheeled roller, weighted rollers, knapping shears, measuring tape, straightedge, carpenter square

**accessories** include: transition strips, baseboards

Knowledge		
Learning Outcomes	Learning Objectives	
C-12.03.01L	demonstrate knowledge of carpets, their characteristics, construction and applications	identify <b>types of carpet</b> , and describe their characteristics, construction and applications
C-12.03.02L	demonstrate knowledge of procedures to repair carpet installed by double glue-down method	identify <b>tools and equipment</b> used to repair carpet installed by double glue-down method, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to repair carpet installed by double glue-down method
		describe <b>carpet repair methods</b> to repair and replace carpet installed by double glue-down method

## Range of Variables

**types of carpet** include: woven, tufted, fusion-bonded, flocked, needle-punched, walk-off mats, turf, indoor/outdoor

**tools and equipment** include: wall trimmers, tucking tools, knives, adhesive spreaders, knee-kicker, double-headed crab, star-wheeled roller, weighted rollers, knapping shears, measuring tape, straightedge, carpenter square

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching, dangerous fumes and solvents

**carpet repair methods** include: cutting, seaming, patching, tufting, burling

## C-12.04 Repairs artificial turf

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	no	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

Skills		
Performance Criteria	Evidence of Attainment	
C-12.04.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
C-12.04.02P	vacuum out filler material around damaged area	filler material around damaged area is vacuumed out
C-12.04.03P	cut out damaged area	damaged area is cut out, cutting row-to-row where possible

C-12.04.04P	replace section with new piece and secure in place	section is replaced with new piece and secured in place with adhesive
C-12.04.05P	refill repaired area	repaired area is refilled with matching filler material
C-12.04.06P	trim loose fibres	loose fibres are trimmed

### Range of Variables

**tools and equipment** include: turf sewing machine, turf clamps, turf shears, turf line cutter, circle cutter, loop pile cutter, glue trowels, breakaway blade knife, turf roller, motorized fill spreader, power sweeper, rakes, shovels, forklift, shop vacuum

Knowledge		
	Learning Outcomes	Learning Objectives
C-12.04.01L	demonstrate knowledge of artificial turf, their characteristics and applications	identify types of artificial turf, and describe their characteristics and applications
		identify types of adhesives, and describe their characteristics and applications
C-12.04.02L	demonstrate knowledge of procedures to repair artificial turf	identify <b>tools and equipment</b> used to repair artificial turf, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to repair artificial turf
		describe <b>artificial turf repair methods</b> and procedures

### Range of Variables

**tools and equipment** include: turf sewing machine, turf clamps, turf shears, turf line cutter, circle cutter, loop pile cutter, glue trowels, breakaway blade knife, turf roller, motorized fill spreader, power sweeper, rakes, shovels, forklift, shop vacuum

**hazards** include: cutting hazards, moving heavy and awkward materials and equipment, body strains and pulls from kneeling and reaching, heavy machinery

**artificial turf repair methods** include: vacuuming, cutting, replacing damaged areas, refilling

# Major Work Activity D

## Installs and repairs resilient flooring

### Task D-13 Installs resilient flooring

#### Task Descriptor

Installation of resilient flooring is the art of physically executing the design plans to achieve a durable and aesthetic result. Proper installation techniques are important to validate warranty and to improve longevity of the flooring system.

#### D-13.01 Establishes layout and grid lines

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
D-13.01.01P	select and use <i>tools and equipment</i>	<i>tools and equipment</i> are selected and used according to task
D-13.01.02P	verify square layout	square layout is verified by determining straight reference line and taking measurements
D-13.01.03P	square material to room	material is squared to room according to plans using <i>layout methods</i>
D-13.01.04P	mark layout and grid lines	layout and grid lines are marked using chalk line
D-13.01.05P	adjust layout lines	layout lines are adjusted to minimize use of small pieces of material along prominent walls and transitions

#### Range of Variables

*tools and equipment* include: chalk lines, measuring tapes, plumb bobs

*layout methods* include: 3-4-5 method, laser levels, swinging arcs, equal distance

## Knowledge

	Learning Outcomes	Learning Objectives
D-13.01.01L	demonstrate knowledge of procedures to establish layout and grid lines	identify <b>tools and equipment</b> used to establish layout and grid lines, and describe their procedures for use
		interpret information pertaining to layout found on drawings and specifications
		describe geometry and calculations used to perform layout and grid lines
		describe procedures and methods to establish layout and grid lines
		identify practices that reduce material waste

### Range of Variables

**tools and equipment** include: chalk lines, measuring tapes, plumb bobs

## D-13.02 Installs resilient tiles

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
D-13.02.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
D-13.02.02P	locate placement of conductive grounding strips and position	placement of conductive grounding strips and position for dissipating electrical current are located according to manufacturers' specifications
D-13.02.03P	apply adhesive	adhesive is applied according to <b>manufacturers' recommendations</b>
D-13.02.04P	allow adhesive open time	adhesive is allowed open time according to <b>manufacturers' recommendations</b>
D-13.02.05P	batch tiles	tiles are batched to achieve even distribution of natural variations in tiles
D-13.02.06P	lay tiles	tiles are laid to maintain straight and square installation
D-13.02.07P	cut tiles	tiles are cut to fit around <b>vertical obstructions</b> using <b>installation methods</b>

D-13.02.08P	prevent tile movement when using wet-set method	tile movement is prevented when using wet-set method by working away from adhesive or using kneeling board
D-13.02.09P	roll material	material is rolled to improve adhesive transfer and bond according to manufacturers' specifications

## Range of Variables

**tools and equipment** include: tile cutters, utility knives, propane torches, heat guns, under-scribers, dividers

**manufacturers' recommendations** include: adhesive spread rate; method of adhesive application; open, working and curing times

**vertical obstructions** include: walls, drains, door frames, electrical floor outlets, plumbing, electrical conduit

**installation methods** include: pattern scribing, direct scribing, measuring

Knowledge		
	Learning Outcomes	Learning Objectives
D-13.02.01L	demonstrate knowledge of resilient tiles, their <b>characteristics</b> and applications	identify <b>types of resilient tiles</b> , and describe their <b>characteristics</b> and applications interpret information pertaining to resilient tiles found on drawings and specifications describe acclimation requirements of resilient tiles
D-13.02.02L	demonstrate knowledge of adhesives, their characteristics and applications	identify <b>types of adhesives</b> , and describe their characteristics and applications
D-13.02.03L	demonstrate knowledge of procedures to install resilient tiles and adhesives	identify <b>tools and equipment</b> used to install resilient tiles and adhesives, and describe their procedures for use identify <b>hazards</b> and describe safe work practices to install resilient tiles describe procedures to apply adhesives to substrates describe <b>installation methods</b> and procedures to cut resilient tiles describe procedures to install resilient tiles describe resilient tile <b>installation patterns</b> describe procedures to roll resilient tiles identify practices that reduce material waste

## Range of Variables

**characteristics** include: grain, directional arrows

**types of resilient tiles** include: pure vinyl, vinyl plank, luxury vinyl tile (LVT), linoleum, VCT, rubber, cork, static dissipative tile (SDT), conductive tile

**types of adhesives** include: asphalt emulsion, clear set, conductive, polyurethane, two-part epoxy

**tools and equipment** include: tile cutters, utility knives, propane torches, heat guns, under-scribers, dividers

**hazards** include: burns, fumes, slips and falls, cutting hazards, lifting heavy materials

**installation methods** include: pattern scribing, direct scribing, measuring

**installation patterns** include: ashlar, basket weave, herringbone, brick, monolithic, quarter-turn, random

### D-13.03 Installs resilient sheet goods

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
D-13.03.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
D-13.03.02P	locate placement of conductive grounding strips and position	placement of conductive grounding strips and position for dissipating electrical current are located according to manufacturers' specifications
D-13.03.03P	make relief cuts	relief cuts are made according to dimensions and fixtures in installation area to prepare for adhesive
D-13.03.04P	de-curl (massage) material ends	material ends are de-curved (massaged) to ensure flatness of seams and edges according to manufacturers' recommendations
D-13.03.05P	lap and tube material	material is lapped and tubed to accommodate ease of installation and working time of adhesives
D-13.03.06P	apply adhesive and seam treatments	adhesive and seam treatments are applied according to manufacturers' specifications
D-13.03.07P	roll material	material is rolled to eliminate bubbles, and improve adhesive transfer and bond according to manufacturers' specifications
D-13.03.08P	cut material	material is cut to fit <b>vertical obstructions</b>
D-13.03.09P	roll perimeter and seams	perimeter and seams are rolled with hand or seam roller to improve adhesive transfer and bond at edges

## Range of Variables

**tools and equipment** include: utility knives, linoleum knives, seam rollers, notch blade knives, under scribes, bar scribes, dividers, linoleum carts, linoleum dollies, heat welding kits, edge trimmers, straightedges, squares

**vertical obstructions** include: walls, drains, door frames, electrical floor outlets, plumbing, electrical conduit

<b>Knowledge</b>		
<b>Learning Outcomes</b>	<b>Learning Objectives</b>	
D-13.03.01L	demonstrate knowledge of resilient sheet goods, their characteristics and applications	identify <b>types of resilient sheet goods</b> , and describe their <b>characteristics</b> and applications
		interpret information pertaining to resilient sheet goods found on drawings and specifications
D-13.03.02L	demonstrate knowledge of adhesives, their characteristics and applications	identify <b>types of adhesives</b> , and describe their characteristics and applications
D-13.03.03L	demonstrate knowledge of procedures to install resilient sheet goods and adhesives	identify <b>tools and equipment</b> used to install resilient sheet goods and adhesives, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install resilient sheet goods
		describe procedures to apply adhesives to substrates
		describe procedures to cut resilient sheet goods
		describe strategic placement of material cuts and efficient use of material
		describe procedures to install resilient sheet goods
		describe procedures to roll resilient sheet goods
		describe <b>scribing methods</b>
		describe <b>seam preparation</b>
		describe <b>seaming methods</b>
		identify practices that reduce material waste

## Range of Variables

**types of resilient sheet goods** include: PVC, rubber, linoleum, roto vinyl, conductive, inlaid vinyl  
**characteristics** include: heterogeneous, homogeneous

**types of adhesives** include: conductive, polyurethane, two-part epoxy, acrylic, latex

**tools and equipment** include: utility knives, linoleum knives, seam rollers, notch blade knives, under scribes, bar scribes, dividers, linoleum carts, linoleum dollies, heat welding kits, edge trimmers, straightedges, squares

**hazards** include: dangerous fumes, slips and falls, cutting hazards, lifting heavy materials, burns

**scribing methods** include: pattern scribing, 3-wall scribing, direct scribing

**seam preparation** includes: edge trimming, pattern matching, overlapping

**seaming methods** include: double cutting, pre-cutting, under scribing

### D-13.04 Cuts seams to fit

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
D-13.04.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
D-13.04.02P	trim edges of sheets	edges of sheets are trimmed according to manufacturers' specifications and recommended overlap
D-13.04.03P	recess scribe seams	seams are recess scribed to fit according to manufacturers' specifications and industry practices
D-13.04.04P	double cut seams	seams are double cut according to manufacturers' specifications and industry practices
D-13.04.05P	straight edge cut and butt edges together	seam is cut with straightedge and edges are butt together according to manufacturers' specifications and industry practices

## Range of Variables

**tools and equipment** include: utility knives, linoleum knives, notch blade knives, recess scribes, edge trimmers, straightedges, squares, seam rollers, dividers

## Knowledge

	Learning Outcomes	Learning Objectives
D-13.04.01L	demonstrate knowledge of procedures to cut seams to fit	identify <b>tools and equipment</b> used to cut seams, and describe their procedures for use
		describe procedures to cut seams to fit

### Range of Variables

**tools and equipment** include: utility knives, linoleum knives, notch blade knives, recess scribes, edge trimmers, straightedges, squares, seam rollers, dividers

## D-13.05 Seals seams chemically

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
D-13.05.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
D-13.05.02P	clean and prepare seam	seam is cleaned and prepared using mineral spirits or recommended solvent to prevent contamination of seam sealer
D-13.05.03P	mix seam sealer	seam sealer is mixed according to manufacturers' specifications
D-13.05.04P	apply seam sealer	seam sealer is applied according to manufacturers' specifications
D-13.05.05P	protect seams during drying time	seams are protected during drying time using barriers to prevent contamination of seam sealer according to manufacturers' specifications

### Range of Variables

**tools and equipment** include: straightedges, rags, applicator bottles

## Knowledge

	Learning Outcomes	Learning Objectives
D-13.05.01L	demonstrate knowledge of seam sealers, their characteristics and applications	identify types of seam sealers, and describe their characteristics and applications
		interpret information pertaining to seam sealers found on manufacturers' specifications

D-13.05.02L	demonstrate knowledge of procedures to seal seams chemically	identify <b>tools and equipment</b> used to seal seams chemically, and describe their procedures for use
		describe procedures to clean and prepare seams
		describe procedures to mix seam sealers
		describe procedures to apply seam sealers

### Range of Variables

**tools and equipment** include: straightedges, rags, applicator bottles

## D-13.06 Heat welds seams

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
D-13.06.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
D-13.06.02P	clean and prepare seam	seam is cleaned and prepared to prevent contamination and weak bond
D-13.06.03P	groove seams	seams are grooved to depth and width according to product manufacturers' specifications
D-13.06.04P	set heat welder to temperature	heat welder is set to temperature according to manufacturers' specifications
D-13.06.05P	apply weld rod	weld rod is applied according to manufacturers' specifications
D-13.06.06P	trim weld rod	weld rod is trimmed according to manufacturers' specifications
D-13.06.07P	perform final skiving	final skiving is performed to achieve smooth and flat seam

### Range of Variables

**tools and equipment** include: automatic welders, heat seam welding system (hand groover, heat welding gun, electric groover, nozzles for welder, trim plate, skiving tools, spatula knives, hobby knives, trimmers, cleaning tool)

## Knowledge

	Learning Outcomes	Learning Objectives
D-13.06.01L	demonstrate knowledge of flooring materials than can be heat welded	identify types of flooring materials that can be heat welded
		identify weld rods, and describe their characteristics and applications
D-13.06.02L	demonstrate knowledge of procedures to heat weld seams	identify <b>tools and equipment</b> used to heat weld seams, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to heat weld seams
		describe procedures to clean and prepare seams
		describe procedures to groove seams
		identify <b>grooving methods</b>
		describe procedures to heat weld seams
		describe procedures to perform final skiving

### Range of Variables

**tools and equipment** include: automatic welders, heat seam welding system (hand groover, heat welding gun, electric groover, nozzles for welder, trim plate, skiving tools, spatula knives, hobby knives, trimmers, cleaning tool)

**hazards** include: burns, fumes

**grooving methods** include: hand, machine

## D-13.07 Completes resilient flooring installation

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

## Skills

	Performance Criteria	Evidence of Attainment
D-13.07.01P	select and use tools and equipment	tools and equipment are selected and used according to task
D-13.07.02P	apply sealants around <b>features</b> and inside and outside doors	sealants are applied around <b>features</b> and inside and outside doors according to project requirements and manufacturers' specifications
D-13.07.03P	perform final inspection and <b>cleanup procedures</b>	final inspection and <b>cleanup procedures</b> are performed

## Range of Variables

**features** include: bathtubs, water pipes, conduit, toe kicks

**cleanup procedures** include: removing excess sealant and adhesive, removing debris

Knowledge		
Learning Outcomes	Learning Objectives	
D-13.07.01L	demonstrate knowledge of procedures to complete resilient flooring installation	identify tools and equipment used to complete resilient flooring installation, and describe their procedures for use
		identify hazards and describe safe work practices to complete resilient flooring installation
		describe procedures to perform final inspection
		describe <b>cleanup procedures</b>

## Range of Variables

**cleanup procedures** include: removing excess sealant and adhesive, removing debris

## Task D-14 Performs custom resilient flooring procedures

### Task Descriptor

This task covers specialized installation procedures in the floorcovering trade such as coving, resilient flooring on stairs and specialty wall coverings. Some sheet good applications may cover wall as well as floors. These installations include residential, commercial and institutional applications.

### D-14.01 Performs coving operations

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

Skills		
Performance Criteria	Evidence of Attainment	
D-14.01.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
D-14.01.02P	cut, fit and fasten fillet/cove strips and capping	fillet/cove strips and capping are cut, fit and fastened according to manufacturers' specifications to support flooring material where floor meets wall and capping to receive material

D-14.01.03P	install prefabricated coving	prefabricated coving is installed according to manufacturers' specifications
D-14.01.04P	install v-plug corners and boot plug corners	v-plug corners and boot plug corners are installed according to industry practices and manufacturers' recommendations
D-14.01.05P	heat material before bending	material is heated before bending to prevent breakage and binding
D-14.01.06P	ensure adhesion to cove strips	adhesion to cove strips is ensured by pushing material into cove strips around perimeter of room
D-14.01.07P	cut flooring material and fit into capping	flooring material is cut and fit into capping
D-14.01.08P	roll wall using seam roller	wall is rolled using seam roller to improve glue transfer and bond
D-14.01.09P	cut and fit inside and outside corners	inside and outside corners are cut and fit using <b>cutting methods</b>

### Range of Variables

**tools and equipment** include: utility knives, linoleum knives, notch blade knives, recess scribes, bar scribes, dividers, heat welding kits, edge trimmers, straightedges, squares, seam roller, material roller, compound miter saw, reverse scribes

**cutting methods** include: pattern scribe, direct scribe, freehand knifing, pre-measure

Knowledge		
	Learning Outcomes	Learning Objectives
D-14.01.01L	demonstrate knowledge of coving, their characteristics and applications	identify <b>types of coving</b> , and describe their characteristics and applications
D-14.01.02L	demonstrate knowledge of adhesives, their characteristics and applications	identify <b>types of adhesives</b> , and describe their characteristics and applications
D-14.01.03L	demonstrate knowledge of procedures to perform coving procedures	identify <b>tools and equipment</b> used to perform coving procedures, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to perform coving procedures
		describe procedures to install coving

### Range of Variables

**types of coving** include: pre-fabricated coving, on-site coving, V plug, boot plug

**types of adhesives** include: contact tape, contact cement, nosing epoxy, base adhesives

**tools and equipment** include: utility knives, linoleum knives, notch blade knives, recess scribes, bar scribes, dividers, heat welding kits, edge trimmers, straightedges, squares, seam roller, material roller, compound miter saw, reverse scribes

**hazards** include: cutting hazards, burns, fire

## D-14.02 Installs tread, riser and stringer materials

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
D-14.02.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
D-14.02.02P	measure and snap chalk line	chalk line is measured and snapped to determine height of stringer material
D-14.02.03P	scribe and fit stringers	stringers are scribed and fit top to bottom
D-14.02.04P	adhere stringer materials to wall surface and roll stringers	stringer materials are adhered to wall surface and stringers are rolled to improve glue transfer and bond
D-14.02.05P	cut, fit and scribe treads and risers	treads and risers are cut, fit and scribed to ensure net finish
D-14.02.06P	apply adhesive	adhesive is applied according to manufacturers' specifications and industry practices
D-14.02.07P	roll tread and riser materials	tread and riser materials are rolled
D-14.02.08P	install tactile warning strips	tactile warning strips are installed according to project requirements, manufacturers' specifications and jurisdictional codes

### Range of Variables

**tools and equipment** include: chalk lines, measuring tape, utility knives, linoleum knives, notch blade knives, recess scribes, bar scribes, dividers, edge trimmers, straightedges, squares, seam roller, material roller, compound miter saw, glue trowels, orbital sander, stair jig

### Knowledge

	Learning Outcomes	Learning Objectives
D-14.02.01L	demonstrate knowledge of treads, risers and stringer materials, their characteristics and applications	identify types of treads, risers and stringer materials, and describe their characteristics and applications
D-14.02.02L	demonstrate knowledge of <b>types of adhesives</b> , their characteristics and applications	identify <b>types of adhesives</b> , and describe their characteristics and applications
D-14.02.03L	demonstrate knowledge of procedures to install treads, risers and stringer materials	identify <b>tools and equipment</b> used to install treads, risers and stringer materials, and describe their procedures for use

		identify <b>hazards</b> and describe safe work practices to install treads, risers and stringer materials
		describe procedures to install treads, risers and stringer materials
		identify practices that reduce material waste
D-14.02.04L	demonstrate knowledge of regulatory requirements pertaining to stairs	identify codes, standards and regulations pertaining to stairs

## Range of Variables

**types of adhesives** include: contact tape, contact cement, nosing epoxy, base adhesives, stair tread adhesive

**tools and equipment** include: chalk lines, measuring tape, utility knives, linoleum knives, notch blade knives, recess scribes, bar scribes, dividers, edge trimmers, straightedges, squares, seam roller, material roller, compound miter saw, glue trowels, orbital sander, stair jig

**hazards** include: dangerous fumes, falls, cutting hazards

## D-14.03 Installs resilient flooring on stairs

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
D-14.03.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
D-14.03.02P	cut, fit and fasten fillet/cove strips	fillet/cove strips are cut, fit and fastened to receive and support flooring material where tread meets riser according to <b>installation method</b> and codes
D-14.03.03P	fit flooring to riser, tread and stringer	flooring is fit to riser, tread and stringer according to manufacturers' specifications
D-14.03.04P	cut and fit nosing	nosing is cut and fit according to <b>installation method</b>
D-14.03.05P	pattern match field, stairs and landings	field, stairs and landings are pattern matched according to industry practices

## Range of Variables

**tools and equipment** include: utility knives, linoleum knives, notch blade knives, recess scribes, bar scribes, dividers, heat welding kits, edge trimmers, straightedges, squares, tile cutter, material roller, hand roller, measuring tape

**installation methods** include: one-piece, two-piece, coved

## Knowledge

	Learning Outcomes	Learning Objectives
D-14.03.01L	demonstrate knowledge of products used to install <b>resilient flooring</b> on stairs, their characteristics and applications	identify types of products used to install <b>resilient flooring</b> on stairs, and describe their characteristics and applications
D-14.03.02L	demonstrate knowledge of stairs, their characteristics, applications and construction	identify <b>stair substrates</b> , and describe their characteristics and applications
		identify <b>types of stair construction</b> , and describe their characteristics and applications
D-14.03.03L	demonstrate knowledge of procedures to install <b>resilient flooring</b> on stairs	identify <b>tools and equipment</b> used to install <b>resilient flooring</b> on stairs, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install resilient flooring on stairs
		describe <b>installation method</b> procedures, and sequence to install <b>resilient flooring</b> on stairs
		identify practices that reduce material waste
D-14.03.04L	demonstrate knowledge of regulatory requirements pertaining to stairs	identify codes, standards and regulations pertaining to stairs

### Range of Variables

**resilient flooring** includes: linoleum, sheet vinyl, VCT, rubber

**stair substrates** include: wood, concrete, steel pan

**types of stair construction** include: boxed, open-ended, double-ended, bullnose, spiral, curved, Hollywood, floating, winder

**tools and equipment** include: utility knives, linoleum knives, notch blade knives, recess scribes, bar scribes, dividers, heat welding kits, edge trimmers, straightedges, squares, tile cutter, material roller, hand roller, measuring tape

**hazards** include: dangerous fumes, falls, cutting hazards

**installation methods** include: one-piece, two-piece, coved

## D-14.04 Installs insets, borders and feature strips

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
D-14.04.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
D-14.04.02P	scale measurements for insets, borders and feature strips from plans	measurements are scaled for insets, borders and feature strips from plans to achieve scaled image
D-14.04.03P	create <b>geometric shapes</b>	<b>geometric shapes</b> are created according to job site requirements and drawings
D-14.04.04P	place insets, borders and feature strips	insets, borders and feature strips are placed according to design layout on drawings
D-14.04.05P	incorporate pattern into field	pattern is incorporated into field to achieve uniform look

### Range of Variables

**tools and equipment** include: utility knives, linoleum knives, notch blade knives, recess scribes, bar scribes, dividers, heat welding kits, edge trimmers, straightedges, squares, tile cutter, material roller, hand roller, measuring tape

**geometric shapes** include: circles, ellipses, curved lines

### Knowledge

	Learning Outcomes	Learning Objectives
D-14.04.01L	demonstrate knowledge of insets, borders and feature strips, their characteristics and applications	identify types of insets, borders and feature strips, and describe their characteristics and applications
D-14.04.02L	demonstrate knowledge of procedures to install insets, borders and feature strips	identify <b>tools and equipment</b> used to install insets, borders and feature strips, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install insets, borders and feature strips
		describe procedures to install insets, borders and feature strips
		identify <b>geometric shapes</b> created for installations

describe measurements taken to install insets, borders and feature strips

identify practices that reduce material waste

## Range of Variables

**tools and equipment** include: utility knives, linoleum knives, notch blade knives, recess scribes, bar scribes, dividers, heat welding kits, edge trimmers, straightedges, squares, tile cutter, material roller, hand roller, measuring tape

**hazards** include: dangerous fumes, falls, cutting hazards

**geometric shapes** include: circles, ellipses, curved lines

## D-14.05 Installs specialty wall covering products

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
D-14.05.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
D-14.05.02P	cut <b>specialty wall covering products</b>	<b>specialty wall covering products</b> are cut according to dimensions
D-14.05.03P	bend and form material to inside and outside corners	material is bent and formed to inside and outside corners according to wall dimensions and manufacturers' specifications
D-14.05.04P	apply and trowel adhesive	adhesive is applied and troweled according to manufacturers' specifications
D-14.05.05P	roll wall surface	wall surface is rolled to improve adhesive transfer and bond
D-14.05.06P	seal seams	seams are sealed using heat weld or H-strips

## Range of Variables

**tool and equipment** include: jigsaws, hole saws, carbide blade knives, heat benders, laser lines, levels, circular saws, track saws, angle finder, measuring tape, plumb bob, material roller, hand roller, glue trowel, heat welding kit, step ladders

**specialty wall covering products** include: sheet vinyl and panels, hygienic vinyl PVC rigid panels, wall protection

## Knowledge

	Learning Outcomes	Learning Objectives
D-14.05.01L	demonstrate knowledge of <b>specialty wall covering products</b> , their characteristics and applications	identify types of <b>specialty wall covering products</b> , and describe their characteristics and applications
D-14.05.02L	demonstrate knowledge of procedures to install <b>specialty wall covering products</b>	identify <b>tools and equipment</b> used to install <b>specialty wall covering products</b> , and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install <b>specialty wall covering products</b>
		describe procedures to install <b>specialty wall covering products</b>
		describe procedures to apply and trowel adhesives
		describe procedures to seal seams
		identify practices that reduce material waste

### Range of Variables

**specialty wall covering products** include: sheet vinyl and panels, hygienic vinyl PVC rigid panels, wall protection

**tool and equipment** include: jigsaws, hole saws, carbide blade knives, heat benders, laser lines, levels, circular saws, track saws, angle finder, measuring tape, plumb bob, material roller, hand roller, glue trowel, heat welding kit, step ladders

**hazards** include: falls, cutting hazards, burns, lifting heavy materials, body strains and pulls

# Task D-15 Repairs resilient flooring and accessories

## Task Descriptor

Floorcovering installers repair resilient flooring that is damaged and worn. This includes replacement of components and materials.

### D-15.01 Repairs resilient flooring

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
D-15.01.01P	select and use <i>tools and equipment</i>	<i>tools and equipment</i> are selected and used according to task
D-15.01.02P	inspect substrate	substrate is inspected to ensure it is ready to accept flooring repair
D-15.01.03P	determine <i>repair method</i>	<i>repair method</i> is determined
D-15.01.04P	cut out damaged areas	damaged areas are cut out according to manufacturers' recommendations and industry practices
D-15.01.05P	replace damaged areas	damaged areas are replaced with best matching product
D-15.01.06P	repair miscut, open, peaked and loose seams	miscut, open, peaked and loose seams are repaired using manufacturer approved adhesive
D-15.01.07P	protect seams during drying time of seam sealers	seams are protected during drying time of seam sealers

### Range of Variables

*tools and equipment* include: carpenter square, measuring tape, knives, heat gun, torches, adhesive trowel, patching tools, syringe, recess scribe, hand roller, heat welding kit

*repair methods* include: patching, re-gluing and sealing seams, injecting adhesive, heat welding

### Knowledge

	Learning Outcomes	Learning Objectives
D-15.01.01L	demonstrate knowledge of <i>resilient flooring</i> , their characteristics, applications and construction	identify types of <i>resilient flooring</i> , and describe their characteristics, applications and construction
D-15.01.02L	demonstrate knowledge of procedures to repair <i>resilient flooring</i>	identify <i>tools and equipment</i> used to repair <i>resilient flooring</i> , and describe their procedures for use
		identify <i>hazards</i> and describe safe work practices to repair <i>resilient flooring</i>

	describe <b>repair methods</b> and procedures to repair and replace <b>resilient flooring</b>
	describe <b>seaming methods</b>
	describe seam repair limitations
	describe <b>causes of damage</b> to <b>resilient flooring</b>
	identify practices that reduce material waste

## Range of Variables

**resilient flooring** includes: linoleum, sheet vinyl, VCT, rubber

**tools and equipment** include: carpenter square, measuring tape, knives, heat gun, torches, adhesive trowel, patching tools, syringe, recess scribe, hand roller, heat welding kit

**hazards** include: cutting hazards, burns, slips and falls

**repair methods** include: patching, re-gluing and sealing seams, injecting adhesive, heat welding

**seaming methods** include: heat welding, chemical welding, tight scribe

**causes of damage** include: moisture, contaminants, marks, wear and tear, damage during construction

## D-15.02 Repairs accessories

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
D-15.02.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
D-15.02.02P	remove adhesives and fasteners	adhesives and fasteners are removed from repair area to prevent damage and to salvage <b>accessories</b> for reinstallation
D-15.02.03P	replace fasteners to complete repair	fasteners are replaced to complete repair

## Range of Variables

**tools and equipment** include: hammer, carpenter square, measuring tape, knives, heat gun, torches, adhesive trowel, patching tools, syringe, recess scribe, hand roller, stripping machine, pry bar

**accessories** include: nosing, baseboards, capping, transitions

## Knowledge

	Learning Outcomes	Learning Objectives
D-15.02.01L	demonstrate knowledge of flooring <b>accessories</b> , their characteristics and applications	identify types of flooring <b>accessories</b> , and describe their characteristics and applications
D-15.02.02L	demonstrate knowledge of procedures to repair flooring <b>accessories</b>	identify <b>tools and equipment</b> used to repair flooring <b>accessories</b> , and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to repair flooring <b>accessories</b>
		describe procedures to repair flooring <b>accessories</b>
		identify practices that reduce material waste

### Range of Variables

**accessories** include: nosing, baseboards, capping, transitions

**tools and equipment** include: hammer, carpenter square, measuring tape, knives, heat gun, torches, adhesive trowel, patching tools, syringe, recess scribe, hand roller, stripping machine, pry bar

**hazards** include: cutting hazards, burns, scrapes, slips and falls

# Major Work Activity E

## Installs and services wood, laminate and floating vinyl plank flooring

### Task E-16 Installs pre-finished solid, engineered, laminate and floating vinyl plank flooring

#### Task Descriptor

This task encompasses the various installation methods for installing pre-finished solid, engineered, laminate and floating vinyl plank flooring products.

#### E-16.01 Undercuts jambs and trims

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
E-16.01.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
E-16.01.02P	check for <b>wiring</b>	<b>wiring</b> is checked prior to cutting
E-16.01.03P	select blade	blade is selected according to <b>material</b>
E-16.01.04P	set blade	blade is set to finished height of <b>flooring material</b> to be installed and to depth of cut
E-16.01.05P	protect surrounding finished surfaces during cutting process	surrounding finished surfaces are protected during cutting process using tape and score line to prevent chipping
E-16.01.06P	cut <b>jambs</b> and <b>trims</b> to finished height of <b>flooring material</b>	<b>jambs</b> and <b>trims</b> are cut to finished height of <b>flooring material</b> to allow for expansion and contraction

## Range of Variables

**tools and equipment** include: undercut saws, blades, oscillating tools, jamb saws

**wiring** includes: security alarms, doorbells, TV cables, computer wiring, electricity

**material** includes: metal, wood

**flooring materials** include: laminate, engineered, parquet, solid wood, vinyl plank

**jamb**s include: steel, wood, medium density fibreboard (MDF)

**trim**s include: door trims, jamb, baseboards, door casings

Knowledge		
	Learning Outcomes	Learning Objectives
E-16.01.01L	demonstrate knowledge of <b>jamb</b> s and <b>trim</b> s, their characteristics and applications	identify types of <b>jamb</b> s and <b>trim</b> s, and describe their characteristics and applications
E-16.01.02L	demonstrate knowledge of procedures to undercut <b>jamb</b> s and <b>trim</b> s	identify <b>tools and equipment</b> used to undercut <b>jamb</b> s and <b>trim</b> s, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to undercut <b>jamb</b> s and <b>trim</b> s
		describe procedures to undercut <b>jamb</b> s and <b>trim</b> s

## Range of Variables

**jamb**s include: steel, wood, medium density fibreboard (MDF)

**trim**s include: door trims, jamb, baseboards, door casings

**tools and equipment** include: undercut saws, blades, oscillating tools, jamb saws

**hazards** include: cutting hazards, dust, flying debris

## E-16.02 Installs vapour retarders and underlayment cushion

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

Skills		
	Performance Criteria	Evidence of Attainment
E-16.02.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
E-16.02.02P	select vapour retarder and underlayment cushion	vapour retarder and underlayment cushion are selected according to codes and flooring material manufacturers' specifications

E-16.02.03P	finish seams of vapour retarder and underlayment cushion	seams of vapour retarder and underlayment cushion are finished according to manufacturers' specifications
E-16.02.04P	position vapour retarder and underlayment cushion	vapour retarder and underlayment cushion are positioned according to manufacturers' specifications

## Range of Variables

**tools and equipment** include: measuring tape, knives, carpenter square, straightedge, tape

Knowledge		
	Learning Outcomes	Learning Objectives
E-16.02.01L	demonstrate knowledge of vapour retarders and underlayment cushions, their characteristics and applications	identify <b>types</b> and <b>classes of vapour retarders</b> , and describe their characteristics and applications
		identify <b>types</b> and <b>classes of underlayment cushions</b> , and describe their characteristics and applications
E-16.02.02L	demonstrate knowledge of procedures to install vapour retarders and underlayment cushions	identify <b>tools and equipment</b> used to install vapour retarders and underlayment cushions, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install vapour retarders and underlayment cushions
		describe procedures to install vapour retarders and underlayment cushions
		identify practices that reduce material waste
E-16.02.03L	demonstrate knowledge of regulatory requirements and restrictions pertaining to sound transmission	identify codes, standards and regulations pertaining to sound transmission

## Range of Variables

**types of vapour retarders** include: asphalt saturated paper (tar paper), asphalt laminated craft paper, chemical applied, 6 ml poly, epoxy

**classes of vapour retarders** include: 1, 2

**types of underlayment cushions** include: open cell foam, cork, rubber, felt

**classes of underlayment cushions** include: sound transmission class (STC), impact insulation (IIC)

**tools and equipment** include: measuring tape, knives, carpenter square, straightedge, tape

**hazards** include: cutting hazards, dust, flying debris

## E-16.03 Establishes layout

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
E-16.03.01P	select and use tools and equipment	tools and equipment are selected and used according to task
E-16.03.02P	establish reference line	reference line is established using chalk line and measuring tools
E-16.03.03P	establish square of area	square of area is established using 3-4-5 method or swinging arcs method
E-16.03.04P	determine direction of floor joists	direction of floor joists are determined to establish direction of boards
E-16.03.05P	lay out <b>patterns</b>	<b>patterns</b> are laid out according to project requirements
E-16.03.06P	establish start line for flooring materials	start line for flooring materials is established by identifying prominent (longest, straightest) wall
E-16.03.07P	rack <b>flooring materials</b>	<b>flooring materials</b> are racked to avoid use of small pieces by staggering end joints to maintain consistency of appearance
E-16.03.08P	batch <b>flooring materials</b>	<b>flooring materials</b> are batched according to manufacturers' specifications to maintain consistency of appearance

### Range of Variables

**patterns** include: herringbone, medallions, borders

**flooring materials** include: laminate, engineered, parquet, solid wood, vinyl plank

### Knowledge

	Learning Outcomes	Learning Objectives
E-16.03.01L	demonstrate knowledge of <b>flooring materials</b> , their characteristics and applications	identify types of <b>flooring materials</b> , and describe their characteristics and applications
		identify types of <b>patterns</b> used in <b>flooring material</b> installations
E-16.03.02L	demonstrate knowledge of procedures to establish layout for <b>flooring materials</b>	identify tools and equipment used to establish layout for <b>flooring materials</b> , and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to establish layout for <b>flooring materials</b>

	describe procedures to establish layout for <b>flooring materials</b>
	identify <b>mathematical calculations</b> performed to establish layout for <b>flooring materials</b>
	describe procedures to rack and batch <b>flooring materials</b> for appearance and designs
	identify practices that reduce material waste

## Range of Variables

**flooring materials** include: laminate, engineered, parquet, solid wood, vinyl plank

**patterns** include: herringbone, medallions, borders

**hazards** include: cutting hazards, dust, flying debris, material handling

**mathematical calculations** include: basic geometry, 3-4-5 method, surface area and triangulation, swinging arcs

## E-16.04 Fits materials

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
E-16.04.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
E-16.04.02P	cut <b>flooring material</b> around walls and vertical obstructions	<b>flooring material</b> is cut around walls and vertical obstructions using <b>fitting methods</b> to allow for expansion and contraction
E-16.04.03P	select <b>flooring material</b> from multiple boxes	<b>flooring material</b> is selected from multiple boxes to prevent shading and uneven colouring

## Range of Variables

**tools and equipment** include: circular saws, compound mitre saws, table saws, jigsaws, laminate shears, routers, drills, oscillating tool

**flooring materials** include: laminate, engineered, parquet, solid wood, vinyl plank

**fitting methods** include: scribing, direct scribing, reversing board, cutting

## Knowledge

	Learning Outcomes	Learning Objectives
E-16.04.01L	demonstrate knowledge of <b>flooring materials</b> , their characteristics and applications	identify types of <b>flooring materials</b> , and describe their characteristics and applications explain acclimation requirements of <b>flooring materials</b> describe expansion and contraction tolerances describe expansion and contraction characteristics of wood species explain importance of measuring moisture, humidity and temperature
E-16.04.02L	demonstrate knowledge of procedures to fit <b>flooring materials</b>	identify <b>tools and equipment</b> used to fit <b>flooring materials</b> , and describe their procedures for use identify <b>hazards</b> and describe safe work practices to fit <b>flooring materials</b> describe procedures to cut <b>flooring materials</b> describe <b>cutting blade properties</b> describe <b>fitting methods</b> identify materials that can be reconditioned, reused or recycled identify practices that reduce material waste

### Range of Variables

**flooring materials** include: laminate, engineered, parquet, solid wood, vinyl plank

**tools and equipment** include: circular saws, compound mitre saws, table saws, jigsaws, laminate shears, routers, drills, oscillating tool

**cutting blade properties** include: tooth count, kerf and tooth blade material

## E-16.05 Mechanically fastens pre-finished solid and engineered hardwood flooring

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
E-16.05.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
E-16.05.02P	adjust <b>fastening tool</b>	<b>fastening tool</b> is adjusted for placement and depth of fastener according to thickness of material
E-16.05.03P	fasten material	material is fastened using <b>fasteners</b> according to material and sub-floor
E-16.05.04P	space <b>fasteners</b>	<b>fasteners</b> are spaced according to manufacturers' specifications
E-16.05.05P	face (top) nail or apply an elastomeric adhesive in starting row and finishing row	face (top) nail or elastomeric adhesive are applied in starting row and finishing row according to industry standards
E-16.05.06P	install spline or slip tongue	spline or slip tongue is installed to reverse direction of lay
E-16.05.07P	secure spline	spline is secured by mechanically fastening and applying glue to one groove

### Range of Variables

**tools and equipment** include: cleat nailers, staplers, compressors, finishing nail guns, mallets

**fastening tools** include: cleat nailers, staplers, compressors

**fasteners** include: cleats, staples, nails

### Knowledge

	Learning Outcomes	Learning Objectives
E-16.05.01L	demonstrate knowledge of pre-finished solid and engineered hardwood flooring, their characteristics and applications	identify pre-finished solid and engineered hardwood flooring, and describe their characteristics and applications
		identify types of <b>fasteners</b> , and describe their characteristics and applications
E-16.05.02L	demonstrate knowledge of procedures to mechanically fasten pre-finished solid and engineered hardwood flooring	identify <b>tools and equipment</b> used to mechanically fasten pre-finished solid and engineered hardwood flooring, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to mechanically fasten pre-finished solid and engineered hardwood flooring

describe procedures to mechanically fasten pre-finished solid and engineered hardwood flooring

identify practices that reduce material waste

## Range of Variables

**fasteners** include: cleats, staples, nails

**tools and equipment** include: cleat nailers, staplers, compressors, finishing nail guns, mallets

**hazards** include: flying debris, noise, cutting hazards, dust

## E-16.06 Glues down solid and engineered hardwood flooring

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
E-16.06.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
E-16.06.02P	fasten backer board to substrate on starting line	backer board is fastened to substrate on starting line
E-16.06.03P	establish glue line	glue line is established to determine placement of adhesive according to adhesive working time
E-16.06.04P	apply adhesive to substrate from backer board to glue line	adhesive is applied to substrate from backer board to glue line according to manufacturers' recommendations for open time, working time and spread rate
E-16.06.05P	lay starter rows along backer board	starter rows are laid along backer board into adhesive from start line
E-16.06.06P	tighten rows	rows are tightened
E-16.06.07P	stagger end joints	end joints are staggered according to manufacturers' specifications
E-16.06.08P	fit tongue into groove	tongue is fit into groove facing out of backer board to avoid forcing adhesive into gap
E-16.06.09P	clean excess adhesive	excess adhesive is cleaned off surface while adhesive is still wet
E-16.06.10P	roll flooring	flooring is rolled according to manufacturers' specifications

## Range of Variables

**tools and equipment** include: clamps, tape, wall jacks, trowels

Knowledge		
Learning Outcomes	Learning Objectives	
E-16.06.01L	demonstrate knowledge of solid and engineered hardwood flooring, their characteristics and applications	identify solid and engineered hardwood flooring, and describe their characteristics and applications
		identify <b>types of adhesives</b> , and describe their characteristics and applications
E-16.06.02L	demonstrate knowledge of procedures to glue down solid and engineered hardwood flooring	identify <b>tools and equipment</b> used to glue down solid and engineered hardwood flooring, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to glue down solid and engineered hardwood flooring
		determine substrate construction and preparation
		describe procedures to glue down solid and engineered hardwood flooring

## Range of Variables

**types of adhesives** include: wood glues, polyurethane, modified polymers

**tools and equipment** include: clamps, tape, wall jacks, trowels

**hazards** include: flying debris, noise, cutting hazards, dust

## E-16.07 Assembles floating floors

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

Skills		
Performance Criteria	Evidence of Attainment	
E-16.07.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
E-16.07.02P	determine <b>joint type</b>	<b>joint type</b> is determined
E-16.07.03P	apply laminate adhesive to joints where required	laminate adhesive is applied to joints where required according to product manufacturers' specifications
E-16.07.04P	stagger end joints	end joints are staggered according to manufacturers' specifications

E-16.07.05P	position flooring around perimeter with spacers	flooring is positioned around perimeter with spacers according to manufacturers' recommendations to avoid contact with vertical obstructions
E-16.07.06P	lock joints together	joints are locked together according to manufacturers' specifications
E-16.07.07P	maintain integrity of floating floor	integrity of floating floor is maintained by not fastening to <b>items</b>
E-16.07.08P	install expansion joints at break points	expansion joints are installed at break points according to manufacturers' specifications

### Range of Variables

**tools and equipment** include: circular saws, compound mitre saws, table saws, jigsaws, routers, drills, oscillating tool, tapping blocks, pull bars, strap clamps, wall jacks

**joint type** includes: mechanical, glued

**items** include: baseboards, closet door hardware, transitions to floor

Knowledge		
	Learning Outcomes	Learning Objectives
E-16.07.01L	demonstrate knowledge of floating floors, their characteristics and applications	identify <b>types of floating floors</b> , and describe their characteristics and applications
E-16.07.02L	demonstrate knowledge of procedures to assemble floating floors	identify <b>tools and equipment</b> used to assemble floating floors, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to assemble floating floors
		describe procedures to assemble floating floors
		identify materials that can be reconditioned, reused or recycled
		identify practices that reduce material waste

### Range of Variables

**types of floating floors** include: locking (engineered, laminate, vinyl plank), glued together (engineered, laminate)

**tools and equipment** include: circular saws, compound mitre saws, table saws, jigsaws, routers, drills, oscillating tool, tapping blocks, pull bars, strap clamps, wall jacks

**hazards** include: flying debris, noise, cutting hazards, dust

# Task E-17 Installs custom wood and laminate flooring

## Task Descriptor

This task encompasses installing borders and insets and covering stairs using custom wood and laminate flooring products.

### E-17.01 Installs borders, insets and custom fabrications in wood

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

#### Skills

	Performance Criteria	Evidence of Attainment
E-17.01.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
E-17.01.02P	determine design layout and patterns	design layout and patterns are determined according to project requirements
E-17.01.03P	cut medallions, insets and borders	medallions, insets and borders are cut according to project requirements
E-17.01.04P	apply <b>adhesive</b>	<b>adhesive</b> is applied according to product requirements
E-17.01.05P	install spline or slip tongue	spline or slip tongue is installed for borders and mitre joints
E-17.01.06P	fabricate custom trims and transitions	custom trims and transitions are fabricated from field materials
E-17.01.07P	screw and plug plank flooring	plank flooring is screwed and plugged for decorative purposes

## Range of Variables

**tools and equipment** include: jigs, scroll saws, circular saws, compound mitre saws, table saws, jigsaws, routers, drills

**adhesives** include: wood glues, polyurethane, modified polymers

#### Knowledge

	Learning Outcomes	Learning Objectives
E-17.01.01L	demonstrate knowledge of borders, insets and custom fabrications in wood, their characteristics and applications	identify types of borders, insets and custom fabrications in wood, and describe their characteristics and applications
		identify types of <b>adhesives</b> , and describe their characteristics and applications
		describe <b>border design terminology</b>

		identify <b>types of trims</b> , and describe their characteristics and applications
E-17.01.02L	demonstrate knowledge of procedures to install borders, insets and custom fabrications in wood	identify <b>tools and equipment</b> used to install borders, insets and custom fabrications in wood, and describe their procedures for use
		identify hazards and describe safe work practices to install borders, insets and custom fabrications in wood
		describe procedures to install borders, insets and custom fabrications in wood
		identify practices that reduce material waste

## Range of Variables

**adhesives** include: wood glues, polyurethane, modified polymers

**border design terminology** includes: inset, framing, skirting, apron, log cabin, feature strips

**types of trims** include: mouldings, reducers, stair nosing, quarter rounds, wedges

**tools and equipment** include: jigs, scroll saws, circular saws, compound mitre saws, table saws, jigsaws, routers, drills

## E-17.02 Installs wood and laminate flooring on stairs

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
E-17.02.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
E-17.02.02P	determine tread and riser	tread and riser are determined according to jurisdictional regulations
E-17.02.03P	cut existing nosing to achieve square stair	existing nosing is cut to achieve square stair according to manufacturers' specifications
E-17.02.04P	cut material for net fit	material is cut for net fit
E-17.02.05P	fasten flooring	flooring is fastened using <b>fasteners</b> according to substrate and product manufacturers' specifications
E-17.02.06P	cut and finish stair return	stair return is cut and finished using mitre or router

## Range of Variables

**tools and equipment** include: stair jigs, scroll saws, circular saws, compound mitre saws, table saws, jigsaws, routers, drills, oscillating tool, caulking gun

**fasteners** include: glues, screws, nails, staples

Knowledge		
Learning Outcomes	Learning Objectives	
E-17.02.01L	demonstrate knowledge of stairs, their <b>components</b> , characteristics and applications	identify <b>types of stair construction</b> and their <b>components</b> , and describe their characteristics and applications
E-17.02.02L	demonstrate knowledge of procedures to install wood and laminate flooring on stairs	identify <b>tools and equipment</b> used to install wood and laminate flooring on stairs, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to install wood and laminate flooring on stairs
		describe procedures to install wood and laminate flooring on stairs
		identify <b>fasteners</b> used to fasten wood and laminate flooring on stairs
		identify practices that reduce material waste
E-17.02.03L	demonstrate knowledge of regulatory requirements pertaining to stairs	identify codes, standards and regulations pertaining to stairs

## Range of Variables

**types of stair construction** include: boxed, open-ended, double-ended, bullnose, spiral, curved, Hollywood, floating, winder

**components** include: stringers, risers, railings, spindles, nosing, treads

**tools and equipment** include: stair jigs, scroll saws, circular saws, compound mitre saws, table saws, jigsaws, routers, drills, oscillating tool, caulking gun

**hazards** include: falls, cutting hazards, dust, noise

**fasteners** include: glues, screws, nails, staples

# Task E-18 Services pre-finished solid, engineered, laminate and floating vinyl plank flooring

## Task Descriptor

This task includes repairing and replacing sections of pre-finished solid, engineered, laminate and floating vinyl plank flooring. In some jurisdictions, floorcovering installers may also refinish wood floors.

### E-18.01 Repairs boards

<b>NL</b>	<b>NS</b>	<b>PE</b>	<b>NB</b>	<b>QC</b>	<b>ON</b>	<b>MB</b>	<b>SK</b>	<b>AB</b>	<b>BC</b>	<b>NT</b>	<b>YT</b>	<b>NU</b>
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
E-18.01.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
E-18.01.02P	use thermal plastic repair kits for pre-finished wood	thermal plastic repair kits for pre-finished wood are used according to manufacturers' specifications
E-18.01.03P	use laminate repair kit	laminate repair kit is used according to manufacturers' specifications
E-18.01.04P	fill holes	holes are filled with putties and crayons
E-18.01.05P	re-fasten loose boards	loose boards are re-fastened using <b>refastening methods</b>
E-18.01.06P	repair hollow spots	hollow spots are repaired using <b>refastening methods</b>

### Range of Variables

**tools and equipment** include: scroll saws, circular saws, compound mitre saws, table saws, jigsaws, routers, drills, oscillating tools, hand tools, adhesive injectors

**refastening methods** include: gluing, mechanically fastening, injecting adhesive

### Knowledge

	Learning Outcomes	Learning Objectives
E-18.01.01L	demonstrate knowledge of <b>flooring and repair materials</b> , their characteristics and applications	identify <b>flooring and repair materials</b> , and describe their characteristics and applications  identify types of <b>fasteners</b> , and describe their characteristics and applications
E-18.01.02L	demonstrate knowledge of <b>repair kits</b> , their characteristics, applications and limitations	identify types of <b>repair kits</b> , and describe their characteristics, applications and limitations

E-18.01.03L	demonstrate knowledge of procedures to repair boards	identify <b>tools and equipment</b> used to repair boards, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to repair boards
		describe procedures to repair boards
		explain repair limitations
		identify practices that reduce material waste

## Range of Variables

**flooring and repair materials** include: wax crayons, putties, stains, mechanical fasteners, adhesives  
**fasteners** include: brads, finish nails

**repair kits** include: thermal plastic, laminate, graining, burn-in, injection

**tools and equipment** include: scroll saws, circular saws, compound mitre saws, table saws, jigsaws, routers, drills, oscillating tools, hand tools, adhesive injectors

**hazards** include: dust, cutting hazards, dangerous fumes, burns, noise, splinters

## E-18.02 Replaces boards and accessories

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

### Skills

	Performance Criteria	Evidence of Attainment
E-18.02.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
E-18.02.02P	protect existing finished surfaces	existing finished surfaces are protected using <b>materials</b>
E-18.02.03P	determine thickness of wood board to be replaced and set saw	thickness of wood board to be replaced is determined and saw is set according to depth
E-18.02.04P	remove board	board is removed without damaging adjacent boards
E-18.02.05P	remove and replace accessories	accessories are removed and replaced without damaging surrounding area
E-18.02.06P	remove existing <b>click flooring</b> , replace with new and reinstall	existing <b>click flooring</b> is removed up to damaged area, replaced with new and reinstalled
E-18.02.07P	remove fasteners	fasteners are removed to prepare for new board

E-18.02.08P	apply adhesives	adhesives are applied according to flooring material needs, environmental conditions and manufacturers' specifications
E-18.02.09P	fit and install new board and apply weight	new board is fit and installed, and weight is applied to minimize raised edges of adjacent boards

### Range of Variables

**tools and equipment** include: scroll saws, circular saws, compound mitre saws, table saws, jigsaws, routers, drills, oscillating tool, hand tools, adhesive injector, specialty tools for laminate

**materials** include: masking tape, cardboard, plastic

**click flooring** includes: laminate, vinyl plank

Knowledge		
	Learning Outcomes	Learning Objectives
E-18.02.01L	demonstrate knowledge of procedures to replace boards and accessories	identify <b>tools and equipment</b> used to replace boards and accessories, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to replace boards and accessories
		describe procedures to remove and replace boards and accessories
		identify practices that reduce material waste

### Range of Variables

**tools and equipment** include: scroll saws, circular saws, compound mitre saws, table saws, jigsaws, routers, drills, oscillating tool, hand tools, adhesive injector, specialty tools for laminate

**hazards** include: dust, cutting hazards, dangerous fumes, burns, noise, splinters

## E-18.03 Refinishes hardwood flooring

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
NV	yes	NV	NV	NV	yes	NV	ND	yes	yes	NV	NV	NV

Skills		
	Performance Criteria	Evidence of Attainment
E-18.03.01P	select and use <b>tools and equipment</b>	<b>tools and equipment</b> are selected and used according to task
E-18.03.02P	sand and screen surface	surface is sanded and screened to remove existing finish

E-18.03.03P	apply fillers	fillers are applied according to existing flooring
E-18.03.04P	remove dust	dust is removed by vacuuming and tacking floor
E-18.03.05P	apply stain	stain is applied according to manufacturers' specifications
E-18.03.06P	apply finish	finish is applied according to manufacturers' specifications

## Range of Variables

**tools and equipment** include: edgers, drum sanders, vacuums, random orbital sanders, buffers, planetary sanders

Knowledge		
	Learning Outcomes	Learning Objectives
E-18.03.01L	demonstrate knowledge of hardwood flooring, their characteristics and applications	identify types of hardwood flooring, and describe their characteristics and applications
E-18.03.02L	demonstrate knowledge of <b>refinishing products</b> , their characteristics and applications	identify <b>refinishing products</b> , and describe their characteristics and applications
E-18.03.03L	demonstrate knowledge of procedures to refinish hardwood flooring	identify <b>tools and equipment</b> used to refinish hardwood flooring, and describe their procedures for use
		identify <b>hazards</b> and describe safe work practices to refinish hardwood flooring
		describe procedures and techniques to refinish hardwood flooring
		identify practices that reduce material waste
E-18.03.04L	demonstrate knowledge of regulatory requirements pertaining to refinishing hardwood floors	identify standards and regulations pertaining to refinishing hardwood floors

## Range of Variables

**refinishing products** include: fillers, stains, finishes

**tools and equipment** include: edgers, drum sanders, vacuums, random orbital sanders, buffers, planetary sanders

**hazards** include: electrocution, dust, noise, dangerous fumes, fire, body strains and pulls, repetitive movements

# Appendix A

## Acronyms

AMPP	Association for Materials Protection and Performance
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
BEES	Building for Environmental and Economic Stability
CaGBC	Canadian Green Building Council
CARE	Carpet America Recovery Effort
CRI	Carpet and Rug Institute
CSA	Canadian Standards Association
FLRA	field level risk assessment
IIC	impact insulation class
ICI	industrial/commercial/institutional
ISO	International Organization for Standardization
LEED	Leadership in Energy and Environmental Design
LVT	luxury vinyl tile
MDF	medium density fibreboard
OH&S	Occupational Health and Safety
PPE	personal protective equipment
PVC	polyvinyl chloride
RH	relative humidity
SDS	safety data sheets
SDT	static dissipative tile
STC	sound transmission class
T&M	time and materials
TDG	Transport of Dangerous Goods
TSP	trisodium phosphate
UV	ultraviolet
VCT	vinyl composite tile
WHMIS	Workplace Hazardous Materials Information System

# Appendix B

## Tools and Equipment / Outils et équipement

### Personal Protective Equipment (PPE) and Safety Equipment / Équipement de protection individuelle (EPI) et de sécurité

approved respirator and filters

CSA approved work boots

cut-resistant work gloves

dust mask

face shield

fall arrest equipment

hard hat

hearing protection

high visibility clothing

knee pads

safety glasses and side shields

ventilators

appareils de protection respiratoire et filtres homologués

bottes de sécurité approuvées par la CSA

gants de travail résistants aux coupures

masques antipoussières

écrans faciaux

dispositifs antichutes

casques de sécurité

protection de l'ouïe

gilets de haute visibilité

genouillères

lunettes de protection et écrans latéraux

ventilateurs

### Hand Tools / Outils à main

adjustable wrench

awl

brooms (push, corner)

caulking gun

chalk line

chisels (wood, cold)

claw hammer

door pin tool

dryline

dust brush

files

finger clamps

hacksaw

hand scraper

hammer stapler

hand stapler

knives (utility, notch blade, linoleum, breakaway blade)

level

measuring tapes (imperial, metric)

mitre box

moulding lifter

nail set

patching trowel

pencils/markers

pliers

plumb bob

profile base cutter

putty knife

clés à molette

alènes

balais (balais-brosses, balais de coin)

pistolets à calfeutrer

cordeaux à craie

ciseaux (à bois, à froid)

marteaux à panne fendue

outils de fixation de porte

cordeaux

brosses

limes

dispositifs de serrage à doigts

scies à métaux

grattoirs manuels

marteaux-agrafeurs

agrafeuses à main

couteaux (universels, à lame crantée, à linoléum, à lame détachable)

niveaux

rubans à mesurer (système impérial, système métrique)

boîtes à onglets

pieds de biche

jeux de clous

truelles de colmatage

crayons/marqueurs

pinces

fils à plomb

outils de coupe profilés pour plinthes

couteaux à mastiquer

replacement blades (utility, slotted, hooked, saw)	lames de rechange (universelles, à quatre faces, à crochet, pour scie)
scale rulers	règles graduées
screwdrivers	tournevis
sharpening stone	pierres à aiguiser
squares (carpenter, speed)	équerres (de charpentier, de charpente)
stand-up scraper	grattoirs debout
straightedge	règles de vérification
tee square	équerres en T
aviation snips	cisailles de type aviation
tool box	boîtes à outils
tool pouch and belt	trousses et ceintures porte-outils
top set base gouging tool	gougeurs de moulures à gorge (bouveteurs)
white rubber mallet	maillets en caoutchouc blanc

## **Power Tools and Equipment / Outils et équipement mécaniques**

air compressors	compresseurs d'air
air sled	traîneaux à air
angle grinder	meuleuses angulaires
circular saw	scies circulaires
cove base adhesive gun	pistolets applicateurs d'adhésifs pour gorge
dollies and hand trucks	chariots et diables
drum sander	ponceuses à tambours
edger	coupe-bordures
electric tacker	brocheuses-cloueuses électriques
extension cords	rallonges électriques
floor fan	ventilateurs de plancher
floor polisher	circueuses
generator	génératrices
hammer drill	marteaux perforateurs
heat gun	pistolets thermiques
hot melt glue gun	thermofusibles
jamb saw	scies à montants
jigsaw	scies sauteuses
laser line	raies laser
lights	lampes
mitre saw	scies à onglets
moisture meter	humidimètres
oscillating tool	outils oscillants
pneumatic nailer	cloueuses pneumatiques
pneumatic tacker	brocheuses-cloueuses pneumatiques
portable electric circular saw	scies circulaires portatives électriques
portable table saw	scies circulaires portatives à table
powder actuated tools	fixateurs à cartouches
power drill and mixing paddle	perceuses mécaniques et palettes à mélanger
router and specialized router bits	toupies et mèches spécialisées pour toupies
sanders	ponceuses
seaming irons	fers de thermocollage
shot blaster	grenailleuses
soldering guns	pistolets de brasage tendre
spray machines	vaporisateurs
stripping machines	grattoirs à plancher motorisés
toe-kick saw	scies à plinthe
vacuum cleaners	aspirateurs
welding guns	pistolets à souder

## **Specialized Carpet Tools and Equipment / Outils et équipement spécialisés pour les tapis**

adhesive trowels	truelles pour adhésifs
binding machine and stapler	machines à border et agrafeuses
brad set	jeux de clous de vitrier
carpet base cutter	outils de coupe de base de tapis
carpet cart	chariots à tapis
carpet comb	peignes à tapis
carpet clamp	pincés à tapis
carpet crane	grues pour les tapis
carpet restretcher (crab)	retendeurs de tapis (treuil à patins)
carpet seam roller	roulettes à joints
carpet shears (napping shears)	tondeuses à tapis (ciseaux à tapis)
carpet spreader	élargisseurs de tapis
carpet tractor (star-wheeled, smooth-wheeled)	tracteurs à tapis (à roue dentelée, à roue lisse)
carpet tucker	plisseurs de tapis
conductive seam weight	poids de couture conducteurs
cookie cutter	emporte-pièces
cushion-back cutter	outils de coupe du revers de mousse
double cutter	outils de coupe à deux couteaux
double headed crab	treuils à patins à deux bouts
driving bar	barres de commande
hot melt edge sealer tip	fers d'étanchéité thermofusible
induction heating irons	fers chauffant à induction
knee kicker	coups de genoux
knives (slotted blade, pad)	couteaux (à lame rainurée, à sous-tapis)
latex squeeze bottle	bouteilles en latex souple
loop pile cutter	couteaux à velours bouclé
moisture test kit	trousse d'essai d'humidité
power stretcher	tendeurs à levier
row separator	diviseurs de rangées
seam sealer bottle	flacons de scellant à joints
seam squeezer	presse-joints
seaming board	planches de couture
sewing needles	aiguilles à coudre
sewing palm and thimble	paumelles de couture et dés à coudre
sewing thread	fils à coudre
stair stretcher	tendeurs pour marches
stair tool	outils pour marches
stand-up roller (35 lb. – 75 lb.)	rouleaux debout (35 à 75 lb)
staple remover	arrache-agrafes
tack hammer	marteaux de tapissier
tack strip cutter	outils de coupe de plomb à picot
tufting kit	trousse de touffetage
wall trimmers (universal, conventional/stretch-in)	coupe-tapis muraux (multi-usages, conventionnels)

## **Specialized Resilient Flooring Tools and Equipment / Outils et équipement spécialisés pour les revêtements de sol résilients**

bar scribe	compas à barre
bricks (paver)	briques (carreaux de pavé)
corner scribe	traceurs de coins

die cutters  
divider  
edge trimmer  
extension hand roller (laminated)  
hand roller (seam/coving roller)  
heat seam welding system (hand groover, heat welding gun, electric groover, nozzles for welder, trim plate, skiving tools, spatula knives, hobby knives, trimmers, cleaning tool)

knives (notch blade, utility, linoleum)

linoleum dolly (sheet vinyl cradle)  
mixing drill  
mixing paddle  
moisture test kit  
paint brushes  
paint roller and tray  
pin vise  
power drill  
propane torch/heat gun  
reverse scribe  
sand bags  
spreader or notched steel trowel

stand up roller (75 lb. – 150 lb.)  
straightedge  
tee square (6 ft. or 2 m)  
tile cutter  
under or recess scribe  
universal scribe  
wall trimmer

découpeurs à l'emporte-pièce  
compas à pointe sèche  
couteaux tranchants  
rouleaux à bras d'extension (stratifié)  
rouleaux à main (joint/gorge)  
systèmes de thermosoudage des joints (rainureuses manuelles, pistolets de thermosoudage, rainureuses électriques, buses de machine à souder, plaques pour ébarbage, outils de rasage des soudures, couteaux spatulés, couteaux à tout faire, outils à tailler, outils de nettoyage)  
couteaux (à lame crantée, universels, à linoléum)  
diables à linoléum  
perceuses à mélanger  
palettes à mélanger  
trousse d'essai d'humidité  
pinceaux  
rouleaux et bacs à peinture  
étaux à manche creux  
perceuses mécaniques  
chalumeaux à propane/pistolets à air chaud  
pointes à tracer inversées  
sacs de sable  
applicateurs d'adhésif ou truelles crénelées en acier  
rouleaux debout (de 75 lb à 150 lb)  
règles de vérification  
équerres en T (6 pi ou 2 m)  
coupeurs de carreaux  
compas à traçage en retrait  
compas universels  
taille-bordures

## **Specialized Wood and Laminate Flooring and Underlayment Tools and Equipment / Outils et équipement spécialisés pour les revêtements de sol en bois, et en stratifié et pour les sous-couches**

angle clamps  
block plane  
fastening detectors  
flooring jacks  
glue scrapers  
glue trowels  
hardwood mallets  
laminated clamps  
laminated shears (guillotine)  
laminated straps  
manual hardwood nailers  
moisture meters  
pneumatic hardwood nailers  
pull bars  
shears  
spacers

serre-joints d'angle  
rabots à main  
détecteurs de fixation  
crics à plancher  
racloirs à colle  
truelles à colle  
maillets à bois franc  
serre-joints à stratifié  
cisailles à stratifié (guillotine)  
sangles à stratifié  
marteaux cloueurs manuels à bois franc  
humidimètres  
marteaux cloueurs pneumatiques à bois franc  
pieds de biche  
cisailles  
entretoises

tapping blocks  
thermo-hygrometer  
toe-kick saws  
underlayment staplers  
staplers

blocs de taraudage  
thermomètres-hygromètres  
scies à plinthe  
agrafeuses pour sous-couche  
agrafeuses

## **Specialized Turf Tools and Equipment / Outils et équipement spécialisés pour le gazon artificiel**

breakaway blade knife  
circle cutter  
forklift  
glue trowels  
loop pile cutter  
motorized fill spreader  
motorized landscape roller  
power sweeper  
rakes  
shovels  
turf line cutter  
turf roller  
turf sewing machine  
turf clamps  
turf shears (electric, pneumatic)

couteaux à lame détachable  
coupe-cercles  
chariots élévateur s  
truelles à colle  
outils de coupe pour velours bouclé  
étendeurs motorisés pour granules  
rouleaux mécaniques à gazon  
balayeuses mécaniques  
râteaux  
pelles  
coupe-lignes  
rouleaux à gazon  
machines à coudre pour gazon artificiel  
pinces à gazon  
rasoirs à gazon artificiel (électriques et pneumatiques)

# Appendix C

## Glossary / Glossaire

<b>acclimation</b>	allowing the flooring products to pre-adjust to the environmental conditions in which they are being installed	<b>acclimatation</b>	laisser le temps aux produits de revêtements souples de s'ajuster à l'environnement dans lequel on les installe
<b>adhesive</b>	material used as a bonding agent	<b>adhésif</b>	produit utilisé comme liant
<b>area rug</b>	carpet not fastened to the floor and usually not covering the entire floor	<b>carpette</b>	tapis non fixé au plancher qui ne couvre habituellement pas totalement ce dernier
<b>artificial turf</b>	manufactured like carpet but made of vinyl used to mimic natural grass	<b>gazon artificiel</b>	fabriqué de la même façon qu'un tapis à partir de vinyle; utilisé pour imiter le gazon naturel
<b>ashlar</b>	term used to describe the layout of floor tiles or plywood panels in relation to every other row such as half-staggered or brick pattern design	<b>Pierre de taille</b>	terme utilisé pour décrire la disposition des carreaux ou des panneaux de contreplaqué par rapport à chaque autre rangée comme le style de motif semi-décalé ou de brique
<b>asphalt emulsion</b>	fast setting water-based adhesive, containing solutions of asphalt and latex (rubber)	<b>émulsion de bitume</b>	adhésif à base d'eau à prise rapide, contenant des solutions de bitume et de latex (caoutchouc)

<b>backing</b>	material that forms the back of the carpet, regardless of type of construction: a) primary back- in tufted carpets, the material to which surface yarns are attached; made of jute, Kraft cord, cotton, woven or non-woven synthetics b) secondary back- also called double backing; any material (jute, polypropylene, woven or non-woven synthetic scrim, foam or cushion) laminated to the primary back	<b>endos</b>	matériau constituant l'endos d'un tapis, peu importe le type de fabrication du tapis : a) premier endos : dans un tapis touffeté, support dans lequel les touffes sont ancrées; peut être en jute, en fil câblé Kraft, en coton ou en fibres synthétiques tissées ou non b) deuxième endos : aussi appelé double endos; tout matériau (jute, polypropylène, canevas synthétique tissé ou non tissé, mousse ou thibaude) contrecollé au premier endos d'un tapis
<b>base</b>	flat or shaped, extruded or moulded, vinyl, rubber or combination material attached to the bottom of vertical surfaces such as walls, counter bases, etc.	<b>plinthe</b>	bande plate ou profilée, formée par extrusion ou par moulage, faite de caoutchouc, de vinyle ou de matériaux combinés, que l'on place, par exemple, au bas des surfaces verticales comme les murs, les armoires, etc.
<b>batch</b>	to select flooring material from multiple boxes to prevent shading and uneven colouring	<b>mélanger les lots</b>	sélectionner les matériaux de revêtement souple dans plusieurs boîtes à la fois pour prévenir le miroitement
<b>below-grade sub-floor</b>	sub-floor that is partially or completely below the surrounding ground level in direct contact either with the ground or with fill that is in direct contact with the ground	<b>sous-plancher sous le niveau du sol</b>	se dit d'un sous-plancher qui se trouve complètement ou partiellement sous le niveau du sol environnant et qui se trouve soit en contact direct avec le sol ou avec du remplissage, qui eux se trouvent en contact avec le sol
<b>binding</b>	strip (usually cloth) sewn over the edge of a piece of carpet for protection from wear and unravelling	<b>galonnage</b>	bande (généralement en tissu) cousue sur le bord d'un tapis pour protéger de l'usure et de l'effilochage

<b>buckles</b>	humps in carpet due to improper stretching, lack of adhesive and delamination	<b>bombement</b>	bosses apparaissant dans le tapis, causées par un mauvais étirement, un manque de colle et la délamination
<b>burling</b>	removing and replacing damaged tufts using a curved needle in a woven carpet	<b>épincetage</b>	enlever et remplacer les touffes endommagées à l'aide d'une aiguille courbe dans un tapis tissé
<b>capping</b>	material used when flash coving tile and/or sheet goods as an edge finish	<b>moulure de finition</b>	matériau utilisé lorsque le carreau de relevé de plinthe ou les revêtements en feuilles sont utilisés pour le fini des extrémités
<b>carpet</b>	general term for a fabric or soft floorcovering fastened to the entire floor from wall to wall	<b>tapis</b>	terme générique désignant un revêtement textile ou souple qui recouvre complètement le plancher mur à mur
<b>conductive floorcovering</b>	electrical conductive resilient floorcovering materials specially formulated to prevent the build-up of static charges	<b>revêtement souple conducteur</b>	revêtement souple conducteur spécialement conçu pour dissiper l'électricité statique
<b>construction</b>	term applies to the method by which a floorcovering is manufactured	<b>fabrication</b>	terme décrivant la méthode dont le revêtement souple est fabriqué
<b>contaminant</b>	substance that inhibits the bond between the substrate and the floorcovering material and/or discolours the floorcovering material	<b>contaminant</b>	substance qui bloque le lien entre le support et le revêtement souple ou qui décolore le revêtement souple
<b>conventional method</b>	stretch in installation of carpet over cushion and tackless strip	<b>méthode traditionnelle</b>	tension du tapis sur une thibaude et une bande à griffes
<b>cork tile</b>	cork granules of different sizes and densities thoroughly and uniformly bonded with resin binders; made in sheet and tile form	<b>carreau de liège</b>	matériau de revêtement constitué de granules de liège, de grosseur et de masse volumique variées qui sont liées de façon homogène et uniforme avec des résines; fabriqué en feuille ou en carreau

<b>coving</b>	also referred to as flash coving or pre-fabricated coving; floorcovering materials installed over a cove backing-up the wall to a specific height	<b>moulure à gorge</b>	aussi appelée relevé de plinthe ou moulure à gorge préfabriquée; matériaux de revêtements souples posés sur une gorge qui remplit un mur jusqu'à une hauteur spécifique
<b>cross seams</b>	the joining together of the ends of two pieces of floorcovering into a continuous length of floorcovering	<b>joints transversaux</b>	joint servant à réunir deux extrémités de revêtement ensemble pour former une seule section unie
<b>cushion</b>	separate material placed under a carpet to provide resiliency support and noise absorption (also carpet lining, padding and underlay)	<b>sous-tapis</b>	matériau distinct installé sous un tapis et destiné à servir de support souple et d'isolation acoustique (aussi appelé thibaude, garnissage et sous-couche)
<b>cut pile</b>	carpet pile that has cut ends as the face	<b>velours coupé</b>	velours de tapis dont le bout coupé est exposé
<b>density</b>	amount of pile in a given area of carpet reflective of the closeness of the pile yarns and expressed as kilotex per cm <sup>2</sup> which reflects the percent of the surface covered with fibres	<b>densité</b>	quantité de velours que l'on retrouve dans une superficie de tapis donnée, en fonction de la proximité des fils de velours et qui est exprimée en kilotex par cm <sup>2</sup> qui représente le pourcentage de la surface recouverte de fibres
<b>double cut</b>	also called full-lapped; a method making a seam in which both sheets are cut through at the same time	<b>taille double</b>	aussi appelée chevauchement complet; méthode de création d'un joint dans laquelle les deux feuilles sont coupées en même temps
<b>dye lot</b>	amount of floorcovering material that is produced from a single batch of dye; each batch of dye has a control number attached to it to assist in sequencing	<b>lot de teinture</b>	quantité de revêtement souple qui est produit dans un seul lot de teinture; un numéro de contrôle est attaché à chaque lot de teinture pour faciliter la séquence
<b>edging (reducers, butt strips)</b>	finished protective edge material used as a stop for resilient floorcovering	<b>bordure (bandes de transition, bandes d'aboutements)</b>	matériau d'embout fini qui sert d'arrêt aux revêtements résilients

<b>feature strips</b>	contrasting strips or shapes of flooring material used as borders or to delineate pattern for decorative or functional purpose (as in gymnasium or multi-purpose game situations)	<b>bande contrastante</b>	bande de matériau contrastant avec le reste du revêtement et placée en bordure ou autour d'un motif pour obtenir un effet décoratif ou fonctionnel (par exemple, dans un gymnase ou une salle de jeu)
<b>field</b>	area of floorcovering that is contained within the limits of the borders or walls	<b>champ</b>	section de revêtement contenue dans les limites des bordures ou des murs
<b>fillet strips/cove strips</b>	structural backing for flash coving	<b>listels/bandes de plinthe</b>	endos structural pour les relevés de plinthe
<b>flocked</b>	method of manufacturing carpet using electrostatic charge and adhesive	<b>floqué</b>	méthode de fabrication de tapis utilisant une charge électrostatique et des adhésifs
<b>gauge</b>	specified thickness and density of a floorcovering product	<b>calibre</b>	épaisseur et densité précise d'un produit de revêtement
<b>grade</b>	relationship of a sub-floor to exterior ground levels	<b>niveau</b>	rapport entre le sous-plancher et le niveau du sol à l'extérieur
<b>heterogeneous</b>	a sheet vinyl flooring constructed of multiple layers serving different purposes	<b>hétérogène</b>	se dit d'une feuille de revêtement souple en vinyle composée de plusieurs couches ayant différentes finalités
<b>homogeneous</b>	a sheet vinyl flooring constructed of a single layer	<b>homogène</b>	se dit d'une feuille de revêtement souple en vinyle composée d'une seule couche
<b>hot melt seaming</b>	carpet seaming method	<b>assemblage par bande adhésive thermofusible</b>	méthode d'assemblage du tapis
<b>induction heating iron</b>	electric magnetic iron that seams carpet from the top using specialty tapes	<b>fer chauffant à induction</b>	fer chauffant par induction électromagnétique servant à assembler le tapis à partir du dessus en utilisant des rubans spécialisés
<b>inset (also insert)</b>	custom or standard shape in contrasting colour or pattern, set into the field of resilient floorcovering for special purposes or effects	<b>incrustation</b>	pièce de revêtement de couleur ou de motif contrastant, préfabriquée ou découpée sur commande, et posée dans le champ du revêtement résilient pour créer un effet décoratif ou fonctionnel

<b>kerf</b>	cut or incision made by a saw in a piece of wood	<b>trait de scie</b>	passage que fait la scie en coupant une pièce de bois
<b>lap/tube material</b>	folding material back along the width (lap) or along the length (tube)	<b>réenrouler les matériaux</b>	enroulement du matériau sur la longueur ou sur la largeur
<b>linoleum</b>	thoroughly blended composition of linseed oil, natural and synthetic resins, granulated cork, wood flour, mineral and chemical pigments calendered to a backing of jute canvas or polypropylene	<b>linoléum</b>	mélange homogène d'huile de lin, de résines naturelles et synthétiques, de granulés de liège, de farine de bois, de pigments minéraux et synthétiques laminés sur un endos de jute ou de polypropylène
<b>loop pile carpet</b>	manufactured carpet with continuous filament loops creating a pebbly, homespun appearance made from wools and synthetics	<b>tapis à velours bouclé</b>	tapis fait en manufacture avec du fil vrillé donnant l'apparence « fait à la main », fabriqué avec de la laine et des fibres synthétiques
<b>mitre</b>	method where two pieces of floorcovering are joined together at an angle (usually 45 degrees)	<b>onglet</b>	méthode d'assemblage de deux pièces de revêtements souples à un angle (généralement de 45 degrés)
<b>needle-punched carpet</b>	method of constructing a carpet without backing	<b>tapis aiguilleté</b>	méthode de fabrication d'un tapis sans endos
<b>nosing</b>	finished protective metal, vinyl or rubber, formed edge material used for stair tread covering	<b>nez de marche</b>	profilé en métal, en vinyle ou en caoutchouc, destiné à protéger le devant des marches finies avec un revêtement
<b>on-grade sub-floor</b>	sub-floor that is in direct contact with the ground or with less than 450 mm (18 in.) of air space under it, or a suspended sub-floor in contact at some point with fill	<b>sous-plancher au niveau du sol</b>	sous-plancher en contact direct avec le sol ou au-dessus d'un vide d'air de moins de 450 mm (18 po) ou un sous-plancher suspendu en contact quelconque avec le remplissage
<b>open time</b>	the amount of time recommended for the applied adhesive to set before it is covered with the flooring; open time is affected by temperature, humidity, and porosity of the substrate	<b>temps d'ouverture</b>	durée recommandée pour que l'adhésif appliqué prenne avant d'être recouvert par le revêtement souple; le temps d'ouverture est influencé par la température, l'humidité et la porosité du support

<b>pattern matching</b>	procedure for ensuring correct alignment of patterned materials	<b>agencement des motifs</b>	méthode assurant un bon appariement des revêtements souples à motifs
<b>pattern repeat</b>	distance from a point in a pattern figure to the same point where it occurs again	<b>répétition du motif</b>	distance entre un point et la prochaine occurrence du même point dans un motif
<b>pile</b>	upright ends of yarn, whether cut or looped, that form the wearing surface of carpets or rugs	<b>velours</b>	partie d'un tapis constitué de fils ou de fibres textiles coupés ou bouclés fixés debout à l'endos d'une carpeite et d'un tapis et servant de couche d'usage
<b>pile direction (pile lay)</b>	primary and secondary sweep or direction of the carpet (see shading)	<b>orientation du velours</b>	reflet ou orientation primaires et secondaires du tapis (voir miroitement)
<b>pole buckle/stove bar/hanger mark (linoleum)</b>	deformation created by hanging linoleum during its manufacture	<b>marque de bombement/pli de séchage/marque de suspension (linoléum)</b>	déformation créée par le linoléum en suspension lors de sa fabrication
<b>polyvinyl chloride (PVC)</b>	a homogeneous or heterogeneous resilient good; comes in roll form and sometimes cut into tiles; also may be a backing for carpets	<b>polychlorure de vinyle (PVC)</b>	matériau résilient homogène ou hétérogène proposée sous forme de rouleaux et parfois en carreaux; peut également servir d'endos pour les tapis
<b>porous/porosity</b>	a substrate, normally wood or concrete that is able to absorb a liquid. Nonporous is incapable of absorbing a liquid	<b>poreux/porosité</b>	support, normalement du bois ou du béton, capable d'absorber un liquide; les supports non poreux ne peuvent pas absorber les liquides
<b>pyramid method</b>	process of laying tile to maintain a square installation	<b>méthode pyramidale</b>	méthode de pose des carreaux pour obtenir une installation à angles droits
<b>rack</b>	laying out flooring materials prior to installation to ensure variations in colour, lengths and proper end joint spacing	<b>disposer temporairement</b>	poser les matériaux de revêtement souple avant l'installation pour vérifier les variations de couleurs, de longueurs et l'espacement approprié des joints aux extrémités
<b>reducers (see edging)</b>	materials used to transition floorcovering to a different level	<b>bande de transition (voir bordure)</b>	matériau permettant la transition du revêtement souple à un autre niveau

<b>rubber</b>	a homogeneous or heterogeneous resilient good; comes in roll form and sometimes cut into tiles in varying thicknesses	<b>caoutchouc</b>	matériau résilient homogène ou hétérogène proposée sous forme de rouleaux et parfois en carreaux de diverses épaisseurs
<b>runner</b>	continuous material used as a surface covering in traffic lanes and stairs leaving a margin on each side	<b>passage</b>	matériau continu utilisé comme revêtement de surface dans les chemins et les escaliers et laissant une marge de chaque côté
<b>seam sealing</b>	procedure for sealing seams using a special applicator and sealants	<b>scellement de joints</b>	procédé pour sceller des joints à l'aide d'un applicateur spécial et de scellants
<b>seam welding</b>	process of fusing or filling seams in certain types of flooring	<b>soudage de joints</b>	procédé de fusion ou de remplissage de joints propre à certains types de revêtements
<b>secondary backing</b>	woven or non-woven fabric attached to the back of carpets	<b>deuxième endos</b>	matériau tissé ou non tissé fixé au premier endos des tapis
<b>serging</b>	also known as over sewing, this is a method of finishing the cut edges of some carpets; it is customary to serge the side and bind the end	<b>point de serge</b>	aussi connu par le nom de couture à points hollandais, il s'agit d'une méthode de finition des bordures coupées de certains tapis; il est fréquent d'utiliser le point de serge sur le côté et de galonner l'extrémité
<b>shading</b>	a) an apparent change of colour in carpet pile caused as light is reflected in different ways when pile fibres are bent; not a defect, but a characteristic b) variance in colours between two or more panels of resilient flooring cut from the roll	<b>miroitement</b>	a) changement apparent de la couleur du velours d'un tapis causé par le reflet de la lumière sur les fibres inclinées; il ne s'agit pas d'un défaut de fabrication mais d'une caractéristique b) variation de couleurs entre deux ou plusieurs panneaux de revêtement résilient coupés d'un rouleau
<b>slip tongue</b>	in hardwood flooring, is a small piece of hardwood that is inserted into the groove portion when reversing direction of the tongue and groove system	<b>fausse languette</b>	petite languette de bois servant à inverser la direction des planches de bois franc en l'insérant dans la rainure

<b>static dissipative tile (SDT)</b>	flooring installation system that allows for controlled dissipation of static electric charges; used for computer and data rooms	<b>carreau antistatique</b>	système d'installation de revêtement souple permettant une dissipation contrôlée des charges électrostatiques; utilisé dans les locaux informatiques et les locaux de données
<b>stringer/skirting material</b>	continuous strip material used on the wall sides of the stairs	<b>matériau de limon/bordure</b>	bande de matériau continue utilisée du côté du mur des escaliers
<b>sub-floor</b>	for structural purposes and is the substrate or supporting layer for the underlayment	<b>sous-plancher</b>	servant à des fins structurales, il est le support ou la couche de support de la sous-couche
<b>substrate</b>	smooth surface prepared to accept the floorcovering such as concrete, underlayment and existing floorcovering	<b>support</b>	surface lisse préparée pour recevoir le revêtement souple comme du béton, une sous-couche ou des revêtements souples existants
<b>tackless strip</b>	used under carpet along walls with pins angled towards the wall; carpet is stretched onto the pins to provide a smooth tight finish	<b>bande à griffes (bordure de précision)</b>	utilisée sous le tapis le long des murs, avec des griffes orientées vers le mur; le tapis est tendu sur les griffes pour lui procurer un fini lisse et serré
<b>trace cutting</b>	procedure for cutting seams where a trimmed side overlaps an untrimmed side and the trace of the trimmed side is followed	<b>découpage à la trace</b>	méthode de découpage des joints; le côté découpé chevauche le côté non découpé et l'on suit la trace du côté découpé
<b>tread material</b>	floorcovering materials used for covering stair treads	<b>revêtement de marche</b>	revêtements souples utilisés pour recouvrir les marches
<b>trim</b>	material used to finish and protect edge and to provide transition between different floorcovering materials	<b>moulure</b>	matériau servant à finir et à protéger la bordure et à fournir la transition entre les différents matériaux de revêtements souples
<b>tufted carpet</b>	type of carpet construction	<b>tapis touffeté</b>	type de fabrication de tapis
<b>tufting</b>	removing and replacing damaged tufts in a tufted carpet	<b>touffetage</b>	enlèvement et remplacement des touffes endommagées d'un tapis touffeté
<b>tufts</b>	cut or uncut loops forming the face of tufted or woven carpet	<b>touffes</b>	fils coupés ou bouclés constituant le velours d'un tapis tissé ou touffeté

<b>underlayment</b>	<p>a) approved composition board or plywood of at least 6 mm (1/4 in.) thick, properly secured over wood-based sub-floors to create a substrate</p> <p>b) approved trowel-applied material used to level, smooth, skim-coat or fill sub-floor irregularities to create a substrate</p>	<b>sous-couche</b>	<p>a) planche composée ou contreplaquée approuvée d'au moins 6 mm (1/4 po) d'épaisseur, bien fixée au-dessus des sous-planchers de bois pour former un support</p> <p>b) matériau approuvé appliqué à la truelle pour niveler, adoucir, enduire ou remplir les irrégularités du sous-plancher pour former un support</p>
<b>upholster</b>	applying carpet material to three-dimensionally shaped objects and structures (excluding stairs)	<b>recouvrir de tapis</b>	mettre du tapis sur des objets ou des structures de forme tridimensionnelle (à l'exception des escaliers)
<b>vinyl composite tile (VCT)</b>	thoroughly blended composition of vinyl resins, plasticizer, inert fillers and pigments formed under pressure and heated into sheet form, then cut into tile size	<b>carreaux de vinyle composites</b>	mélange homogène de résines vinyliques, de plastifiants, de charges inertes et de pigments, pressé à chaud en forme de feuilles qui sont ensuite découpées en carreaux
<b>wear layer</b>	the top portion of a floorcovering	<b>couche d'usure</b>	couche de surface de revêtement souple
<b>working time</b>	the amount of time allowable from laying the material into the adhesive and all cutting and fitting must be completed before adhesive loses its bond strength	<b>temps d'emploi</b>	durée maximale pour poser le matériau sur l'adhésif et effectuer toutes les coupes et toutes les fixations avant que l'adhésif perde sa force de liaison
<b>woven carpet</b>	type of carpet construction using a loom method with a wool yarn being interlaced through backing material and then locking tufts in place using a layer of latex	<b>tapis tissé</b>	type de fabrication de tapis utilisant une technique de métier à tisser par laquelle un fil de laine est entrelacé au travers du matériau de l'endos et les touffes sont maintenues en place à l'aide d'une couche de latex