

# Apprenticeship and Industry Training

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## Residential Construction Site Manager Competency Outline

212 (2023)



Apprenticeship  
and Industry  
Training

**ALBERTA SKILLED TRADES AND PROFESSIONS**

Residential construction site manager : competency outline

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**RESIDENTIAL CONSTRUCTION SITE MANAGER**

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**RESIDENTIAL CONSTRUCTION SITE MANAGER COMPETENCY OUTLINE**

**Level 1 .....7**

## Apprenticeship and Industry Training System

A person who has completed the competency requirements and met industry standards for the residential construction site manager training program, including 36 months and 4500 hours of level specific on-the-job training, can apply for certification at any client services office of Alberta Skilled Trades and Professions, Apprenticeship and Industry Training. The candidate will have to successfully pass an industry examination administered by Alberta Skilled Trades and Professions before obtaining certification.

**Special thanks are offered to the following industry members who contributed to the development of the standard:**

**Mr. D. Little.....Calgary**  
**Mr. G. Halvorson.....Red Deer**  
**Mr. D. Hooge.....Airdrie**  
**Mr. R. Leslie.....Grande Prairie**  
**Mr. M. Rohl .....Red Deer**  
**Mr. T. Gamelin .....Red Deer**  
**Mr. B. Gulbraa.....Edmonton**  
**Mr. T. King .....Leduc**  
**Mr. D. Vars.....Calgary**

### Safety

Safe working procedures and conditions, accident prevention and the preservation of health are of primary importance in industry training programs in Alberta. These responsibilities are shared and require the joint efforts of sponsors and employees. Controlling the variables and behaviours that may contribute to or cause an accident or injury can create safe learning experiences and environments. It is generally recognized that a safe attitude contributes to an accident free environment. Everyone will benefit as a result of a healthy safe attitude towards prevention of accidents. Individuals in this trade may be exposed to more hazards than others in the work force and should be familiar and comply with the Occupational Health and Safety Act and Regulations respecting personal safety and the safety in the work place.

### Legal and Administrative Aspects of Safety

Accident prevention and the provisions of safe working conditions are the responsibilities of a sponsor and employee.

#### **Sponsor's/Employer's Responsibilities:**

The sponsor is responsible for:

- providing and maintaining safety equipment, protective devices and clothing
- enforcement of safe working procedures
- safeguards for machinery, equipment and tools
- observance of all accident prevention regulations
- training of employees in safe use and operation of equipment

#### **Employee's Responsibilities:**

The employee is responsible for:

- working in accordance with the safety regulations pertaining to job environment
- working in such a way as not to endanger themselves or fellow employees
- safe use of all equipment and supplies provided by the sponsor/employer

### **Formal or Technical Training**

Formal training may be available through colleges and training providers in Alberta or outside the province. Contact Registrar of Apprenticeship Programs, Apprenticeship Delivery and Industry Support Services, Apprenticeship and Industry Support for more information

Training for the occupation of residential construction site manager is available through the Professional Home Builders Institute of Alberta. The cost of training is the responsibility of the trainee or the employer or both. In order to obtain an occupational certificate a candidate must demonstrate competency in each of the standards established by industry. Contact the Professional Home Builders Institute of Alberta for more information.

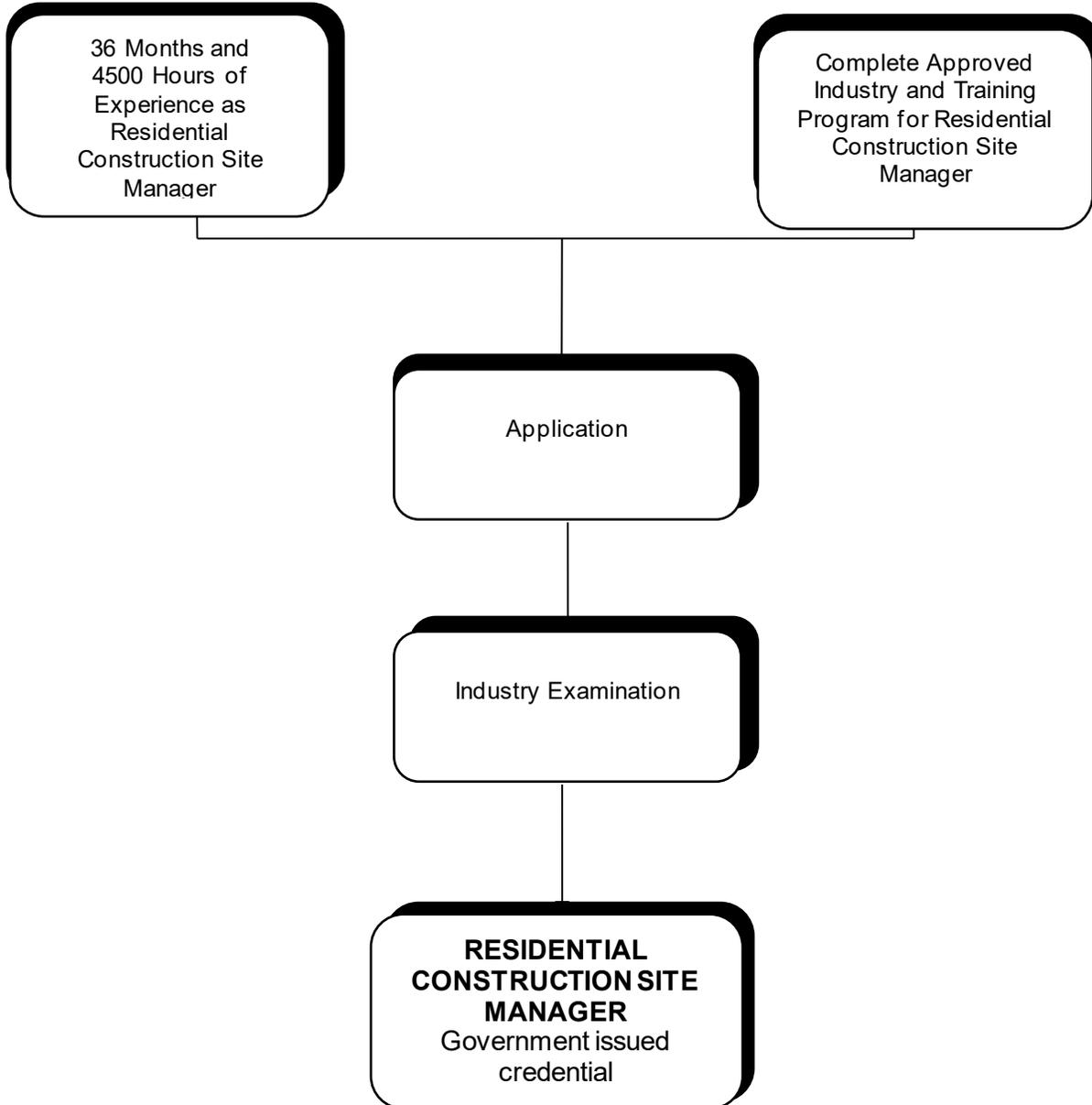
### **Procedures for Recommending Revisions to the Competency Outline**

Valuable input is acknowledged from industry and the training providers. Any concerned citizen or group in the province of Alberta may make recommendations for change by writing to:

Registrar of Apprenticeship Programs  
c/o Apprenticeship Delivery and Industry Support Services  
Apprenticeship Delivery and Industry Support  
19th floor, Commerce Place  
10155 - 102 Street  
Edmonton, AB T5J 4L5

It is requested that recommendations for change refer to specific areas and state references used.

**RESIDENTIAL CONSTRUCTION SITE MANAGER – ROUTE TO CREDENTIAL**



## Residential Construction Site Manager Training Outline

(4500 Hours Over 36 Months)

### SECTION ONE

**UNDERSTAND WHAT IS BEING BUILT**



<b>A</b>	<b>B</b>	<b>C</b>
Blueprint Reading Skills	Building on Soils	Building Codes
<b>D</b>	<b>E</b>	<b>F</b>
Construction File	Environmental Impact	Common Residential Foundations
<b>G</b>	<b>H</b>	<b>I</b>
Common Residential Superstructures	Common Residential Building Envelopes	Common Residential Mechanical and Electrical Systems
<b>J</b>	<b>K</b>	<b>L</b>
Common Residential Interior Finishes	Common Residential Exterior Finishes	House as a System Concept (Building Science)
<b>M</b>	<b>N</b>	
Variations from Common Residential Construction Practice	Building Solutions	

### SECTION TWO

**MANAGING THE BUILDING PROCESS**



<b>A</b>	<b>B</b>	<b>C</b>
Residential Site Safety Management	Planning the Construction Process	Execute the Plan Through Effective Communication
<b>D</b>		
Monitor Construction Progress		

### SECTION THREE

**CONDUCT ADMINISTRATIVE REPORTING**



<b>A</b>	<b>B</b>	<b>C</b>
Documentation	Organization	Reporting

### SECTION FOUR

**APPLY MANAGEMENT SKILLS**



<b>A</b>	<b>B</b>	<b>C</b>
Legal and Regulatory Knowledge	Effective Participation in Meetings	Management Skills
<b>D</b>	<b>E</b>	
Leadership Skills	Dispute Resolution Skills	

**SECTION FIVE**

**MANAGE THE HOMEBUYER  
RELATIONSHIP**



**A**

Perceptions

**B**

Expectations

**C**

Manage Perceptions and  
Expectations

**SECTION SIX**

**MODELING  
PROFESSIONALISM**



**A**

Ethics

**B**

Professional Conduct

**COMPETENCY OUTLINE  
RESIDENTIAL CONSTRUCTION SITE MANAGER TRADE**

*A CERTIFIED RESIDENTIAL CONSTRUCTION SITE MANAGER SHOULD BE ABLE TO PERFORM THE FOLLOWING COMPETENCIES.*

**SECTION ONE: ..... UNDERSTAND WHAT IS BEING BUILT .....**

*The RCSM understands the technical details of construction residences classified in Part 9 of the Alberta Building Code.*

**A. Blueprint Reading Skills**

**Competency:** *Be able to read and interpret blueprints for residential buildings classified in Part 9 of the Building Code.*

1. Describe the different types and views of drawings.
2. Interpret various symbols, abbreviations and line styles used in residential drawings.
3. Read and interpret residential drawings.
4. Read and interpret specifications.

**B. Building on Soils**

**Competency:** *Be able to describe the basic composition of soils, identify conditions that require special attention and/or impact the design of a residential building.*

1. Identify and understand the basic properties of soil.
2. Recognize site conditions that require special attention.
3. Understand geotechnical reports and bore hole logs.
4. Implement appropriate construction techniques based on soil conditions.
5. Apply common structural remediation techniques.

**C. Building Codes**

**Competency:** *The RCSM is knowledgeable of residential building codes and understands municipal jurisdiction for interpretation and enforcement.*

1. Explain the development of the various building codes and their roles, relationship, and authority for interpretation and enforcement.
2. Outline the obligations created by the Building Code and Fire Code.
3. Explain the various permits required and the processes from permit application through to permit closure.
4. Navigate and interpret the Building Code and Fire Code.
5. Understand various product standard regulations. (CSA, CCMC, etc.)
6. Effectively communicate with Municipal Inspectors using knowledge and understanding of the Building Code and Fire Code.
7. Outline Building Code enforcement and appeal processes.

#### **D. Construction File**

**Competency:** *Be able to read and interpret information in the construction file for a residential building.*

1. Perform accurate calculations of resource requirements for a residential building.
2. Read and interpret technical documents in the construction file.
3. Read and interpret contractual and other legal documents in the construction file.
4. Identify errors and omissions in construction file documentation and implement appropriate resolutions.
5. Identify circumstances in the construction file documents that require special attention during construction.
6. Evaluate as-built work and ensure compliance with the construction file, building codes and other regulations.

#### **E. Environmental Impact**

**Competency:** *Outline environmental considerations and initiatives related to residential construction.*

1. Outline the history of environmental issues in residential construction (erosion control, etc).
2. Identify environmental considerations related to residential construction.
3. Explain various environmental initiatives in the residential construction industry.
4. Analyze the risks of participating in environmental initiatives.
5. Describe the benefits of participating in environmental initiatives.

#### **F. Common Residential Foundations**

**Competency:** *Describe the technical details of common residential foundations.*

1. Explain site preparation for the construction of foundations including basic land surveying and grading principles.
2. Explain excavation and backfill processes and issues to consider.
3. Describe common residential foundation systems.
4. Explain when engineering professionals are required in the design and construction of a residential foundation system.
5. Describe common moisture barriers and water proofing systems, and when they are required.
6. Describe utility services including sub-surface drainage systems that are addressed at the foundation stage.
7. Identify foundation components in plans and specifications.

#### **G. Common Residential Superstructures**

**Competency:** *Describe the technical details of common residential superstructures.*

1. Describe common residential superstructure systems.
2. Explain when engineering professionals are required in the design and construction of a residential superstructure.

3. Describe building envelope considerations that must be addressed during the construction of a residential superstructure.
4. Describe considerations for mechanical systems and interior finishes that must be addressed during the construction of a residential superstructure.
5. Identify superstructure components in plans and specifications.

#### **H. Common Residential Building Envelopes**

**Competency:** *Describe the technical details of common residential building envelopes.*

1. Describe common building envelope components.
2. Identify building envelope components in plans, specifications and details.
3. Explain how building envelope components comprise a system.
4. List the various trades involved in the construction of an effective building envelope.
5. Identify components that require special attention during construction to ensure an effective building envelope (windows, doors, trim details and flashing).

#### **I. Common Residential Mechanical and Electrical Systems**

**Competency:** *Describe the technical details of common residential mechanical systems.*

1. Describe common residential mechanical and electrical systems.
2. Identify mechanical and electrical system components in plans and specifications.
3. Identify potential conflicts between various trades that need to be addressed to ensure all mechanical and electrical systems are installed to function as designed.
4. Describe other systems such as security, structured wiring and vacuum.

#### **J. Common Residential Interior Finishes**

**Competency:** *Describe the technical details of common residential interior finishes.*

1. Describe common interior finishes for walls and ceilings.
2. Describe common interior flooring.
3. Describe common interior trim, woodwork, cabinets, handrails and hardware.
4. Describe common interior mechanical and electrical finishes.
5. Identify interior finish components in plans and specifications.

#### **K. Common Residential Exterior Components**

**Competency:** *Describe the technical details of common residential exterior components.*

1. Describe common residential grading requirements.
2. Describe common residential roofing systems.
3. Describe common residential exterior finishes and systems.
4. Describe common residential exterior materials.
5. Describe common residential exterior concrete flatwork.

## **L. House as a System Concept**

**Competency:** *Describe the house as a system concept and the importance of selection and proper assembly of housing components.*

1. Explain basic building science principles.
2. Explain how building science principles impact the design and construction of residential buildings.
3. Explain how assembled construction components compose a 'House-as-a-system'.
4. Explain how changes in materials and/or installation methods impact the operation of the 'House-as-a-system'.
5. Analyze deviations from common best practices in the construction of residential buildings that impact the performance of the 'House-as-a-system'.

## **M. Variations from Common Residential Construction Practice**

**Competency:** *Describe the need to vary from common residential construction practice, identify and analyze the risks associated with such variances, and formulate strategies for managing the risks.*

1. Outline the historical development of current construction practice.
2. Explain the need for thoughtful variations from common construction practice.
3. Explain how building codes allow for variations from common construction practice.
4. Identify local variations from common construction practice.
5. Analyze variations from common construction practice and assess the associated risks.
6. Develop risk mitigation strategies for variations in common construction practice.

## **N. Building Solutions**

**Competency:** *Identify, investigate, and analyze construction issues in residential buildings, and formulate strategies to resolve issues and prevent their reoccurrence.*

1. Identify construction issues that may require a solution.
2. Outline techniques and strategies to investigate possible construction issues.
3. Assess possible construction issues and prioritize the issues that require a solution.
4. Develop appropriate solutions for construction issues.
5. Differentiate warranty and construction issues.
6. Formulate strategies to prevent reoccurrence of construction issues.

**SECTION TWO:..... MANAGE THE BUILDING PROCESS .....**

***The RCSM plans, executes, and monitors the supply and application of materials and labour for residential construction, and ensures applicable site safety measures are followed throughout the construction process.***

**A. Residential Construction Site Safety Management**

***Competency: Represent the Prime Contractor for the purposes of site safety and fulfill requirements for safety and for occupation health and safety legislation, regulations and codes.***

1. Describe legal and regulatory requirements for a safe residential construction site.
2. Recognize liability implications and associated risks for Prime Contractors.
3. Be able to describe safety requirements for each occupation or trade working on the residential construction site.
4. Perform job hazard assessments on a residential construction site.
5. Take appropriate action to correct unsafe practices and infractions.
6. Be able to facilitate/conduct an incident investigation.

**B. Planning the Construction Process**

***Competency: Describe the phases of the residential construction process from site preparation to expiry of the warranty and produce a plan to construct a residential building.***

1. Practice project management principles.
2. Explain the process of assembling construction components into a completed residential building.
3. Identify contractual and regulatory requirements to be addressed in a residential construction project plan.
4. Identify lead time requirements for materials, labour and inspections.
5. Estimate timeline contingencies for a residential construction project including seasonal items.
6. Be able to create and adjust a construction project plan in accordance with project management principles.

**C. Execute the Plan Through Effective Communication**

***Competency: Communicate with developers, colleagues, customers, suppliers, supervisors, subordinates, subcontractors, inspectors, etc., during the residential construction process.***

1. Use the appropriate means of effective communication when corresponding with clients, subcontractors, suppliers, colleagues, inspectors, regulators, internal and external to the company.
2. Communicate clearly and concisely, choose and use appropriate language and grammar for the situation.
3. Provide accurate direction and instructions to ensure compliance with contracts, scopes of work and regulations.

4. Provide appropriate and timely responses to correspondence, requests, notifications, compliances, invoices, etc.

#### **D. Monitor Construction Progress**

**Competency:** *Monitor construction sites against the schedule to obtain information required to adequately manage the construction process.*

1. Monitor and document residential construction project progress and resources used on a daily basis.
2. Determine appropriate actions to ensure projects remain within budget and workmanship and material requirements.
3. Identify when a construction schedule needs to be adjusted.
4. Identify and document potential and manifested incidents regarding labour standards, safety, contractual, and company policies and procedures.
5. Conduct pre-inspections to help ensure that work to be inspected for Building Code compliance will pass inspection.
6. Monitor the site effectively to minimize undesirable incidents.
7. Ensure the site is ready for scheduled labour and material delivery.
8. Protect raw materials and completed work including the prevention of vandalism and theft.

### **SECTION THREE: ..... CONDUCT ADMINISTRATIVE REPORTING .....**

*The RCSM controls the construction process through effective administration of information.*

#### **A. Documentation**

**Competency:** *Document information required to conduct administrative duties for the construction of a residential building.*

1. Use checklists, standardized forms, photographs and daily logs to document construction progress, deficiencies, site safety and environmental issues.
2. Complete inventory documentation for materials, equipment and resources for a residential construction project.
3. Produce effective written communications to stakeholders to document notifications, clarifications and other important correspondence.
4. Ensure that required permits have been issued and closed for a residential construction project.

#### **B. Organization**

**Competency:** *Organize and manage documentation for the construction of a residential building.*

1. Follow corporate administrative procedures.
2. Ensure project plans are created in accordance with project management principles and encompass administrative duties.
3. Select the appropriate means of written communication when communicating formally with clients, subcontractors, suppliers, land developers, colleagues, regulators, internal and external to the company.
4. Organize and manage various electronic and hard copy formats of documentation.

5. Maintain the construction file for assigned projects including daily logs, records of progress, records of safety, inventories, photographs and records of deficiencies.
6. Maintain administrative files for assigned projects including OH&S documentation, environmental issues, insurance, mortgages, third party warranties, change orders, back charges, budgets, purchase orders, invoices, back orders, possession date confirmations, and outstanding seasonal items.

**C. Reporting**

**Competency:** *Develop reports and other documentation in accordance with administrative procedures.*

1. Write clear and accurate reports from documentation as required.
2. Prepare budget estimates for materials and resources required for a residential construction project.
3. Ensure all variance costs are recovered.
4. Prepare and submit enforceable warranty documentation, insurance documentation, change orders, purchase orders, back charges and certificates of possession.
5. Track outstanding post-possession items including seasonal items that are weather-permitting.

**SECTION FOUR: ..... APPLY MANAGEMENT SKILLS .....**

*The RCSM assists in the achievement of corporate goals by taking an active leadership role and by building and maintaining corporate relationships with internal and external stakeholders.*

**A. Legal and Regulatory Knowledge**

**Competency:** *Demonstrate a general understanding of the residential home builders various legal and regulatory obligations.*

1. Understand contract obligations and other principles of obligation and liability in the construction of a residential building.
2. Explain the relationship between various building codes and the obligations they create for a residential home builder.
3. Explain the various roles, authorities, and requirements for third party new home warranty coverage.
4. Be able to explain the basic requirements for Occupational Health & Safety.
5. Be able to explain the basic requirements for labour and human rights.
6. Interpret key terms of contractual and regulatory documents used in the residential construction process.

## **B. Effective Participation in Meetings**

**Competency:** *Participate effectively in formal and informal meetings.*

1. Outline basic rules of order for effective meetings.
2. Plan, organize and prepare for common formal and informal meetings in the residential home building industry.
3. Plan and lead effective meetings.
4. Speak to meetings and groups.
5. Ensure that meeting notes are prepared and distributed in a timely manner.
6. Ensure action items from meetings are followed-up on.

## **C. Management Skills**

**Competency:** *Participate in the effective management of home building operations.*

1. Understand, communicate and apply company policies and procedures.
2. Understand and apply risk management concepts.
3. Identify, prevent, manage and resolve issues.
4. Effectively prioritize, organize and delegate tasks.
5. Manage performance, training needs, stress, goals and objectives for self and subordinates.
6. Manage time.

## **D. Leadership Skills**

**Competency:** *An RCSM has developed an effective leadership style on-site, in the office environment, and within the home building industry.*

1. Explain the difference between management and leadership.
2. Maintains a respectful and effective workplace by acknowledging good performance and applying fair disciplinary action.
3. Lead by modeling the behaviour expected.
4. Effectively train others.
5. Foster a team environment.
6. Effectively participate in industry relations and events.

## **E. Dispute Resolution Skills**

**Competency:** *Proactive in prevent disputes; effectively resolve disputes when they arise, and understand the available dispute resolution mechanisms should they become necessary.*

1. Describe why disputes arise and the difference between issues and positions.
2. Describe the tangible and intangible costs of disputes.
3. Develop strategies for actively preventing disputes.
4. Describe skills used in communication and negotiation that effectively resolve disputes.
5. Outline the processes of various dispute resolution mechanisms.

**SECTION FIVE: ..... MANAGE THE HOMEBUYER RELATIONSHIP .....**

***The RCSM works with sales, management, administrative, service, trades, suppliers and warranty personnel to develop and maintain positive working relationships with homebuyers.***

**A. Perceptions**

***Competency: Develop and maintain a positive working relationship with homebuyers.***

1. Recognize general positions and circumstances that help define homebuyer and builder perceptions of each other.
2. Explain the impact of appearance and demeanour on (first) impressions and perceptions.
3. Explain the impact of effective listening skills on perceptions.
4. Understand the effect of culture on perceptions.
5. Demonstrate an awareness of home buyer perceptions and emotions.

**B. Expectations**

***Competency: Develop and maintain a positive working relationship with homebuyers.***

1. Define expectations.
2. Explain the impact of perception on expectations.
3. Understand difference between contractual and customer expectations.
4. Understand the effect of culture on expectations.
5. Demonstrate an awareness of homebuyer expectations.

**C. Manage Perceptions and Expectations**

***Competency: Manage the perceptions and expectations of homebuyers in order to develop and maintain positive working relationships with homebuyers throughout the construction process.***

1. Communicate and negotiate with internal and external stakeholders to coordinate the formulation of favourable homebuyer perceptions and expectations.
2. Establish homebuyer expectations by managing perceptions, reviewing company policies and procedures, reviewing key documented items, and by effective communication and negotiation.
3. Use effective listening skills to monitor perceptions and expectations.
4. Recognize when adjustments are required to improve homebuyer perceptions and take action to improve those perceptions.
5. Recognize when homebuyer expectations are well founded and take action to meet or exceed those expectations.
6. Recognize when homebuyer perceptions and expectations require adjustment, and be able to use effective communication and negotiation skills to make those adjustments while maintaining a positive working relationship.
7. Conduct well planned homebuyer orientation and possession inspection.

**SECTION SIX: .....MODELING PROFESSIONALISM.....**

*The RCSM fosters and earns respect through consistent demonstrations of professionalism.*

**A. Ethics**

**Competency:** *Manage ethical issues in the residential construction process.*

1. Demonstrate an understanding of perception and reality theories.
2. Define ethics.
3. Explain the relationship between perceptions and ethics.
4. Explain what creates corporate ethics.
5. Explain how ethics impacts decision making.
6. Analyze ethical issues in residential construction.
7. Formulate strategies to manage ethical issues in residential construction.

**B. Professional Conduct**

**Competency:** *Conduct affairs in the residential construction process with professionalism.*

1. Define professionalism.
2. Explain the relationship between perceptions and professionalism.
3. Demonstrate professional written and verbal communication.
4. Understand the impact of professional body language and personal appearance on relationships.
5. Explain the impact of professionalism.



# Apprenticeship and Industry Training

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