



ROCKY VIEW COUNTY  
CONSTRUCTION MANAGEMENT PLAN  
BINGHAM CROSSING SUBDIVISION WORKS

PROJECT No. 14-749  
APRIL 13, 2023  
APLIN & MARTIN CONSULTANTS LTD.



**APLIN MARTIN**  
ENGINEERING ARCHITECTURE PLANNING SURVEYING

## TABLE of CONTENTS

	<u>Page No.</u>
<b>1.0 INTRODUCTION .....</b>	<b>2</b>
<b>2.0 STOCKPILING OF MATERIALS AND STRIPPING AND GRADING .....</b>	<b>3</b>
<b>3.0 TRAFFIC ACCOMMODATION PLAN – OFFSITE ROADS .....</b>	<b>5</b>
<b>4.0 TRAFFIC ACCOMMODATION PLAN – ONSITE ROADS .....</b>	<b>6</b>
<b>5.0 CONSTRUCTION WASTE/RECYCLING/SURPLUS MATERIAL STORAGE AND DISPOSAL.....</b>	<b>6</b>
<b>6.0 STOCKPILING OF TOPSOIL RELATED TO OFFSITE WORKS ON MUNICIPAL ROADWAYS .....</b>	<b>7</b>

### LIST OF MAPS

Map 1	Overall Project Location Plan
Map 2	Contractor Material Stockpile and Laydown Area Plan

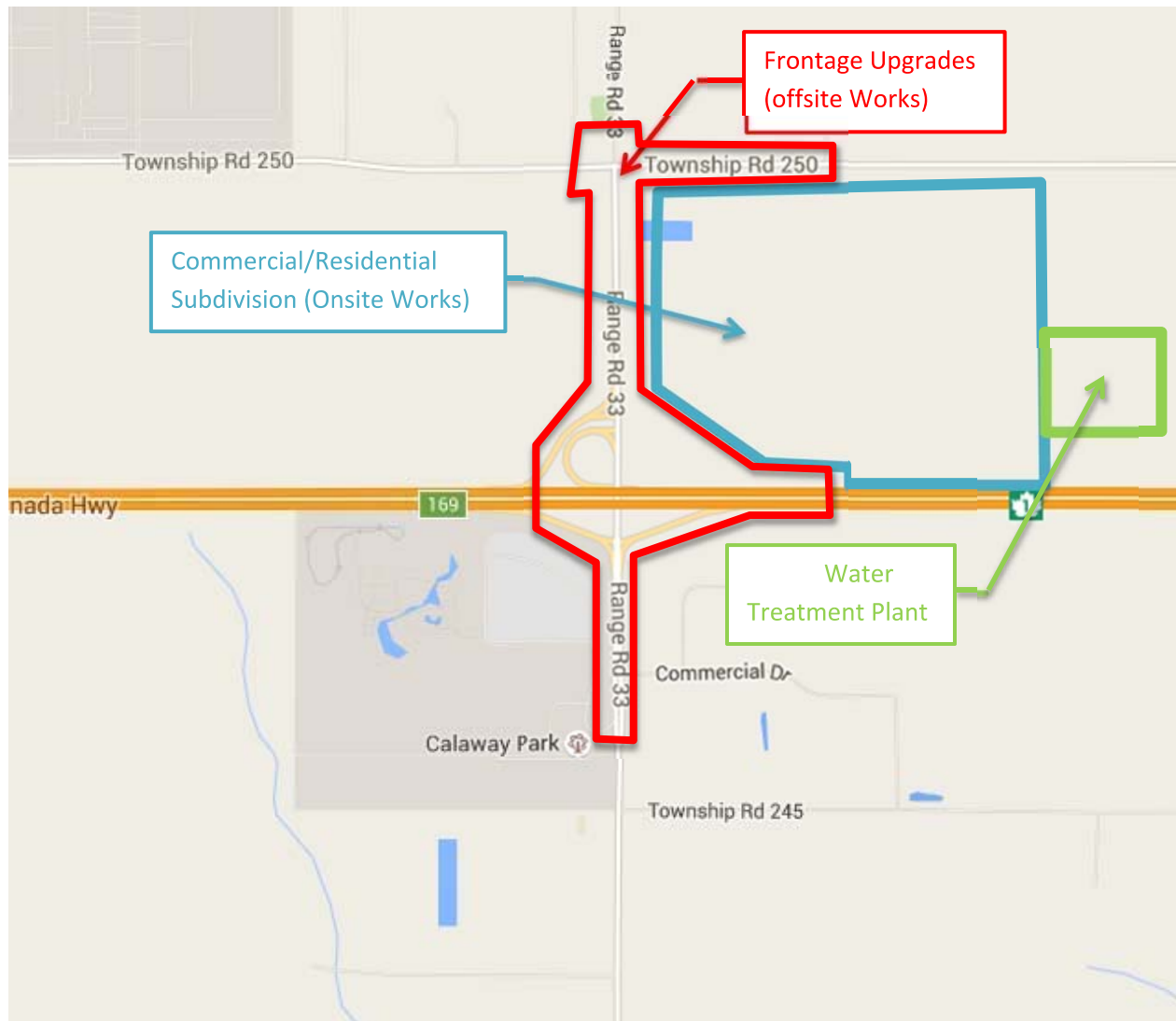
### LIST OF APPENDICIES

Appendix A	<b>Weed Management Plan</b> – Carson McCulloch Associates Ltd. – June 3, 2021
Appendix B	<b>Preliminary Construction Schedule</b> – Gantt Chart
Appendix C	<b>Construction Management Plan</b> - Drawing

## 1.0 INTRODUCTION

This Construction Management Plan addresses the requirements as outlined in Section 1100 of the County Servicing Standards (2013) published by Rocky View County. The information contained in this document is meant for use while referencing the design drawings for additional information. The site is located approximately 5.5km west of Calgary, Alberta along the TransCanada Highway 1 (see Map 1 below). The areas marked in red will from herewithin, be referred to as the 'Offsite', the area marked in blue shall be referred to as 'Onsite', and the area marked in green shall be referred to as 'WTP'

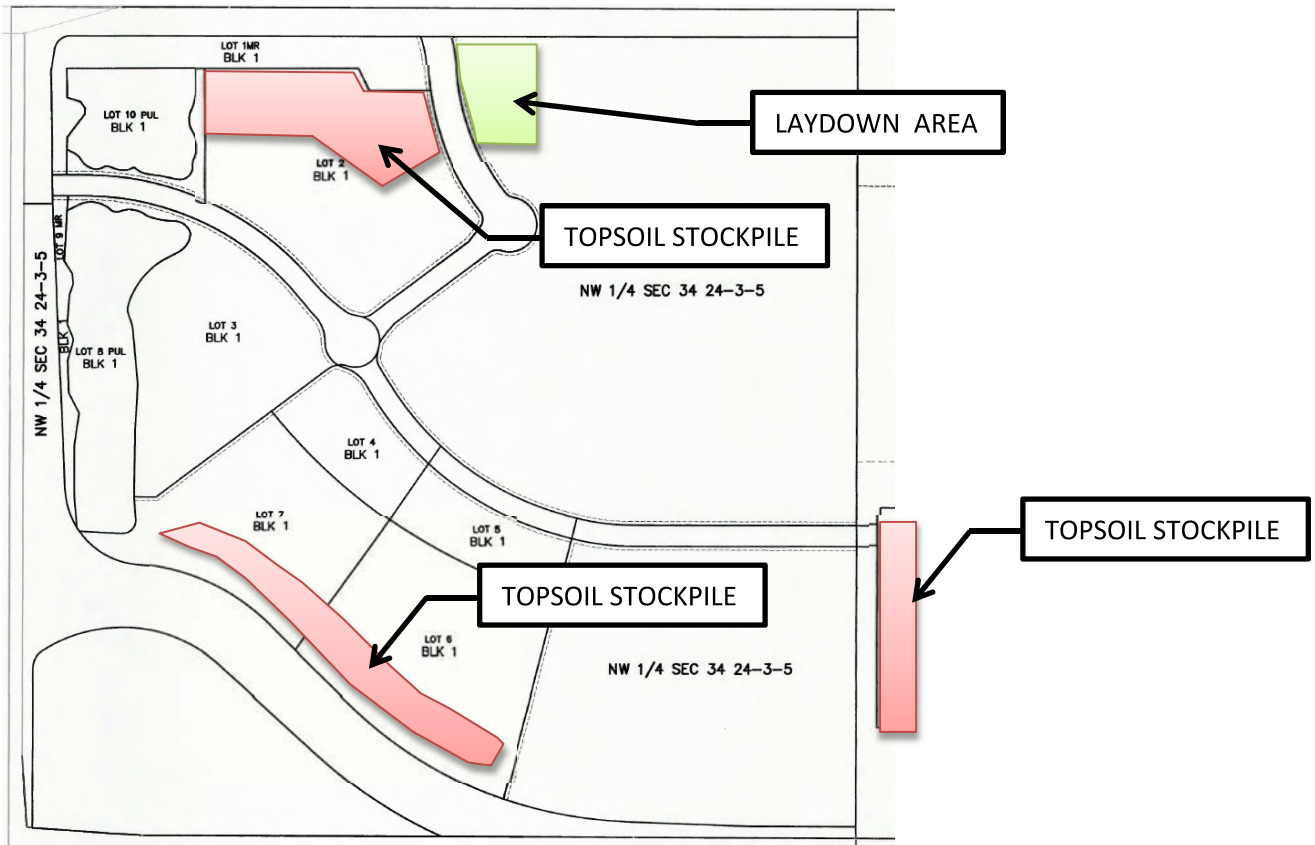
**Map 1: Project Location Plan**



## 2.0 STOCKPIILING OF MATERIALS AND STRIPPING AND GRADING

For the duration of the project, the contractor(s) completing the work on the subject sites will be required to use a Laydown Area in order to limit rubbish and excess materials from being left around the site. The contractor shall use this area to park vehicles, store fuel tanks, store materials, and place contractor site trailers. Should the contractor maintain fuel tanks for equipment onsite, the contractor must designate and use only one area for refueling to limit the potential for contamination. During the stripping and grading phase of the project, the contractor will be required to build and maintain the topsoil stockpiles which will be reused. Stockpiles as well as stripped and graded areas require seeding or surface treatment within 45 days for erosion and sediment control. The proposed topsoil stockpiles and laydown area are shown in Map 2 below.

**Map 2: Contractor Material Stockpile and Laydown Area**



Aplin Martin has produced Erosion and Sedimentation Control Plans which are found in the Subdivision Design Drawings, the WTP Stripping and Grading Drawings as well as a Construction Management Plan drawing which is attached to this Construction Management Report for the Onsite 'WTP' Works.

These drawings contain information regarding the treatment of the stripped and graded areas to reduce erosion and to aid in the stabilization of the soils until vegetation can be established.

Information to accompany the ESC drawings can be found below as well as additional information required by Section 1101 of the County Servicing Standards.

- **Dust Control:** During stripping and grading operations, the contractor shall use a water truck to maintain haul roads and working areas as required when dry conditions create dust disturbed by the vehicles and wind erosion. The contractor may use the water that is found in the excavated areas of the storm ponds on the east side of the site. Should the water volume in the storm ponds prove to be insufficient, the contractor will be required to obtain water from a legal source and at the cost of the contractor
- **Downstream Protection – Erosion and Sediment Controls:** The contractor shall install a rock check dam on the north and south sides of the existing culvert crossing Highway 1 on the east side of the existing bridge. The rock check dams will provide added erosion controls, should a large storm event overwhelm the proposed controls, by slowing and moderately filtering the water as it moves overland to the outlet stream on the south side of the Calaway Park property. A detail for the rock check dam is shown on the Construction Management Drawing (See Construction Management Drawing). This style of check dam mitigates the impacts to downstream rivers and water bodies due to the fact that it is a natural product and is unlikely to be washed downstream. The rock check dams will remain in place for the duration of the subdivision work and will be removed during the Offsite–Frontage Upgrades portion of the project when the grading and construction impact its location. Additional ESC controls will be installed for the Offsite – Frontage Upgrades work
- **Noise Attenuation:** Due to the location of the site, it is not expected that the noise from equipment working on site will require attenuation measures. The topsoil stockpile on the north side of the site will act to reduce the amount of noise from the site toward the northerly neighbours. Neighbours in all other directions are not close enough to the site to be impacted
- **Erosion & Siltation Controls:** The details for the control measures can be found on drawings K1, k2, SG2, SG3 and L1 in the Aplin Martin Design Drawing Set for the 'WTP' and the Subdivision. These measures include Mulch-max with tackifier and Siltation Control fencing.
- **Construction Safety Plan:** The contractor(s) completing work onsite and offsite will be responsible for completing and submitting, for review prior to construction, a Construction Safety Plan which will address items including but not limited to:
  - Closest hospital locations
  - Muster Point locations



- Procedures for personnel and equipment in case of emergency
  - Emergency contact information
  - Firefighting procedures; large and small
  - Contractor's Health and Safety Plan
- **Monitoring and Maintaining Siltation Controls:** These procedures are found in the notes on drawings K1, SG2, SG3, and L1 in the Aplin Martin Design Drawing Set

### 3.0 TRAFFIC ACCOMMODATION PLAN – OFFSITE ROADS

During the construction of the subdivision and WTP, temporary traffic controls and signage will be required on Range Road 33, County Road 250, and along Highway 1 to control and redirect traffic around the work sites which may include detours. Following the tendering of the project, the selected contractor completing the offsite works (Frontage Upgrades) will be responsible for the development, installation and maintenance of the temporary traffic controls, temporary detours, and staging. These controls and detours will be maintained and modified as the staging of the work changes, until the end of the project. A detailed Traffic Accommodation Plan must be submitted, by the General Contractor, to the Engineer, Alberta Transportation, and Rocky View County (based on governing body) for approval. A Traffic Accommodation Plan must be submitted at a minimum of three weeks prior to construction and approved. The plan must include but is not limited to:

- A general map showing the locations of the proposed traffic controls and signage as well as a Staging Plan if the controls will change during construction of the roundabouts and other roadways and ramps;
- Proposed laydown area
- Proposed Public Access through the site during each stage of construction
- Locations and delineation of any proposed temporary roadways
- Schedule of any roadway closures that may be required. Any changes to the Schedule of Closures must be submitted in writing to Rocky View County at a minimum of three weeks prior to the closure complete with an adjusted Traffic Control Plan
- Flag Persons where required
- Proposed message board locations and durations
- Plans for Public communication during any scheduled closures (Minimum of 48hrs notice to affected residents for roadway shut down)
- Temporary signage at the intersection of Range Road 33 and County Road 250 stating the name of the project, contractor completing the work, proposed start and end dates, and emergency contact information (24hr)





#### **4.0 TRAFFIC ACCOMMODATION PLAN – ONSITE ROADS**

During the construction of the subdivision, temporary traffic controls and signage will be required on the adjacent County roads in order to inform the public of the work and to mitigate potential dangers with the increased level of traffic and hazards around the site. Following the tendering process, the selected contractor on site (presumably the deep site servicing contractor) will be responsible for the installation of the temporary traffic controls. These controls will be maintained by subsequent contractors through the use of tender items until the end of the project. A detailed Traffic Control Plan must be submitted to the Engineer and Rocky View County by the General Contractor for approvals prior to implementation at a minimum of three (3) weeks prior to construction start. The plan must include but is not limited to:

- Temporary signage for construction traffic entering and leaving the site.
- A general map showing the locations of the proposed traffic controls and signage as well as a Staging Plan if the controls will change during construction of various roadways
- Locations and delineation of temporary roadways
- Schedule of any roadway closures that may be required. Any changes to the Schedule of Closures must be submitted in writing to Rocky View County at a minimum of three weeks prior to the closure complete with an adjusted Traffic Control Plan
- Flag Persons where required
- Proposed message boards and locations and durations
- Plans for Public communication during any scheduled closures (Minimum of 48hrs notice to affected residents for roadway shut down)
- Temporary signage at the intersection of Range Road 33 and County Road 250 stating the name of the project, contractor completing the work, proposed start and end dates, and emergency contact information (24hr)

#### **5.0 CONSTRUCTION WASTE/RECYCLING/SURPLUS MATERIAL STORAGE AND DISPOSAL**

During the course of construction, the contractor(s) completing the work will create waste materials. The contractor(s) is to collect all waste and recycling materials throughout the respective site at the end of each week to ensure that none of these materials are left on site, are blown away, or get accidentally buried. The contractor(s) shall store the waste and recycling materials within the laydown area and shall be removed from the site at the earliest convenience. Waste materials are to be taken to an approved waste dumping facility at the expense of the contractor(s).

It is not expected that there will be any surplus native material on site as the current grading design requires a net Fill volume and all surplus material can be used elsewhere on site



It is expected that the contractor(s) completing the onsite work will remove some vegetation from the north side of the property along the roadway allowance. The vegetation from the clearing and grubbing operation will be disposed of off site at a disposal facility for organic materials

## **6.0 STOCKPILING OF TOPSOIL RELATED TO OFFSITE WORKS ON MUNICIPAL ROADWAYS**

As Part of the Offsite Construction, the contractor will be required to strip and stockpile topsoil for reuse during the restoration and surface works portion of the offsite project. It is proposed that the contractor completing the offsite works stockpile the offsite topsoil in a separate, delineated pile adjacent to the onsite topsoil stockpile (Refer to Map #2). This shall be coordinated between the onsite and offsite contractors (assuming different contractors) for access to the onsite area. Stripped or graded areas require seeding or surface treatment within 45 days. The offsite topsoil will be replaced where required and any surplus topsoil will be reused onsite, this will be confirmed with the contractor at the time of tendering.

This Design Brief has been created by:

### **APLIN & MARTIN CONSULTANTS LTD:**

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# **APPENDIX A**

## **WEED MANAGEMENT PLAN**

**CARSON McCULLOCH  
ASSOCIATES LTD.**

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## INTRODUCTION

This Weed Management Plan has been prepared at the request of Aplin & Martin Consultants Ltd. to respond to a requirement of Rocky View County. The Weed Management Plan is intended to address weed eradication and control measures and procedures during the pre-development, construction, and post-development phases of the project. Nothing stated and/or implied in this Weed Management Plan supersedes the Alberta Weed Control Act, the Rocky View County Weed Bylaws and/or other legislation and policy of authorities having jurisdiction.

## PROJECT AREA

The project area is bounded by the Trans-Canada Highway 1 on the south, Range Road 33 on the west and Township Road 250 on the north. The legal descriptions are NW1/4 of 34-24-3-5 Block 1 and NE1/4 of 34-24-3-5 Block 2. See *Figure 1* below for Weed Management Plan boundary for the Bingham Crossing Phase 1 and 2 Project.



Figure 1

## **PROJECT ELEMENTS / AREAS**

The Bingham Crossing – Phase 1 and 2 development includes the following:

- Development Areas – developable lands.
- Municipal Reserve (MR) – open space areas located along the north and east sides of the project adjacent Township Road 250 and Range Road 33.
- Public Utility Lot (PUL) – lots serving a utility function, primarily stormwater management within the project area.
- Internal Road Right-of-Ways (ROW's) – landscaped areas abutting internal local roads.
- This Weed Management Plan also includes the Wastewater Treatment Pond 'WTP' and area.

## **LANDSCAPE INTENT**

- There are two basic approaches to landscape design within the Bingham Crossing project:

### **Rehabilitation Based**

Naturalized MR areas within the project area (i.e. abutting Range Road 33 and Township Road 250) are to be reclaimed using native and non-native seed mixes and other plants with the objective of establishing site and vegetation characteristics that reasonably resemble natural conditions that existed prior to disturbance.

### **Reclamation Based**

Road ROW's, development parcel landscaped areas, and PUL's— areas within these zones will be revegetated using a combination of native and non-native grasses, trees shrubs and other plants best suited for the ultimate intended use, positive aesthetics, and functionality.

## **WEED MANAGEMENT APPROACH**

The responsibility for enforcement of the Alberta Weed Control Act rests with the Province of Alberta and the local authority. Policies and procedures outlined in this document are intended to assist Rocky View County with understanding proposed weed management for the Bingham Crossing – Phase 1 and 2 project. Weed eradication and control is the responsibility of the landowner.

### **Pre-Development Phase**

The Developer will engage a qualified representative – 'Weed Consultant' (botanist, plant ecologist, agronomist, etc.) to undertake site reviews with the objective of identifying weed species within the project area:

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- inspections are to be conducted annually between June 1 and September 30 (more or less), with typically two inspections per growing season,
  - the Weed Consultant will contact Rocky View County prior to commencing weed inspections to determine protocols, reporting procedures, and other matters,
  - inspections are to be conducted in the presence of Rocky View County Agricultural Fieldman (or other designate),
  - the Developer's Weed Consultant will map locations of weed species and recommend procedures for eradication and control for review and approval by a Rocky View County Agricultural Fieldman.

### **Construction Phase**

#### Notification

The Developer will provide Rocky View County with contact information for all parties engaged in consulting, monitoring and construction activities within the Bingham Crossing – Phase 1 and 2 project area, and more specifically the contact information of parties responsible for weed monitoring, eradication, and control.

#### Topsoil Salvage – General

In areas that will be disturbed, topsoil should be salvaged to the color change to brown subsoil. Store salvaged topsoil at designated project site(s) cleared of existing topsoil and vegetation. Topsoil stockpiles should be staked and clearly marked.

Salvaged topsoil will be inspected by the Developer's Weed Consultant for the presence of weeds, and sprayed with herbicide if required, to provide additional perennial weed and agronomic grass control prior to soil replacement.

#### Landscape Construction

Topsoil is to be placed to required areas in accordance with the Landscape Plans approved by The Rocky View County.

Seeding with native and non-native grasses will be conducted as soon as possible following topsoil replacement at locations indicated on the Landscape Plans approved by Rocky View County. The seed mixes and varieties specified on the Landscape Plans are to be used, as they have been developed to suit specific locations and to respond to functional requirements:

- A combination of native and non-native grass seed mixes has been selected to reflect the character of vegetation currently found in the project area and native species typically found in the region for 'Rehabilitation' focused areas (ie. Naturalized MR areas).
- Non-native mixes have been selected for 'Reclamation' focused areas (ie: development parcels, road ROW's, etc.).

To ensure that seed mixes do not contain an unacceptable number of weeds and undesirable invasive species, a Certificate of Seed Analysis will be obtained for all seed prior to seeding, for

review by the Developer's representative and the Rocky View County Agricultural Fieldman. If the seed mix contains an unacceptable quantity of weed seeds or other grasses it will be rejected.

Slopes exceeding thirty three percent will be stabilized using erosion control blankets. Straw mulch will not be used, as it can be a source of agronomic grasses and weeds. Mulches will be applied at a rate that provides approximately 80 percent ground cover. Where roll-out mulches or erosion control blankets are used they will have an open mesh to avoid impeding establishment of grasses.

A cover crop may be utilized to provide initial erosion control and provide mulch. If a cover crop is desired non-persistent grasses such as annual and perennial rye should be seeded at a rate of 9 kg/ha in addition to the specified seed mixes.

### **Weed Management**

Monitoring is required to ensure that activities during construction and initial landscape reclamation and rehabilitation will result in the desired outcomes. This includes ensuring that soils are not being eroded by wind or water and that appropriate, healthy vegetation becomes established. During the growing season visits will be conducted by the Developer's Weed Consultant to ascertain:

- germination and establishment of native grasses,
- any areas of weed infestation,
- areas of soil erosion or other site-specific problems.

The weed control program will be conducted according to the 'Preliminary Weed Control and Inspection Schedule'. Exact timing and methods of weed control will depend on the nature and extent of the problems identified. Although some weeds are initially expected, if restricted or noxious weeds become problematic, herbicides will be applied by qualified personnel, and/or other acceptable eradication and control measures will be implemented. Broadcast treatments should be avoided in favor of spot application. Hand picking or removal will be used only when plants are difficult to manage and few in numbers. Broadcast spraying with a broad-leaf herbicide, may be used one year after seeding, if required. Mowing will be conducted to prevent seed ripening using personal hand-mowers (weed whippers) or tractor mowers. Mowing height should be adjusted to remove tall weed seed heads while leaving grasses mostly intact. If herbicides are to be applied this will be done by qualified personnel in accordance with applicable legislation and policy of authorities having jurisdiction.

**Preliminary Weed Control & Inspection Schedule**

(Tentative – to be finalized in consultation with Rocky View County representatives)

<b>Year 1</b>	
May	Week 1 – Spring Site Survey (weather / plant growth dependent): Initial weed inspection and documentation on all regulated weeds or weeds of concern. Week 2 – Monitor / Site Review of Weed Growth Week 3 – Mowing (if required) Week 4 – Monitor / Site Review of Weed Growth
June	Week 1 – Herbicide weed control application (if required) Week 2 – Monitor / Site Review of Weed Growth Week 3 – Mowing (if required) Week 4 – Monitor / Site Review of Weed Growth
July	Week 1 – Mechanical Control or Hand Weeding (if required) Week 2 – Mowing (if required) Week 3 – Monitor / Site Review of Weed Growth Week 4 – Mowing (if required)
August	Week 1 – Monitor / Site Review of Weed Growth Week 2 – Mowing (if required) Week 3 – Monitor / Site Review of Weed Growth Week 4 – Mowing (if required)
September	Week 1 – Fall Site Survey: Follow-up weed inspection and documentation on all remaining regulated weeds or weeds of concern Week 2 – Mechanical Control or Hand Weeding (if required) Week 3 – Mowing (if required) Week 4 – Monitor / Site Review of Weed Growth
October	Week 1 – Mowing (if required) Week 2 – Final Inspection and CCC Application
<b>Year 2</b>	
May	Week 1 – Spring Site Survey (weather / plant growth dependent): Follow-up weed inspection and documentation on all regulated weeds or weeds of concern. Week 2 – Monitor / Site Review of Weed Growth Week 3 – Herbicide weed control application (if required) Week 4 – Mowing (if required)
June	Week 1 – Monitor / Site Review of Weed Growth Week 2 – Herbicide weed control application (if required) Week 3 – Monitor / Site Review of Weed Growth Week 4 – Mowing (if required)
July	Week 1 – Summer Site Survey: Follow-up weed inspection and documentation on all remaining regulated weeds or weeds of concern Week 2 – Mechanical Control or Hand Weeding (if required) Week 3 – Mowing (if required) Week 4 – Monitor / Site Review of Weed Growth



## Weed Management Plan

Bingham Crossing – Phase 1 and 2  
Springbank, Alberta

June 3<sup>rd</sup>, 2021

Version 1.3

Page 6

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August	Week 1 – Mowing (if required) Week 2 – Monitor / Site Review of Weed Growth Week 3 – Mechanical Control or Hand Weeding (if required) Week 4 – Mowing (if required)
September	Week 1 – Fall Site Survey: Follow-up weed inspection and documentation on all remaining regulated weeds or weeds of concern Week 2 – Herbicide weed control application (if required) Week 3 – Mowing, Mechanical Control or Hand Weeding (if required) Week 4 – Final inspections and apply for FAC

### General Preventative and Control Measures

- Prevent unnecessary soil disturbances to limit the establishment of weed infestations.
- Ensure that all equipment and vehicles are free of weed seeds, soils, and plant material before arriving on a job site; equipment exposed to weeds and soils is to be cleaned prior to use.
- Respond to weed infestations in a timely manner prior to plants going to seed.
- Various weed species respond differently to certain control measures and a variety of techniques should be employed, including:
  - Mechanical (mowing and cutting) – generally effective for perennial weeds; weeds should not be mowed once seed set has occurred, as this will facilitate seed dispersion.
  - Hand removal – can be useful for small infestations of annual or biennial weeds, ideally before seed set (if in flower, the plants must be bagged and disposed of properly).
  - Herbicide - effective but will not guarantee complete control; several applications may be required; selection should be made based upon the weed type needing control and the existing surrounding vegetation that is to remain; application to be performed by certified weed applicator only.
  - Biological control - the introduction of insects or diseases that attack or infect a specific weed species.

### RESPONSIBILITIES

Weed management must be adhered to at all stages of development in accordance with Provincial and Municipal Policies and Bylaws. Due to the nature of Bingham Crossing – Phase 1 and 2 and its' development over a period of time, the responsibility for weed management is as follows:

#### DEVELOPMENT PARCELS (Lots) and INTERNAL ROADS

The registered owner of the Development Parcel (Lot) shall be responsible for weed management on that lot, including abutting internal road boulevards. When, and if the Manager (Developer) of Bingham Crossing – Phase 1 and 2 sells a Development Parcel (Lot) to a 'third party' of

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obligations concerning weed management on that property and on abutting internal road boulevards.

ER, MR, PUL LANDS and 'WTP'

The Manager (Developer) of Bingham Crossing – Phase 1 and 2 will be responsible for weed management on MR (Municipal Reserve), PUL (Public Utility Lots) lands and 'WTP' as per the License of Occupation Agreement between the County and the Lot Owner's Association.

#### HIGHWAY BOULEVARDS, TOWNSHIP ROADS, AND RANGE ROADS

The Manager (Developer) of Bingham Crossing – Phase 1 and 2 will be responsible for weed management on Highway Boulevards (Trans-Canada Highway Off-Ramp) or Township and Range Road Boulevards (Township Road 250 and Range Road 33) while there is an active Development Agreement for improvements to the off-site road network. Weed management and control shall be the responsibility of the local and/or provincial authority thereafter.

End

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# **APPENDIX C**

## **CONSTRUCTION MANAGEMENT PLAN – DRAWING 01**

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LOT 1  
BLK 2

NW 1/4 SEC 34 24-3-5

TOPSOIL STOCK PILE  
(APPROXIMATE LOCATION)

LENGTH ≈160.0M

WIDTH ≈28.0M

HEIGHT: ≈4.5M

TO REMAIN APPROXIMATELY

