



# ST ALBERT HERITAGE SITE FUNCTIONAL PLAN PHASE 1

CONSERVATION OF 1906 BRACKMAN-KER ELEVATOR

CONSERVATION OF 1929 ALBERTA WHEAT POOL ELEVATOR



MUNICIPAL HERITAGE FORUM 2011



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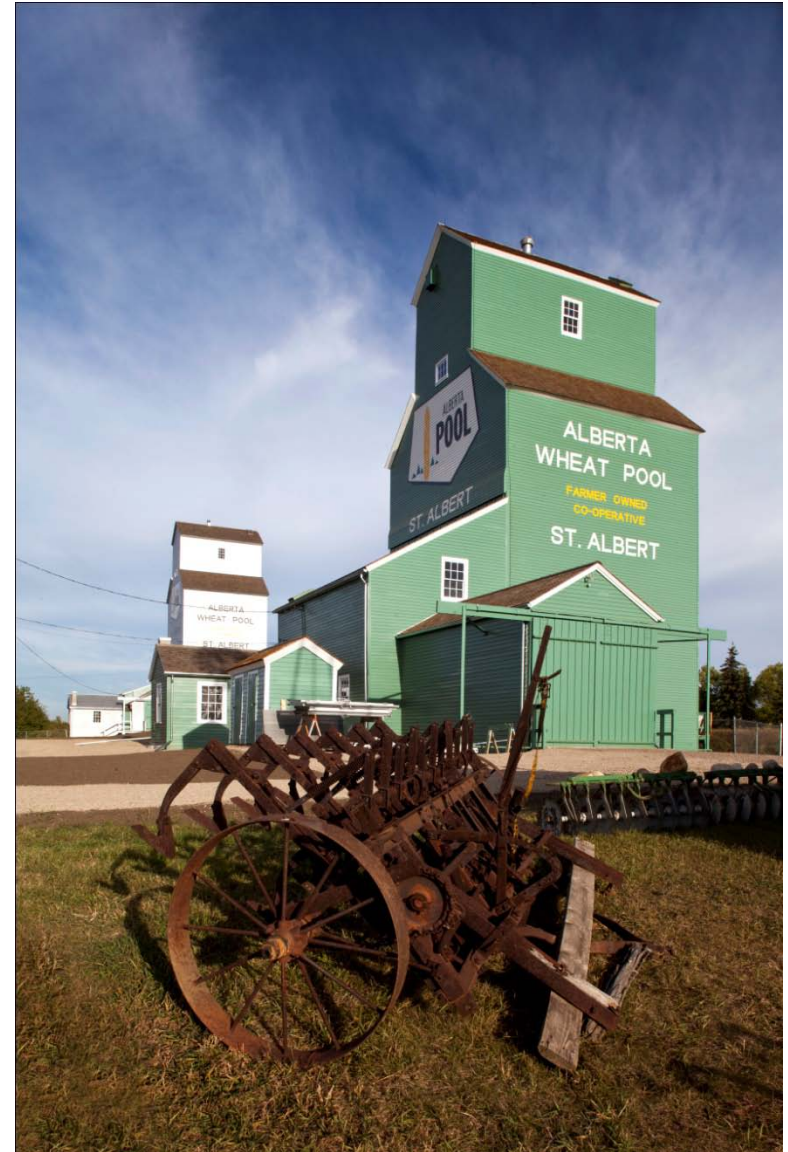






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### ELEVATOR 1 – CONDITION ASSESSMENT

An observation of the 1929 Alberta Wheat Pool Elevator will invariably focus on its appearance and the deterioration evidenced in the siding. Nevertheless it is the hidden and unexpected conditions that present the greatest risk to the building.

Elevator 1 is generally in good condition given the buildings age but there are areas of concern that require interventions to ensure the longevity of the structure. Additional interventions are recommended to mitigate against potential damage to the building in the advent of a fire and are combined into a single construction project.







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### CONSERVATION PLAN – GENERAL & SPECIFIC GOALS

The ultimate aim of the Arts and Heritage Foundation is to restore the elevators to working condition so that a full and thorough interpretation of the inner workings of the elevator can be presented to visitors. The immediate goal of this project has to be the long term preservation of the elevator and the restoration plan is geared to support this primary goal. Works are arranged to mitigate against future physical deterioration of the elevator and remove potential threats.

The priorities for this project are summarized as

- Thorough inspection of concealed foundations and support structures
- Stabilization of foundation under the office to prevent further deformation of structure
- Construction of grade beam and concrete walls to grain storage bins to minimise water penetration
- Inspection of stud framing, sheathing and cribbing with repair and replacement as necessary to prevent further deterioration and complete re-siding and painting of building
- Rehabilitation, restoration and recreation of all windows
- Replacement of cedar shingle roofs and rehabilitation of metal fascias and flashings including installation of eaves trough and downspouts
- Installing gravel fire break
- Reconstructing sidewalk
- Reconstructing loading platform with appropriate handrails and structural bracing.



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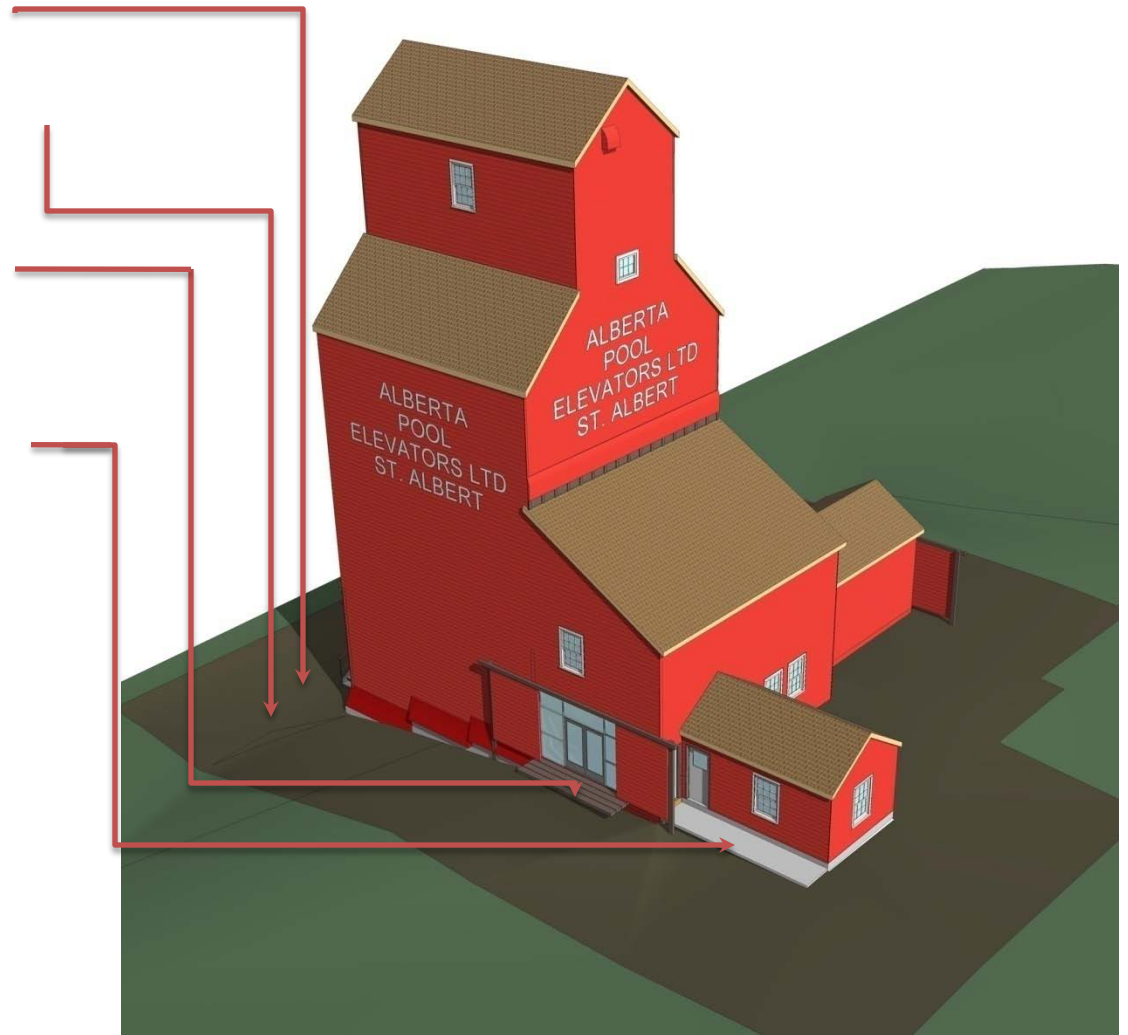
### ELEVATOR 1 – SITE & LANDSCAPING

Replace loading platform

Clear site 20'-0" from building, re-grade for positive drainage, install filter cloth and gravel

Deconstruct approaches to drive shed, replace / repair damaged wood, replace driving surface

Remove concrete sidewalk and install 3 new piles, construct new wooden sidewalk





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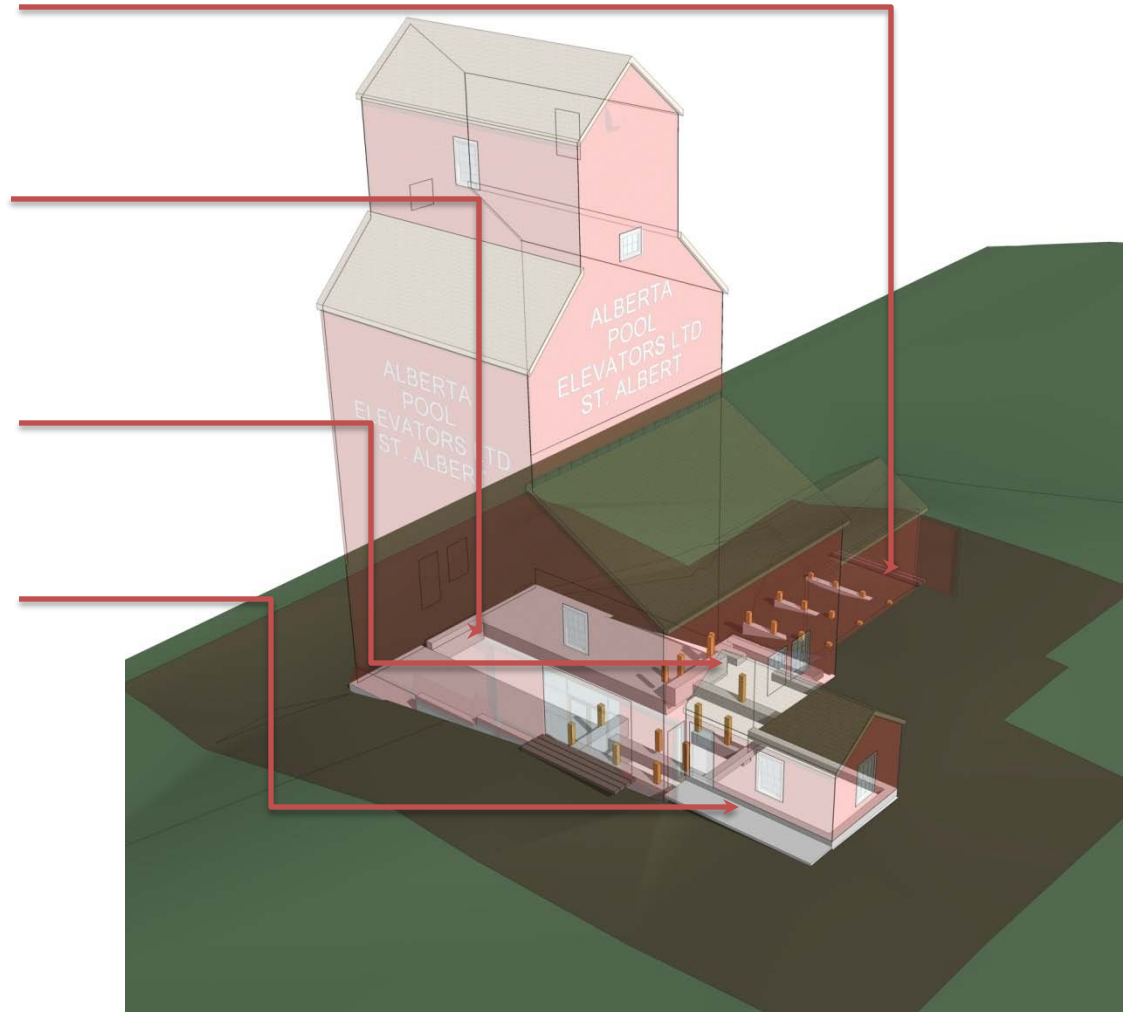
### ELEVATOR 1 – FOUNDATIONS

Disassemble supports to east drive shed, repair / replace as necessary and treat with preservative and re-construct.

Create concrete upstand wall on north of foundation under grain storage bins and increase height of upstand between grain storage bins to mitigate water penetration

Repair / replacement of structural elements to drive shed. Review crack in west foundation wall.

Replace office foundations.







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### ELEVATOR 1 – EXTERIOR WALLS

Remove siding from elevator

Repair of sheathing to upper areas of elevator  
- assume 20% replacement for budget purposes

Install new 15lb perforated felt and siding to elevator, reinstate / replace metal corners, flashing and slip joint between elevator and drive shed

Cribbing replacement - assume 20% replacement of exterior for budget purposes

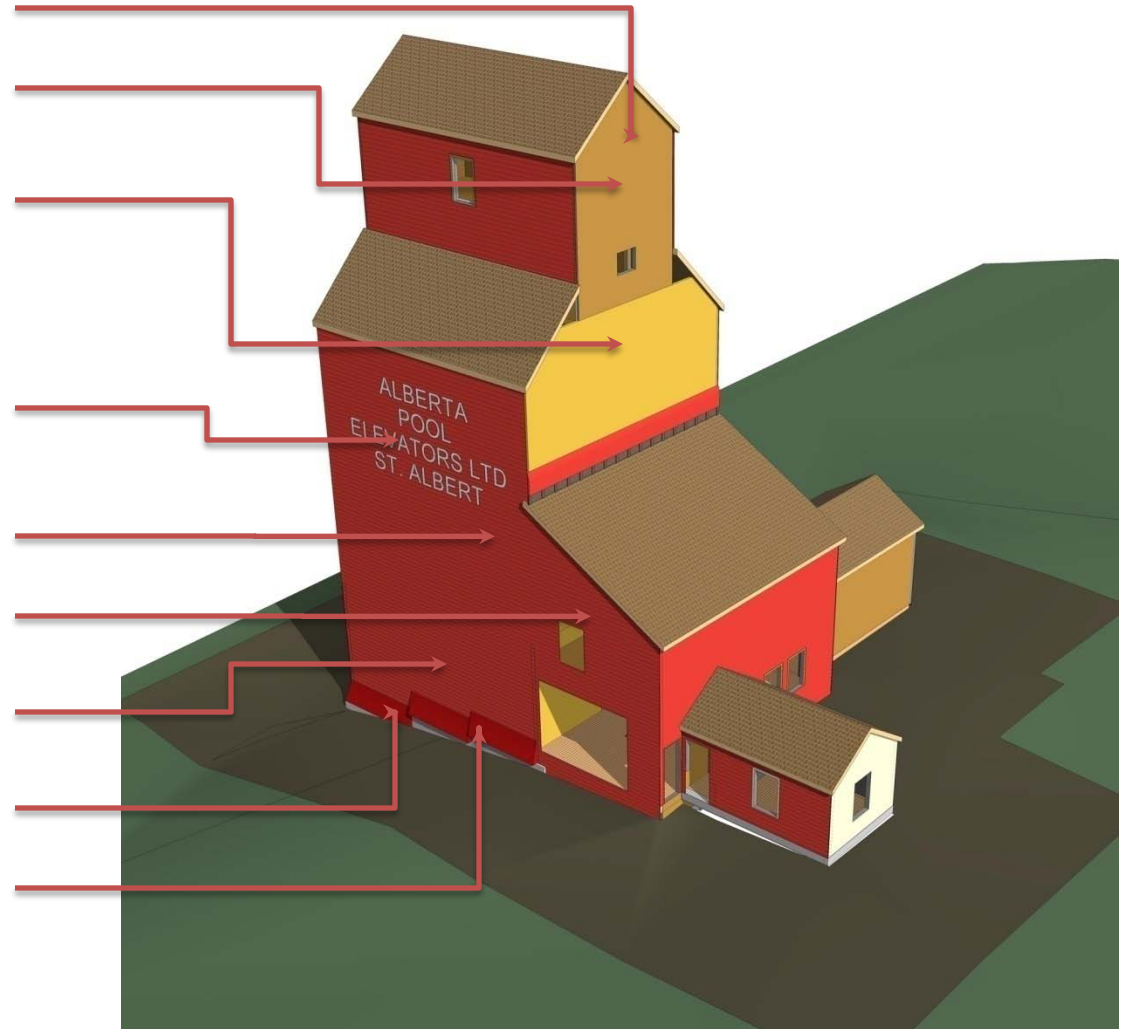
Repaint elevator and signage

Repair of sheathing to drive shed - assume 20% replacement for budget purposes.

Intumescent coatings to exterior

Sill plate and beam repair and replacement

Repair and replacement of skirt and installation of wire mesh





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### ELEVATOR 1 – EXTERIOR WINDOWS AND DOORS

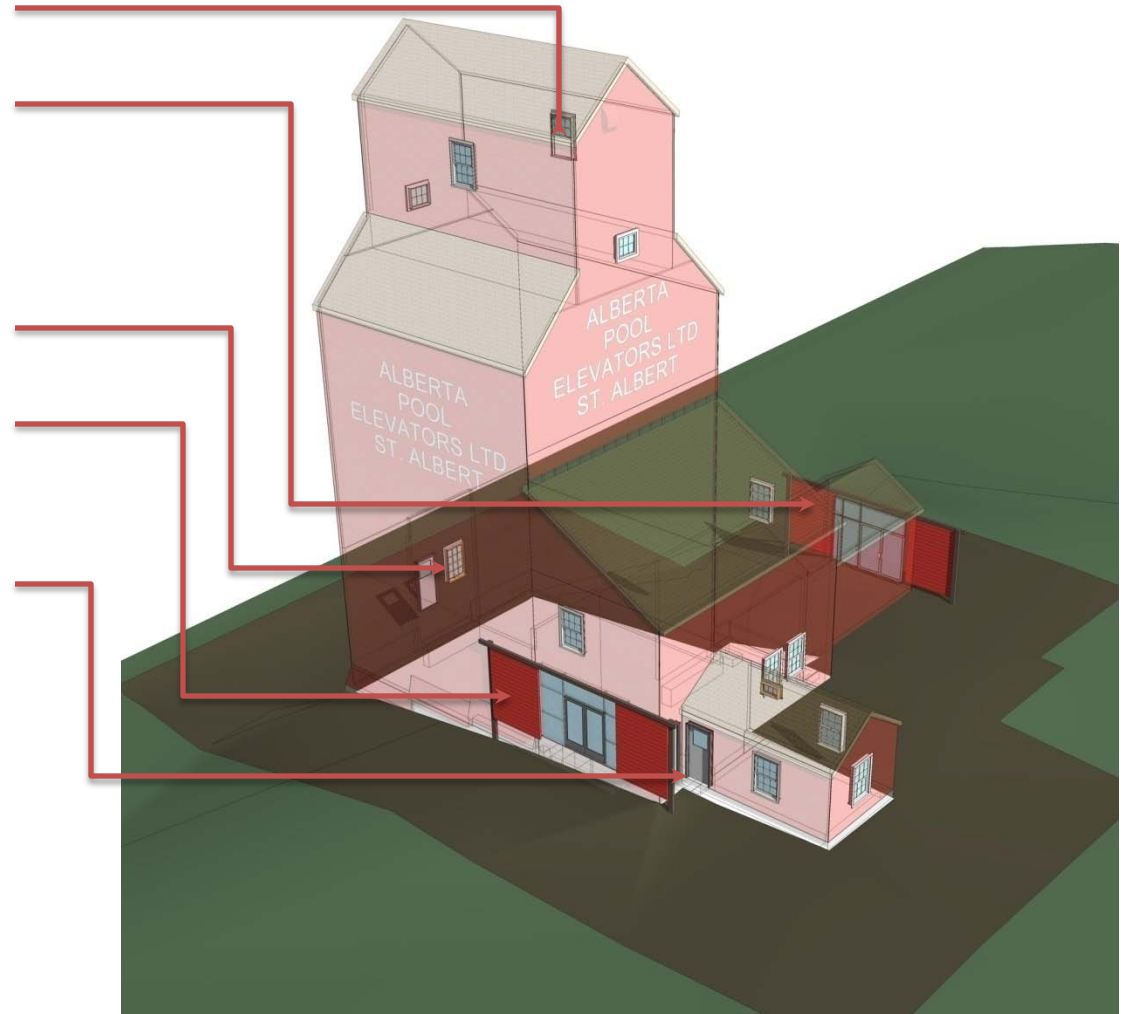
Refurbish and replace existing windows

Replace drive shed doors, install new support beam to sliding door mechanism and support posts and piles. Refurbish sliding door mechanism.

Install new hardware to loading platform door

Replace west drive shed doors, replace posts and support beam, refurbish sliding door mechanism

Modify access door to elevator, install new hardware







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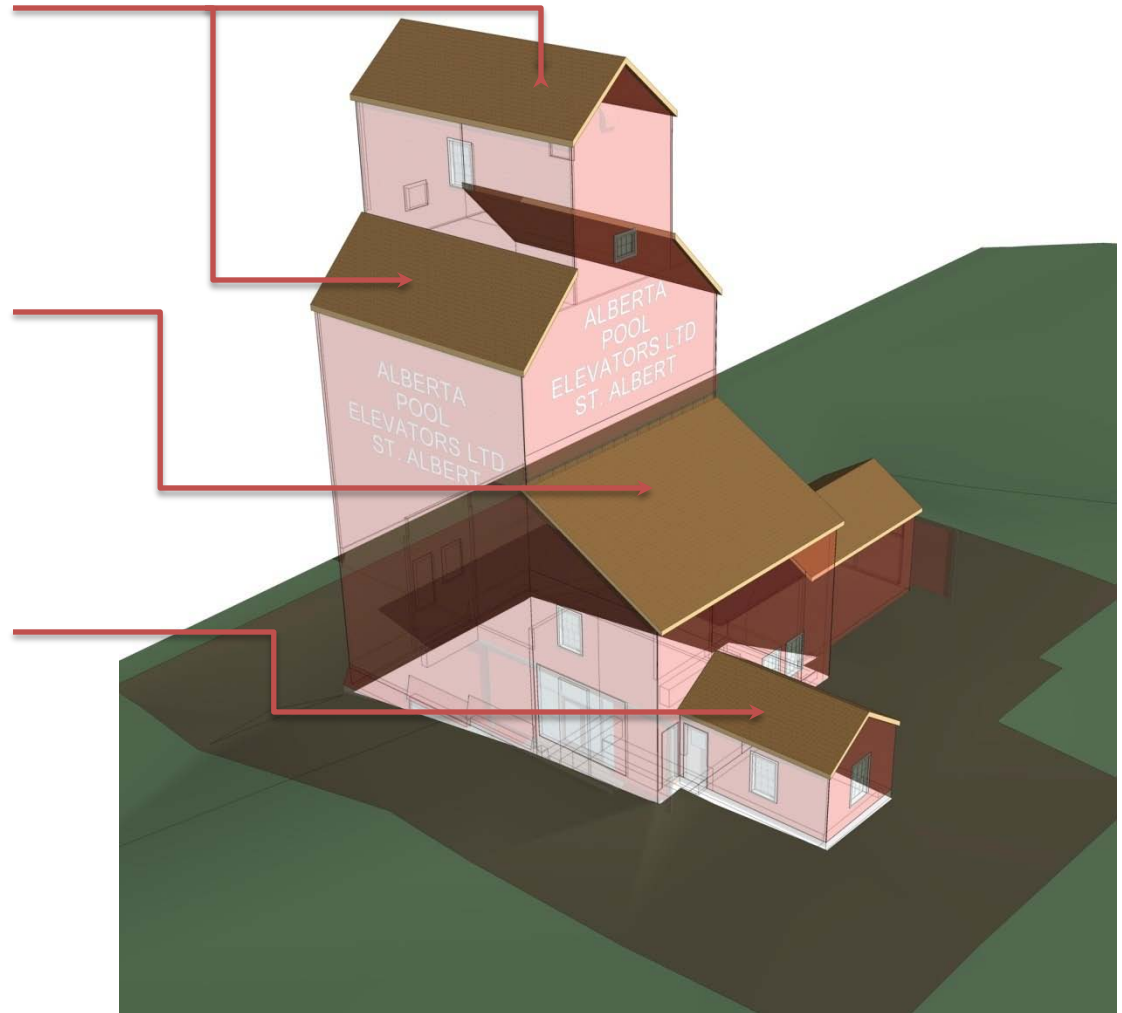


### ELEVATOR 1 – ROOF

Upper roof - Remove existing shingles, apply intumescent coating to roof sheathing, 2 layers of building paper and new shingles. Replace roof access hatches, replace flashings and fascia as necessary. Modify rafter ends for correct installation of fascia and shingles.

Drive shed roof - Remove existing shingles, apply intumescent coating to roof sheathing, 2 layers of building paper and new shingles, install ridge flashing, review fascia for installation of eaves trough, modify fascia and flashings if practical or install new.

Office roof - Remove existing shingles, apply intumescent coating to roof sheathing, 2 layers of building paper and new shingles, install ridge flashing, review fascia for installation of eaves trough, modify fascia and flashings if practical or install new.





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### ELEVATOR 1 – INTERIORS

Clean upper areas of elevator to remove dust and pigeon droppings

Clean cribbing, sheathing and wall studs at second floor, prep and apply intumescent coating

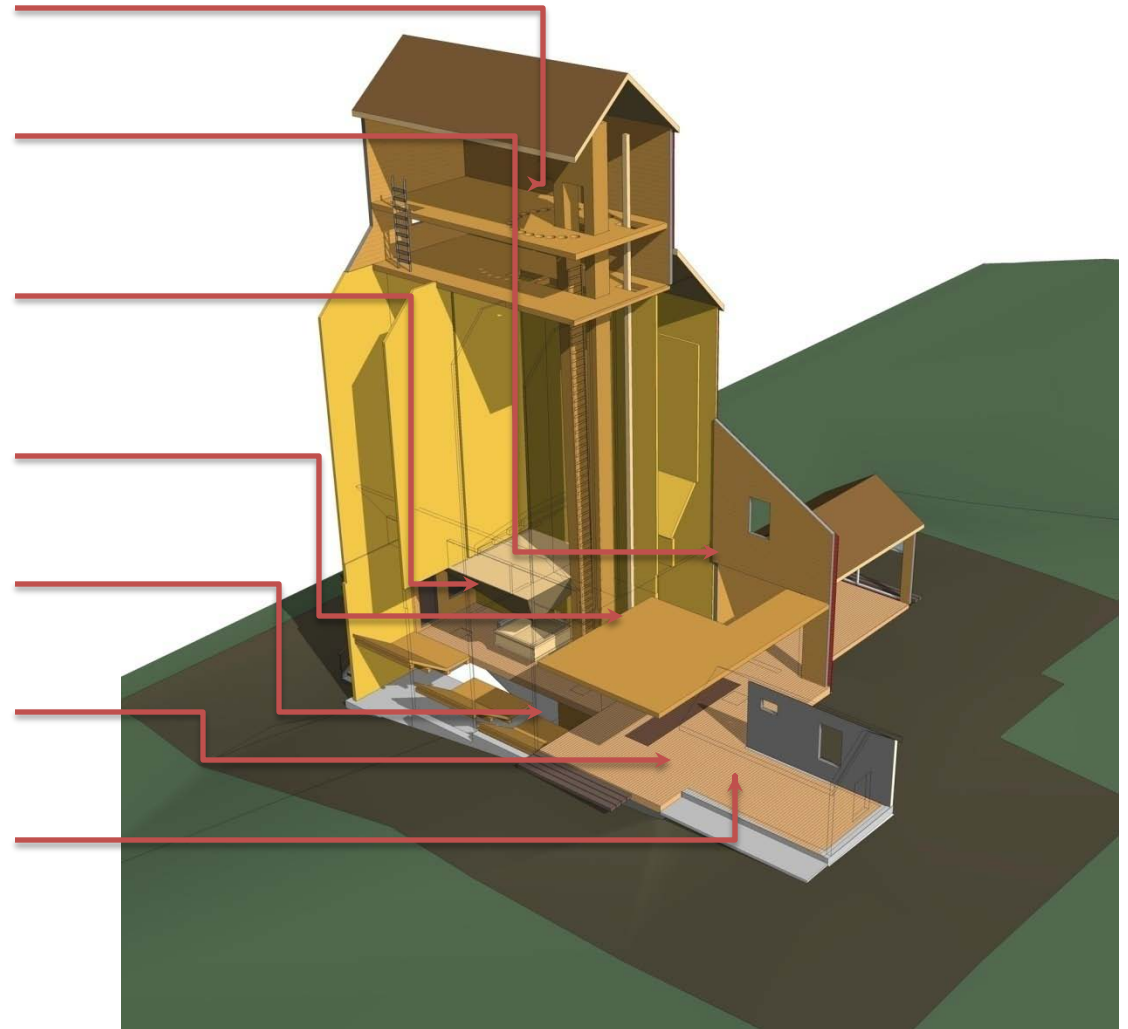
Clean cribbing, sheathing and wall studs in area of hopper scale and grain storage bins, prep and apply intumescent coating

Allowance for upgrades to access to second floor

Clean cribbing, sheathing and wall studs in drive shed, prep and apply intumescent coating

Allowance to re-create grain agent working area, storage cupboards tack boards

Allowance for reinstatement of wall and ceiling panels to office, repair / replacement of floor and attachment of wall cupboards







## ST ALBERT HERITAGE SITE FUNCTIONAL PLAN PHASE 1

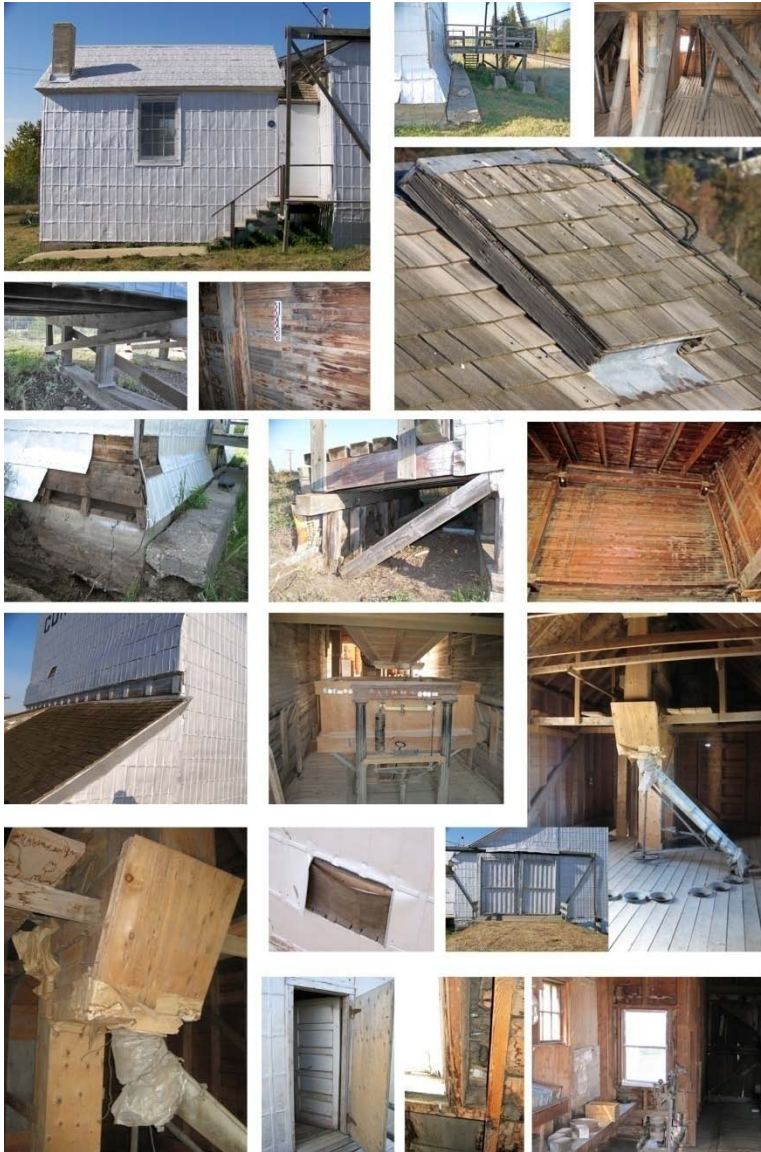
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### ELEVATOR 2 – CONDITION ASSESSMENT

Elevator 2, the 1906 Alberta Grain Company Elevator is in very good condition given the buildings age. The metal cladding has helped to shield the building from the ingress of rain and the observed effects on the wooden structure are reduced. There are however a number of areas of concern that require interventions to ensure the longevity of the building related to the structure itself.

The building has a slight lean that needs to be addressed. It is unknown if this occurred when the building was raised in 1937 or if the situation has progressively deteriorated. The building is not in any immediate danger but during the course of the restoration the foundations under the grain storage bins will be modified to prevent further distress to the building. The eastern portion of the drive shed roof also needs attention to correct the deformation caused by the sinking of the support post in the north east corner.





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### CONSERVATION PLAN – GENERAL & SPECIFIC GOALS

The ultimate aim of the Arts and Heritage Foundation is to restore the elevators to working condition so that a full and thorough interpretation of the inner workings of the elevator can be presented to visitors. The immediate goal of this project has to be the long term preservation of the elevator and the conservation plan is geared to support this primary goal. Works are arranged to mitigate against future physical deterioration of the elevator and remove potential threats.

The priorities for this project are summarized as

- Thorough inspection of concealed foundations and support structures
- Stabilization of foundations to prevent further deformation of structure including underpinning of foundation under grain storage bins
- Repair of grade beams and foundations to office and drive aisle
- Repair of roof beam, beam over drive shed door and new support to post of drive shed
- Inspection of stud framing, sheathing and cribbing with repair and replacement as necessary and reattachment of metal siding
- Rehabilitation, restoration and re-creation of all windows
- Replacement of shingle roofs and rehabilitation of metal roofs including fascias and new eaves trough / downspouts
- Reconstructing access stair and sidewalk. Stair to be installed to meet Code.
- Reconstructing loading platform with appropriate handrails and structural bracing.
- Repainting the elevator





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### ELEVATOR 2 – SITE & LANDSCAPING



Clear site 20'-0" from building, re-grade for positive drainage, install filter cloth and gravel

Deconstruct approaches to drive shed, replace / repair damaged wood, replace driving surface

Remove concrete sidewalk and stair, install 3 new piles, construct new wooden sidewalk and stair

Replace loading platform

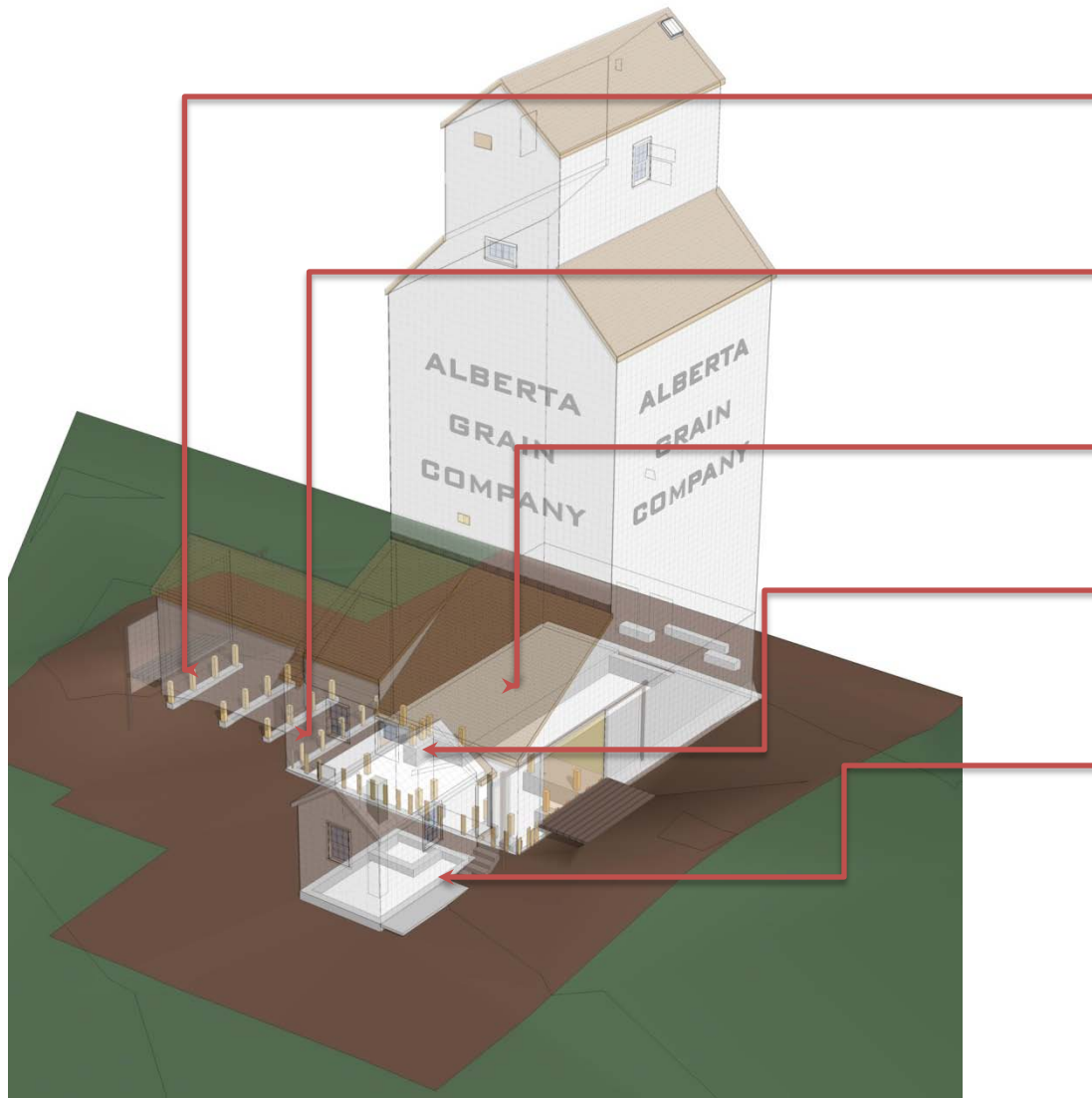


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### ELEVATOR 2 – FOUNDATIONS



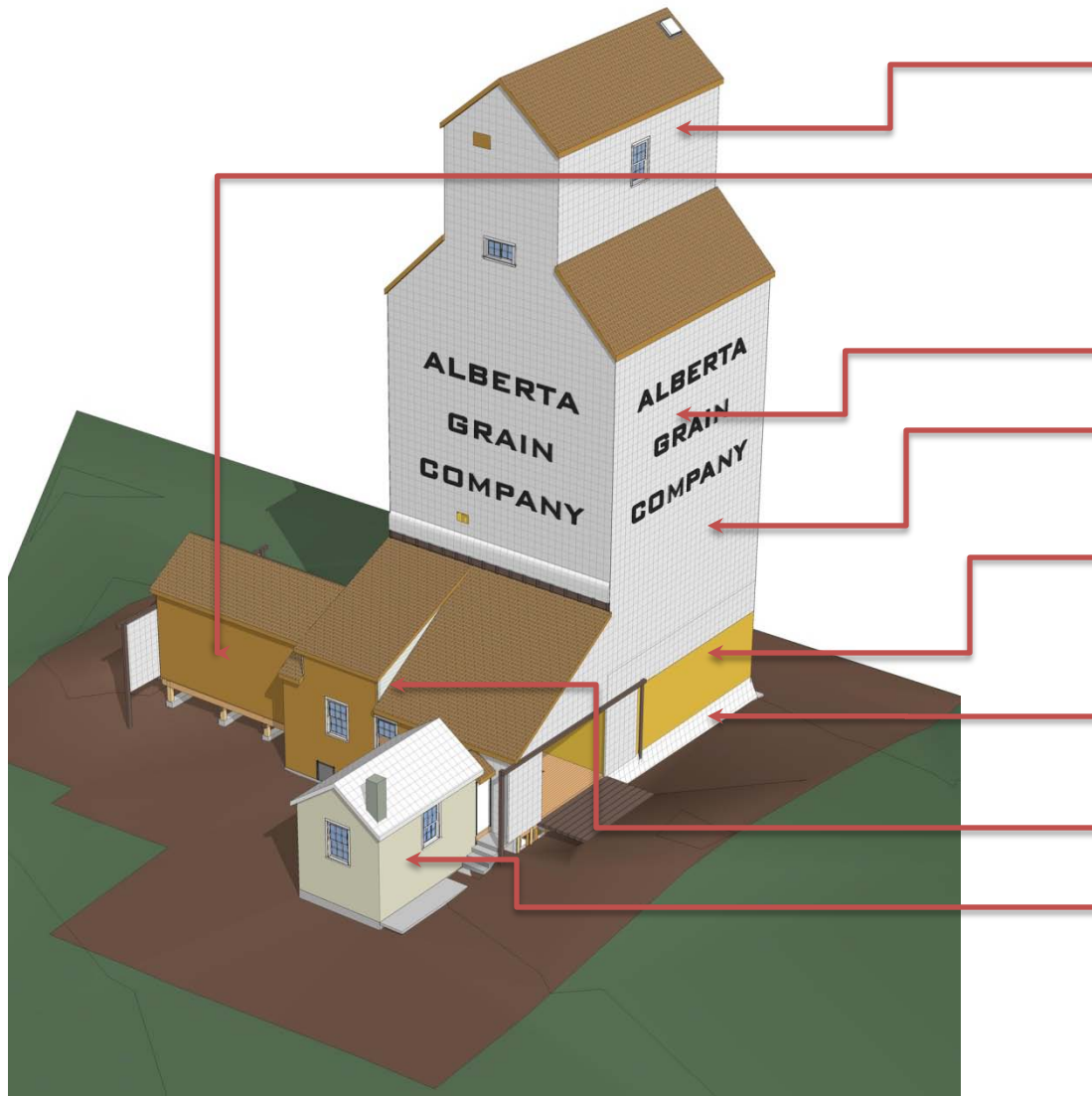
- Disassemble supports to west drive shed, repair / replace as necessary and treat with preservative and re-construct.
- Allowance for investigation and remedial measures associated with deformation of wall at W11
- Stabilize foundation under grain storage bins to prevent further deformation of the building
- Repair / replacement of structural elements to drive shed.
- Replace foundation under office





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### ELEVATOR 2 – EXTERIOR WALLS

Repair of sheathing to upper areas of elevator  
- assume 15% replacement for budget purposes

Removal of cladding to drive shed for  
intumescent coating, minor repairs to openings  
at doors and windows

Repaint elevator and signage

Cribbing replacement - assume 5%  
replacement of exterior for budget purposes

Carefully remove cladding for lower 10'-0 to  
elevator to inspect cribbing and sill plates and  
re-instate following remedial works

Repair and replacement of skirt and installation  
of wire mesh

Replace bevel siding on drive shed roof gables

Removal of cladding to office for intumescent  
coating, repair / replacement of sheathing,  
minor repairs to cladding at openings at doors  
and windows

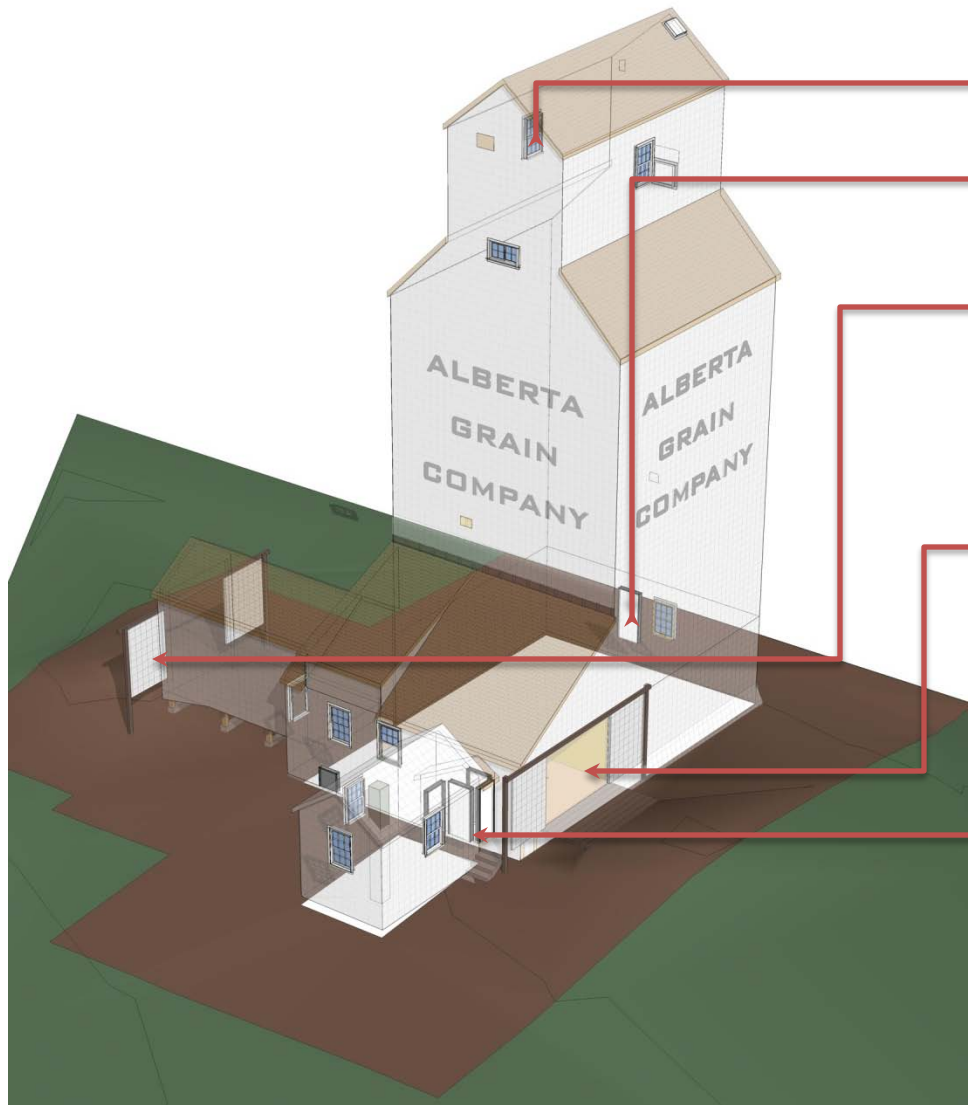


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### ELEVATOR 2 – EXTERIOR WINDOWS & DOORS



Refurbish and replace existing windows

Replace door to loading platform with steel faced solid core door in pressed metal frame.

Replace west drive shed doors, install 2 new piles to support posts, replace posts, support beam and braces, refurbish sliding door mechanism

Replace east drive shed doors, install new support beam to sliding door mechanism and support posts. Refurbish sliding door mechanism.

Replace door to office with steel faced solid core door in pressed metal frame



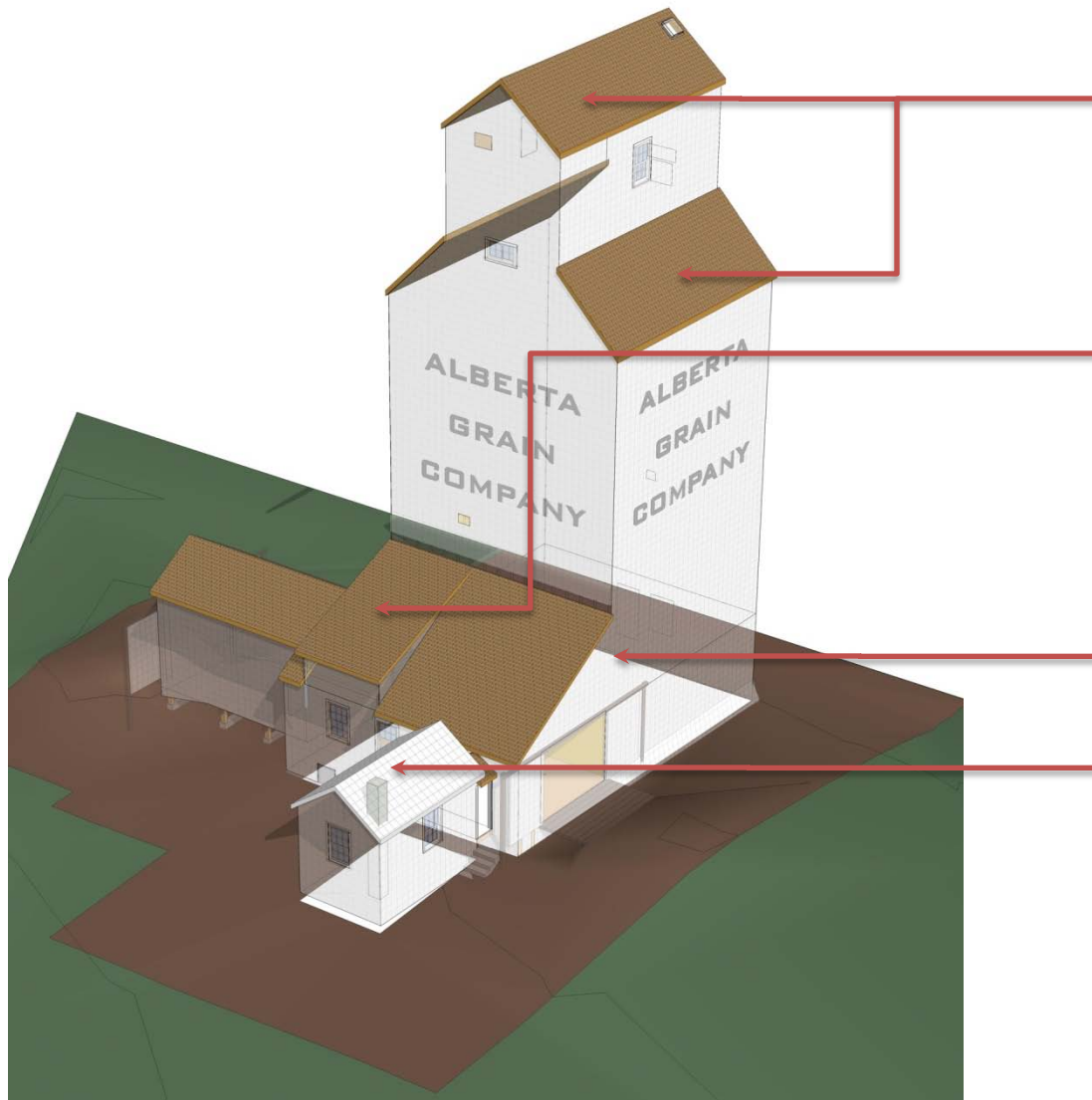


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### ELEVATOR 2 – ROOF



Upper roof - Remove existing shingles, apply intumescent coating to roof sheathing, 2 layers of building paper and new shingles. Replace roof access hatches and install cover to vent. Replace flashings and fascia as necessary

Drive shed roof - Remove existing shingles, apply intumescent coating to roof sheathing, 2 layers of building paper and new shingles, install ridge flashing, review fascia for installation of eaves trough, modify fascia and flashings if practical or install new.

Structural upgrade to eastern portion of roof, support post and roof beam.

Office roof - Inspect metal roofing, review fascia and flashings for re-use, install new eaves trough and downspouts. Repoint chimney and repair flashing

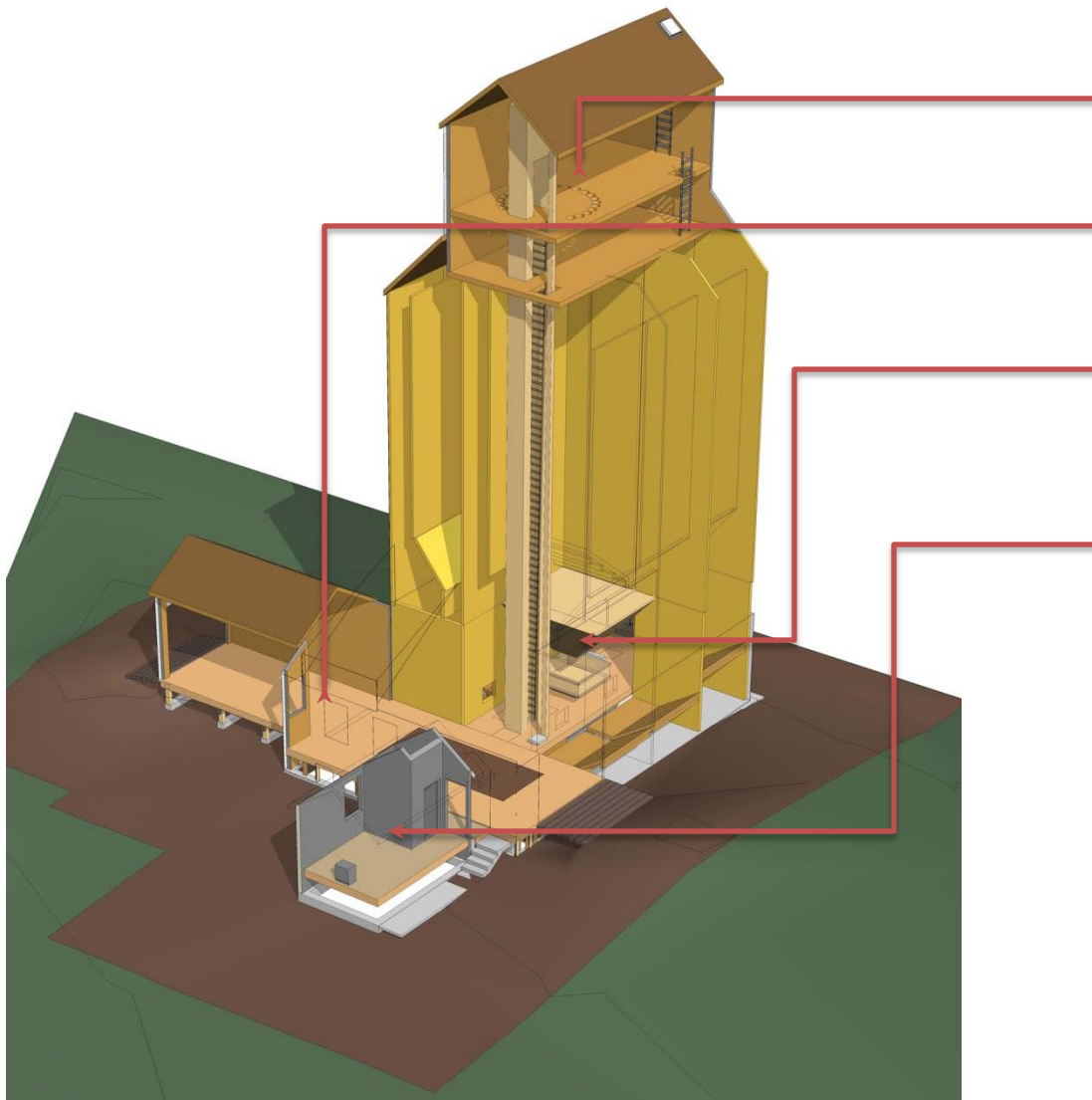


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### ELEVATOR 2 – INTERIORS



Clean upper areas of elevator to remove dust and pigeon droppings

Clean cribbing, sheathing and wall studs in drive shed, prep and apply intumescent coating

Clean cribbing, sheathing and wall studs in area of hopper scale and grain storage bins, prep and apply intumescent coating

Allowance for minor repair to office following restoration works to windows, paint touch up, floor cleaning and minor repair and intumescent coating.





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## ELEVATOR 1 – SITE & LANDSCAPING







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## ELEVATOR 1 – FOUNDATIONS





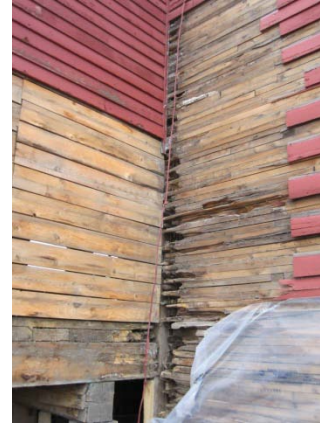


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### ELEVATOR 1 – EXTERIOR WALLS





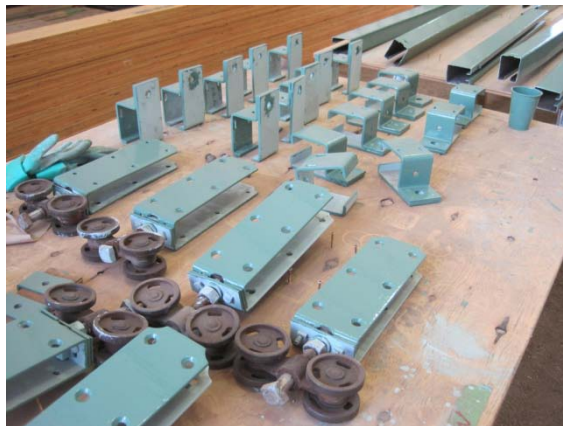


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## ELEVATOR 1 – WINDOWS AND DOORS







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## ELEVATOR 1 – ROOF







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## ELEVATOR 1 – INTERIOR







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## ELEVATOR 2 – SITE & LANDSCAPING







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## ELEVATOR 2 – FOUNDATIONS







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## ELEVATOR 2 – EXTERIOR WALLS







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### ELEVATOR 2 – WINDOWS AND DOORS







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## ELEVATOR 2 – INTERIORS







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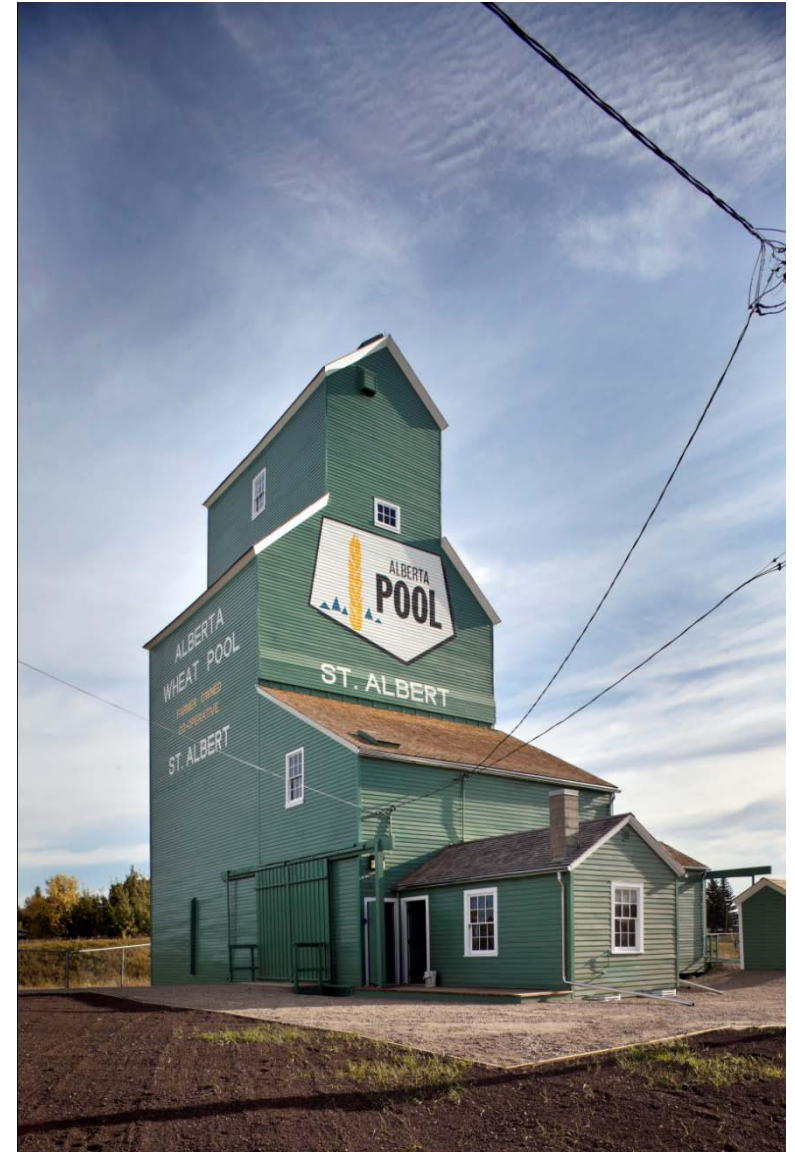
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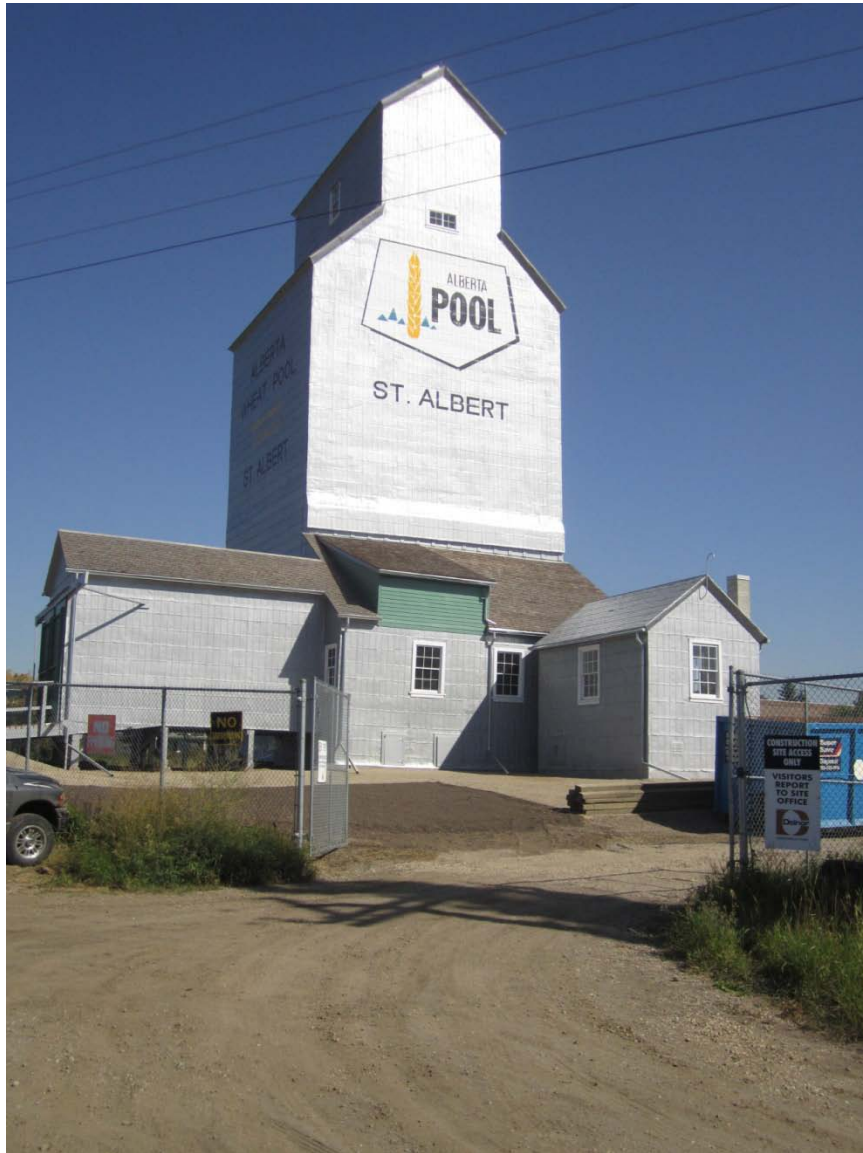
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