



Planning and Development Technical Reporting Guidelines

Important Notes:

- *Guidelines are subject to updates on a regular basis.*
- *Guidelines are provided for general reference purposes only. Developers shall verify all technical reporting requirements with Town Planning and Development Staff on a case-by-case basis.*

Historical Resource Act (HRA) Clearance

The need to preserve and study historic resources in Alberta is outlined within the Historical Resources Act. Most types of developments on both private and public lands are required to obtain formal approval under the HRA prior to construction. In some instances, a Historic Resource Impact Assessment (HRIA) is required before approval can be issued.

Resources:

- [Historical Resources Act](#)
- [Alberta Government Web Page – Historical Resources Act approval for a development project](#)
- [Alberta Land Use Procedures Bulletin – Subdivision Historical Resources Act Compliance](#)
- [Alberta Listings of Historic Resources: Instructions for Use](#)
- [Alberta Culture – Online Permitting and Clearance \(OPAC\) System](#)

Area Structure Plan (ASP) / Area Redevelopment Plan (ARP)

As an initial planning tool, complete a review of the Alberta Listing of Historical Resources to verify if any lands with an assigned Historical Resource Value (HRV) are present in the development area.

As recommended by Alberta Culture and Status of Women, a HRA Clearance submission (Historical Resources Application), via the Alberta Culture Online Permitting and Clearance (OPAC) System, is required prior to approval of an ASP/ARP. The outcome of Historical Resources Application review will provide the applicant with information about historic resource concerns in the planning areas, if applicable, and may offer guidance for developing strategies to address these concerns.

Outline Plan (OP)

The HRA Clearance submission made at ASP/ARP will provide direction for any additional requirements relating to the HRA. If HRA Clearance has been granted at the previous ASP/ARP stage an additional HRA Clearance submission is typically not required at the OP Stage; however, may be requested at the discretion of the Town.

Subdivision

The HRA Clearance submission made at ASP/ARP will provide direction for any additional requirements relating to the HRA. If HRA Clearance has been granted at the previous ASP/ARP stage an additional HRA Clearance submission is typically not required at the Subdivision Stage; however, may be requested at the discretion of the Town.

Environmental Site Assessment (ESA)

The Environmental Protection and Enhancement Act prohibits the release of substances in an amount that causes, has caused or may cause adverse effect. Furthermore, whenever a release of a substance causes, has caused or has the potential to cause an adverse effect, appropriate remedial measures must be taken. An ESA is often the first step in determining whether a substance release has the potential to cause an adverse effect, and what corresponding remedial measures must be implemented in order to protect the environment.

The Alberta Environmental Site Assessment Standard provides a summary of minimum requirements for ESA in Alberta. In general, the ESA process is implemented in phases as follows:

Phase 1 ESA

Involves an evaluation of historical and current land use. Site reconnaissance and other information gathering techniques assess whether a site is or may be subject to contaminants of potential concern and/or areas of potential environmental concern. A Phase 1 ESA does not include a sampling and analysis component.

Phase 2 ESA

Typically completed if merited by the findings of a Phase 1 ESA. Phase 2 ESA is intended to obtain quantitative analytical information regarding the nature of contaminants of potential concern and delineation of areas of potential environmental concern, and is used to assess risks and design remedial options. Data collected during a Phase 2 ESA must be compared to appropriate soil, sediment, surface water, and groundwater remediation guidelines. Exceedance of guidelines is a trigger for focused remediation, risk management options, or further site and risk characterization of contaminants of potential concern.

Resources:

- [Alberta Environmental Site Assessment Standard](#)

Area Structure Plan (ASP) / Area Redevelopment Plan (ARP)

A Phase 1 ESA is typically recommended at the ASP/ARP Stage, as it is generally most efficient to assess the development area at a larger scale early in the development process. If warranted, more complex Phase 2 ESA's can be completed later in the planning and development process.

Outline Plan (OP)

If not completed during the ASP/ARP stage, a Phase 1 ESA is typically required at the OP stage. Should the Phase 1 ESA identify any potential contaminants and/or areas of environmental concern, a Phase 2 ESA should also be completed at the OP Stage as well.

Subdivision

If a Phase 1 ESA and Phase 2 ESA (if applicable) has been provided at the previous ASP/ARP and OP Stages, additional ESA is typically not required at the Subdivision stage; however, may be requested at the discretion of the Town.

Environmental Impact Assessment (EIA)

Provincially, Alberta Environment administers environmental assessments under the Environmental Protection and Enhancement Act and Water Act. EIA is required where a proposed industrial project could result in significant adverse environmental effects. The environmental assessment process allows companies and government to examine the effects that the proposed project may have on the environment and determine if the project is of public interest. The Environmental Assessment (Mandatory and Exempted Activities) Regulation provides a list of proposed activities that are both subject and exempt to the Act; however, activities not listed in the regulation are considered discretionary and may also require an EIA under the Act.

Federally, the Impact Assessment Agency of Canada directs impact assessments for major projects like mines, pipelines, and dams under the Impact Assessment Act. The Physical Activities Regulations defines the projects and activities that are subject to the Act.

Typically, the Town does not require EIA to be completed as part of the Planning and Subdivision Process, but rather the Development Permitting process if applicable.

Resources:

- [Alberta Environment Web Page – Environmental Impact Assessments](#)
- [Environmental Protection and Enhancement Act – Environmental Assessment \(Mandatory and Exempted Activities\) Regulation](#)
- [Government of Canada Web Page – Impact Assessment Agency of Canada](#)
- [Canada Physical Activities Regulation](#)

Biophysical Impact Assessment (BIA)

Unlike EIA or ESA, BIA is not regulated by federal or provincial law; however, BIA is an important tool utilized to assess and evaluate potential biological and ecological impacts of a proposed development. BIA is used to identify valued biotic and abiotic features within the development area, assess and evaluate the impacts of development on these features, and provide corresponding site-specific mitigation strategies with residual impacts.

When required BIA shall be authenticated by a Professional Biologist and generally consist of the following scope:

- 1) Project Description: Include the location, type, and purpose of the proposed development. Summarize the type of infrastructure proposed to be constructed.
- 2) Regulatory Requirements: Identify and describe potential regulatory requirements and approvals impacting the development. Consider legislation, such as the Migratory Birds Act, Fisheries Act, Species at Risk Act, Water Act, Historical Resources Act, etc.
- 3) Biophysical Overview: Identify the Study Area, including the Local Study Area and Regional Study Area. Review and describe the existing biotic and abiotic features, including vegetation, wildlife, soils, terrain, and wetlands; environmental sensitive and management areas; and historical resources and traditional use areas.
- 4) Impact Assessment: Identify Valued Components (VC's) on the basis of above scope items, then determine and assess potential impacts of the proposed development. Utilize the assessment methodology prescribed by the Impact Assessment Agency of Canada, unless approved otherwise.
- 5) Proposed Mitigation and Compensation: Provide best management practices and general mitigation measures to mitigate impacts, during construction and operation of the proposed development site, to the VC's identified in the previous scope item. Furthermore, if applicable, identify any recommended compensation measures resulting from impacts to VC's.
- 6) Conclusion and Recommendation: Summarize the BIA findings and recommendations. Identify any monitoring and/or inspections strategies recommended during constructing of the proposed development.

Area Structure Plan (ASP) / Area Redevelopment Plan (ARP)

BIA is often required should there be any biological and ecological concerns within the ASP/ARP area, and can also be a valuable tool to identify potential wetlands for the purposes of the Alberta Wetland Policy. If required, the BIA is typically recommended at the ASP/ARP stage, as it is generally most efficient to assess the development area at a larger scale early in the development process.

Outline Plan (OP)

If required, BIA is typically completed at the ASP/ARP stage; however, may be deferred to the OP Stage at the Town's discretion.

Subdivision

If required, BIA is typically completed at the ASP/ARP stage; however, may be deferred to the Subdivision Stage at the Town's discretion.

Wetland Inventory and Assessment

Wetlands are natural occurring or constructed to replacement of natural occurring land saturated with water long enough to promote the formation of water altered soils, growth of water tolerant vegetation, and various kinds of biological activity that are adapted to the wet environment. The goal of the Alberta Wetland Policy, on the basis of the Water Act, is to conserve, restore, protect, and manage Alberta's wetlands to sustain the benefits they provide to the environment, society, and the economy. The policy applies to natural wetlands, restored natural wetlands, and wetlands constructed for the purposes of wetland replacement.

All newly proposed developments within the Town shall consider a Wetland Inventory and Assessment process as follows:

Wetland Identification and Delineation Assessment (WIDA)

All new development areas must complete a WIDA, in accordance with the Alberta Wetland Identification and Delineation Directive, to identify, characterize, and delineate wetlands and water features that may be located within proposed development areas. The Town requires WIDA to be completed by a Qualified Wetland Science Practitioner, as defined by the *Professional Responsibilities in Completion and Assurance of Wetland Science, Design and Engineering Work in Alberta* Professional Practice Standard.

Wetland Assessment and Impact Report (WAIR)

Should the WIDA identify any wetlands within the proposed development area, a WAIR shall be required in accordance with the Alberta Wetland Assessment and Impact Report Directive. Wetland assessments shall be undertaken by Qualified Wetland Science Practitioners to identify a wetland and determine its class using the Alberta Wetland Classification System, confirm the delineation of the boundary of a wetland, and assess their relative value using.

Wetland Assessment and Impact Form (WAIF)

WAIFs are similar to WAIRs; however, are not typically relevant to permanent developments, but rather short-term activities and activities with minimal permanent impact.

Regulatory Authorizations

In addition to the above, proponents proposing work within a wetland must first provide notification and obtain approval under the Water Act, Environmental Protection and Enhancement Act, and/or Public Lands Act prior to commencing work.

Resources:

- [Alberta Government Web Page – Alberta Wetland Policy Implementation](#)

Area Structure Plan (ASP) / Area Redevelopment Plan (ARP)

As per the Alberta Wetland Identification and Delineation Directive, WIDA should be conducted as early in the planning stage as possible, on the basis that wetlands are most evident before any development planning, engineering, or land-use changes have occurred. Accordingly, the Town typically requires a WIDA to be completed at the ASP/ARP stage.

WAIRs are generally only necessary should the WIDA identify wetland(s) within the proposed development area. If required, it is also recommended to complete WAIR's at the ASP Stage.

Outline Plan (OP)

If not completed during the ASP/ARP stage, a WIDA and WAIR (if required) is typically required at the OP stage.

Subdivision

If not completed during the ASP/ARP or OP stage, a WIDA and WAIR (if required) is typically required at the Subdivision stage.

Geotechnical Site Evaluation

Geotechnical Site Evaluation is required to identify subsurface conditions impacting development and to establish recommendations for construction. It is recommended that initial geotechnical reports include sufficient site investigations and recommendations to reduce the requirement for additional reporting prior to construction occurring.

When required Geotechnical Site Evaluations shall be authenticated by an Engineering Professional and generally consist of the following scope:

- 1) Geotechnical Field and Laboratory Work:
 - a) Provide adequate boreholes, standpipes, and soil classification test to determine existing site conditions, groundwater, and engineered properties of existing material. Borehole logs and locations are required, and Atterberg and Proctor Test results are suggested for construction purposes.
 - b) Summarized existing site conditions, such as surface features, soil stratigraphy, and ground water conditions.
- 2) Geotechnical Recommendations for Construction:
 - a) Site Development: Address various types of site development considerations, including, topsoil depth and stripping; lot grading; backfill materials and compaction; construction excavations; groundwater mitigation; trench backfill, compaction and frost protection; storm pond liners; concrete; etc.
 - b) Pavement Structures: Provide recommendations for subgrade preparation depth and compaction; subsurface drainage; and pavement design and construction for various road classifications.
 - c) Building Foundations: Address various types of building foundation considerations, including design parameters, foundation drainage, seismic design, frost protection, concrete types, radon mitigation, etc. Address the need for lot level bearing certificates.
 - d) QC and QA: Recommendations for site work, to ensure compliance with Town Engineering Standards.
- 3) Additional information pertinent to the site and type of development, such as a slope stability assessment where slopes greater than 15% are present.

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Geotechnical Site Evaluation is typically not required at the ASP/ARP Stage; however, may be requested at the discretion of the Town. Should geotechnical reporting not be completed at this stage, available historical geotechnical reports related to the development area should be reviewed and referenced for preliminary planning purposes.

Outline Plan (OP)

Geotechnical Site Evaluation is typically required no later than the OP Stage. If a full scope Geotechnical Site Evaluation has been provided at the previous ASP/ARP Stage, additional reports/evaluations are typically not required at the OP Stage; however, may be requested at the discretion of the Town.

Subdivision

If a full scope Geotechnical Site Evaluation has been provided at the previous ASP/ARP or OP stage, additional reports/evaluations are typically not required at the Subdivision Stage; however, may be requested at the discretion of the Town.

Site Utility Servicing

A two-stage method for Site Utility Servicing reporting has been established for the development and planning process. The purpose of the two-stage method, is to allow Developers the flexibility to limit initial reporting requirements early in the planning process, should they choose, while providing comprehensive analysis to confirm the viability of the development prior to subdivision endorsement.

All Site Utility Servicing reporting must be completed by an Engineering Professional, and include considerations for future demands of the proposed development; and, if applicable, adjacent developments anticipated beyond the development area.

Site Utility Servicing Strategies

Site Utility Servicing Strategies are utilized to identify internal utility networks, stormwater management, and necessary off-site upgrades required to service the development area. Site Utility Servicing Strategies typically involve the following work scope:

Water Distribution Servicing Strategy:

- 1) Description with figures of the conceptual internal municipal water distribution utility networks, including pressure zones and connections to existing municipal water utility infrastructure.
- 2) If applicable, conceptual off-site municipal water upgrade requirements to service the development, based upon currently available information, such as the Town of Coaldale Infrastructure Master Plan.
- 3) Conceptual land use summary of expected average day, maximum day, peak hour, and fire flow requirements.
- 4) Conceptual strategy for provision of fire protection, consistent with the Town's current 10 Minute Response Area and applicable regulatory Fire and Building Codes.
- 5) Policy communicating that all site water utility servicing shall be consistent with relevant Town polices, bylaws, and studies including the Water Bylaw 762-R-07-19, and the Infrastructure Master Plan; City of Lethbridge Design Standards; and Alberta Environment and Parks Standards and Guidelines for Municipal Waterworks Systems.

Wastewater Collection Servicing Strategy:

- 1) Description with figures of the conceptual internal municipal wastewater collection utility networks, including tentative catchment boundaries, locations of lift station and force mains, and connections to existing municipal wastewater utility infrastructure.
- 2) If applicable, conceptual off-site municipal wastewater system upgrade requirements to service the development, based upon currently available information, such as the Town of Coaldale Infrastructure Master Plan.
- 3) Conceptual land use summary of expected dry weather, peak dry weather, wet weather, and inflow/infiltration flows.
- 4) Policy communicating that all site wastewater collection utility servicing shall be consistent with relevant Town polices, bylaws, and studies including the Sewer Bylaw 763-R-07-19, and the Infrastructure Master Plan;

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City of Lethbridge Design Standards; and Alberta Environment and Parks Standards and Guidelines for Municipal Wastewater Systems.

Stormwater Management Strategy:

- 1) Description with figures of the existing/undeveloped stormwater catchment boundaries, including off-site contributing areas.
- 2) Description with figures of the conceptual major stormwater conveyance system, including tentative catchment boundaries, off-site contributing areas, and proposed connections to downstream stormwater systems.
- 3) Description with figures of the conceptual minor stormwater conveyance system, including tentative catchment boundaries and proposed connections to existing stormwater systems.
- 4) If applicable, conceptual off-site municipal stormwater upgrade requirements to service the development, based upon currently available information, such as the Town of Coaldale Infrastructure Master Plan and Malloy Drain Master Drainage Plan.
- 5) Conceptual land use summary of expected minor and major system flows, and stormwater management facility sizing.
- 6) Policy stating stormwater management shall be consistent with relevant Town polices, bylaws, and studies including the Malloy Master Drainage Plan as per Water Act Approval File No. 00383892, Storm Bylaw 764-R-07-19, and the Town Infrastructure Master Plan; City of Lethbridge Design Standards; and Alberta Environment and Parks Standards and Guidelines for Municipal Storm Drainage Systems.

Third-Party Utility Servicing Strategy:

- 1) Description with figures of the conceptual third-party utility servicing for the provision of natural gas, electricity, and telecommunications, including connections to existing utility infrastructure.
- 2) Policy stating all site utility servicing shall be consistent with relevant Town polices, bylaws, and studies; and other relevant regulations.

Site Utility Master Servicing Plans

Site Utility Servicing Plans verify and expand upon the scope of applicable Site Utility Servicing Strategies. Site Utility Servicing Plans are completed to a greater level of detail, and typically involve the following work scope:

Water Distribution Master Servicing Plan:

- 1) Land use summary of average day, maximum day, peak hour, and fire flow requirements.
- 2) Computer modelled hydraulic network analysis for areas which have not been previously analyzed shall be coordinated with the Town. Typically, the Town will provide boundary conditions of the existing network; however, the proposed network analysis will be the responsibility of the developer.
- 3) Strategy for provision of fire protection, consistent with the Town's current 10 Minute Response Area and applicable regulatory Fire and Building Codes.
- 4) Impacts to existing water infrastructure. Provide a description, cost, and phasing plan for any off-site upgrades required to accommodate the development.
- 5) Phasing and trigger points for new water infrastructure.
- 6) Master Plan(s) summarizing the above scope items, including pressure zones, phasing plans, connection to existing systems, layout/sizing of the preliminary distribution system, oversize for future development, layout of hydrants, and layout/sizing of pressure stations.

- 7) Designs shall generally be consistent with relevant Town polices, bylaws, and studies including the Water Bylaw 762-R-07-19, and the Infrastructure Master Plan; City of Lethbridge Design Standards; and Alberta Environment and Parks Standards and Guidelines for Municipal Waterworks Systems.
- 8) Level of Service objectives should generally be consistent with the City of Lethbridge Design Standards, with any exceptions noted in the Town IMP.

Wastewater Master Servicing Plan:

- 1) Land use summary of dry weather, peak dry weather, wet weather, and inflow/infiltration flows.
- 2) Computer modelled or unit/area hydraulic network analysis. The required method of network analysis shall be reviewed with the Town. Typically, when computer modelled analysis is required, the Town will provide boundary conditions of the existing network; however, the proposed network analysis will be the responsibility of the developer.
- 3) Impacts to existing wastewater infrastructure. Provide a description, cost, and phasing plan for any off-site upgrades required to accommodate the development.
- 4) Phasing and trigger points for new wastewater infrastructure.
- 5) Preliminary Master Plan(s) summarizing the above scope items, including catchment areas; phasing plans; connection to existing systems; oversize for future development; and layout, sizing, and capacity (required and design) of the preliminary collection system, trunk lines, lift-stations and force mains.
- 6) Designs shall generally be consistent with relevant Town polices, bylaws, and studies including the Sewer Bylaw 763-R-07-19, and the Infrastructure Master Plan; City of Lethbridge Design Standards; and Alberta Environment and Parks Standards and Guidelines for Municipal Wastewater Systems.
- 7) Level of Service objectives should generally be consistent with the City of Lethbridge Design Standards, with any exceptions noted in the Town IMP.

Stormwater Management Master Servicing Plan:

- 1) Computer modelled or unit/area hydraulic analysis. The required method of analysis shall be verified with the Town on a case-by-case basis; however, in general the two methods include:
 - a) Tabulated City of Lethbridge Design Standard Unit/Area Hydraulic Analysis:
 - i) Major overland flow – 200L/sec/Ha
 - ii) Minor system flow – 90L/sec/Ha
 - iii) Wet Pond Storage – 1000m³/Ha for 0 release rate situations. Pond size is to be a minimum of 1.5 Ha of normal water level area but larger is preferred
 - b) Modelled Hydraulic Analysis:
 - i) Pre-development peak flows, volumes, and inflow/outflow locations by catchment area. Off-site flows must be considered.
 - ii) Post-development peaks flow, volumes, and inflow/outflow locations by catchment area. Off-site flows must be considered
 - iii) Design Storms and natural and developed conditions shall be derived from City of Lethbridge Design Standards.

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- iv) Typically, when computer modelled analysis is required, the Town will provide boundary conditions of the existing conveyance systems; however, analysis of the proposed works will be the responsibility of the developer
- 2) Identify Phasing and trigger points for new stormwater infrastructure.
- 3) Identify any impacts to existing stormwater infrastructure. Provide a description, cost, and phasing plan for any off-site upgrades required to accommodate the development.
- 4) Preliminary Master Plan(s) summarizing the above scope items including:
 - a) Storm pond locations, extents, volumes (required and design), release rates, phasing plans, oversize for future development, makeup water supply, pumping stations, etc.
 - b) Major stormwater conveyance system and catchments, including off-site contributions; connections to downstream stormwater systems with release rates; oversize for future development; phasing plans; and layout, sizing, and capacity (required and design) of the conveyance system and pump stations.
 - c) Minor stormwater conveyance systems and catchments, including off-site contributions; connections to downstream stormwater systems with release rates; oversize for future development; phasing plans; and layout, sizing, and capacity (required and design) of the conveyance system and pump stations.
 - d) Emergency storage and/or overland spill paths.
- 5) Shall generally be consistent with relevant Town polices, bylaws, and studies including the Malloy Drain Master Drainage Plan as per Water Act Approval File No. 00383892, Storm Bylaw 764-R-07-19, and the Town Infrastructure Master Plan (IMP); City of Lethbridge Design Standards; and Alberta Environment and Parks Standards and Guidelines for Municipal Storm Drainage Systems.
- 6) Level of Service objectives should generally be consistent with the City of Lethbridge Design Standards. Required exceptions are noted with the Town IMP and Malloy Drain Master Drainage Plan.

Third-Party Utility Master Servicing Plan:

- 1) Identify any impacts to existing infrastructure.
- 2) Preliminary Master Plan(s) showing third-party utility servicing for the provision of natural gas, electricity and telecommunications, including oversize for future development and connections to existing utility infrastructure.
- 3) Designs shall generally be consistent with relevant Town polices, bylaws, and studies; and other relevant regulations.

Resources:

- [Town of Coaldale Infrastructure Master Plan \(IMP\)](#)
- [Town of Coaldale, County of Lethbridge, and St Mary River Irrigation District Malloy Drain Master Drainage Plan](#)
- [Town of Utility Bylaws, including Storm Bylaw, Sewer Bylaw, and Water Services Bylaw](#)
- [City of Lethbridge Design Standards](#)
- [Alberta Environment and Parks Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems](#)

Area Structure Plan (ASP) / Area Redevelopment Plan (ARP)

Site Utility Servicing Strategies are typically required at the ASP/ARP Stage to efficiently assess the development area at a larger scale early in the development process. More complex Site Utility Master Servicing Plans can be completed later in the planning and development process, or in place of Site Utility Servicing Strategies.

Outline Plan (OP)

Site Utility Master Plans are typically required at the OP Stage; however, may be differed at the Town's discretion.

Subdivision

Both Site Utility Servicing Strategies and Site Utilities Master Plans are typically completed prior to the Subdivision Stage.

Transportation Network Analysis

A two-stage method for Transportation Network Analysis reporting has been established for the development and planning process. The purpose of the two-stage method, is to allow Developers the flexibility to limit initial reporting requirements early in the planning process, should they choose, while providing comprehensive analysis to confirm the viability of the development prior to subdivision endorsement.

All Transportation Network Analysis must be completed by a Transportation Engineering Professional, and include considerations for future demands of the proposed development; and, if applicable, adjacent developments anticipated beyond the development area.

Notwithstanding the above, requirements to notify Alberta Transportation for all ASP/ARP and subdivision applications within 1.6km of a highway centreline must be considered. Typically, Alberta Transportation will require a full scope TIA for all such developments, and accordingly must be consulted when determining the level of Transportation Network Analysis required for a development.

Transportation Network Strategies

Transportation Network Strategies are necessary to identify internal road and active-mode networks and classifications; traffic calming concepts; necessary off-site upgrades required to service the development area; and considerations for future demands beyond the development area. Transportation Network Strategies typically involve the following work scope:

- 1) Description with figures of the conceptual internal transportation networks, including tentative locations of arterial and major collector roads and intersections; general locations of active modes routes, transit routes, and connections to existing transportation networks.
- 2) If applicable, conceptual off-site transportation network upgrades requirements to service the development, based upon currently available information, such as the Town of Coaldale Infrastructure Master Plan, Transportation Master Plan, any related TIA's.
- 3) Conceptual land use summary of estimated peak trip generations.
- 4) Policy communicating that established transportation networks shall be consistent with relevant Town polices, bylaws, and studies including the Transportation Master Plan, Infrastructure Master Plan, and Parks and Trails Master Plan; City of Lethbridge Design Standards; and the TAC Geometric Design Guide for Canadian Roads, Manual of Uniform Traffic Control Devices for Canada, Canadian Traffic Signal Warrant Matrix Procedure, and Pedestrian Crossing Control Guide.

Transportation Impact Assessment (TIA)

TIA is necessary to verify and expand upon the scope of Transportation Network Strategies, and shall generally conform to Alberta Transportation's Traffic Impact Assessment Guidelines and City of Lethbridge Design Standards. For all developments within 1.6km of a highway centerline, Alberta Transportation must be consulted prior to the finalization of scope.

A basic summary of scope items includes:

- 1) Schematic representations of arterial and collector roads; intersections; and access points to the existing transportation network.
- 2) Identification of study intersections to be included in the TIA, in coordination with Town and AT staff.
- 3) Confirmation with Town of trip generation rates; trip distribution and assignments (internal and external); and background growth assumptions prior to analysis.
- 4) Schematic representation of proposed transit routes and active mode transportation networks.
- 5) Estimated trip generation data for various land use areas proposed.
- 6) Evaluate existing, 5-year, 10-year, 20-year, and full build out design horizons for background and projected traffic volumes. Must consider the planned build-out of adjacent developments.
- 7) Synchro and SimTraffic capacity analysis of study intersections, including recommendations for future improvements based on resulting operating conditions.
- 8) TAC Signal, Left Turn, Right Turn, Illumination, Pedestrian Warrant Analysis of analyzed intersections.
- 9) Recommendations for traffic calming and entryway features.
- 10) Safety and Collision Data Review.
- 11) Identify recommended road classifications, cross-sections, right-of-way widths, speed limits, and intersection types; which roads will provide on-street parking and those which direct property access should be limited; and TDG and truck route considerations. Include key on-site and adjacent off-site roads in analysis, and included estimate of AADT.
- 12) Identify any impacts to existing off-site transportation infrastructure. Provide a description, cost, and phasing plan for any off-site upgrades required to accommodate the development.
- 13) Shall generally be consistent with relevant Town polices, bylaws, and studies including the Transportation Master Plan, Infrastructure Master Plan, and Parks and Trails Master Plan; City of Lethbridge Design Standards; and the TAC Geometric Design Guide for Canadian Roads, Manual of Uniform Traffic Control Devices for Canada, Canadian Traffic Signal Warrant Matrix Procedure, and Pedestrian Crossing Control Guide.
- 14) Background information and modelling available from Watt Consulting Group. Previous TIA's in the area available from the Town.

Resources:

- [Town of Coaldale Infrastructure Master Plan \(IMP\)](#)
- [Town of Coaldale Transportation Master Plan \(TMP\)](#)
- [Town of Coaldale Parks and Trails Master Plan](#)
- [Town of Coaldale Infrastructure Municipal Development Plan \(MDP\)](#)
- [Alberta Traffic Impact Assessment Guidelines](#)
- [City of Lethbridge Design Standards](#)

Area Structure Plan (ASP) / Area Redevelopment Plan (ARP)

Transportation Network Strategies are typically required at the ASP/ARP Stage to efficiently assess the development area at a larger scale early in the development process. More complex TIA can be completed later in the planning and development process, unless required otherwise by Alberta Transportation or the Town.

Outline Plan (OP)

TIA is typically required at the OP Stage; however, may be differed at the Town's discretion, unless required otherwise by Alberta Transportation.

Subdivision

Both Transportation Network Strategies and TIAs are typically completed prior to the Subdivision Stage.