

**BY-LAW NO. 2752 OF THE
COUNTY OF GRANDE PRAIRIE NO. 1**

A by-law of the County of Grande Prairie No. 1 in the Province of Alberta, to adopt the attached CROSSROADS SOUTH PHASE 1 Area Structure Plan for SECTION 12-72-6-W6

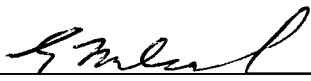
WHEREAS the Municipal Government Act, Statutes of Alberta, 2000, Chapter M-26. and amendments thereto, authorizes a Council to provide a framework for the subdivision and development of an area of land within the Municipality; and

WHEREAS the Council of the County of Grande Prairie No. 1 has properly notified the owners of land within the development area, pursuant to provisions of the Municipal Government Act, Statutes of Alberta, 2000, Chapter M-26, and amendments thereto.

NOW THEREFORE the Council of the County of Grande Prairie No. 1 duly assembled, hereby enacts as follows:

1. That this By-law shall be known as the "**CROSSROADS SOUTH PHASE 1 AREA STRUCTURE PLAN BY-LAW**".
2. That the CROSSROADS SOUTH PHASE 1 Area Structure Plan document is attached to this by-law as an appendix and forms part of this by-law.
3. That Bylaw 1346, the Highways 2 and 43 Area Structure Plan be amended by deleting section 12-72-6-W6;
4. That this by-law shall take effect on the date of its final passage by Council.

READ A FIRST AND SECOND TIME THIS 13~~th~~ **DAY OF** June **A.D. 2005.**




REEVE



COUNTY ADMINISTRATOR

READ A THIRD TIME AND FINALLY PASSED THIS 17~~th~~ **DAY OF** September **A.D. 2005** .



REEVE



COUNTY ADMINISTRATOR

**Crossroads South Phase 1
AREA STRUCTURE PLAN**

(Sec. 12-72-6-W6M)

Prepared by:

ISL

In association with



Beirsto Lehnars Ketchum Engineering Ltd.

**Bylaw No.: 2752
Adopted: September 12, 2005**

Office of Rob Penny
Assistant Deputy Minister
Transportation and Civil Engineering Division

2nd Floor, 4999 - 98 Avenue
Edmonton AB T6B 2X3
Phone: (780) 422-2184
Fax: (780) 415-1268

August 26, 2005

Mr. Bill Rogan
County Administrator
County of Grande Prairie No. 1
10001 84 Ave
CLAIRMONT AB T0H 0W0

Dear Mr. Rogan:

RE: CROSSROADS SOUTH PHASE 1 AREA STRUCTURE PLAN

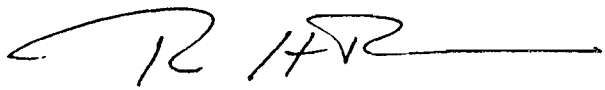
Alberta Transportation has reviewed the Crossroads South Phase 1 Area Structure Plan (ASP), regarding the future development in the County of Grande Prairie No. 1, located adjacent to Highways 2 and 43. The ASP addresses the department's concerns and is approved to meet the requirements of Section 14 of the Subdivision and Development Regulation.

Please forward a copy of the ASP once it has received third reading and the approval of council to our Operations Manager in Grande Prairie, Tom Williams, at the following address:

Alberta Infrastructure and Transportation
1st Floor, Provincial Building
10320 - 99 Street.
Grande Prairie AB T8V 6J4

The department supports continued co-operation on planning matters between the County of Grande Prairie No. 1 and Alberta Infrastructure and Transportation.

Sincerely,



Rob Penny, P.Eng.
Assistant Deputy Minister
Transportation and Civil Engineering

cc: Tom Williams

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1.0 INTRODUCTION

1.1 Purpose of Plan

The Crossroads South Phase 1 Area Structure Plan has been prepared to provide a framework for future development of a section of land north of the City of Grande Prairie in the County of Grande Prairie No. 1.

The primary objective of this Plan is to provide a framework for the development of the subject lands for commercial and industrial purposes in a manner that is consistent with the goals, objectives and policies of the County of Grande Prairie No. 1. In addition, as the Plan area fronts onto two highways, the requirements of Alberta Infrastructure and Transportation need to be accommodated. The Plan establishes the future land use and circulation pattern proposed for the site, and provides details respecting proposed servicing for the area.

This Area Structure Plan has been prepared in accordance with the Municipal Government Act, the Subdivision and Development Regulation, and the County of Grande Prairie Municipal Development Plan.

1.2 Plan Area

The land affected by this Area Structure Plan is located at Four Mile Corner, with the south boundary of the area being 0.8 km north of the City of Grande Prairie as illustrated in Map 1. The Plan area consists of four quarter sections of land totaling approximately 260 ha as outlined in Table 1. The policies of this plan will apply to this area.

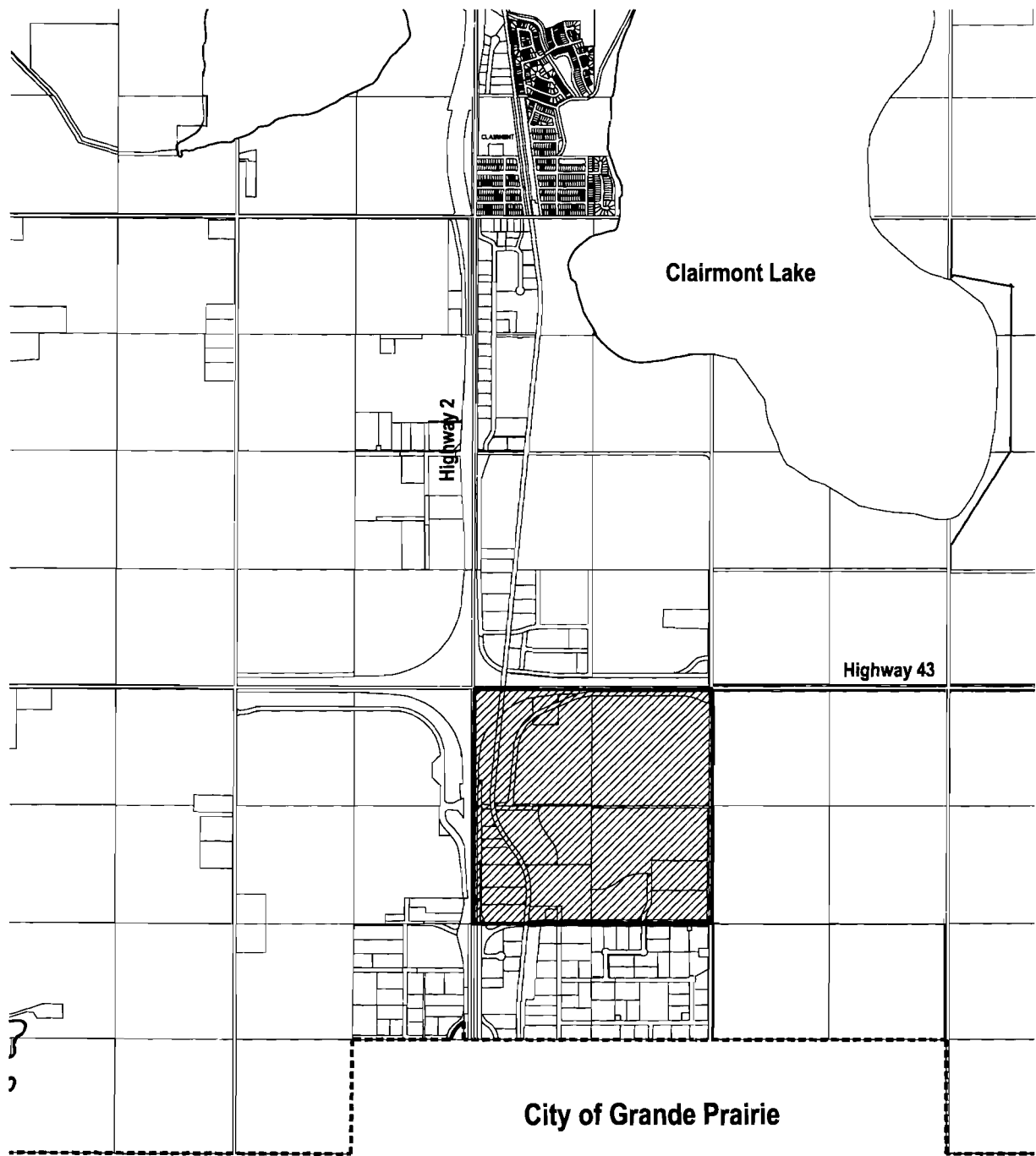
The Plan area is bounded to the west and north by Highway 43 and to the east by a local road (Range Road 60 or 92nd Street). The McRae Industrial Park is located on adjacent lands to the south. The lands to the east are currently in agricultural use, but are proposed for future industrial development.

The Crossroads Industrial Park, currently under development, is located across Highway 43 to the north.

1.3 Existing Conditions

As indicated in Map 2 the southerly and westerly portions of the Plan area are partially developed for industrial purposes, while the north half is predominantly in agricultural production. A large borrow pit that was created for the extraction of material for the construction of the Four Mile Corner interchange is located on the NW 12.

The westerly portion of the Plan area is bisected by the Alberta RailNet rail line, the lands to the west of which are fully developed. A utility corridor that accommodates a regional water transmission line and a power line runs north-south through the centre of the Plan area.



Map 1- Location

**CROSSROADS SOUTH PHASE 1
 AREA STRUCTURE PLAN
 County of Grande Prairie No. 1**



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**CROSSROADS SOUTH PHASE 1 AREA STRUCTURE PLAN
COUNTY OF GRANDE PRAIRIE NO. 1**

MAP 2 - Existing Conditions



SCALE N.T.S.

-  RAILWAY LINE
-  UTILITY CORRIDOR
-  EXTENT OF EXISTING DEVELOPMENT

 BORROW PIT

 PLAN BOUNDARY



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Table 1 – Plan Area Composition

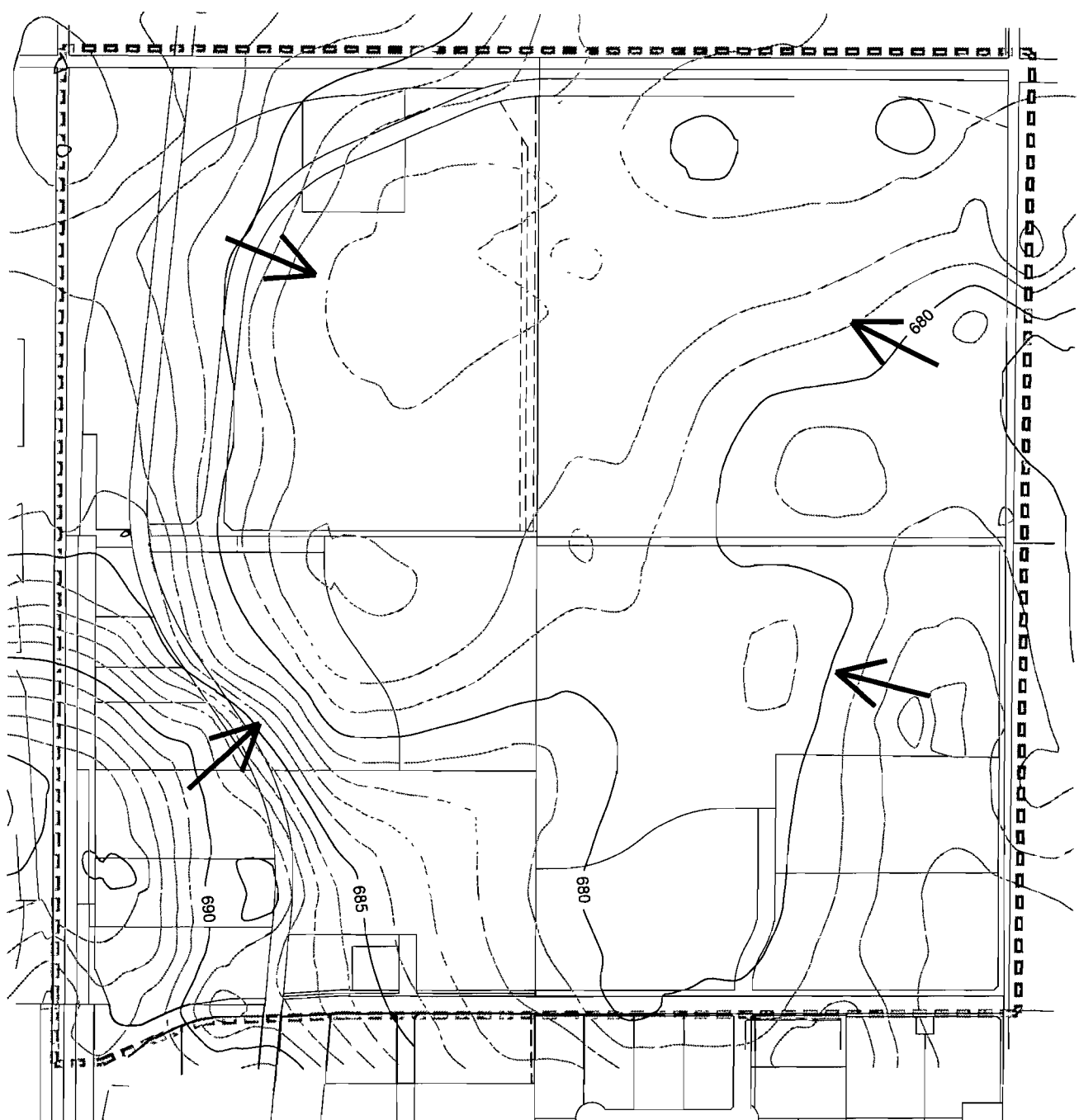
Legal	Owner	Area (ha)
NE 12-72-6-W6M	D. and D. Geherman	61.5
NW12-72-6-W6M	H.M. the Queen (AB Trans)	41.3
Lot 1, Plan 9523812	H.M. the Queen (AB Trans)	2.9
Block 1, Lot 2, Plan 0324891	R. Wald & Sons Moving & Storage Ltd	4.4
SE 12-72-6-W6M	625494 Alberta Ltd.	34.7
Block 1, Lot 1, Plan 0420690	Far North Trucking (2004) Ltd.	7.8
Block 1, Lot 2, Plan 0420690	P. D. Leyen	8.0
Block 2, Lot 1, Plan 0420690	625494 Alberta Ltd.	9.8
Pt. SW 12-72-6-W6M	Wellco Energy Services Inc.	12.4
Block 1, Lot 2, Plan 0422981	Pete's Auction Service Ltd.	10.2
Pt. SW 12-72-6-W6M	Pete's Auction Service Ltd.	2.7
Lot 1, Plan 9521742	All-Peace Petroleum Maintenance Ltd.	1.1
Lot 2, Plan 9521742	Pete's Auction Service Ltd.	1.1
Lot 3, Plan 9521742	Pete's Auction Service Ltd.	1.0
Lot D, Plan 1835TR	Bodo Cattle Company Ltd.	4.6
Lot E, Plan 9422445	Pentex Holdings Ltd.	3.6
Lot 1, Plan 8020186	Grande Prairie Auction Mart Ltd.	14.3
Block 1, Lot 1A, Plan 8621022	324007 Alberta Ltd.	3.6
Block 2, Lot 2, Plan 0225205	324007 Alberta Ltd.	1.3
Block 2, Lot 3, Plan 0225205	Grande Prairie Auction Mart Ltd.	0.6
Block 2, Lot 4, Plan 0225205	County of Grande Prairie No. 1	0.1
Block 2, Lot 5, Plan 0225205	County of Grande Prairie No. 1	0.1
Several Plans	Internal Roads	5.6
Plan 3285BU	Railway ROW	5.0
Several Plans	Highway 43 Service Road	9.0
Several Plans	Highway 43 ROW	13.2
Total		259.9

As illustrated in Map 3, surface drainage runs from all directions to the centre of the Plan area, which is characterized by a shallow basin. The centre and east portions of the Plan area are relatively flat, with elevations ranging from 676m to 682m at the southeast corner (0.5% slope). Steeper slopes are found on the southwest portion of the Plan area, where elevations increase to 695m in proximity to the highway.

1.4 Policy Framework

1.4.1 County of Grande Prairie Municipal Development Plan

The County MDP provides the general policy framework with which more detailed plans are required to be consistent. Section 13.5 of the Plan indicates that area structure plans are required as a prerequisite for the development of industrial parks, hamlets, highway commercial subdivisions, "or



**CROSSROADS SOUTH PHASE 1 AREA STRUCTURE PLAN
COUNTY OF GRANDE PRAIRIE NO. 1**

MAP 3 - Topography



SCALE N T S

685 ELEVATION

 DIRECTION OF FLOW

 PLAN BOUNDARY



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any other major development where such a plan would assist the County in making planning decisions”.

The County of Grande Prairie Municipal Development Plan identifies the lands located in the Highway 2 corridor for future industrial use. The content of this ASP is consistent with this policy direction.

1.4.2 Grande Prairie Intermunicipal Development Plan

The south half of the Plan area is located in the Grande Prairie IDP’s “Referral Area”, which requires that subdivision and major development applications proposed for the subject lands be circulated to the City for information.

1.4.3 Highway No. 2/43 North Area Structure Plan

Approved in 1982, this ASP addresses 11 quarters of land immediately north of Grande Prairie, including the east half (NE 11) of the subject Plan area. However, the Highway No. 2/43 ASP is dated and calls for continued agricultural development on the subject land. As a result, it is proposed that the affected portions of the Highway No. 2/43 ASP be rescinded upon approval of the Crossroads South Phase 1 ASP.

1.4.4 County of Grande Prairie Land Use Bylaw

The south half of the Plan area is designated as Rural Medium Industrial (RM-2) in the County’s Land Use Bylaw. The balance of the Plan area is zoned as Agricultural (AG). In order to facilitate the development of these lands for general and highway industrial purposes, it is intended that portions of the Plan area be rezoned to the appropriate land use districts as a prerequisite to subdivision as discussed in Section 4.2.

1.4.5 Subdivision and Development Regulation

Section 14 of the Regulation requires that an area structure plan be prepared in advance of development on all lands located within 800m of a highway. This ASP has been prepared in accordance with the Regulation.

1.4.6 Clairmont Planning and Servicing Areas Study

The Clairmont Planning and Servicing Areas Study established logical area structure plan and servicing areas for lands in the vicinity of Clairmont. This study was prepared in order to address broad planning and servicing opportunities for future development around Clairmont.

This Area Structure Plan corresponds to planning area P9 as defined in the Study.

2.0 DEVELOPMENT CONCEPT

2.1 Goals of the Plan

The Crossroads South Phase 1 Area Structure Plan has been prepared in accordance with the following goals and objectives.

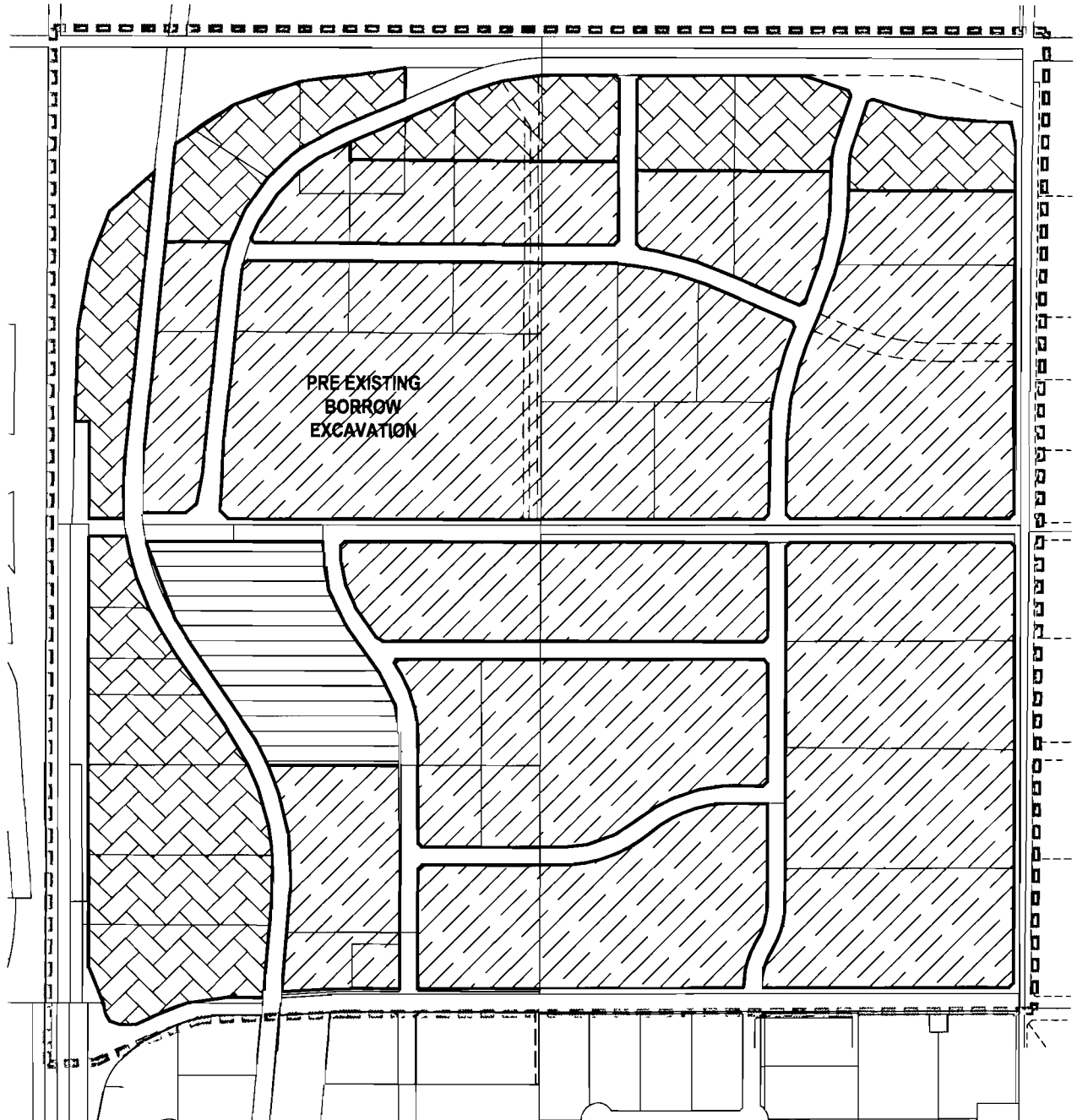
1. To provide a sound planning framework for the future development of the Plan area that is consistent with the goals of the County of Grande Prairie No. 1.
2. To contribute to the continued development of the Highway 2 and 43 corridors for industrial purposes.
3. To protect and maintain the operational safety and integrity of the Highway 2 and 43 corridors.
4. To establish an efficient and economical servicing and development concept for the Plan area.

2.2 Land Use Concept

The proposed land use concept for the subject lands is illustrated in Map 4. The intent of this plan is to provide a generalized land use plan with a conceptual lot layout that will be subject to further refinement at the time of subdivision and survey. A detailed breakdown of land uses proposed for the Plan Area is provided in Table 2.

Table 2 - Land Use Area Estimates

Land Use Category	NW 12	NE 12	SW 12	SE 12	Total	Percent
Gross Developable Area	64.88	64.88	64.90	65.23	259.89	
Less Highway Right-of-Way	10.06	1.41	1.75	0	13.22	
Less Rail Line	2.44	0	2.61	0	5.05	
Less Service Roads	3.79	2.77	2.44	0	9.00	
Net Developable Area	48.59	60.70	58.10	65.23	232.62	100.0
Highway Industrial	12.73	12.73	17.86	0	43.32	18.6
General Industrial	16.91	42.49	23.50	54.40	137.30	59.0
Heavy Industrial	0	0	10.17	0	10.17	4.4
Internal Roads	2.29	4.73	6.57	10.04	23.63	10.2
Road Widening	0	0.75	0	0.79	1.54	0.7
Storm Pond	16.66	0	0	0	16.66	7.1






**CROSSROADS SOUTH PHASE 1 AREA STRUCTURE PLAN
COUNTY OF GRANDE PRAIRIE NO. 1**

MAP 4 - Future Land Use



SCALE N T S

-  **HIGHWAY INDUSTRIAL**
-  **HEAVY INDUSTRIAL**
-  **GENERAL INDUSTRIAL**

 **PLAN BOUNDARY**



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2.3 Industrial Development

- 2.3.1 As noted in Table 2, 83% of the Plan area is to be developed for industrial purposes. A mixture of highway-oriented, heavy, and general industrial development is proposed. Given the proximity to Highway 43, it is proposed that approximately 43 ha of land located along the west and north boundaries of the Plan area be designated as Highway Industrial (RM-4) in the Land Use Bylaw. The balance of the industrial land (149 ha or 64% of the Plan area) is to be zoned as Rural Medium Industrial (RM-2) and Rural Heavy Industrial (RM-3).
- 2.3.2 General industrial development, totalling approximately 137 ha, is proposed for a majority of the Plan area. Uses encouraged in this area are those that are characteristic of other industrial parks in the County, and would be administered under the Rural Medium Industrial (RM-2) District of the Land Use Bylaw. Lot sizes designated for this use are intended to average approximately 3.0 ha based on the layout illustrated in Map 4.
- 2.3.3 Highway Industrial development (zoned RM-4 in the Land Use Bylaw) comprises approximately 43 ha (19%) of the Plan area, including the currently developed portion between the highway and rail line. Lot sizes designated for this use are intended to average approximately 2.2 ha based on the layout illustrated in Map 4.
- 2.3.4 Heavy industrial development is proposed for a single large lot in the west-central portion of the Plan area. This site, totalling approximately 10 ha, is intended to accommodate an asphalt plant and associated uses. The subject lot is to be zoned as Heavy Industrial (RM-3) in the Land Use Bylaw.
- 2.3.5 All industrial development in the Plan area shall be the subject of a high level of design and landscaping in accordance with County requirements as identified in Section 4.4 of this Plan. This is a result of the high degree of visibility that these locations afford.
- 2.3.6 All industrial development will be serviced with municipal water and sewer services in accordance with the provisions of this plan.

2.4 Municipal Reserve

In accordance with the Municipal Government Act, a maximum of 10% of the Plan area (23.3 ha) may be provided as municipal reserve at the time of subdivision. Due to previous subdivision activity in the Plan area, approximately 10.4 ha of municipal reserve have already been dedicated¹. As a result, a balance of 12.9 ha of municipal reserve may be dedicated in the Plan area. Municipal Reserve shall be provided in land form unless there is a definitive indication that the land for parks and schools is not needed in which case cash-in-lieu will be established as a condition of subdivision approval.

¹ Two parcels totalling 0.2 ha were created in 2002, both of which were disposed of in 2004. In addition, a total of 10.2 ha of reserve have been deferred, which would be dedicated as cash-in-lieu at the time the subject lands are resubdivided.

3.0 TRANSPORTATION AND SERVICING

3.1 Road Network

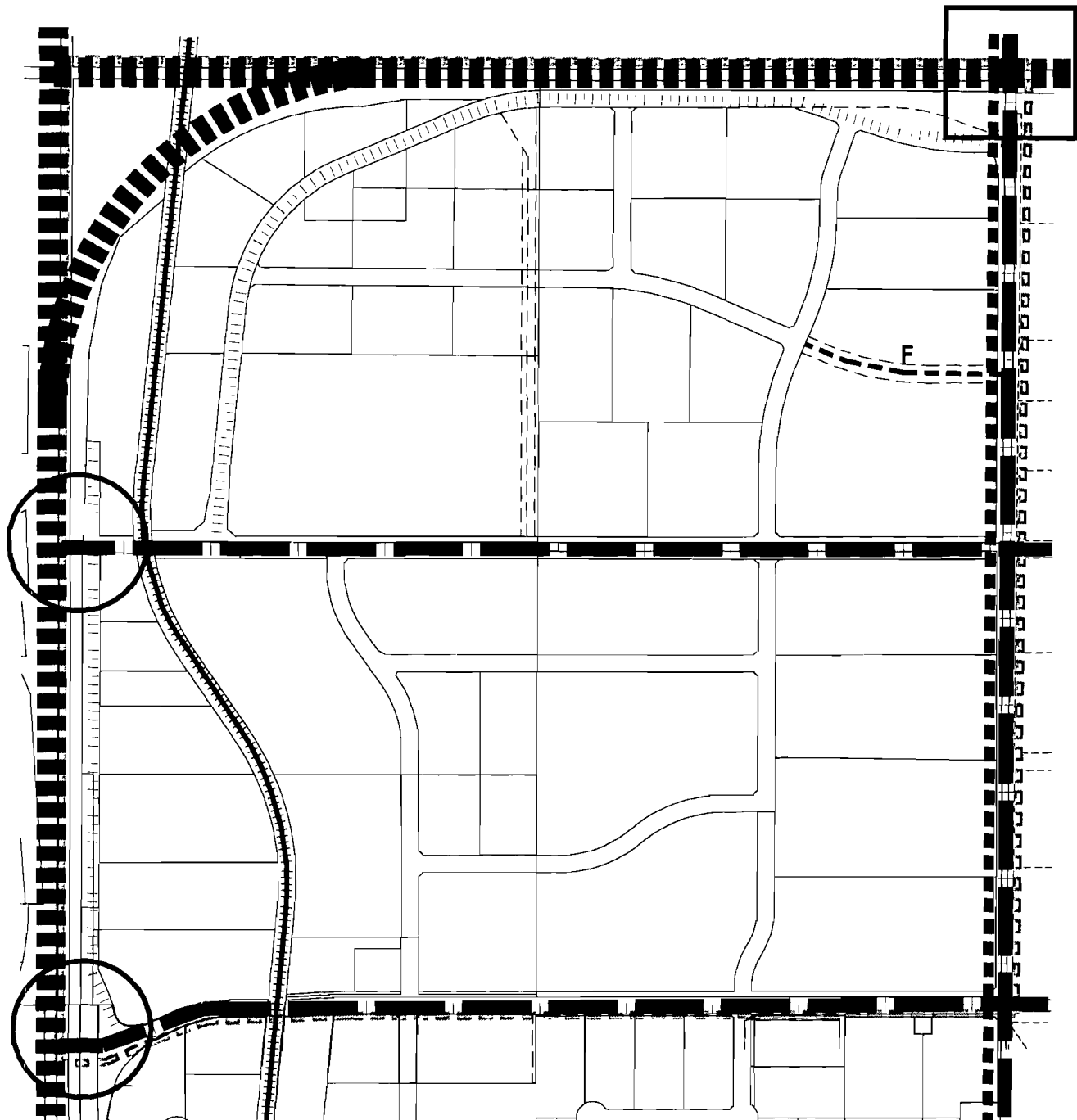
As illustrated in Map 5, primary access to the Plan area is currently obtained from existing locations along Highway 43 on the west side and northeast corner of the Plan area (Range Road 60). Traffic impact assessments for these intersections will be prepared for Alberta Infrastructure and Transportation and the County at the time of subdivision.

The development of roads in the plan area is consistent with an overall transportation strategy for the area. Map 5A identifies a broader, long term transportation plan for the entire area north of the City of Grande Prairie. The map indicates future highway locations, an arterial road network system linking the highways to future truck routes and land use areas. A major collector system to enable traffic to flow from the local roads to the arterial roads and ultimately to the highways is also indicated. Of particular importance to the County is the preservation and maintenance of the major collector road system that facilitates north-south traffic flow in the Clairmont corridor, and reduces reliance on the Highway 2/43 corridor. It is intended that this system be integrated into the area structure plan.

The development of 148th Avenue and 156th Avenue as major collectors to facilitate the movement of traffic in an east west pattern is also extremely important. As such, the rights of way for these important road systems will be defined and developed in accordance with County standards.

Range Road 60 currently intersects with Highway 43. A Highway Access Management Plan recently completed by Alberta Infrastructure and Transportation indicates that a flyover may be appropriate at this location. It is the position of Alberta Infrastructure and Transportation that costs associated with a flyover would be the responsibility of the County or developers and that it will be constructed to the satisfaction of, but no cost to Alberta Infrastructure and Transportation. Lands have been set aside in the northeast corner of the Plan area in order to accommodate this structure. In addition, traffic impact assessments will be prepared for Alberta Infrastructure and Transportation at the time of subdivision to determine if the intersection has sufficient capacity to accommodate the proposal.

- 3.1.1 Highway access to the Plan area shall be limited to the two highway locations located on the west side of the Plan area. No direct highway access to individual lots will be permitted, as all lots shall be accessed by the internal road system.
- 3.1.2 Additional access points are proposed from Range Road 60 (92nd Street) on the east side of the Plan area at two locations. Range Road 60 currently intersects with Highway 43 at the northeast corner of the Plan area. Development will be permitted, subject to County approval, on the understanding that at some future point the Province intends to close access to Highway 43 from Range Road 60 and provide a fronting service road to the nearest interchange location.
- 3.1.3 All internal roads are to be paved and constructed in accordance with County specifications for road construction at the expense of the developer. The standard right-of-way for a local road shall be 30 metres. In those instances where a proposed road straddles a property line, the cost of road construction would be shared by the affected landowners.



CROSSROADS SOUTH PHASE 1 AREA STRUCTURE PLAN
COUNTY OF GRANDE PRAIRIE NO. 1

MAP 5 - Transportation



SCALE N.T.S.

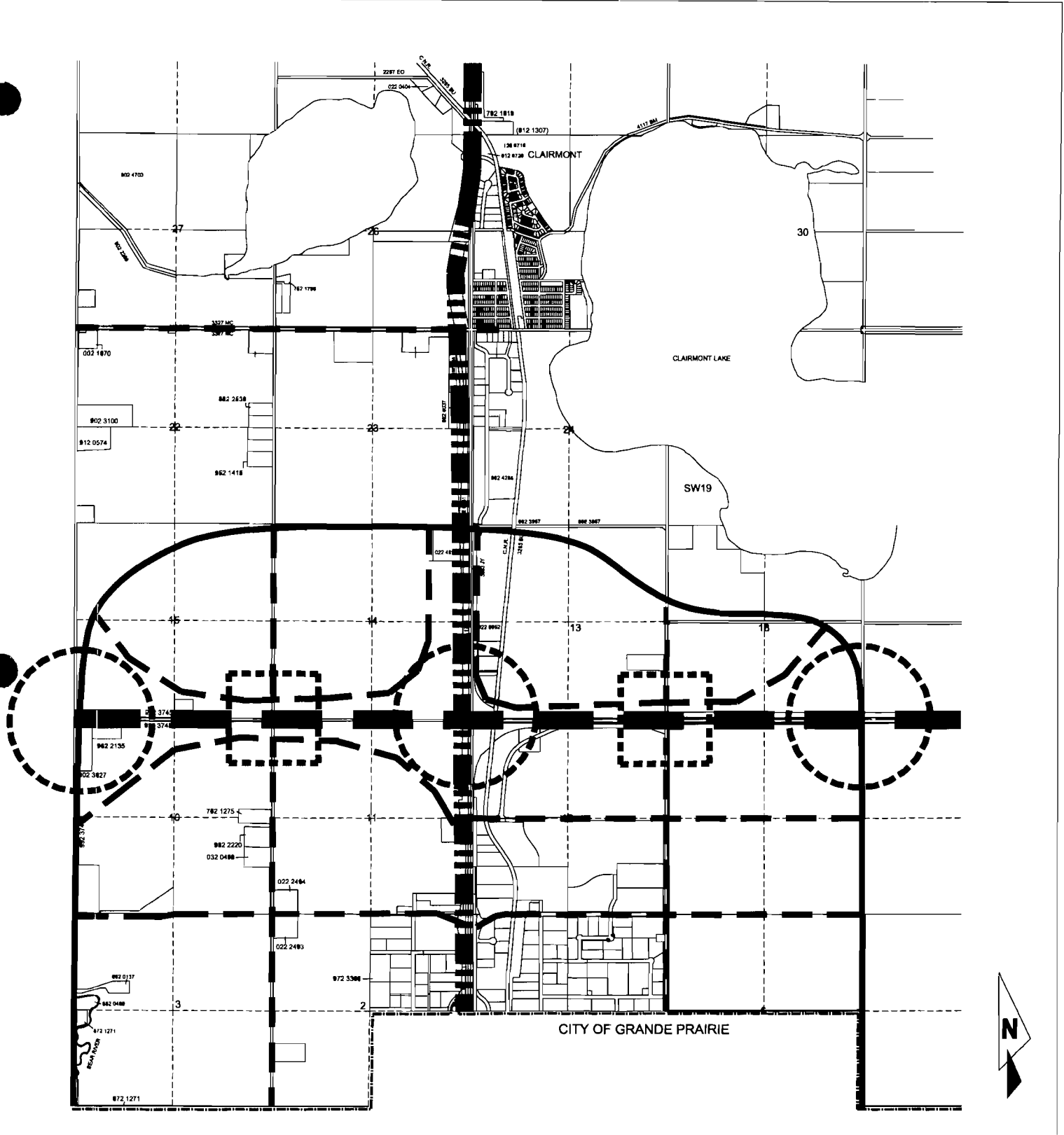
- | | | |
|---|--|--|
|  HIGHWAY |  SERVICE ROAD |  FUTURE COLLECTOR |
|  MAJOR COLLECTOR |  RAILWAY |  FUTURE FLYOVER |
|  PEDESTRIAN LINK |  HIGHWAY INTERSECTION | |

 PLAN BOUNDARY



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MAP 5A - FUTURE REGIONAL TRANSPORTATION NETWORK



SCALE N T S

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ISL

-  HIGHWAY 43 (FUTURE FREEWAY)
-  HIGHWAY 2
-  ARTERIAL ROAD
-  MAJOR COLLECTOR ROAD

-  INTERCHANGE
-  FLYOVER

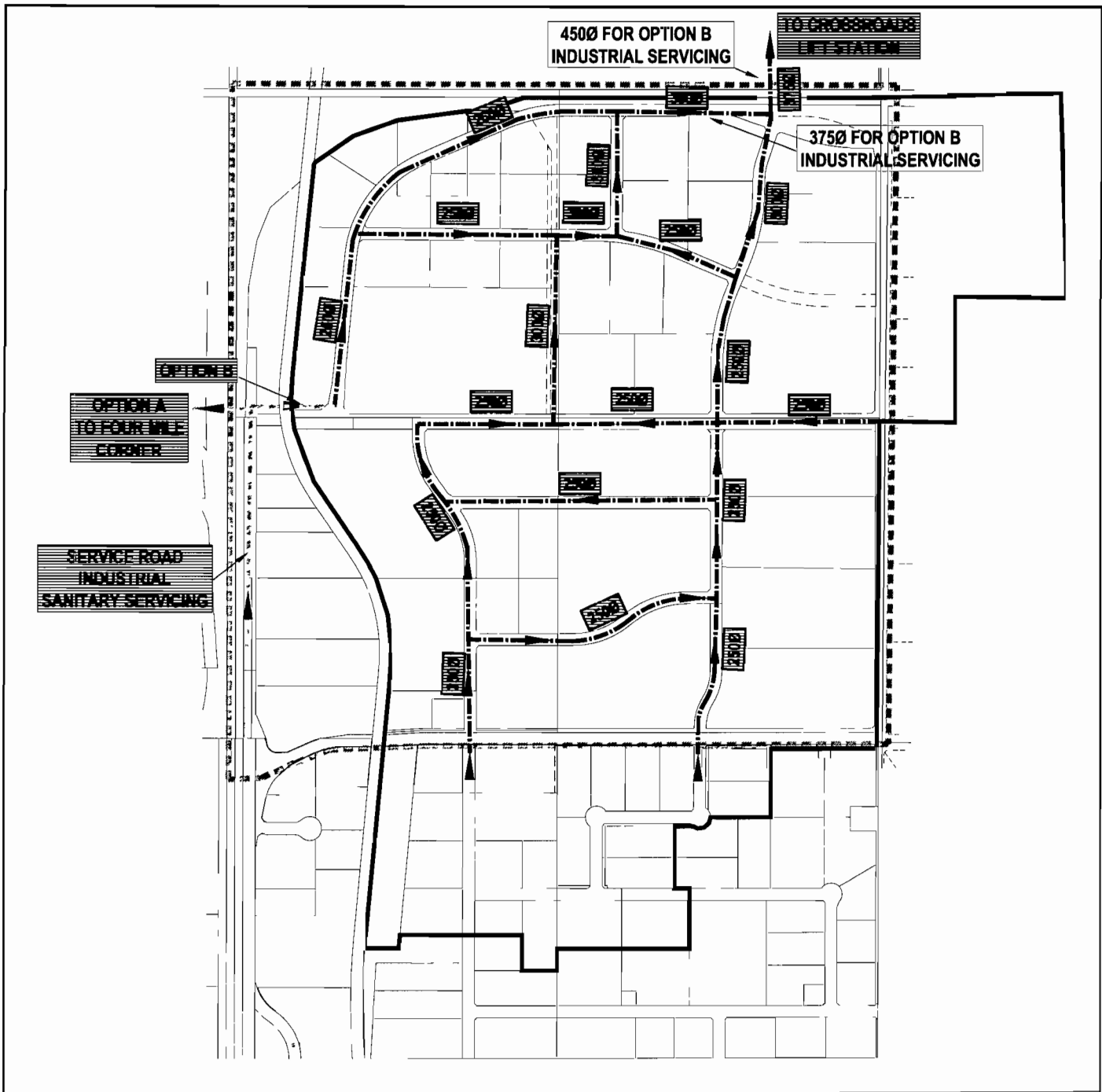
Note: Conceptual only. Subject to refinement in individual area structure plans.

- 3.1.4 Prior to approval of any subdivision in future phases of the Plan area, a traffic impact assessment (TIA) shall be prepared for the County and Alberta Infrastructure and Transportation to determine if the existing highway intersections and other major roads are suitable for the area at "build-out". This TIA shall be provided prior to or with submission of the first subdivision application in the planning area.
- 3.1.5 Notwithstanding 3.1.4, traffic impact assessments may be requested by the County at the time of future subdivision phases to identify additional potential improvements to all external roadways.
- 3.1.6 Through the subdivision process, additional land shall be acquired by the County from the developer to provide for the future widening of Range Road 60 and allow for the future development of a flyover at the Highway 43 intersection. Precise land requirements for a flyover will be provided at the time of first subdivision or development within the NE 12-72-6-W6M, ensuring that the height requirements of the high load corridor on Highway 43 have been addressed.
- 3.1.7 Improvements to Range Road 60 (92nd Street) will create a benefiting area which includes the two quarter sections to the east of the Plan area. The County may require new development occurring in the benefiting area to pay levies to recover a portion of the costs for these improvements.
- 3.1.8 All major collector roads shall have a 40 metre right-of-way. Developers will be required to construct the major collector road system to County standards. Where improvements to the major collector road network create a benefit to other landowners within the Plan area, the County will endeavour to require any new development in those areas to compensate the developers in this plan area for a portion of the costs of the improvements.
- 3.1.9 The County may impose a transportation levy to assist in paying for future upgrades to the road system in the area.
- 3.1.10 In order to facilitate pedestrian and bicycle movement in the Plan area and connections to neighbouring areas, a potential pedestrian linkage is proposed adjacent to Range Road 60 as illustrated in Map 5. This traffic may be accommodated through the construction of wider shoulders on the road, or the provision of a separate asphalt trail.

3.2 Sanitary Sewer

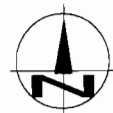
The Plan area consists of a single drainage basin as illustrated on Map 6. The Plan area drains to the existing sanitary sewer and lift station located in the Crossroads development across Highway 43 to the north. There is the potential for a portion of the lands west of the railroad and east of Highway 2 to drain into the Four Mile Corner lift station. Costs and development timing will be determining factors as to which option occurs. It is preferred that the area drain to Crossroads and if it does the pipe sizing will need to be upgraded as per the Map 6 to reflect the increase in flow.

- 3.2.1 All development in the plan area will be serviced with municipal sanitary sewer as indicated on Map 6. No private sewage disposal systems will be allowed. Lands west of the RailNet right-of-way may be serviced through the Four Mile Corner system and lands east of the RailNet right-of-way shall be serviced through the Crossroads sanitary system.



CROSSROADS SOUTH PHASE 1 AREA STRUCTURE PLAN COUNTY OF GRANDE PRAIRIE NO. 1

MAP 6 - Sanitary Sewer



SCALE N 1 S

-  3000 PROPOSED SANITARY
-  EXISTING SANITARY
-  EXISTING LIFT STATION

 SANITARY DRAINAGE BASIN

DRAINAGE / LEVY AREA = 292.8 ha

 PLAN BOUNDARY



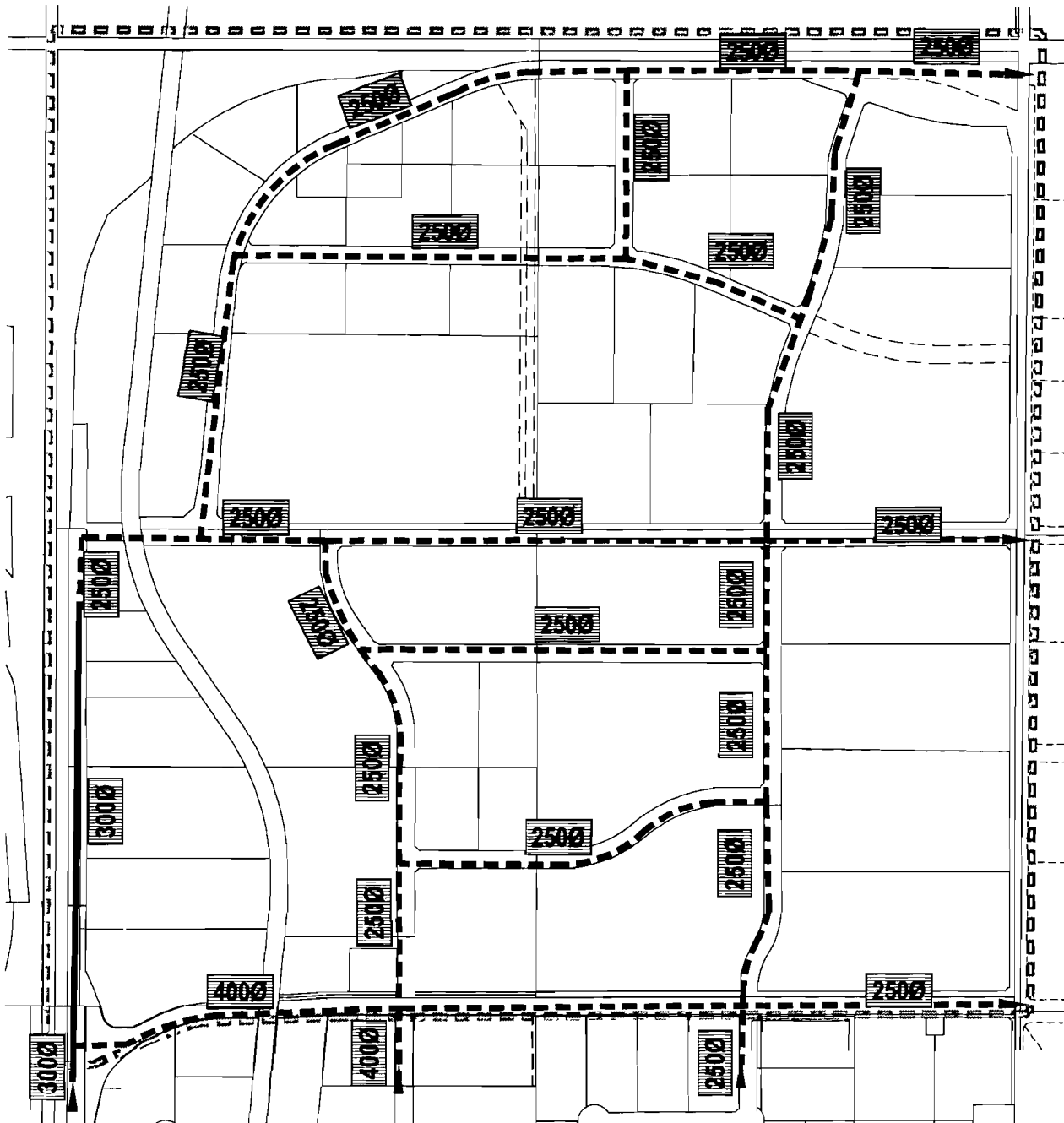
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- 3.2.2 Existing private sewage disposal systems may remain in place until the municipal sanitary sewer system is installed. When these services are available, the existing development must connect to the new system at the owner's expense.
- 3.2.3 Where the development of an area is contingent upon a servicing system to be developed outside the Plan area, the subject land may not be developed until the servicing is available.
- 3.2.4 In addition to over-sizing fees and recovery charges, the County will collect offsite levies in the amount of \$13,248/ha to cover the costs of future improvements to the sanitary sewer system in Clairmont.
- 3.2.5 The County will require existing developments located adjacent to Highway 2 (identified in Map 6) that tie into the sanitary system to compensate developers in the Plan area for expenses incurred in providing municipal services to the area. There is a \$5,373/ha recovery charge currently associated with tying into the Four Mile Corner sanitary system, but the original design for the system did not include these lands. Upsizing of the lift station will be needed in the future in order to accommodate these lands. Only those properties connecting to this system will be required to pay this fee as most lands within the Plan area will be serviced through the Crossroads lift station.
- 3.2.6 The initial cost of the Crossroads lift station is to be recovered by lands north of Highway 43. Lands south of Highway 43 will be required to pay for the upgrading costs for the Crossroads system as the original design for the system did not include these lands. Upsizing of the lift station (including the possible provision of additional force mains) will be needed in the future in order to accommodate these lands. A fee equivalent to the Northgate lift station fee of \$4,863/ha should be used until an overall master plan recommends a more appropriate value.
- 3.2.7 The crossing of the sanitary main across Highway 43 will be of general benefit. A preliminary estimate indicates that the cost of this is approximately \$122,000. Assessed on a benefiting area of 412.2 ha as defined in Map 6, a proposed levy of approximately \$296/ha would be applicable to all developments located within this area.
- 3.2.8 The crossing of the sanitary main across Highway 2 (100th Street) for the Four Mile Corner tie-in will be of general benefit. A preliminary estimate indicates that the cost of this item is approximately \$184,256. Assessed on a benefiting area of 50.8 ha, a proposed levy of \$3,627/ha would be applicable to all those lands in the Plan area that drain by gravity to the Four Mile Corner lift station.
- 3.2.9 All development is subject to connection fees charged by Aquatera Utilities Inc.

3.3 Water Supply

- 3.3.1 Water supply for the Plan area will come from Grande Prairie. All areas have been designed to meet or exceed fire flows of 95L/s based on the Water System Master Plan recently prepared for Aquatera Utilities Inc. Ultimately there will be several hook-ups to adjacent plan areas to accommodate looping. Map 7 illustrates the proposed locations and sizes for the future water system.
- 3.3.2 If fire flows are insufficient to meet FUS guidelines or building code applications then supplemental internal pumps and sprinklers may be required to mitigate risks.



**CROSSROADS SOUTH PHASE 1 AREA STRUCTURE PLAN
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MAP 7 - Water Distribution System



SCALE N.T.S.

- PROPOSED WATERLINE
- EXISTING WATERLINE

□□□□□ PLAN BOUNDARY



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- 3.3.3 The County may establish an offsite levy to assist in improving infrastructure required to service this development. Within the present design guidelines no levies are required.
- 3.3.4 The County will require new development occurring in the benefiting area to compensate developers in the Plan area for expenses incurred in providing municipal services to the area.
- 3.3.5 Existing development with private water systems can remain in place until a water system is installed on lands adjacent to the existing development. When the services are available, the existing development must connect to the new system at the owner's expense.

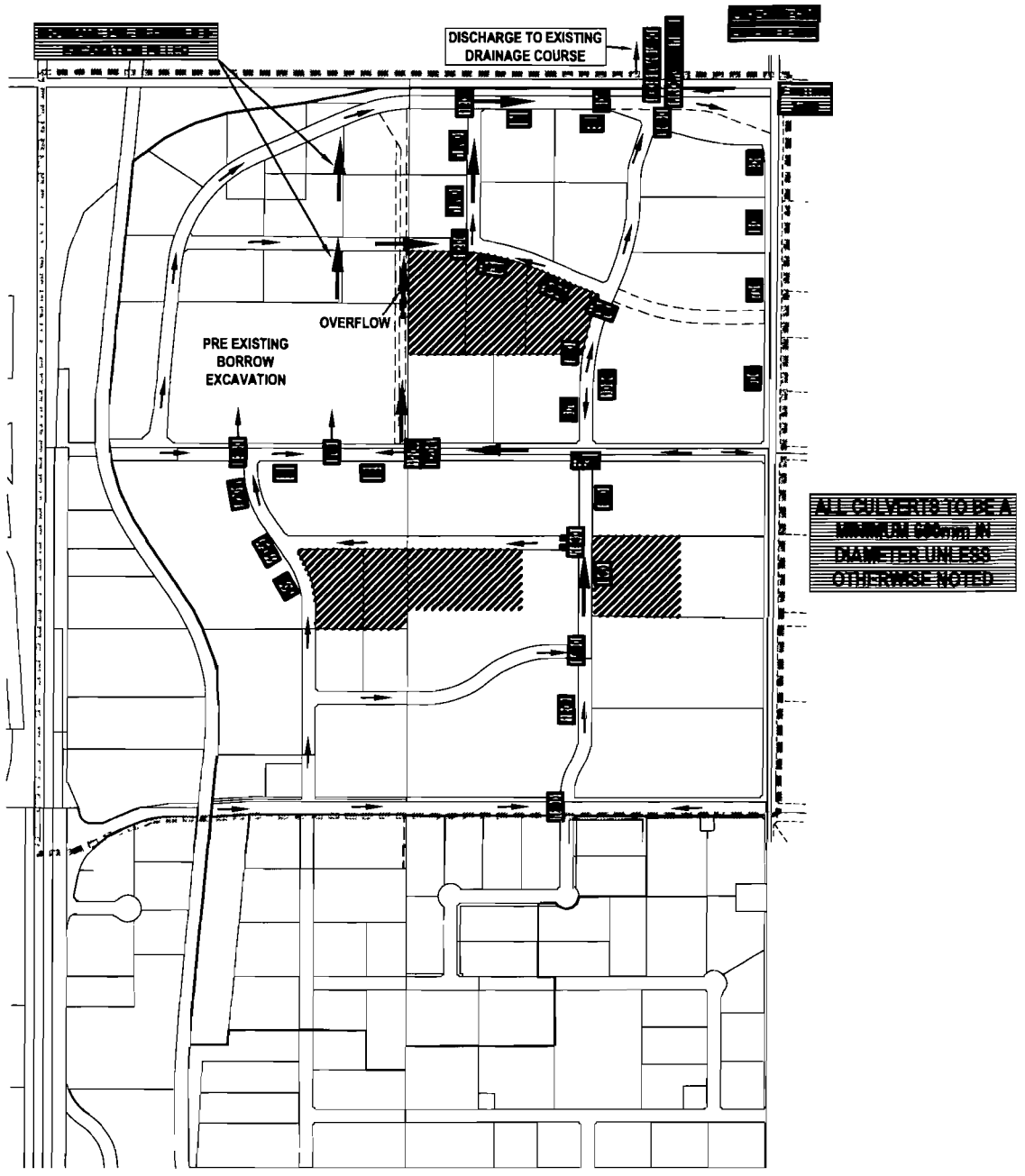
3.4 Storm Water Management

Storm water management shall be required for quantity and quality control. Quantity control is required to reduce the potential impacts of urban storm water run-off on drainage ditches and watercourses (i.e. higher rates of erosion), and limit the potential for flooding on developed lands during major storm events. Quality control is required to mitigate any potential for environmental contamination of nearby bodies of water.

Storm water for the plan area drains to one distinct watercourse as depicted in Map 8. All the water in the plan area is directed to the Highway 43 ditch and then ultimately downstream into Clairmont Lake. If the large borrow pit located in the NW 12 is ever filled, an additional drainage public utility lot will be required in the NW 12 to convey the additional flows to the highway ditch.

The major drainage course (1:100 year events) as identified in Map 8 is to be sized to handle 1:5 year flows with overflow requirements for the 1:100 year event. In this major course it is important to maintain flows within the road boundaries. To accomplish this it is important that overflows across approaches and roads be designed to handle excess water. In cases where this cannot occur, culverts must be designed to handle the 1:100 year event. This overflow will also assist in situations where culvert freeze-up occurs. Ditches in the major course that exceed 2% in grade will need to have erosion control measures such as silt traps, rip-rapped corners, hydro-seeded ditch bottoms or other approved erosion prevention methods. Each developer will be responsible for upgrading their ditches in their respective developments. Additional information pertaining to storm water flows and the Sheehan Ditch drainage system is available in the report entitled "Storm Drainage Analysis – Crossroads Development Phase 2".

It is the intent for the remainder of the lands in the Plan area to use Clairmont Lake for retention purposes. Ducks Unlimited operates a weir system at the outfall of the lake which is successfully being used to regulate flows and maintain lake levels. This has proven to be an acceptable method in adjacent areas for mitigating the impacts of increased flows on the downstream wetlands. The combination of a natural wetland that acts as an environmental cleansing agent as well as the incorporation of a grassed drainage ditch proves to be quite effective in providing water quality management as well as quantity management. Should Alberta Environment require further quality management, a wet pond at the last leg of the drainage course prior to the water entering the lake would be needed. This would only be needed if the downstream scenario is converted to an urban model with underground storm sewer and curbs. The cost of the wet pond would then need to be included in the upgrade cost.



ALL CULVERTS TO BE A
MINIMUM 600mm IN
DIAMETER UNLESS
OTHERWISE NOTED




CROSSROADS SOUTH PHASE 1 AREA STRUCTURE PLAN




COUNTY OF GRANDE PRAIRIE NO. 1

MAP 8 - Storm Water Management



SCALE N T S

-  DRAINAGE DIRECTION
-  1:100YR MAJOR DRAINAGE COURSE
-  DRAINAGE EASEMENT MAY BE REQUIRED

-  PROPOSED CULVERT
 -  DITCH BLOCK
 -  DRAINAGE BASIN
- DRAINAGE / LEVY AREA = 265.6 ha

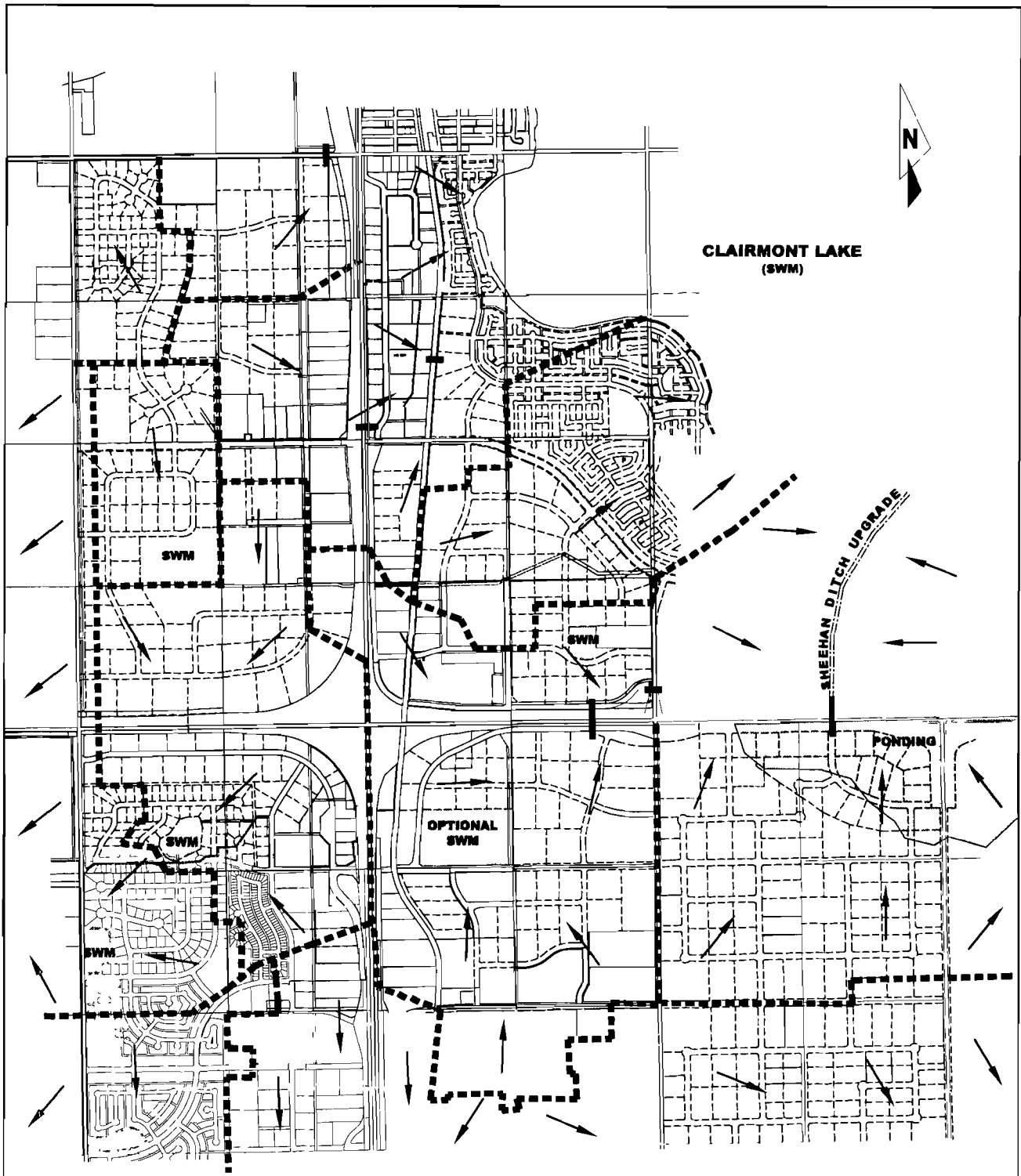
..... PLAN BOUNDARY



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- 3.4.1 Storm water management shall be required for quantity and quality control. Storm drainage will be provided as indicated on Map 8, and is part of a larger drainage system as illustrated on Map 8A.
- 3.4.2 Lands tributary to the Sheehan Ditch shall be required to control post-development storm water run-off at pre-development rates until all improvements required to the Sheehan Ditch drainage system are completed to the satisfaction of the County of Grande Prairie No. 1. Suitable storm water management facilities shall be designed to the satisfaction of the County to achieve this standard.
- 3.4.3 If improvements to the Sheehan Ditch drainage system are initiated by public or private interests, the County may endeavour to cooperate with those interests to recover all or a portion of those costs from benefiting land owners.
- 3.4.4 An additional culvert crossing Highway 43 and one across Range Road 60 may be permitted once development begins to change from a rural to an urban landscape, and a plan for improvements to the Sheehan Ditch drainage system are complete. A preliminary estimate indicates that the cost of these culverts is approximately \$134,280. Assessed on a benefiting area of 308.4 ha, a tentative levy of approximately \$412/ha may be applied to developments located within the drainage area defined in Map 8 and includes drainage areas outside the Plan area. A policy or "endeavour to assist" would need to be created to administer this recovery.
- 3.4.5 The County may implement a review process at the time of development permit to ensure businesses wishing to locate within the drainage basin do not impose any undue or unreasonable environmental risk to the area as part of their normal operations. Should there be a suspicion of risk the County will require a site specific, on-site storm water management plan, to minimize any spill related incidents. Based on the nature of the zoning only certain areas will be at elevated risk of this occurring.
- 3.4.6 Storm drainage with its associated road crossing and approach sizings shall be provided as indicated on Map 8.
- 3.4.7 There is a significant wetland in the north end of the Plan area. Should this area be filled in, consideration for lot drainage will be required. The storm drainage design contained in this Plan assumes that this wetland will be developed for industrial use, and filled and graded accordingly. It may also be used for storm water management, subject to County approval, until improvements to the Sheehan Ditch drainage system are complete.
- 3.4.8 Detailed engineering design drawings (submitted for subdivision approval) for all storm water conveyance and management systems shall ensure that the 1:100 year storm event does not impact private property, either within the subdivision or on upstream and downstream properties and shall conform to County Design Standards.
- 3.4.9 Detailed design drawings shall identify major overland flow routes as per County Design Standards and illustrate the 5- and 100-year storm events along those routes.



COUNTY OF GRANDE PRAIRIE NO. 1

MAP 8A - OVERALL STORM WATER PLAN

- DRAINAGE BOUNDARY**
- DRAINAGE DIRECTION**
- █ REQUIRES UPGRADED CULVERT CROSSINGS**
- SWM STORM WATER MANAGEMENT POND**

3.5 Shallow Utilities

- 3.5.1 All shallow utilities (natural gas, power, telephone) are to be extended into the Plan area by the individual franchise holders as required.
- 3.5.2 Shallow utilities may be located outside road rights-of-way in easements registered in the name of the County of Grande Prairie No. 1.
- 3.5.3 Through the subdivision process, the developer shall provide a 30m x 30m site to accommodate a gas pressure regulating station in accordance with utility company requirements.

3.6 Lot Grading

- 3.6.1 A grading plan for each subdivision will be prepared by the Developer in accordance with County standards, prior to approval of each subdivision plan within the Area Structure Plan boundary, with the intent that all future building projects conform to the grading plan. The grading plan is intended to ensure that surface drainage from all lots is directed to the roadside ditches and storm retention ponds as provided in Section 3.4 and to ensure that all new construction proceeds in a manner consistent with that intent.
- 3.6.2 Lot grading plans shall be submitted to the County prior to development permit approval.

4.0 IMPLEMENTATION

4.1 Phasing

The proposed timing of development in the Plan area will be dependent on market conditions and the logical extension of municipal services. A tentative phasing plan is proposed on Map 9.

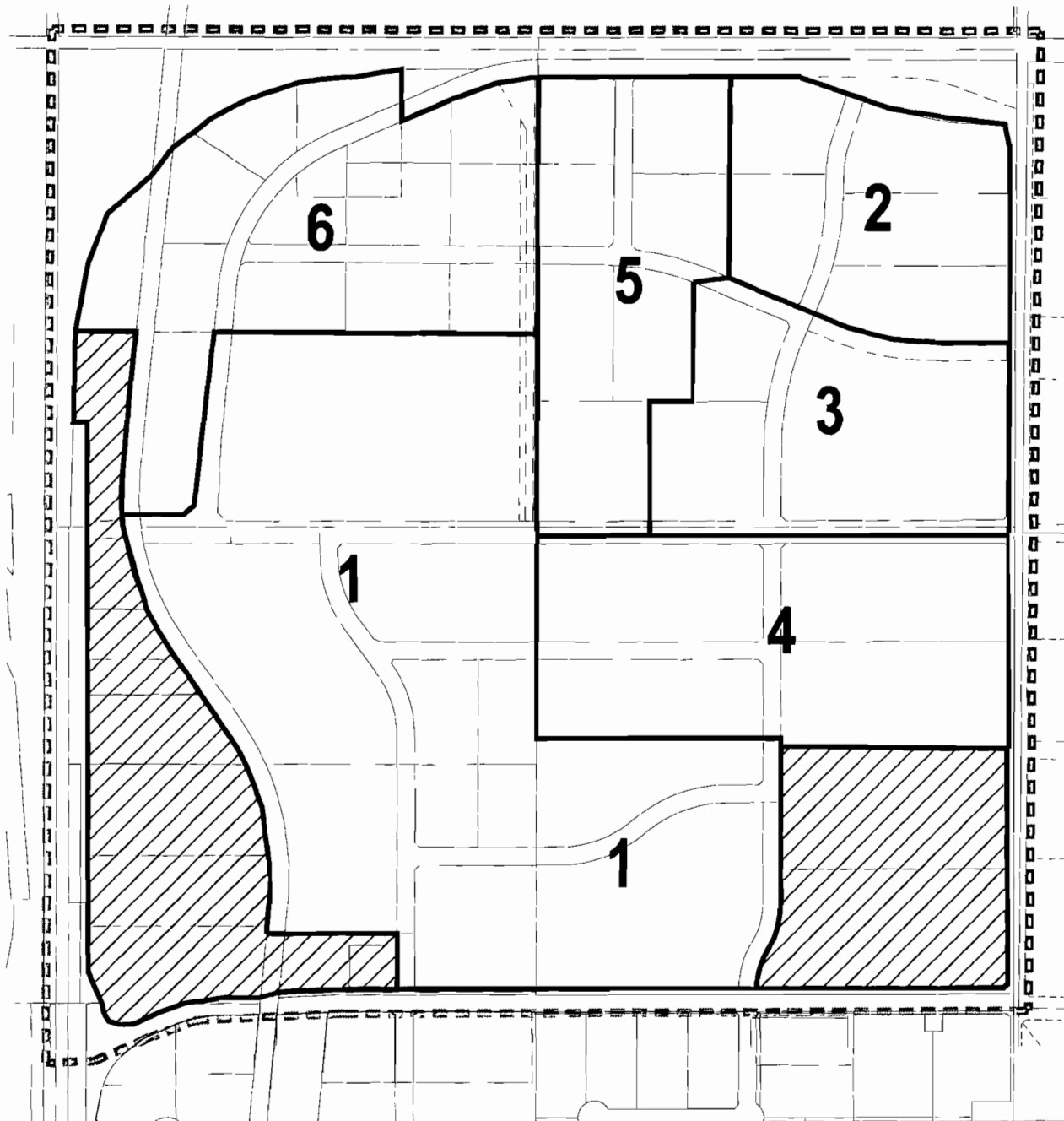
4.2 Proposed Zoning

Proposed zoning for the Plan area is identified on Map 10. The industrial areas will be zoned under the Rural Medium Industrial (RM-2), Rural Heavy Industrial (RM-3) and Highway Industrial (RM-4) Districts of the County's Land Use Bylaw. All zoning changes will be made in advance of subdivision approval².

4.3 Subdivision and Development

- 4.3.1 All developers shall be required to enter into a development agreement with the County and Aquatera Utilities Inc. as a condition of subdivision approval. The matters to be included in these agreements will include but not be limited to the provision of roads and municipal services, and the payment of off-site levies. The agreements will also deal with issues related to benefiting areas.
- 4.3.2 Detailed engineering drawings and specifications for roads, water, sanitary sewer, and storm drainage shall be prepared by the developer and approved by the County and Aquatera Utilities Inc. prior to subdivision approval on the subject lands.
- 4.3.3 The lot sizes and yields identified in this Plan are conceptual. Minor variations to the road system and lot layout may be made at the time of subdivision without amendment to this Area Structure Plan.
- 4.3.4 The resubdivision of lots in the Plan area may be supported without amendment to the Plan provided that the resulting lot sizes meet the minimum requirements of the Land Use Bylaw and the capacity of servicing systems is not negatively affected. Where possible, buildings should be sited in a way that allows for the future resubdivision of lots.

² Existing development in the southeast portion of the Plan area fronting onto Highway 43 is currently zoned RM-2. Redesignation of these lands to RM-4 is recommended to reflect the uses that are present and the highway frontage location of the lands in question.



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MAP 9 - Phasing



SCALE 1" = 5'

1 DEVELOPMENT PHASE (TENTATIVE)

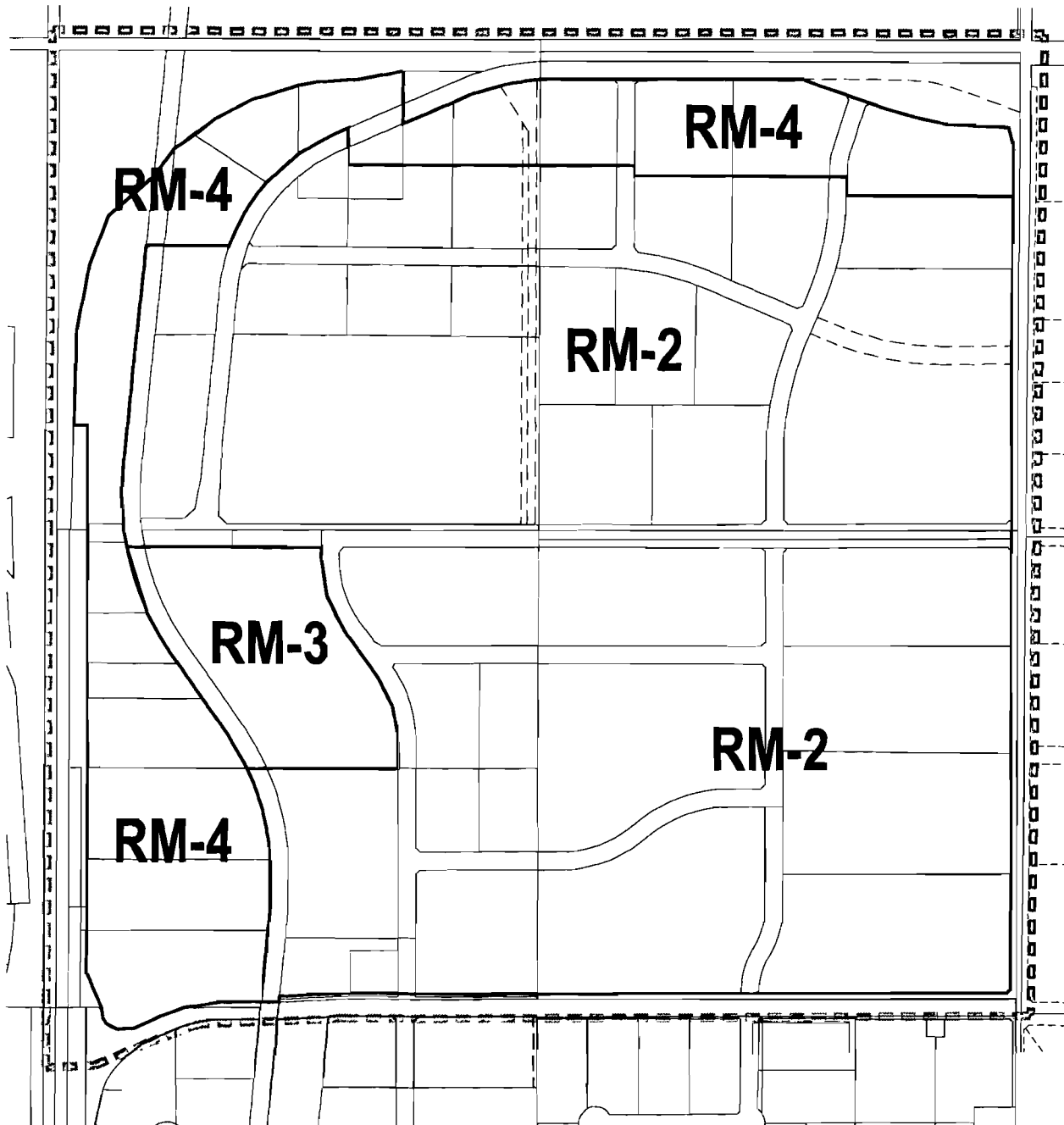
 EXISTING DEVELOPMENT

 PLAN BOUNDARY



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**CROSSROADS SOUTH PHASE 1 AREA STRUCTURE PLAN
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MAP 10 - Proposed Zoning



SCALE N T S

RM-2 RURAL MEDIUM INDUSTRIAL

RM-4 HIGHWAY INDUSTRIAL

RM-3 RURAL HEAVY INDUSTRIAL

■■■■■■ PLAN BOUNDARY



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4.4 High-Visibility Sites

4.4.1 Notwithstanding the requirements contained in the County's Land Use Bylaw³, the following design guidelines are to be applied to all developments in the Plan area located along arterial roadways and other high-visibility corridors:

1. That portion of any lot abutting a major roadway identified as a high-visibility corridor is to be landscaped to the satisfaction of the County. The landscaped area is to consist of no less than 5% of the area of the subject lot.
2. All development permit applications submitted to the County shall include a landscaping plan in accordance with Section 3.16 of the Land Use Bylaw.
3. Any outdoor storage areas that abut a major roadway shall be fenced and/or screened from view to the satisfaction of the County. Screening may take the form of fencing, berming, soft landscaping or a combination of these.
4. All development permit applications submitted to the County shall include building elevation drawings illustrating proposed finishing materials, colours and signage.
5. All principal buildings are to be developed on permanent foundations. In addition no soft-walled structures will be permitted as principal buildings in high-visibility areas, but may be considered for approval as secondary buildings in approved outdoor storage areas.

4.5 Benefiting Areas

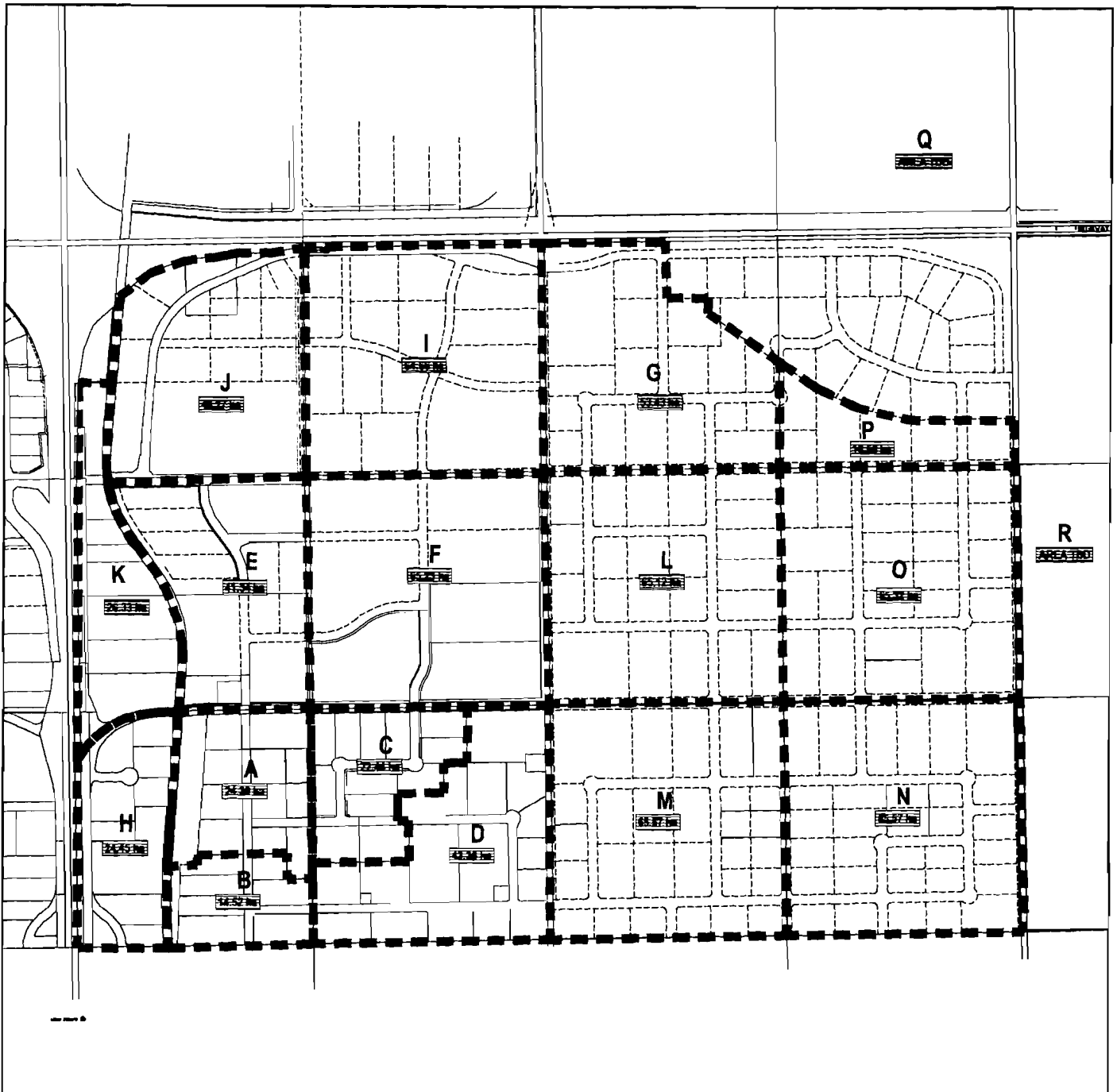
4.5.1 Where municipal infrastructure is developed that provides a benefit to lands outside of the Plan area, the County will assist in collecting a portion of the costs of the infrastructure from the said lands that benefit from the infrastructure at the time the lands that benefit initiate subdivision or development activities. A summary of applicable fees and levies is provided in Table 3, with benefiting areas illustrated in Map 11.

4.5.2 The efforts to collect costs from benefiting areas will expire within 20 years of the initial approval of this plan. Developers who develop in a particular quarter will be responsible for their entire contribution of their costs and costs incurred by other developers that benefit the subject quarter at the time of first subdivision. Costs incurred by the County are to be recovered on a per hectare basis, or other cost recovery mechanisms acceptable to the County.

4.6 Levies

4.6.1 All levies identified in the plan shall be collected at the time of subdivision.

³ As an alternative to these design guidelines, the County may instead develop a high visibility site overlay for inclusion in the Land Use Bylaw.



**CROSSROADS SOUTH PHASE 1 AREA STRUCTURE PLAN
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MAP 11 - LEVY OR ENDEAVOR TO ASSIST AREAS



SCALE N 1 S



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Table 3 – Levies and Endeavours to Assist

Infrastructure Development	Areas	Rate ⁴
Range Road 60 and Highway 43 culverts	A,C,K,E,F,J,I	\$412/ha
Crossroads lift station upgrade ⁵	A,C,K,E,F,G,L,J,I	\$4,863/ha
Highway 43 Sanitary Crossing	A,C,K,E,F,G,L,J,I	\$296/ha
Four Mile Corner Lift Station Upgrade	H,K	\$5,373/ha
Highway 2 (100 th Street) Sanitary Crossing	H,K	\$3,627/ha
156 th Avenue Road Construction ⁶	E,J,I,F,G,L,P,O	\$615/m
148 th Avenue Road Construction ⁷	E,A,C,D,F,L,M,O,N	\$615/m
156 th Avenue Water Main ⁷	E,J,I,F,G,L,Q,P	\$125/m
148 th Avenue Water Main ⁷	E,A,C,D,F,L,M,O,N	\$125/m
Regional Storm Pond Contribution into City	B,D,M,N	TBD
Regional Lift Station – Highway 43 and RR 55	O,P,Q,R	TBD
Levies or Secondary Contributions⁷		
Bylaw 2657 – Levy ⁸	All areas	See latest bylaw
Transportation Levy ⁹	All areas	See latest bylaw
Aquatera Water Fee ¹⁰	All areas	Meter size
Aquatera Sanitary Fee ¹¹	B,D,M,N	Meter size

- 4.6.2 In addition to the levies identified in this plan, developers may be required to pay a connection fee to Aquatera Utilities Inc.

⁴ Value in the infrastructure development could change based on actual costs of construction and design implications. Some costs may be up fronted by developers and recovered at a later date.

⁵ This is the equivalent of the Northgate Lift Station levy which is to be used for the Crossroads Lift Station upgrade and force main construction until the Sanitary Master Plan recommends a new rate.

⁶ Water mains and road construction shall be contributed based on a frontage basis and is recoverable once subdivision along that frontage occurs.

⁷ Secondary contributions are those costs above what is required to pay for the existing infrastructure but are needed to pay for future upgrades and expansion. These numbers could change after a sanitary master plan is completed.

⁸ Assumes levy will be expanded to include all those lands that will ultimately drain to Clairmont. An adjustment may be necessary to accommodate for the fact that water supply comes from Grande Prairie for lands south of Highway 43. This levy is paid for at the building permit stage.

⁹ This levy is charged to collect for regional roads. It shall not apply if regional roads are being constructed by the developer.

¹⁰ This fee is a function of meter size and is charged at the building permit stage.