

**BY-LAW NO. 2708 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 Area Structure Plan for Section Twenty Three (23), Township Seventy Two (72), Range Six (6), West of the Sixth Meridian.

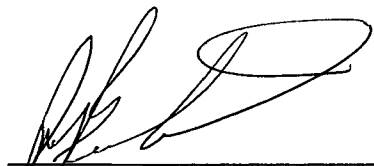
WHEREAS the Municipal Government Act, Statutes of Alberta, 2000, Chapter M-26. and amendments thereto, authorizes a Council to provide a framework for the subdivision and development of an area of land within the Municipality; and

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 **"WEST CLAIMONT AREA STRUCTURE PLAN BY-LAW"**.
2. That the West Clairmont Area Structure Plan By-law shall provide the framework and policies for future development of the land described therein.
3. That the West Clairmont Area Structure Plan document is attached to this by-law as an appendix and forms part of this by-law.
4. That this by-law shall take effect on the date of its final passage by Council.

READ A FIRST AND SECOND TIME THIS 24th **day of** March. **, A.D. 2004.**



REEVE



COUNTY ADMINISTRATOR

READ A THIRD TIME AND FINALLY PASSED THIS 14 **DAY OF** JUNE
A.D. 2004.



REEVE



COUNTY ADMINISTRATOR

RECEIVED

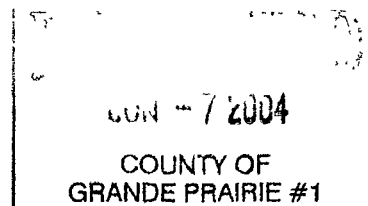
JUN 07 2004

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

June 2, 2004

Mr. John Simpson
Director of Planning
County of Grande Prairie No. 1
PO Bag 6000
Clairmont AB T0H 0W0



Dear Mr. Simpson:

Re: WEST CLAIRMONT AREA STRUCTURE PLAN - (Section 23-72-6-W6M)


The department has reviewed the West Clairmont Area Structure Plan (ASP) located adjacent to Highway 2, within the County of Grande Prairie No. 1. The ASP meets the department's requirements and is approved to meet the requirements of Section 14 of the Subdivision and Development Regulation. In paragraph 3.1.7 the department notes that a pedestrian access across Highway 2 is proposed. The department will not support this access until such time as traffic signals are put in place either by the department or the developer. Once traffic signals are in place the department would wish to review this issue further.

Please forward a copy of the ASP once it has received third reading and the approval of the Council of the County of Grande Prairie No. 1 to our Operations Manager in Grande Prairie, Geoff Dunn, at the following address:

Alberta Transportation
2nd Floor, 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 Transportation.

Sincerely,



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

cc: Geoff Dunn

WEST CLAIRMONT AREA STRUCTURE PLAN

(Sec. 23-72-6-W6M)

Prepared by:

ISL
Infrastructure Systems Ltd.

In association with



Beirsto Lehnert Ketchum Engineering Ltd.

May 2004

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1.0 INTRODUCTION

1.1 Purpose of Plan

The West Clairmont Area Structure Plan has been prepared to provide a framework for future development of a section of land in the Clairmont area of 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 industrial and residential 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 site fronts onto a primary highway, the requirements of Alberta Transportation also 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 immediately west of the Hamlet of Clairmont, approximately 4 km north of the City of Grande Prairie as illustrated in Map 1. The Plan area consists of a section of land (23-72-6-6) totaling approximately 258 ha as outlined in Table 1 below. The policies of this plan will apply to this area.

Table 1 – Plan Area Composition

Legal	Owner	Area (ha)
Pt. NW 23-72-6-W6M	E. and A. Tremblay	8.1
NW 23-72-6-W6M	K. and C. Thomson	55.7
NE 23-72-6-W6M	564609 Alberta Ltd.	51.8
SW 23-72-6-W6M	J.K. Thomson	64.7
SE 23-72-6-W6M	D. Althen	59.1
Lot 2, Plan 0020037	J. & A. Knobloch/U. Becker	1.6
Lot 3, Plan 0020037	George James	1.2
Lot 4, Plan 0020037	564609 Alberta Ltd.	3.3
Road Plans		12.6
Total		258.1

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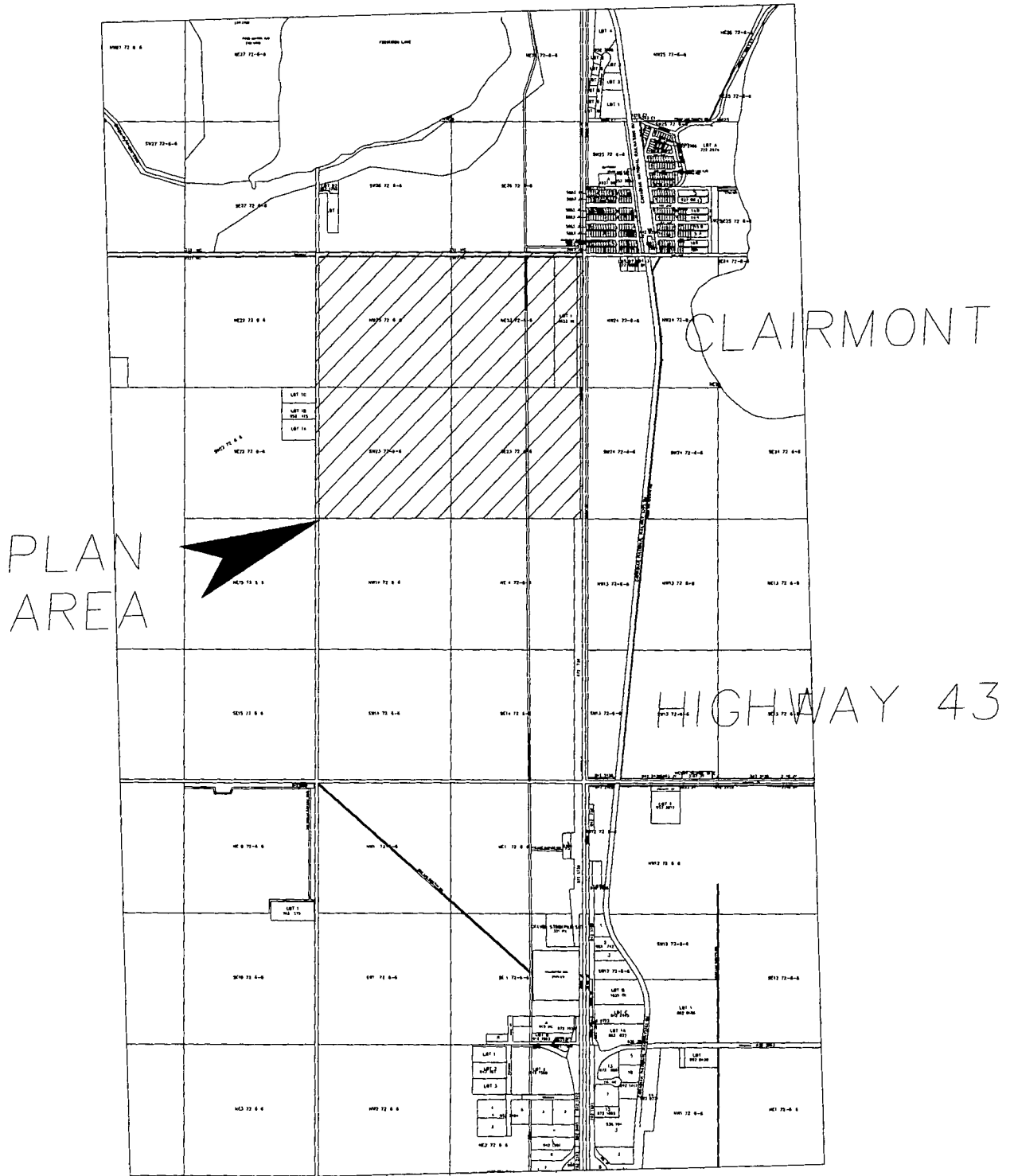
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MAP 1
LOCATION MAP



SCALE N T S



The site is bounded to the east by Highway 2 and to the west and north by local roads (Township Road 724 and Range Road 62). The Plan area is surrounded by agricultural lands to the north, south and west. The Plan area is also abutted by a small number of country residential parcels to the west, and the new County municipal complex and other industrial development to the south. The Hamlet of Clairmont and the Northgate Industrial Park is situated across the highway to the east.

1.3 Existing Conditions

The majority of the Plan area is currently in agricultural production. As shown on Map 2, non-agricultural uses include five residences, and a commercial development (car sales) at the northeast corner of NE 23.

The east side of the Plan area is traversed by a high pressure gas line that runs parallel to Highway 2. There is an existing gas well located on the SW 23.

There is very little native vegetation in the Plan area, with treed areas limited to its northeast corner. A poorly drained area is located in the west-central portion of the Plan area.

The Plan area is characterized by a large hill that crests in the W½ of 23 as illustrated in Map 3. From this point, the ground elevation drops by approximately 16 m (1.4% grade) to the northeast corner of the Plan area, 7 m (1.6%) to the poorly drained area noted above, and 11 m (1%) to the southeast. Elevations range from approximately 696 m at the highest point to 680 m at the northeast corner.

1.4 Policy Framework

1.4.1 County of Grande Prairie Municipal Development Plan

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

1.4.2 County of Grande Prairie Land Use Bylaw

A majority of the Plan area is currently designated as Agricultural (AG) in the County's Land Use Bylaw. The exception is part of the NE 23 which has one parcel zoned as Highway Industrial (RM-4), and a parcel on the NW 23 zoned as Country Residential (CR-5). In order to facilitate the development of these lands for industrial and residential purposes, it is intended that the Plan area be rezoned to the appropriate districts as a prerequisite to subdivision.

1.4.3 Clairmont Planning and Servicing Areas Study

The Clairmont Planning and Servicing Areas Study establishes logical area structure plan and servicing areas for lands in the vicinity of Clairmont. This study was prepared in order to address future development in a comprehensive and coordinated manner.

This Area Structure Plan corresponds to planning area P4 as defined in the Study.

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MAY, 2004

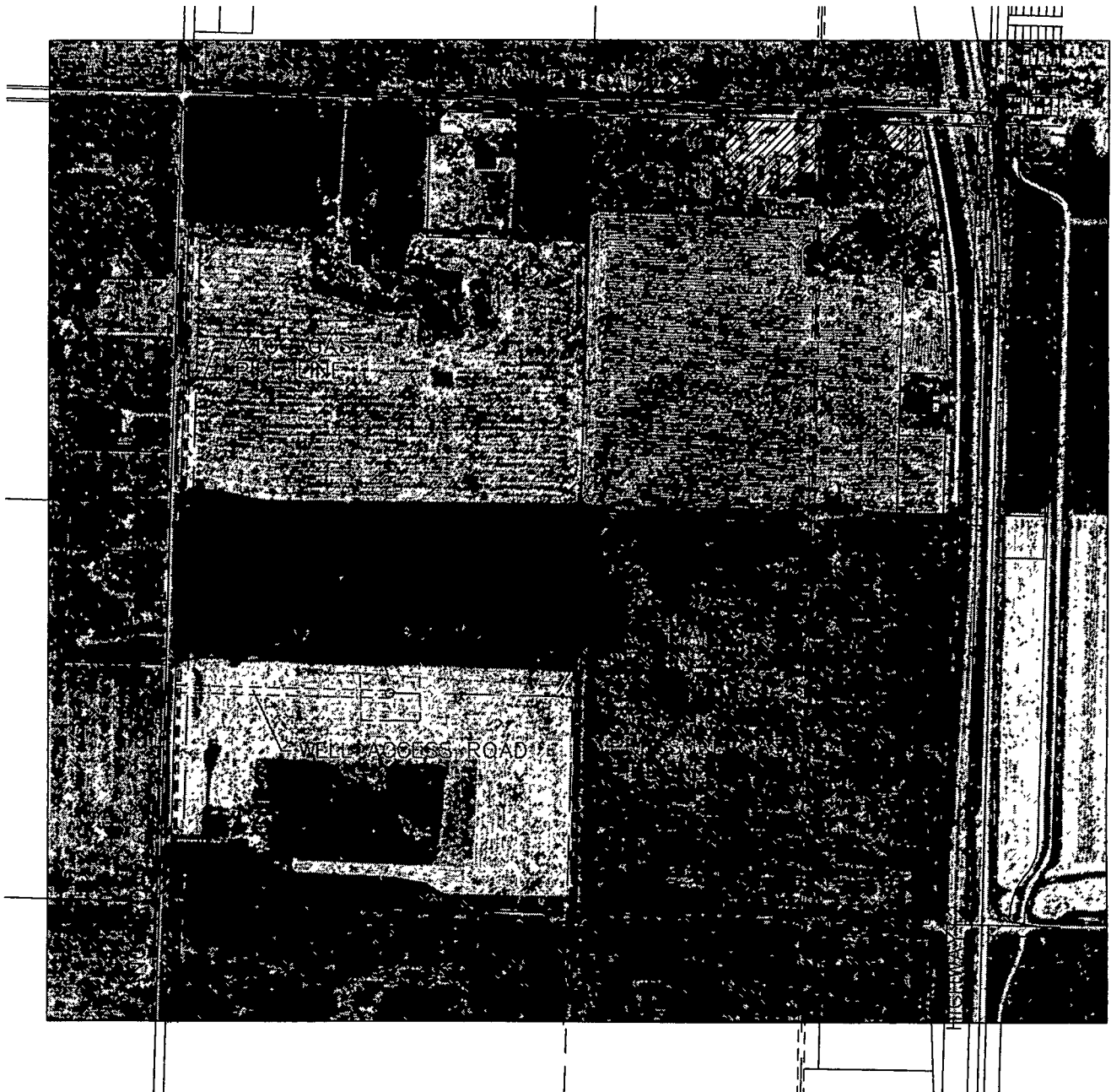
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MAP 2 EXISTING CONDITIONS



SCALE . N.T.S



LEGEND:

- - RESIDENCE
- ▨ - COMMERCIAL USE
- — — - GAS LINE

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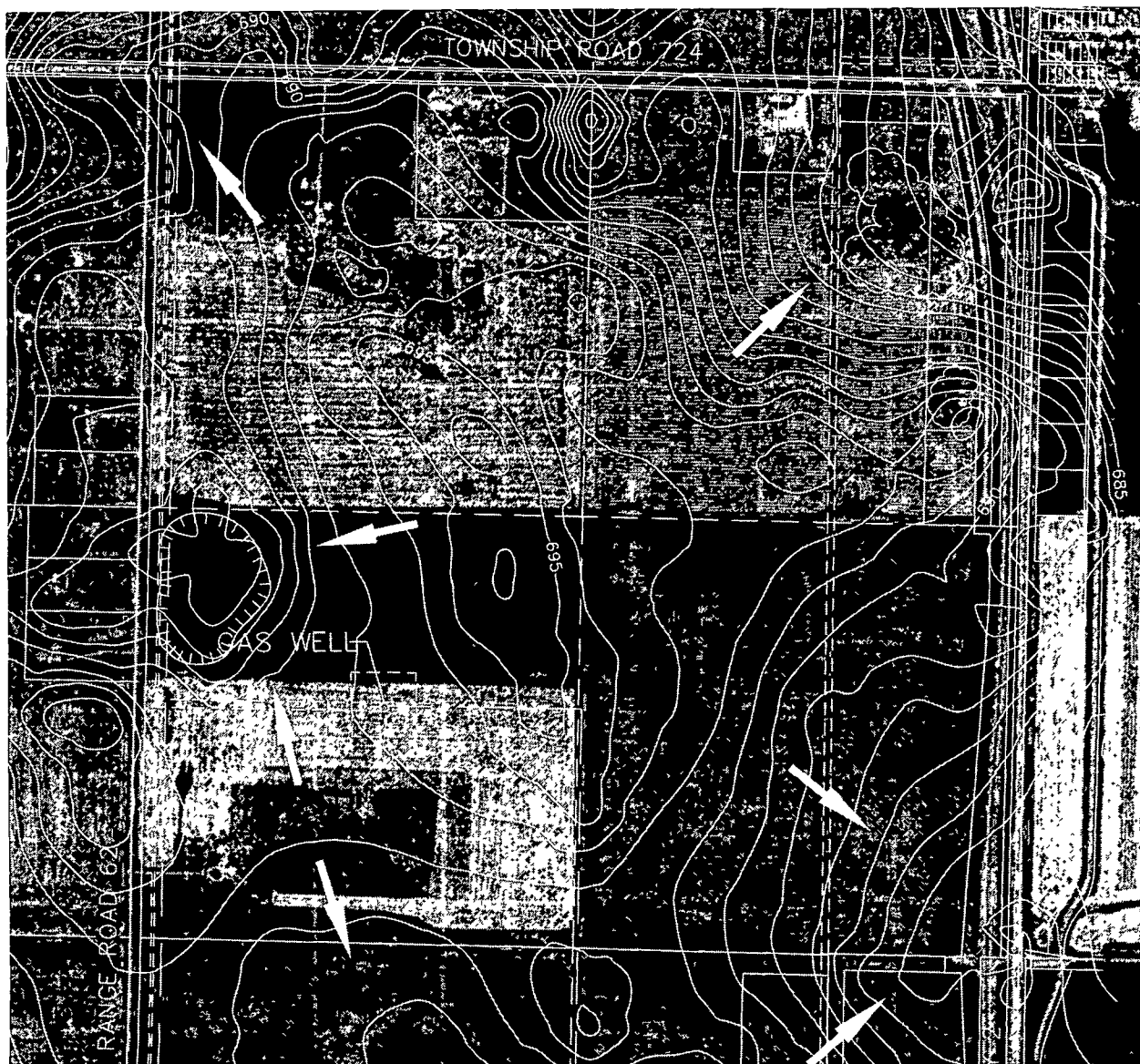
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MAP 3 PHYSICAL FEATURES





SCALE N 1 S



LEGEND:

-  -- 1m CONTOUR
-  - TREED AREA

-  - DIRECTIONAL FLOW
-  - LOW AREA

1.4.4 Subdivision and Development Regulation

The preparation of the plan is consistent with Section 14 of the Subdivision and Development Regulation of the Province of Alberta. It is intended that the plan receive the approval of the Minister of Transportation pursuant to this section.

2.0 DEVELOPMENT CONCEPT

2.1 Goals of the Plan

The West Clairmont 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 economic development of the Clairmont area through the development of the plan area for residential and 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 development concept for the Plan area.

2.2 Land Use Concept

A detailed breakdown of land uses proposed for the Plan Area is provided in Table 2. The overall development concept proposed for the area 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.

2.3 Residential Development

- 2.3.1 Residential development is proposed for the westerly portion of the Plan area, adjacent to agricultural lands and country residential development located to the west. The total area proposed for residential development is 78 ha, or 31% of the Plan area. Based on the layout presented in Map 4 an average lot size of approximately 1.0 ha is proposed, resulting in a yield of 81 lots¹ and accommodating approximately 240 residents assuming a density of 3 persons per unit. For the purposes of ensuring that adequate sewage and water capacity is committed to this residential area, up to 150 residential lots will be permitted in the Plan area without an amendment to this Area Structure Plan.
- 2.3.2 Two residential development forms are proposed for the area. Given that the proposed residential development is to have access to municipal services, it is intended that the lots located along the west side of the Plan area be zoned as Rural Estate (RE) in the Land Use Bylaw. In order to provide for transition between proposed industrial development outlined in Section 2.4 and the Rural Estate development, residential (mixed use) development is proposed for the westerly portion of the Plan area. It is intended that lots in this area be zoned as Country Industrial (CM) in the Land Use Bylaw, which allows for the development of residences and small industrial operations on the same lot.

¹ Lot yield would increase to approximately 100 lots if additional lots were created in the southwest corner of the Plan area, and the large municipal reserve parcel were to be developed for residential purposes.

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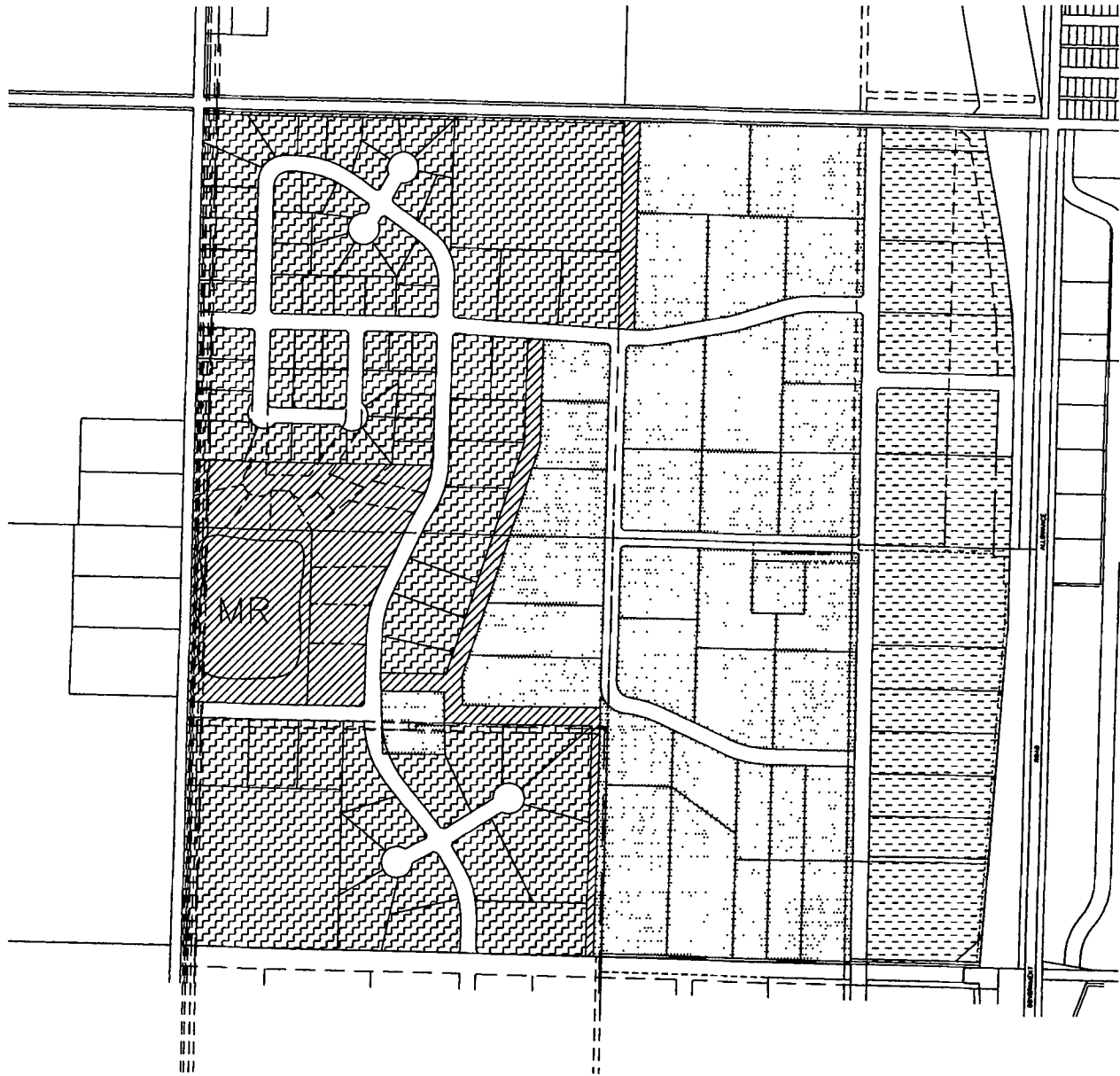
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MAP 4 DEVELOPMENT CONCEPT







SCALE - N.T.S.



LEGEND:

 - STORM POND

-  - RESIDENTIAL
-  - GENERAL INDUSTRIAL
-  - HIGHWAY INDUSTRIAL
-  - MUNICIPAL RESERVE

----- POTENTIAL RESUBDIVISION/CONSOLIDATION OPPORTUNITY

Table 2 - Land Use Area Estimates

Land Use Category	NW 23	NE 23	SW 23	SE 23	Total	Percent
Gross Developable Area	64.3	64.3	64.7	64.7	258.0	
Less Road Plans	(0.6)	(6.4)	0.0	(5.6)	(12.6)	
Add Road Closure	0.0	2.0	0.0	0.0	2.0	
Net Developable Area	63.7	59.9	64.7	59.1	247.4	100.0
Industrial	5.2	48.5	8.8	52.8	118.2	47.8
Highway Industrial	0.0	22.6	0.0	29.7	52.3	21.1
General Industrial	5.2	28.8	7.4	23.1	64.5	26.1
Gas Well	0.0	0.0	1.4	0.0	1.4	0.6
Residential	42.9	0.0	34.9	0.0	77.8	31.4
Rural Estate	25.2	0.0	19.5	0.0	44.7	18.1
Mixed Use	17.7	0.0	15.4	0.0	33.1	13.3
Roads	8.7	7.3	6.0	6.3	28.3	11.4
Storm Pond²	0.0	0.0	5.1	0.0	5.1	2.1
Municipal Reserve³	6.9	1.2	9.9	0.0	18.0	7.3

- 2.3.3 In order to protect proposed residential development from the effects of adjacent industrial sites, landscaped buffers with screening and berming shall be provided in accordance with County requirements. Such measures are to be accommodated on municipal reserve lands 30 metres wide and separating residential and industrial properties, as well as on-site landscaping on individual lots.
- 2.3.4 All residential development shall be serviced with municipal water and sewer services.
- 2.3.5 Higher density residential development will be considered in this area but will require an amendment to this plan.

2.4 Industrial Development

- 2.4.1 As noted in Table 2, approximately 48% of the Plan area is to be developed for industrial purposes. A mixture of highway-oriented and general industrial development is proposed, the location of which is intended to optimize opportunities for transition between uses and minimize the potential for detrimental impacts on non-industrial properties.
- 2.4.2 General industrial development, totaling approximately 65 ha, is proposed for the central portion of the Plan area. However, the RM-1 and RM-2 Districts will not be permitted adjacent to Bauman Road, Township Road 724, and Highway 2. Uses encouraged in this area are those that are characteristic of other industrial parks in the vicinity, and would be administered under the Rural Light (RM-1) and Rural Medium Industrial (RM-2) Districts of the Land Use Bylaw. For transitional purposes, the RM-1 District or RM-4 District will be placed adjacent to the Country Industrial (CM) District. Lot sizes designated for this use are intended to average approximately 2.7 ha based on the layout illustrated in Map 4.

² If not required pursuant to Section 3.4, the land occupied by the storm pond will be dedicated as municipal reserve.

³ The balance of municipal reserve owing to be dedicated as cash-in-lieu as outlined in Section 2.5.

- 2.4.3 Given the proximity of the Plan area to Highway 2, it is proposed that those lands located along the east boundary of the Plan area and along Bauman Road and Township Road 724 be designated as Highway Industrial (RM-4) in the Land Use Bylaw. This development occupies approximately 51 ha (21%) of the Plan area. It is the intent of this District that developments be the subject of a high level of design and landscaping given the high degree of visibility that these locations afford.
- 2.4.4 All industrial development in the Plan area shall be the subject of a high level of design and landscaping in accordance with County requirements. This is a result of the high degree of visibility that these locations afford, as well as their close proximity to residential development.
- 2.4.5 All industrial development will be serviced with municipal water and sewer systems.

2.5 Municipal Reserve

- 2.5.1 In accordance with the Municipal Government Act, a maximum of 10% of the Plan area (24.7 ha) may be provided as municipal reserve. Due to previous subdivision activity in the NE 23, 1.5 ha of municipal reserve has already been dedicated as cash-in-lieu⁴. As a result, the 23.2 ha of municipal reserve that remains owing is to be allocated as follows:
- Approximately 5.5 ha of land is to be dedicated in parcel form by way of a 30m-wide buffer strip on the east side of the residential area to mitigate impacts from adjacent industrial activities. This also provides a potential linkage to future development proposed on lands to the south;
 - A 1m-wide strip, totaling approximately 0.1 ha, is to be provided adjacent to the residential lots at the north end of the Plan area to deter direct access to Township Road 724;
 - A large parcel totaling approximately 12.3 ha surrounding a future storm pond is proposed at the centre of the Plan area to be developed as a community park facility⁵. If the storm pond is not required pursuant to Section 3.4, the land it occupies will be added to the park space and the area of this site increases to 17.4 ha. It should be noted that the land required for this site exceeds the amount of MR that is potentially available from the lands in which they are located (NW and SW 23). Therefore it will be necessary to apply cash-in-lieu or reserve deferral from adjacent lands within the Plan area in order to assemble the required land.
- 2.5.2 The balance of the municipal reserve owing (5.2 ha) shall be provided to the County as cash-in-lieu as a condition of subdivision approval. If the storm pond site is dedicated as municipal reserve, then there will be no balance owing.

⁴ A deferred reserve caveat in the amount of 5.7 ha (14 ac) is registered on the title.

⁵ If not required, this municipal reserve site may be developed for residential purposes. If so, a portion of the subject lands would be dedicated for neighbourhood park space.

3.0 TRANSPORTATION AND SERVICING

3.1 Road Network

As illustrated in Map 5 primary access to the Plan area is to be obtained from existing locations along Highway 2 at the northeast and southeast corners of the Plan area. Traffic impact assessments will be prepared for Alberta Transportation and the County at the time of subdivision to determine if improvements to these intersections are required in the future. The development of roads in the plan area is consistent with an overall transportation strategy for the area. The regional transportation system is outlined on Map 5A.

- 3.1.1 A traffic impact assessment (TIA) shall identify future traffic generation expected from the area. The Area Structure Plan will identify all road rights-of-way requirements based on the information produced from the TIA to ensure compatibility with the County Roads Study and roads standards included therein.
- 3.1.2 Internal vehicle circulation is to be accommodated by a looped road system that has been designed to ensure a separation of residential and industrial traffic. All roads are to be constructed and paved in accordance with County specifications at the expense of the developer. In those instances where a proposed road straddles a property line, the cost of road construction shall be shared by the affected landowners. All internal roads are to be constructed as per County standards. All arterial and major collector roads are to have a minimum of a 40 metre right-of-way.
- 3.1.3 With the exception of existing lots fronting onto Township Road 724, all lots shall be accessed by the internal road system. No direct highway access will be permitted. In the interests of safety, it is proposed that those existing lots fronting onto Township Road 724 be developed with shared approaches. No highway frontage service roads are proposed for the Plan area, and much of the existing service road located in the northeast corner of the Plan area is to be closed and replaced by the internal road system. In addition, it is proposed that the gas well lease access road be closed and direct access be obtained from an internal subdivision road that will abut the site.
- 3.1.4 Direct access to the Bauman Road. (84th Avenue) will be restricted as indicated in Map 5. Those properties having direct access to Bauman Road may be required to remove the accesses in the future. Additional future accesses may be restricted to right-in/right-out only.
- 3.1.5 Through the subdivision process, additional land may be required by the County from the developer to provide for the future widening of Range Road 62. In addition, more specific traffic impact assessments may be required to identify potential improvements to all external roadways.
- 3.1.6 Improvements to Range Road 62 and Township Road 724 will create a benefiting area. The benefiting area would be those quarters that are adjacent to these roads. The County will require new development occurring in the benefiting area to pay levies to recover a portion of the costs for these improvements. A potential levy based on 2003 dollars is approximately \$3750/ha to construct the improvements.

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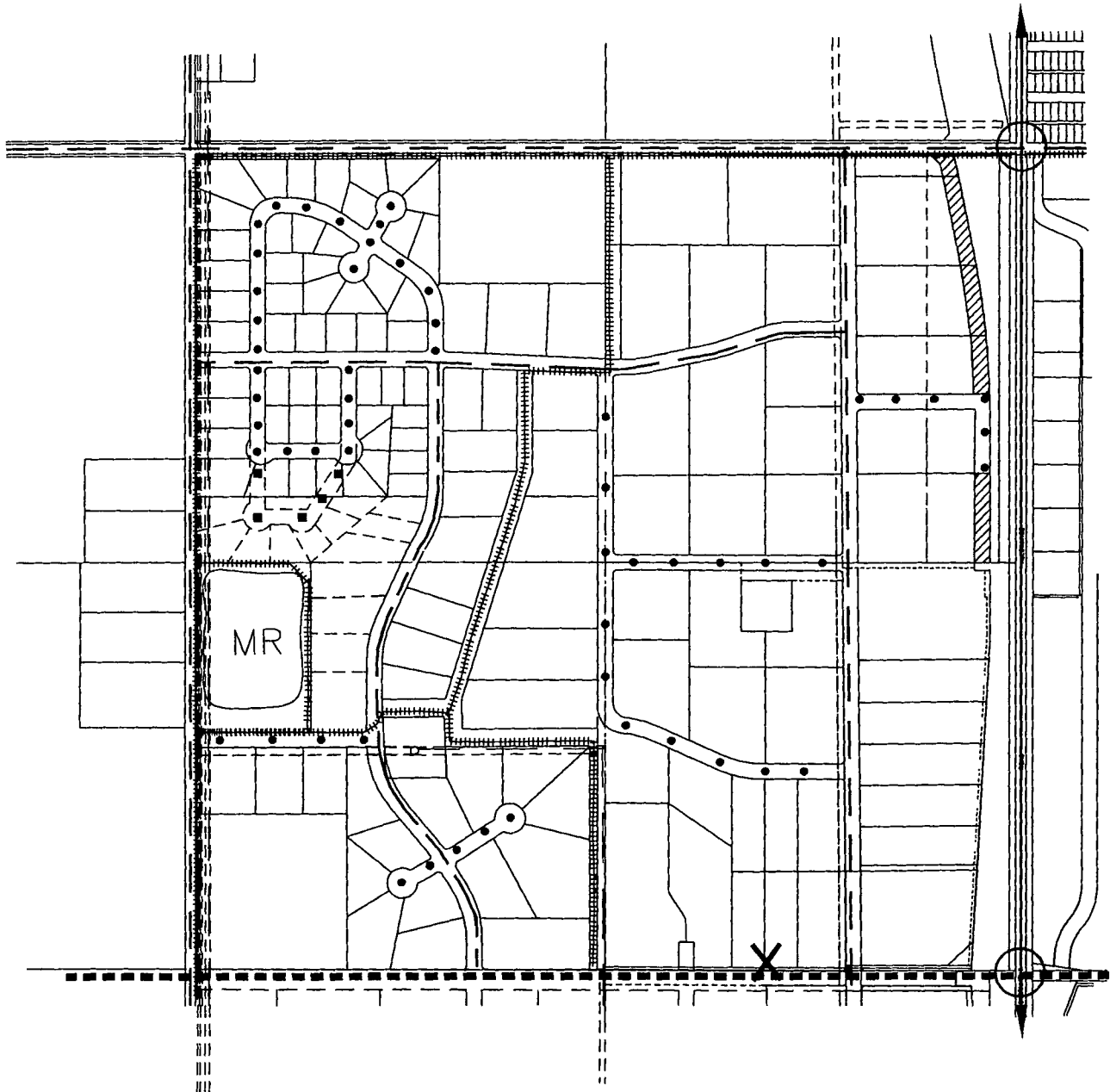


WEST CLAIRMONT AREA STRUCTURE PLAN

MAY, 2004

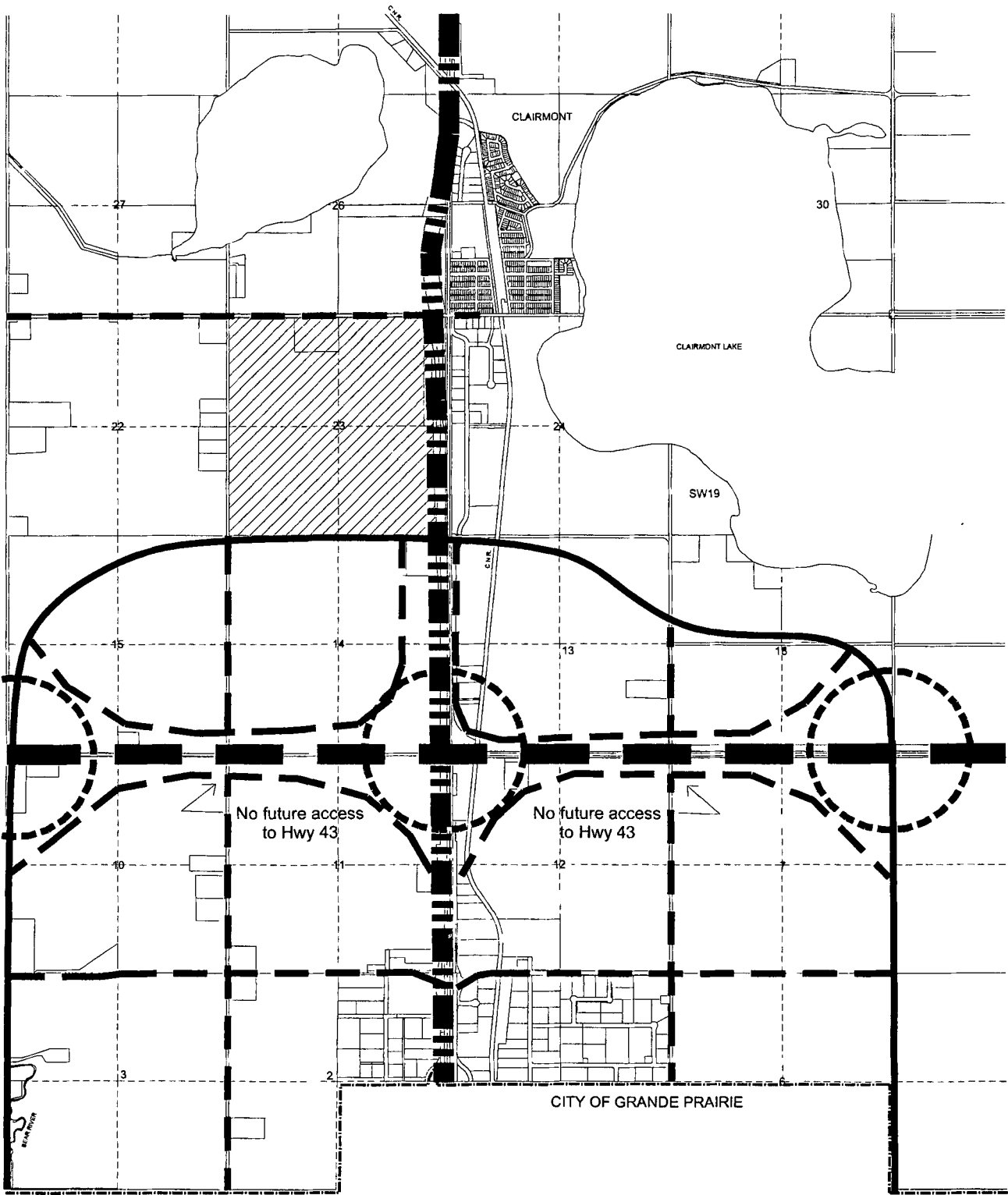
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MAP 5 TRANSPORTATION CONCEPT



LEGEND:

- | | | | |
|--|-------------------|--|------------------------|
| | - HIGHWAY | | - HIGHWAY INTERSECTION |
| | - ARTERIAL | | - ROAD CLOSURE |
| | - MINOR COLLECTOR | | - JOINT ACCESS |
| | - LOCAL ROAD | | |
| | - TRAIL LINKAGE | | |







MAP 5A - FUTURE REGIONAL TRANSPORTATION NETWORK

SCALE N.T.S.

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



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

- 3.1.7 In order to facilitate pedestrian and bicycle movement within the Plan area and provide linkages to adjacent areas, a trail system shall be developed that is consistent with the concept identified in Map 5. This trail system shall provide for pedestrian access across Highway 2 to the satisfaction of the County and Alberta Transportation. The developer will be responsible for the construction of all trails required by this plan.
- 3.1.8 Bauman Road shall be recognized as an urban arterial in this Plan. All future planning approvals will recognize the status of this road that requires no less than a 40 metre wide right-of-way. This arterial road is part of a planned urban arterial ring road concept in the County connecting Bauman Road to the west with Range Road 63 (116th Street) and to the east with Range Road 55 (84th Street).
- 3.1.9 The County may impose a transportation levy to pay for additional transportation upgrades in the area.
- 3.1.10 If the proposed road standards imposed by the County (to a rural standard) are inconsistent with the development of the area to an urban standard, the developer may propose for consideration, an urban model that is consistent with generally accepted engineering standards.

3.2 Sanitary Sewer

The sanitary sewer for the plan area is broken down into 4 primary drainage basins. The south east corner is serviced by the existing sanitary lines that were installed to accommodate the County office and the Precision lands. This area is referred to as drainage basin (B) in Map 6. These lands drain downstream into Clairmont into the lift station that was constructed as part of the Northgate development. As such there is a levy associated with tying into this portion of the line. The entire SE 23 is accommodated in this basin as well as some peripheral areas. Many of these peripheral areas can be serviced with the option of this drainage basin or the adjacent ones.

Another drainage system (D) is shown in the northeast quarter. It is the intention here to drain these portions across Highway 2 and into the existing Clairmont gravity system. The downstream pipe is only 200mm within the Hamlet and as such will need to be upgraded in the future to accommodate the increased flows. The upgrading of this line could be easily undertaken when the new force main to the sewage lagoon is constructed.

In addition, future upgrades to the main lift station, or a new regional lift station, will need to be constructed to accommodate the additional flows from this area and drainage basin (B).

The other drainage system (A) is a system that will ultimately drain to a lift station to be situated in the NW 11-72-6-W6M, which is topographically the lowest point. Map 6A identifies all the area that will ultimately be drained by gravity to the lift station, which will pump the sewage northward along Range Road 62 and ultimately tie into the Clairmont force main located along Township Road 724. A right of way along the lands adjacent to Range Road 62 will be required for these purposes. The existing east-west force main from Clairmont has the capacity for an additional combined flow of approximately 30L/s before force main upgrades are required. Upgrades will need to take into context future expansion on both sides of Highway 2 and integrate all other needed improvements.

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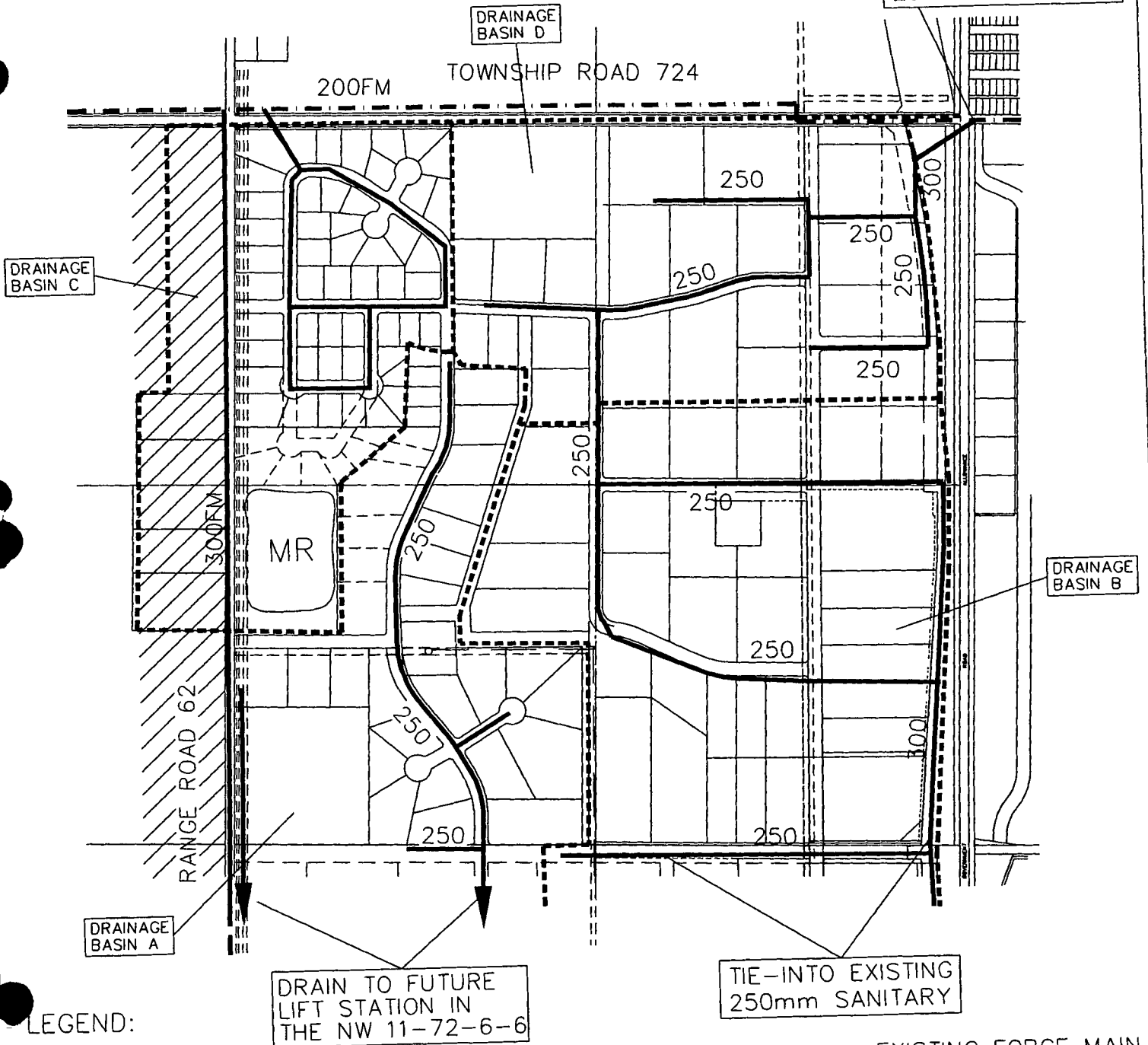
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MAP 6 SANITARY SERVICING CONCEPT

SCALE - N.T.S.

TIE-INTO EXISTING
200mm SANITARY



LEGEND:

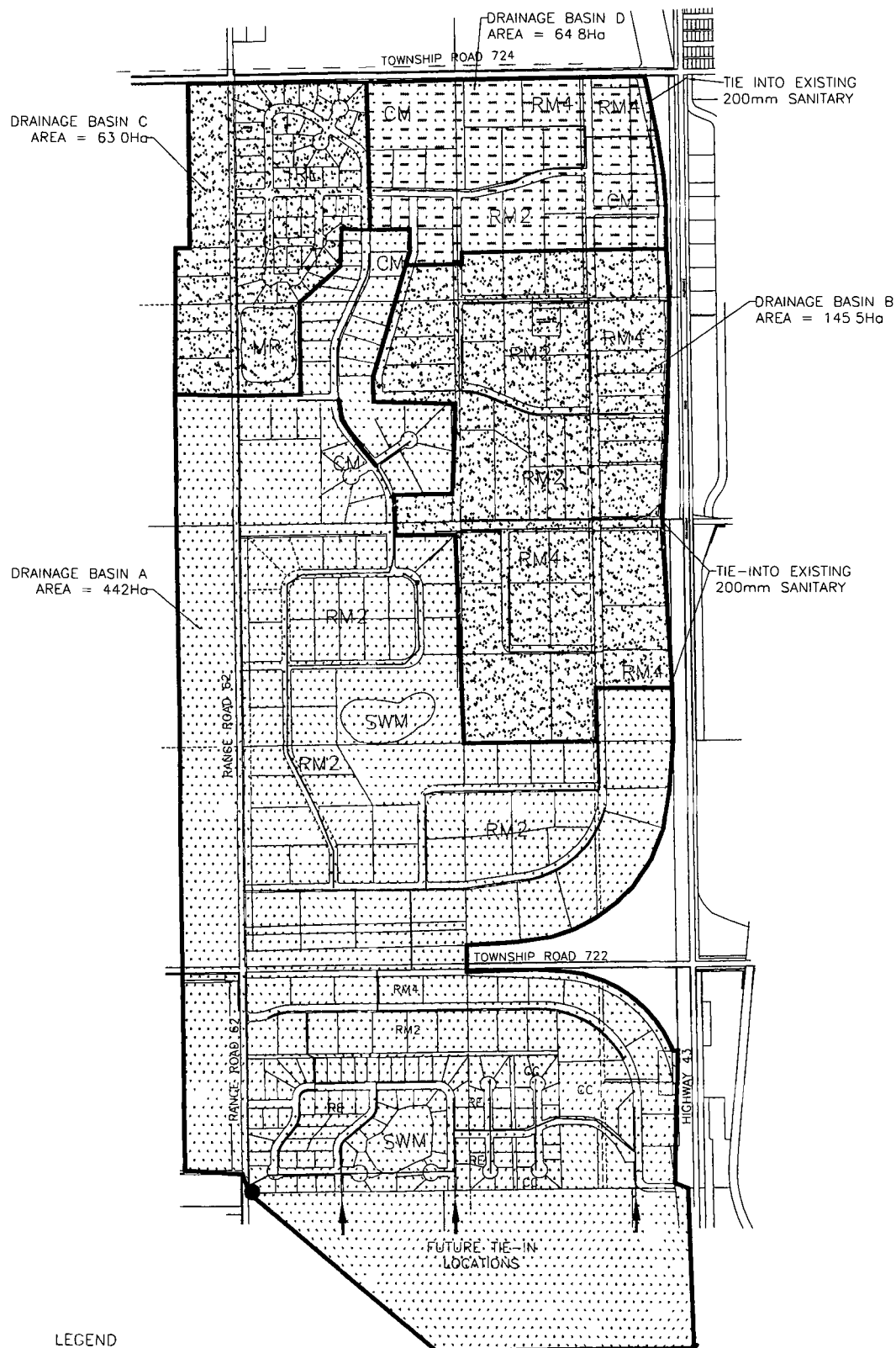
- 250 - PROPOSED SANITARY MAIN AND SIZE
- - EXISTING SANITARY MAIN
- - PROPOSED FORCE MAIN
- - EXISTING FORCE MAIN & ADDITIONAL FUTURE FORCE
- - - - - DRAINAGE BOUNDARY

MAY, 2004

SANITARY SEWER LIFT STATION LEVY



SCALE N T S



250 - PROPOSED SANITARY MAIN AND SIZE
 - - - - - EXISTING SANITARY MAIN
 - PROPOSED FORCE MAIN

- — — — — EXISTING FORCE MAIN
 ————— DRAINAGE BOUNDARY
 ● ———— LIFT STATION

The drainage basin includes a significant amount of land to the south, which causes many of the pipes in the plan area to be oversized, occasionally over trenched and the lift station made larger. The location of the lift station will necessitate an agreement between landowners in the form of rights-of-way and cost sharing arrangements to make this location effective. A preliminary estimate indicates that the cost of the fore mentioned items is approximately \$1.35 million (2003 dollars). The benefiting area is approximately 442 Ha. The benefiting area is identified on Map 6A. A levy to recapture the costs of the installation would be approximately \$3060/ha in 2003 dollars. A policy to recover costs will need to be established prior to the construction of the lift station. Developer costs should be entirely recoverable from each upstream quarter at the time of initial subdivision.

Staging of the lift station upgrade requirements may be necessary for operational and pump efficiency purposes.

A portion of the planning area is presently included in the Clairmont off-site levy Bylaw No. 2657. It would be prudent to review the existing off-site levy by-law and only include the relevant infrastructure. This would include upgrading the Clairmont sewage lagoon and perhaps a small portion of a larger future Clairmont force main. Should a new levy be created it should include the new lift station levy proposed as part of this ASP with the Clairmont upgrades to create a single chargeable levy.

In lieu of the immediate installation of the regional lift station for the entire area a temporary lift station could be constructed, as well as a force main along Range Road 62, which would ultimately tie into the force main, which exists along Township Road 724.

It should be noted that there is a small area along Range Road 62 on the quarter directly west of the plan area that could be included in the drainage basin. This area has been accounted for in any proposed levies.

The last drainage basin (C) is topographically isolated from the other systems. This area is unique in that it can be serviced by one of two options. The first option would be to construct a separate lift station or a low-pressure system that could pump directly into the hamlet force main or the force main proposed for Range Road 62 as part of the drainage basin (A) requirements.

The second option would be to install a gravity system and use the force main that exists along Township Road 722. Presently the force main gravity drains itself for large portions of the line once the lift station pumps stop. It may be possible to have a gravity system with storage, check valves and flow sensors that will drain into this force main when it is not being used. During pumping events the system would have to be designed to avoid back flow. This system would have operational concerns and as such a design proposal would need to be approved by the County prior to acceptance of this methodology.

- 3.2.1 All new development in the plan area will be serviced with municipal sanitary sewer services.
- 3.2.2 Existing development with private sewage disposal systems can remain in place until a sanitary sewer 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.

- 3.2.3 Where the development of an area is contingent upon a servicing system to be developed in another area outside the plan area, the land may not be developed until the servicing is available.
- 3.2.4 Offsite levies will be established in the plan area to assist in the upgrading of existing municipal infrastructure required to service the development.
- 3.2.5 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.
- 3.2.6 The sanitary sewer system will be sized to accommodate the area identified on Map 6A.

3.3 Water Supply

- 3.3.1 Water for this plan area will come from crossover connections to water access points on the east side of Highway 2.

A preliminary analysis shows there are sufficient flows to accommodate the 1200 IGPM (95 LPS) required by the County, if sufficient cross connections are installed. The flows are sufficient on the east end but become progressively weaker as one moves to the west. Also in the topographically higher sections hydrant flows are reduced. Looping at a minimum of two locations is recommended. A cross connection to the system installed at the County Office provides this opportunity to increase flows when they fall below the County requirements. Also improvements to the feeder line from the Clairmont Pumphouse to a location in Northgate would increase flows in the range of another 20 L/s.

Map 7 depicts the proposed location and sizings of the future water system. To maintain consistency, all tie-ins across Highway 2 are to be treated as benefiting larger areas, the costs for which will be shared and recovered through levies that are assessed across a broader benefiting geographical area.

- 3.3.2 If an additional storage reservoir and pumping system is needed a location has been provided in the Plan area. The costs associated with constructing this shall be recovered through off-site levies. If fire flows are insufficient to meet FUS guidelines or building codes then alternative internal pumps and sprinklers may be needed to mitigate risks.
- 3.3.3 The County may establish an offsite levy to assist in improving infrastructure required to service this development.
- 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 Development may be allowed in the Phase 1 of the plan area notwithstanding that fire flows for the area do meet or exceed 1200 IGPM (95 LPS). Development will not be allowed in any other phase until the minimum flows have been established. Minimum flows will be required within 3 years of the date of the first subdivision approval at the expense of the developer.

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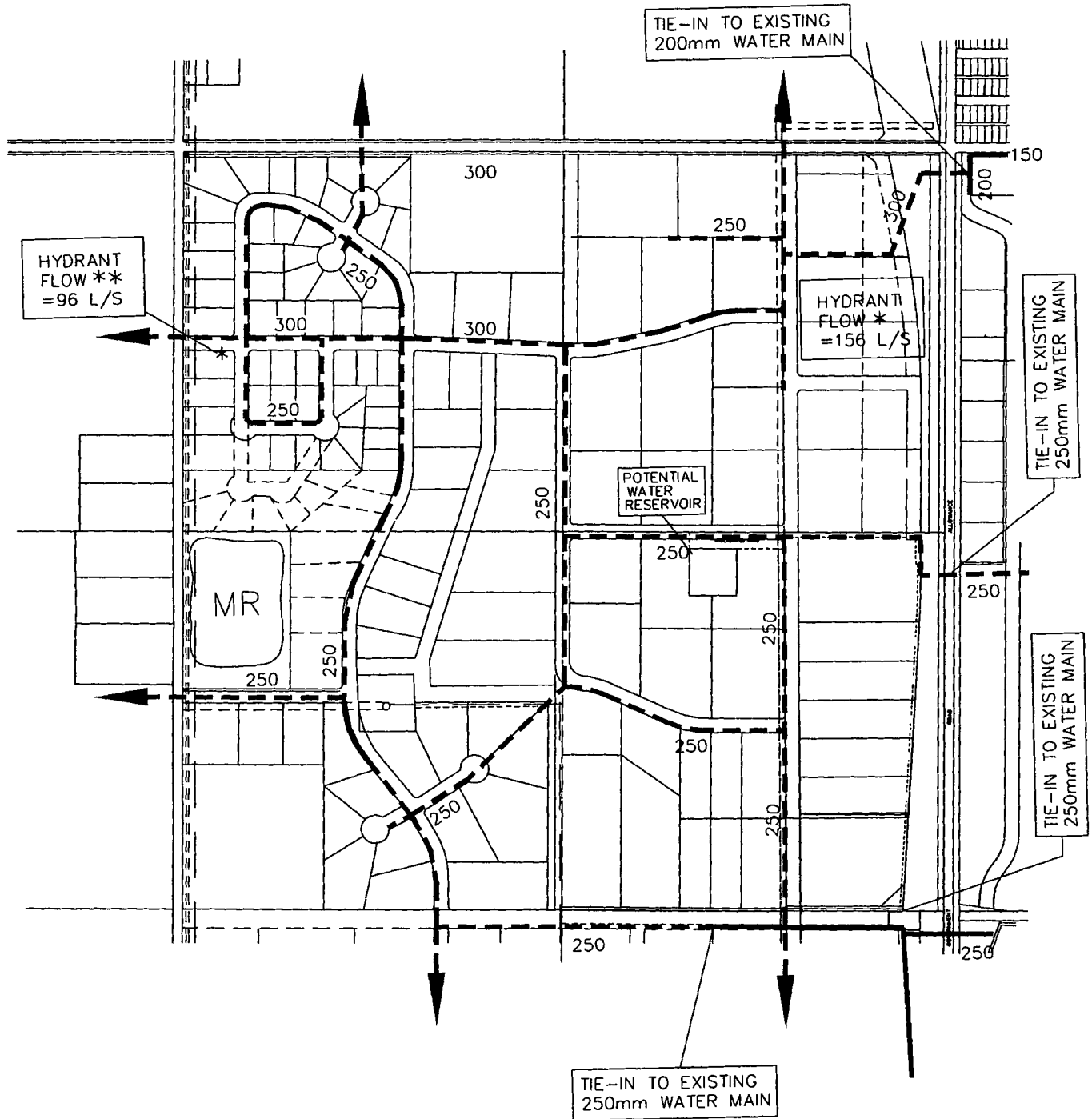


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MAP 7 WATER SYSTEM



LEGEND:

- — — — — EXISTING WATER MAINS
- - - - - FUTURE WATER MAINS
- * - HYDRANT FLOWS BASED ON A MINIMUM 2 TIE-INS
ACROSS HIGHWAY 2
- ** - HYDRANT FLOWS BASED ON NORTHGATE LOOPING
A MINIMUM 3 TIE-INS ACROSS HIGHWAY 2

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 or 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 four distinct watercourses as depicted in Map 8. In the northeast (Drainage basin "D") the water is directed to the Highway 2 ditch and then directly downstream into Ferguson Lake. A survey of the ditch profile indicates that re-grading will be necessary over portions of the area to accommodate the flows. The redesign of the ditch and proposal to direct storm water to Highway 2 will require Alberta Transportation approval. It may also require some additional road right of way to be garnered. This will alleviate excess flows entering the Hamlet of Clairmont where flows presently go.

To accommodate the increased flows coming from Drainage Basin "D" additional pipe sizings will be needed downstream of the plan area. These costs could be included in a levy system or picked up by the developer as part of the servicing requirements.

Another significant drainage system is that of Drainage Basin "B", which covers the southeast portions of the plan area. This basin crosses over to the quarters south of the plan area and includes the County Office. In this drainage basin it is a requirement that additional culverts across Highway #2 and the downstream railroad be installed once development begins to change from a rural to industrial landscape. A preliminary estimate indicates that the cost of the fore mentioned items is approximately \$137,000. Assessed on a benefiting area of 90.4 ha a tentative levy would be approximately \$1500/ha. Any requirements for wet ponds near Clairmont Lake would also be recoverable through levies.

It is the intent of this ASP to use Clairmont and Ferguson Lakes for retention purposes. Ducks Unlimited operates a weir system on both lakes which are 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 just prior to the water entering the lakes will be required. Alternatively, a wet pond will be required in the plan area. The need for such an auxiliary pond would be particularly true if the County changes its design philosophy from overland drainage to an underground storm water collection system. Funds to recover the cost of such a pond would be best suited to a levy structure. This levy should be charged to developments using an urban drainage model and a policy should be implemented to accommodate this prior to any such development occurring. Map 8A indicates the benefiting lands from each of the associated drainage basins.

In the northwest, drainage basin "C" drains north and west and ultimately into Ferguson Lake and its adjoining wetlands. The land presently drains to a low area identified as MR in the map. Presently the water from this area drains in a man made ditch westerly to Ferguson Lake. Without serious

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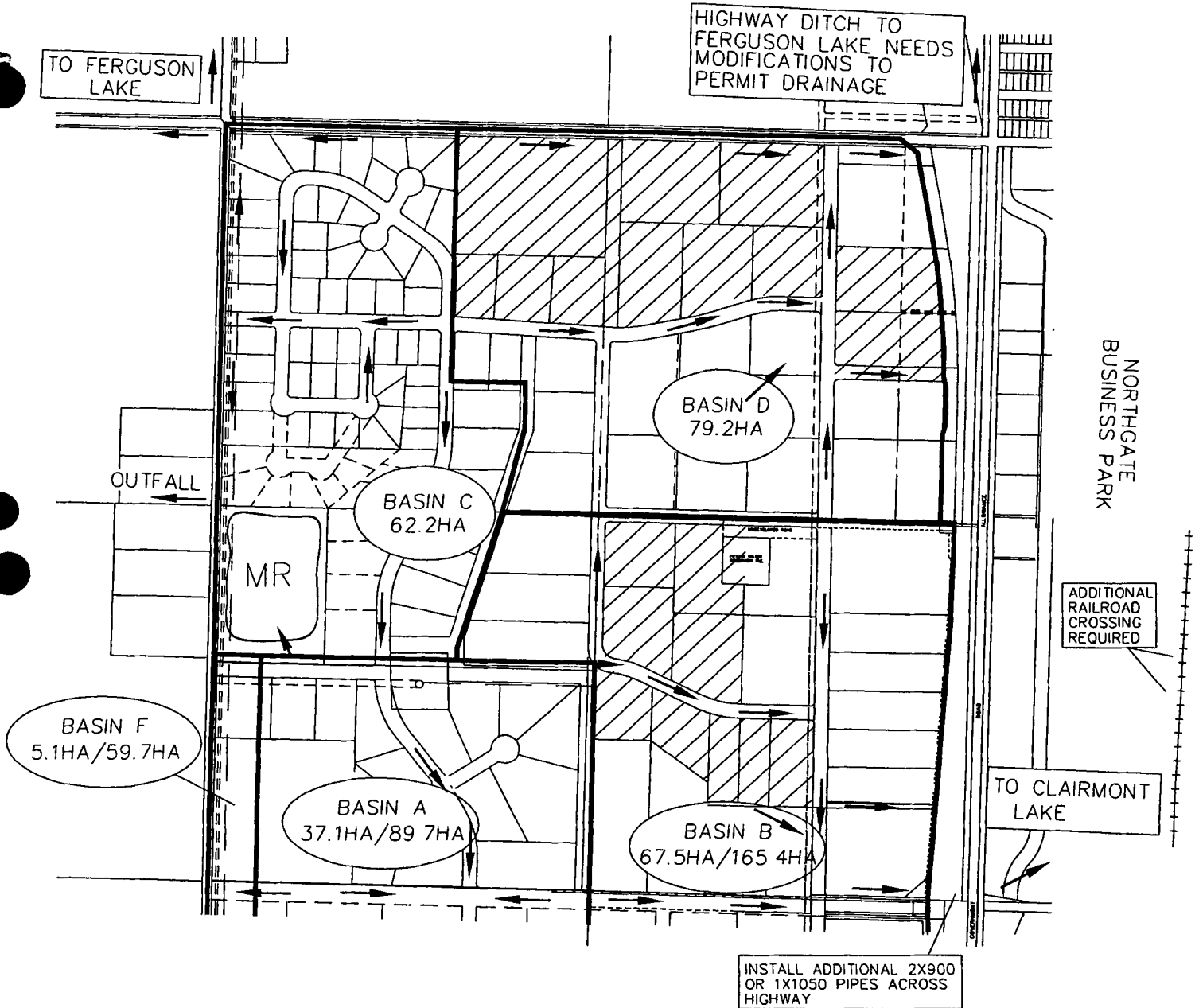
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MAP 8 STORM DRAINAGE CONCEPT

SCALE - N.T.S.



LEGEND:

- FLOW DIRECTION
- POSSIBLE DRAINAGE PUL OR R/W LOCATION
- POTENTIAL DRAINAGE EASEMENT OR DRAINAGE PULS REQUIRED
- DRAINAGE BASIN BOUNDARIES

BASIN D
79.2HA

- DRAINAGE BASIN D WITH A CONTRIBUTION OF 79.2Ha

BASIN A
37.1HA/98.4HA

- DRAINAGE BASIN A WITH A CONTRIBUTION OF 37.1Ha OF 98.4Ha, IN PLAN AREA

modifications to the range road this is still the most plausible location for the outfall. Negotiations for a permanent right of way or PUL may be necessary with the downstream owners should they feel its present location is unsuitable. The MR should incorporate a SWM should the area develop into an urban model. Otherwise in its proposed RE state increased flows are marginal and do not warrant a SWM system other than ditches and Ferguson Lake.

The final drainage basin is "A". This basin works its way slowly southward and onto multiple quarters to the south. Ultimately this watercourse takes itself to Bear Creek. This poses a more difficult problem in that predevelopment flows are more critical than in the other basins. Fortunately, as part of the Four Mile Corner overpass construction two large ponds were created to supply fill for that project. These ponds were prudently placed within the downstream watercourse of this basin and as such will act effectively as SWMs for this basin. This will also prove effective in minimizing downstream approach and road culverts which are required. Accommodating these flows, however, will require somewhat of a concerted effort to ensure proper drainage patterns are maintained. This will likely mean the provision of PULs or drainage easements to accommodate flows. In Map 8 the location of PULs are shown. Also any cost of converting these ponds to properly operating storm water management systems is relatively small. These ponds shall be brought up to County standards prior to subdivision approval for Phase 2 of this Area Structure Plan. The costs associated with their expansion/conversion may be recovered through "Endeavor to Assist" agreements at the subdivision and development stages or by implementing a levy structure. The areas that will benefit are identified in Map 8A and includes all those areas in drainage basin A.

The County may implement a review process at the time of development permit to ensure any businesses wishing to locate within any of the plan areas do not impose any undue or unreasonable environmental risk to the area as part of their normal operations. Based on the nature of the zoning only certain areas will be at elevated risk of this occurring

- 3.4.1 Storm water management shall be required for quantity and quality control. Storm drainage will be provided as indicated on Map 8.
- 3.4.2 A storm drainage master plan for all the drainage areas (or one for each basin) will be prepared for the area prior to beginning Phase 2. The plan will identify development standards for the storm pond and all required drainage passageways that need to be protected and the timing of the required improvements. The improvements must be done no later than the time the land is accepted as Municipal Reserve. This Master Plan will consider and provide recommendations for, the entire drainage basins impacted by development in this plan area and identify how storm water will be managed within the drainage basins at build-out, assuming an urban development standard is applied throughout each drainage basin. This may involve modeling of storm water run-off to ensure that downstream areas will be adequately protected from flooding in later years and recommend levies that will address the costs of downstream improvements.
- 3.4.3 Throughout the plan areas it is conceivable, based on the topography, that PULs or drainage easements will be required to properly handle overland drainage.
- 3.4.4 Any storm water pond required for the development will designated as a public utility lot.

- 3.4.5 The discharge of storm water to highway ditches will require the approval of Alberta Transportation. All flows to highway ditches are to be maintained at predevelopment levels.

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 Any overhead power lines located adjacent to residential areas are to be installed underground at the developer's expense.
- 3.5.4 ATCO Pipelines presently has a high pressure gas line that bisects the easterly quarters in a north south direction. Any development will require that the line be moved or accommodations be made in the development pattern to ensure that no buildings are constructed over these lines. All appropriate crossing agreements are to be in place with ATCO Pipelines prior to constructing parking lots over this line.

3.6 Lot Grading

- 3.6.1 A grading plan for each subdivision plan will be prepared by the Developer in accordance with County standards, prior to approval of any subdivision plan within the Area Structure Plan boundary, with the intent that all future building projects conform to the grading plan.
- 3.6.2 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.

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. The overall proposed phasing is proposed on Map 9.

As illustrated in Map 9, it is intended that development of the industrial area initially occur in the northeast and southeast corners of the Plan area in proximity to Highway 2 accesses. Subsequent development would then proceed westerly toward the residential node.

Phasing of residential development has the ability to begin development in either the north or south depending on where access is most favorable and subject to the availability of services.

4.2 Proposed Zoning

Proposed zoning for the Plan area is identified in Map 10. The areas slated for residential development will be zoned under the Rural Estate (RE) and Country Industrial (CM) Districts of the Land Use Bylaw. The industrial areas will be zoned under the Light and Medium Rural Industrial (RM-1 and RM-2) and Highway Industrial (RM-4) Districts. All zoning changes will be made in advance of subdivision approval.

4.3 Subdivision and Development

- 4.3.1 All developers shall be required to enter into development agreements with the County 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 address the matters relating 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. Up to 150 residential lots will be permitted in the Plan area without amendment to this Area Structure Plan.
- 4.3.4 The re-subdivision 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, the total number of lots does not exceed 150, and the capacity of servicing systems is not negatively affected. Where possible, buildings should be sited in a way that allows for the future re-subdivision of lots.

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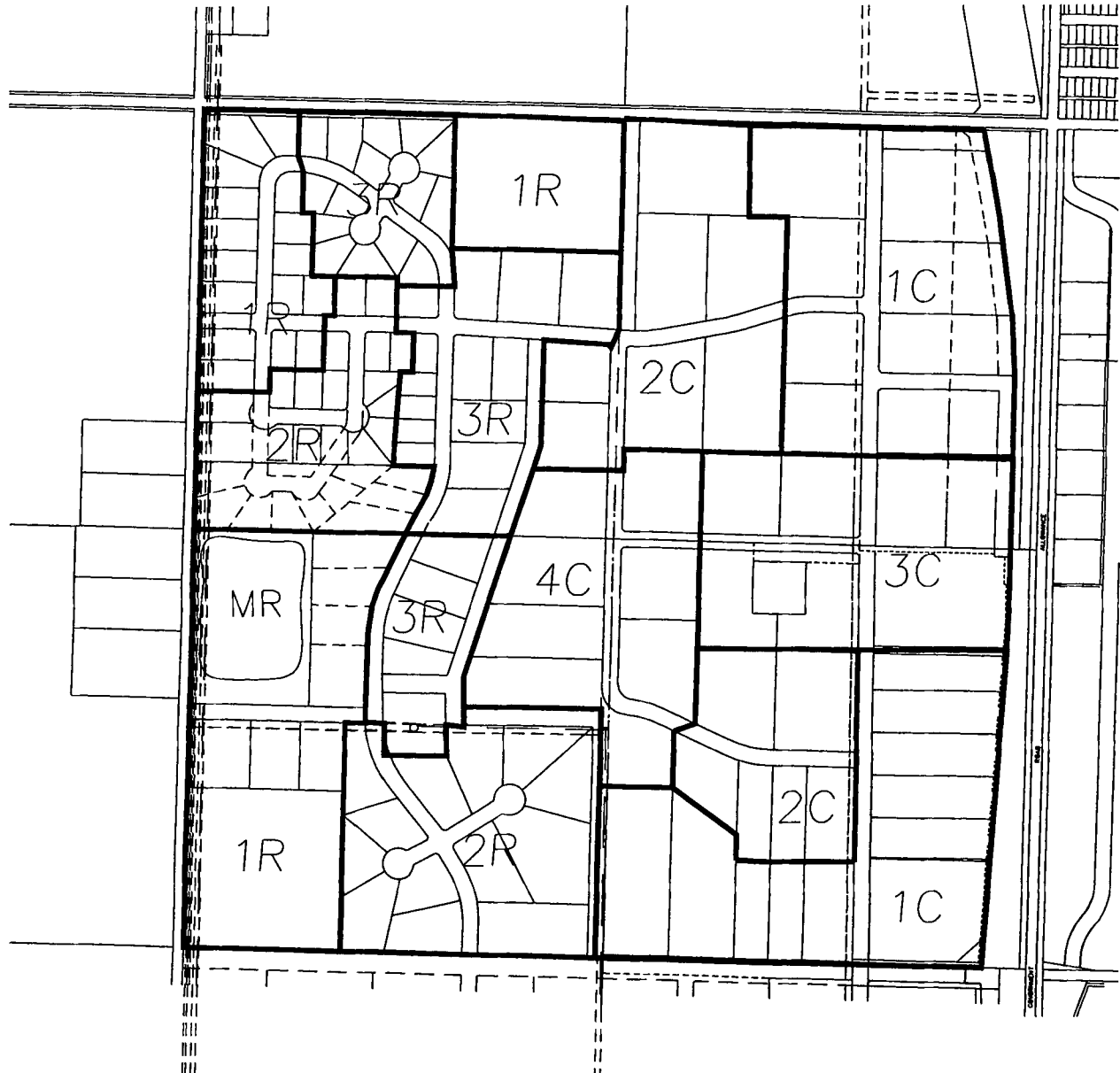
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MAP 9 PROPOSED PHASING



SCALE : N T S



LEGEND:

- 1R- RESIDENTIAL PHASE
- 1C- INDUSTRIAL PHASE

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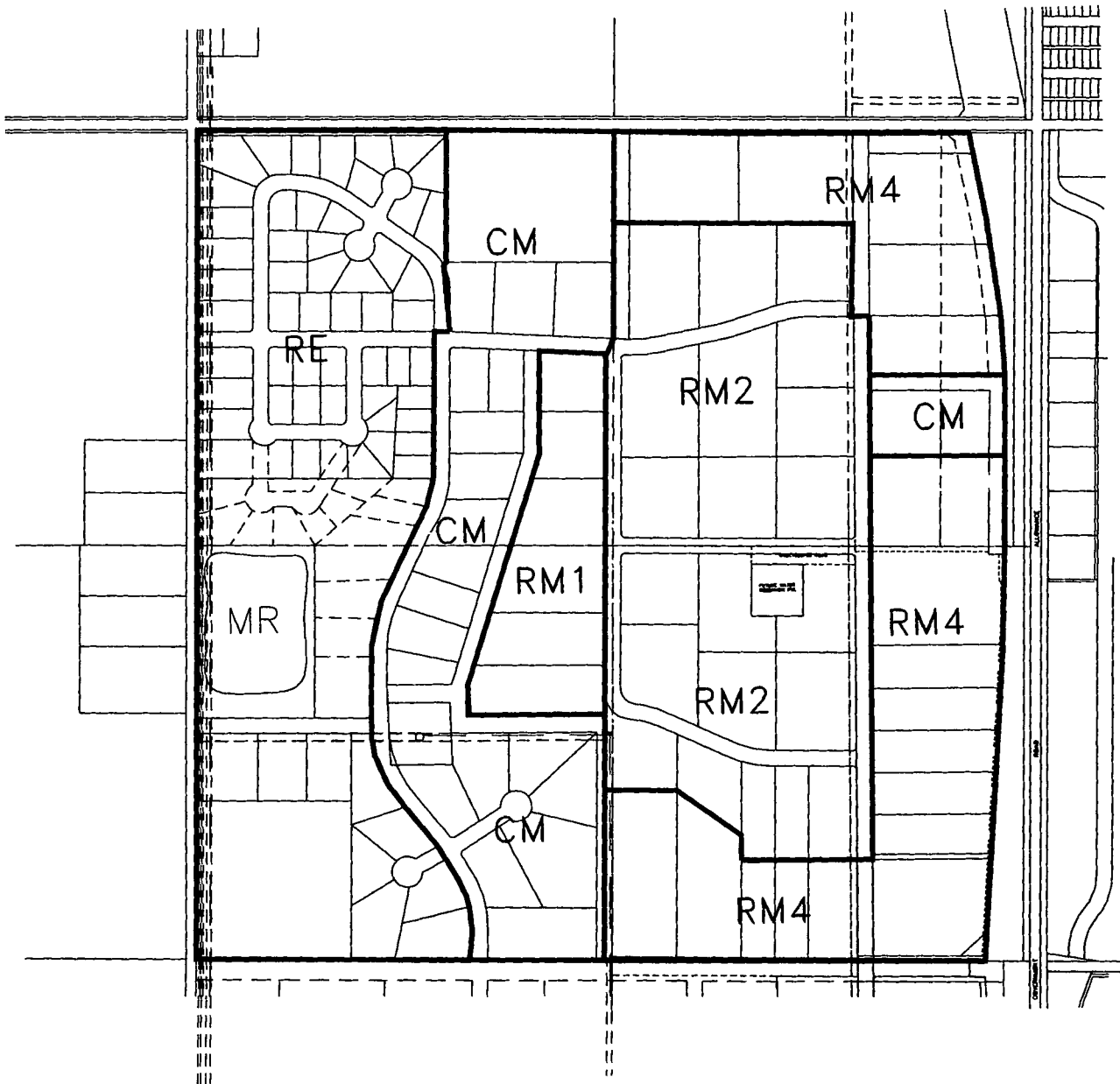
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MAP 10 PROPOSED ZONING



SCALE NTS



LEGEND:



SWM - STORM POND

CM - COUNTRY INDUSTRIAL

RM4 - HIGHWAY INDUSTRIAL

RM2 - RURAL MEDIUM INDUSTRIAL

RE - RURAL ESTATE

----- POTENTIAL RESUBDIVISION/CONSOLIDATION OPPORTUNITY

4.4 Benefiting Areas

- 4.4.1 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.
- 4.4.2 The efforts to collect costs from benefiting areas will expire within 20 years of the initial approval of this plan.

4.5 Levies

- 4.5.1 All levies identified in the plan shall be collected at the time of subdivision.
- 4.5.2 In addition to the levies identified in this plan, developers may be required to pay a connection fee to Aquatera Utilities Inc.