

AREA STRUCTURE PLAN
For
WHITETAIL CROSSING
In
THE TOWN OF MUNDARE



Prepared By:



In Association With
LOVATT PLANNING ASSOCIATES

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1.0 INTRODUCTION

1.1 PURPOSE

This document has been prepared on behalf of Whitetail Crossing Inc. as a guiding framework for development of the land shown on **Figure 1** to accommodate residential development around a proposed golf course, as well as industrial and commercial development on the periphery.

1.2 LOCATION AND ADJACENT LAND USE (FIGURES 1 & 2)

Whitetail Crossing is located due south of the existing Town of Mundare, on land presently being annexed by the Town from Lamont County. As shown on **Figure 1**, and more clearly evident on **Figure 2**, the following land uses surround the Area Structure Plan (ASP) area:

1. The area north of the east $\frac{1}{4}$ section is sparsely developed with large unserviced parcels.
2. Highway 15 bounds the east side of the area, and the area east of Highway 15 is agricultural land.
3. Range Road 170 bounds the west side, except that three existing industrial parcels are left out of the ASP as they remain in Lamont County.
4. The area south is agricultural, and $\frac{1}{2}$ mile further south is Highway 16.

1.3 AREA INCLUDED AND OWNERSHIP

Following are the land areas included in the Area Structure Plan, all owned by partners in Whitetail Crossing Inc., except as indicated.

Land Description

	Land Area
1. The south $\frac{1}{2}$ of SE of 19-53-16-4, except for:	29.19 ha
i) Title No. 012 410 485 owned by George Harvey	1.93 ha
ii) C of T No. 892 258 667 owned by Vegreville and District Co-op	0.37 ha
iii) Lot A, Plan 485MC owned by Alberta Transportation	0.14 ha
2. The NE of 18-53-16-4.	63.79 ha
3. The NW of 18-53-16-4.	61.09 ha
4. The SW of 19-53-16-4, including 2.4 ha for lagoons owned by Mundare	57.42 ha
5. The portion of the NW 19-53-16-4 lying SW of Highway 15, including 6.8 ha for lagoons but excluding 5.5 ha subdivided out for existing industrial uses.	44.92 ha

Total Area

256.41 ha

1.4 POLICY CONTEXT FOR THE AREA STRUCTURE PLAN

The Whitetail Crossing ASP has been prepared in accordance with the Municipal Government Act (*R.S.A. 2000, c M-26*). The Act enables municipalities to adopt Area Structure Plans to provide a framework for future subdivision and development of an area. Sections 633 – 638, and 692 of the Act relate specifically to Area Structure Plans. The MGA stipulates that an ASP must describe the sequence of development, land uses, population density, and location of transportation routes and utilities for the area. The Act provides interested members of the separate and public school boards with the opportunity to provide input in the process. The Act also stipulates that an ASP must be adopted by bylaw, which requires a public hearing to be held on the plan. Finally, the Act requires an ASP to conform to the municipality's Municipal Development Plan (MDP), if one exists. In the case of the Town of Mundare, there is no MDP at this time.

The requirements of the Municipal Government Act have been followed in preparation of the Whitetail Crossing ASP.

2.0 EXISTING CONDITIONS

2.1 SURROUNDING DEVELOPMENT

The proposed development area is situated adjacent to the existing Town of Mundare with established infrastructure, and is adjacent and near two primary highways. It is a 45 minute commute to Edmonton.

2.2 NATURAL AND ENVIRONMENTAL FEATURES (FIGURE 2)

The land is diagonally bisected by the SVIT Drainage Channel, which is an improvement of the original drainage course done by Lamont County in the early 1980's to improve drainage for low lying agricultural areas in this vicinity. In the central part of the south half section there is a substantial stand of aspen trees.

There is also an intermittent wetland area in the west central location, with typical lowland vegetation and trees. The wetland had no standing water at the time of the air photo (May, 2004).

The outline of a surveyed water body in early 1900's is shown, which would have been deemed Crown land. There has been very significant accretion (receding of water body) since then, and land which is no longer wet is considered to come under the ownership of the owner of the surrounding land.

Negotiation will be required with Alberta Public Lands to redefine the Crown land boundary, and perhaps designate some mitigating land to offset area that the golf course will occupy in low land.

It is intended that a significant portion of this natural area be preserved without disturbance other than improvements required for Golf Holes #4, #5, and #6.

2.3 EXISTING IMPROVEMENTS AND RIGHTS-OF-WAY

The land is generally agricultural other than the wetland areas and has the following man-made features:

1. Three man-made dugouts, one in the extreme northwest, one along the west boundary in the north half, and one at the centre of the section.
2. The Town has previously subdivided land out of the west half of Section 19 for sewage lagoons and access roads.

3. There are three industrial parcels subdivided out of the NW of Section 19 and they have development as follows:

- A seed cleaning plant.
- Agricore United has a Crop Production Services site.
- T.S.M. is a highway maintenance yard.

These parcels are **not** intended to be part of the ASP, since they remain in Lamont County.

There is a road right-of-way east-west between the NW 18 and SW of 19, and another road right-of-way north-south between SW and SE of Section 19. These rights-of-way are not developed at this time.

In the southeast corner of the NE of Section 18, there is a telecommunications tower on a 110 m x 125 m right-of-way. No setback is required from this tower for development purposes.

2.4 TOPOGRAPHY AND NATURAL DRAINAGE (FIGURES 3 & 4)

The land is described as hummocky, undulating terrain with various knolls and low areas.

Land elevations range from a high of 687 to a low of 681 meters above sea level.

The general direction of drainage is toward a drainage channel running diagonally from SE to NW, although there are pockets of land along the west boundary which slope westward toward R.R. 170. The drainage channel has a very flat gradient, from SE to NW. Ground surveys done on the ice of standing water in November, 2004, show ice levels actually higher by 200 mm at the northwest corner than at the southeast end, but from overall National Topographic Series Maps, it is known that flow is toward the northwest (see Figure 4).

2.5 SOIL CONDITIONS

A Geotechnical Investigation has been conducted by J.R. Paine & Associates Ltd. The soils are generally 200 mm to 300 mm of topsoil, underlain by 2 m to 5 m of stiff clays and clay tills, and below that, clay shale. House foundations would all be in the clay zone, which appears to have very suitable bearing strength.

Most of the utilities will be in the clay zone which is very suitable for this purpose. Some of the deeper sanitary sewer will be in the clay shale layer which will make excavation more difficult, but not unreasonable.

2.6 DEVELOPMENT IMPLICATIONS

The existing development and the natural features have the following development implications:

1. Residential development must remain a minimum of 300 metres from the sewage lagoons, in accordance with Alberta Environment regulations and from a practical perspective.
2. Industrial uses would be appropriate in lagoon vicinity.
3. The drainage channel is to remain largely intact; a road crossing and minor crossings for golfers are unavoidable, but these are to be done with minimal disturbance, and in a manner so as to allow continued passage for wildlife.

There is also a proposed widening/deepening of the water holding part of the drainage channel northwest of the road crossing to provide water for golf course irrigation. This will be done in communication with, and upon approval of, the Water Resources Section of Alberta Environment.

The low areas adjacent to the drainage channel will be graded and grassed in some areas where golf holes cross it, as the carry distance would otherwise be too great.

4. The wetland and treed area in the southwest part of the plan is to be retained in its natural form, except for minor grading and grassing for golf tees and parts of fairways.
5. The treed belt in the central south part of the plan is to be retained except for minor clearing at the north end for about three lots, and perhaps a pedestrian trail through the south portion.
6. Access points onto Highway 15 must be spaced a minimum of 400 meters, therefore commercial development along here requires a frontage road.
7. Generally, the soils appear very favourable for a housing and golf course development.

3.0 THE DEVELOPMENT CONCEPT

3.1 DEVELOPMENT OBJECTIVES

The primary objectives of the Whitetail Crossing development proposal are:

- To provide an upscale golf course in an area where there is significant interest in golf, but no such facility is available for some distance.
- To create an attractive, residential development, offering a variety of housing types, and capitalizing on the aesthetic features of the golf course, as well as existing and natural features.

The proponents of this development are long time businessmen in Mundare, and include avid golfers, as well as a long time homebuilder who has built houses in the Sherwood Park, Mundare and Vegreville district for the past 25 years.

The experience of the golfers, including their circle of golfing associates, is that a quality 18 hole golf course is not available between Sherwood Park and Lloydminster along the Yellowhead, and that existing 9 hole courses in the area are not likely to be expanded or upgraded. The aging population in the area is finding more time to play golf and would certainly patronize a course in reasonable proximity.

The housebuilder has found that the serviceable lot supply in the Town proper is depleted, but senses a strengthening demand for housing of all categories, particularly with the sharply increasing price of serviced lots in the Edmonton region.

It is expected that numerous retirees in the area would embrace the opportunity to retire in a golf course community, and in fact it might attract retirees from other areas.

With a commuting time of only 45 minutes to Edmonton, it is expected families would also choose to move to a small town lifestyle and save money on their house in the process. In particular, industrial development in the Scotsford area of Strathcona County creates a market for affordable housing in Mundare.

A third category of resident may well be commuters to Fort McMurray, who work four days and return for three days to a family that prefers to stay near the Edmonton region.

There is also expected to be some employment creation by the industrial and commercial development proposed by this ASP, which would bring families to live in the community.

The overall development includes a proposed commercial strip along Highway 15, for which some interest has already been expressed, and includes some industrial area within the 300 meter setback distance from the lagoons.

An R.V. parking area is also proposed as it is expected the golf course would become an attraction to travelers for both short and long term stays.

The various components of this proposed development are more fully described below.

3.2 GOLF COURSE COMPONENT (FIGURES 5 & 6)

The course will be a challenging, full length, 18 hole course, also with practice facilities, and full service club house. The golf holes will be quite contiguous, as compared to the type that threads through residential development, with long distances between greens and tees. This course will be quite walkable for those who prefer to do so.

Significant advantage is taken of the drainage channel to create challenges where the holes cross over it. The treed lowland near the southwest corner is used effectively by routing holes alongside and through this area. Some added water features are proposed, and a signature aquatic practice range is also proposed.

Pedestrian access points to the golf course are proposed at various locations, and the design of the golf course will be done with consideration for walking routes for non-golfers, which will not interfere with the golfers.

3.3 RESIDENTIAL COMPONENT (FIGURES 5 & 6)

A variety of lot size and types are proposed in this plan to try to satisfy the various components of the marketplace:

- Lots backing onto the golf course will generally be about 18 m to 21 m wide by 38 m to 46 m long.
- Lots designated as estate lots will be 21 m to 25 m wide by 48 m to 55 m long, and are intended to provide room to accommodate large truck parking and/or minor equipment parking in the rear yard, as well as home business operations.
- Medium lots would be 15 m to 18 m in width, and 36 m to 40 m in length.
- Small lots would be from 10 m to 15 m in width and from 34 m to 40 m in depth.

A low-density multi-family area would accommodate duplex and row housing type condominiums, largely for people who want a more carefree and low maintenance lifestyle.

The medium density multi-family zone would be for low rise apartments and also for more dense row housing to provide affordable housing alternatives.

Some portion of residential development shown near R.R. 170 is within former crown land, which is low lying.

Subject to further investigation, the boundaries of this development area may need to be modified due to soil conditions and topography.

3.4 R.V. PARK COMPONENT

This area of about 3.4 ha is being designated as R.V. Park for purposes of accommodating short and long term campers who are attracted by the golf course and by other attractions in Mundare and surrounding area, and it would capitalize on the excellent proximity to the Yellowhead Highway. There will be provision made in adjacent servicing to accommodate permanent residential land use if it is found the R.V. Park area is too large or not marketable at all.

3.5 COMMERCIAL COMPONENT

The strip of land along Highway 15 is proposed to be made available for high exposure type of commercial uses, such as service stations, car dealerships, retail greenhouse outlet, etc. A component of the commercial strip adjacent to the entrance road could become a neighbourhood commercial strip.

3.6 INDUSTRIAL COMPONENT

The area within 300 meters of the sewage lagoons is sterilized for residential purposes, but can be used for medium to heavy industrial purposes, as presently exists directly west of the lagoons. Some potential uses include equipment yard and shop, storage for R.V.'s and boats, concrete mixing plant, implement dealership, etc.

For the area immediately north of the proposed residential development, outside of the 300 meter zone, some light to medium industrial uses would be appropriate.

3.7 PARKS AND OPEN SPACE

The central theme of this development is the proposed golf course, which results in a great deal of open space, and which is intended to be somewhat accessible for pedestrian purposes.

Municipal Reserve (MR) proposed in several locations is as follows:

- Two large tracts are proposed north of the residential area and on each side of the proposed widened drainage channel. A minimum separation of 150 m from the sewage lagoons is proposed. These areas would accommodate major sports fields if required, such as soccer pitches and ball diamonds. Vehicle accesses from the local road systems are proposed so the parking area could be developed near the fields. The widened area of the creek would provide an attractive winter activities area, and there may be merit for rest rooms/change house in the future.
- Smaller MR parcels are proposed at various locations within the residential development to provide tot lots and play space for younger children within walking distance of their homes. Pedestrian access-ways are proposed to provide direct access for most residents.

3.8 SVIT DRAINAGE CHANNEL

The drainage channel and low lying area adjacent to it, is generally intended to be preserved in its existing state.

The drainage channel area southeast of the road crossing is intended to be part of the golf course property, and its maintenance will be the responsibility of the golf course operator, subject to environmental and operational considerations, as will be spelled out in the development permit.

The drainage area northwest of 50th Street road crossing is proposed to be classified as P.U.L./Waterway, in the ownership of the Town of Mundare. Operation and maintenance of this area is expected to be a joint effort worked out between the Town and Whitetail Golf Course, since both parties derive some benefit, the golf course for irrigation, and the Town as recreation facilities.

The following improvements are anticipated in the Drainage Channel:

- One road crossing.
- Several pedestrian or golf course trail crossings.
- Deepening and enlargement of a section of the channel for more irrigation storage north of road crossing and pond enlargement on Hole #12.
- Culverting, filling and seeding the drainage channel for Fairways 12 and 13.

The work in these areas would be designed in consultation with an environmental specialist to ensure protection of wildlife habitat.

3.9 BALANCE OF AREA

There is land which will remain as sewage lagoon, and some land around the lagoons which is not considered developable due to potential odors and would remain in agricultural use. It would be available for lagoon expansion, if required.

3.10 POPULATION STATISTICS

General

The total plan area would generate an overall population and student population as outlined below, based on average planning statistics. For planning of major infrastructure, schools etc., it is suggested that market reception be monitored in the early stages of development, before commitments to major infrastructure funding be made.

Land Use	Area	# Dwelling Units	Persons / Dwelling Unit	Population
Single Family	47.3 ha	650	3.1	2015
Low Density Multi-Family	2.7 ha	60*	3.1*	186
Medium Density Multi-Family	3.1 ha	166*	3.1*	514
Total		876		2715

* In the absence of a Municipal Development Plan and Land Use Bylaw, densities for multi-family are estimated.

Student Generation

Student generation factors are based on the Elk Island School Board System as follows:

	Students Per Dwelling Unit	
	Public	Separate
Elementary	0.264	0.0753
Junior High	0.1116	0.0400
Senior High	0.1298	0.0185

The distribution would be as follows:

	Number of Students	
	Public	Separate
Elementary (K-6)	231	66
Junior High (7-9)	98	35
Senior High (10-12)	114	16

The K-6 public school is in Mundare, while all other schools are in Vegreville.

3.11 LAND USE SUMMARY

The concept results in the following land use distribution:

		% of Gross Area	% of Developable Area
Gross Area	247.2 ha	100%	
Less Golf Course	91.7 ha	37.10%	
P.U.L./Waterway	13.9 ha	5.62%	
Widening for R.R. 170	0.9 ha	0.36%	
Crown Land	1.29 ha	0.52%	
Undevelopable Area at Lagoon	22.2 ha	8.98%	
Net Developable Area	117.20	47.42%	100%
Industrial Area	22.80		19.45%
Commercial/RV Area	12.00		10.24%
Multi-Family Area	5.80		4.95%
Single Family Area	47.04		40.14%
Collector Roadways	18.80		16.04%
Municipal Reserve	10.76		9.18%

Proposed reserve dedication is slightly less than 10% of developable area, but actual amount will be reconciled at time of development. Additional reserve area could be allocated, or cash-in-lieu of reserve could be provided to put into a reserve fund.

4.0 TRAFFIC ACCOMODATION AND MUNICIPAL SERVICES

4.1 GENERAL

This section of the ASP briefly describes the design concepts proposed for traffic circulation and access; the sanitary sewer system; water distribution systems; storm drainage system; and power, telephone and natural gas. A Design Brief in support of this Area Structure Plan Amendment will be submitted separately at a later date, and describes these concepts in more detail.

4.2 ACCESS

Principle access to the development will be off Highway 15 at two locations, with the northerly access being the one proposed for the first stage of development. No other direct access to Highway 15 is proposed, so a frontage service road for the commercial strip will be required.

Secondary access will be available by way of 50th Street, which is proposed to remain as a graveled road through largely undeveloped acreage areas between this development and the town.

Thirdly, an access from R.R. 170 is proposed in the long term, as development nears the west boundary.

A traffic Impact Assessment indicates that an Alberta Transportation "Type IVa" intersection would be required at the northerly, first stage access. Construction of this intersection is proposed to be covered in the Development Agreement, with a provision that its construction commence when the 20th building permit is issued, and/or to be completed no later than the opening of the Golf Course. Construction is to be to Alberta Infrastructure and Transportation's Standards, and at no cost to Alberta Infrastructure and Transportation.

Timing of the south entrance to the commercial is indeterminate, so Traffic Impact Assessments should be deferred until subdivision plans, which will trigger their construction, are submitted. Applicable traffic projections will be more accurate closer to the time of construction.

For the access onto R.R. 170, a Traffic Impact Assessment will be carried out for both the development area intersection and the intersection of R.R. 170 at Highway 15, to determine if it would require improvements due to this development. Improvements required would be constructed to Alberta Infrastructure and Transportation Standards, and the costs are to be borne proportionately by the parties responsible for generating the traffic which necessitates the intersection improvements.

Alberta Transportation has identified through the planning process that the at-grade entrance to the Vegreville Co-op land will not meet Alberta Infrastructure and Transportation Standards when the deceleration taper and bays are constructed for the main access to Whitetail Crossing. Alternative access is to be made available on a 10 m wide access easement on the proposed lot to the west of Lot A, Plan 485 MC and C of T No.: 892 258 667. This easement is to be created in the first stage subdivision, and is to extend all the way to Title No. 012410485 so as to provide possible future alternate access to that parcel.

The portion of industrial land that abuts Highway 15, between R.R. 170 and the lagoon access, may have only one direct access off Highway 15 located approximately midway between R.R. 170 and the lagoon access. A Traffic Impact Assessment is to be done for the development when it is proposed, and intersection improvements would be constructed to Alberta Infrastructure and Transportation Standards at no cost to Alberta Infrastructure and Transportation. It is recommended that the speed limit on this section of Highway 15 be posted at 60 kph when this access is constructed.

4.3 INTERNAL ROAD SYSTEM (FIGURE 7)

The internal roads are shown generally as anticipated on **Figure 7**. The roadway hierarchy consists of minor collectors, and local roads dependent on traffic volumes expected for each.

All internal roads will be paved, and most will have curb and gutter with storm sewer catch basins, other than areas where there are no lots fronting onto the roadway, which roads will be paved, but with roadside ditches. Roads tentatively proposed not to be curbed would be the north access road to within one block of 50 Street, and 50 Street from the drainage channel to south of the golf course parking area, as well as a short section of the south access off Highway 15.

Emergency accesses will be required from time to time to connect long dead-end roads to alternate access points. Some of these will be interim connections to facilitate staging, while other emergency accesses will be permanent, such as two shown on **Figure 7** from the ends of cul-de-sacs. These emergency access will be accommodated by widening and strengthening sections of golf course paths.

4.4 PEDESTRIAN CIRCULATION SYSTEM (FIGURE 7)

It is expected the development will be largely auto orientated, and that most of the pedestrian traffic will be leisure walking. As noted in the Development Concept for the golf course, the design will include provision for pedestrians along various golf holes, which will be dealt with at a more detailed stage.

Pedestrian linkage to downtown and to the existing schools/sports fields is proposed to provide safe passage for students to and from these facilities. Special attention will be required for the railway and highway crossings on these routes.

Pedestrian circulation within the development area will be more closely addressed in the engineering design report.

4.5 SANITARY SEWAGE SYSTEM (FIGURE 8)

The proposed sewage system consists of a series of gravity collection mains flowing toward a pumping station, near the location where 50 Street crosses the creek.

A sewage pressure line will convey sewage from the pump station to the existing sewage treatment facilities, which appear to have capacity as follows, based on the current licence allowance of twice per year discharge:

- The anaerobic cells and storage cells appear to have **spare** capacity for about 80 lots.
- The facultative cell appears to be **short** of capacity even for the present population.

Further investigation is required to ensure the record data for existing lagoon sizes is valid and to verify the volume of sewage generated by the Town before coming to firm conclusions. If the facultative cell needs to be enlarged to accommodate any new development, it will be reasonably economically practical to do so.

Through the processing period of this ASP, discussions should take place to determine a funding process for expansion of the lagoons to accommodate further development.

4.6 WATER SUPPLY AND DISTRIBUTION SYSTEM (FIGURE 9)

1. Water Supply & Storage

The Town of Mundare is supplied with water by the Capital Region Vegreville Corridor Water Service Commission, which conveys treated water from the City of Edmonton to this and other communities.

The supply line fills the Town water reservoir of 1200 m³ capacity, from where it is re-pumped to the Town distribution system.

The volume of reservoir storage required is generally based on about 1.6 times the average day requirement, plus the volume required for two hours of fire flow at rates between 75 and 300 litres per second, dependent on the type of development to be protected. The rate of 300 litres per second is applicable to large buildings generally in large urban centres.

Assuming the Town of Mundare considers 100 litres per second adequate for fire flow, this would require 720 m³.

Assuming average water consumption to be 300 litres per person per day times 715 people and multiplied by 1.6 would require 343 m³. Total requirement for the existing Town is then 1063 m³, leaving 137 m³ for growth, which would accommodate 285 people, or 92 lots.

Existing water consumption records are being researched to verify the actual average water consumption.

During the process of this ASP, discussions should take place to determine means of funding future reservoir expansion.

2. Water Distribution

The proposed water distribution system will consist of a variety of pipe sizes ranging from 150 mm diameter to 300 mm diameter, and will connect to a point on 50 Street just northeast of Highway 15 for initial stages. In the longer term, looping of the system should be done for better flow characteristics and surety of supply in case of a line break.

Some upgrading of the existing network in the Town may be required in due course to convey enough water from the reservoir to the connection point.

4.7 DRAINAGE AND STORMWATER MANAGEMENT (FIGURE 10)

1. Stormwater Management

The overall area slopes generally toward the drainage channel, which will be the receiving stream for development runoff. The character of the existing stream is such that it will naturally retain excess runoff and release it slowly. This is due to the very flat gradient, wide channel and the fact that some sections are not a defined waterway at all, but rather an elongated marsh with dense aquatic growth that will act as a flow control. The aquatic vegetation will also provide a degree of treatment to the runoff water, and silt traps are proposed at the inlet points of the storm piping system.

2. Drainage

Figure 10 shows the proposed drainage concept which consists of a combination of surface drainage along gutters or ditches, to a piped system which will convey the runoff to the central channel.

In the commercial and industrial areas, the roads will be rural types with roadside ditches to accept the runoff.

4.8 SHALLOW UTILITIES

Power and communications facilities will be installed by private contractor, to be monitored and taken over by Fortis, Telus and Shaw.

ATCO Gas will install their gas mains as required.

The circulation of this ASP will give these utility companies notice to examine the capacity in their systems.

5.0 STAGING AND IMPLEMENTATION (FIGURE 11)

Staging of the development area will depend heavily on market demand, both in terms of quantities and types of development. The concept shown is very speculative, except for Stage 1, which will generally follow the road toward the golf course clubhouse. Stage 1 includes about 75 single family lots, as well as access and services to the medium density multi, the RV Park and some commercial.

The golf course itself is expected to be developed over a period of time. First, Holes 10 to 18 could be playable as early as mid-summer of 2006, with Holes 1 to 9 playable about a year later.

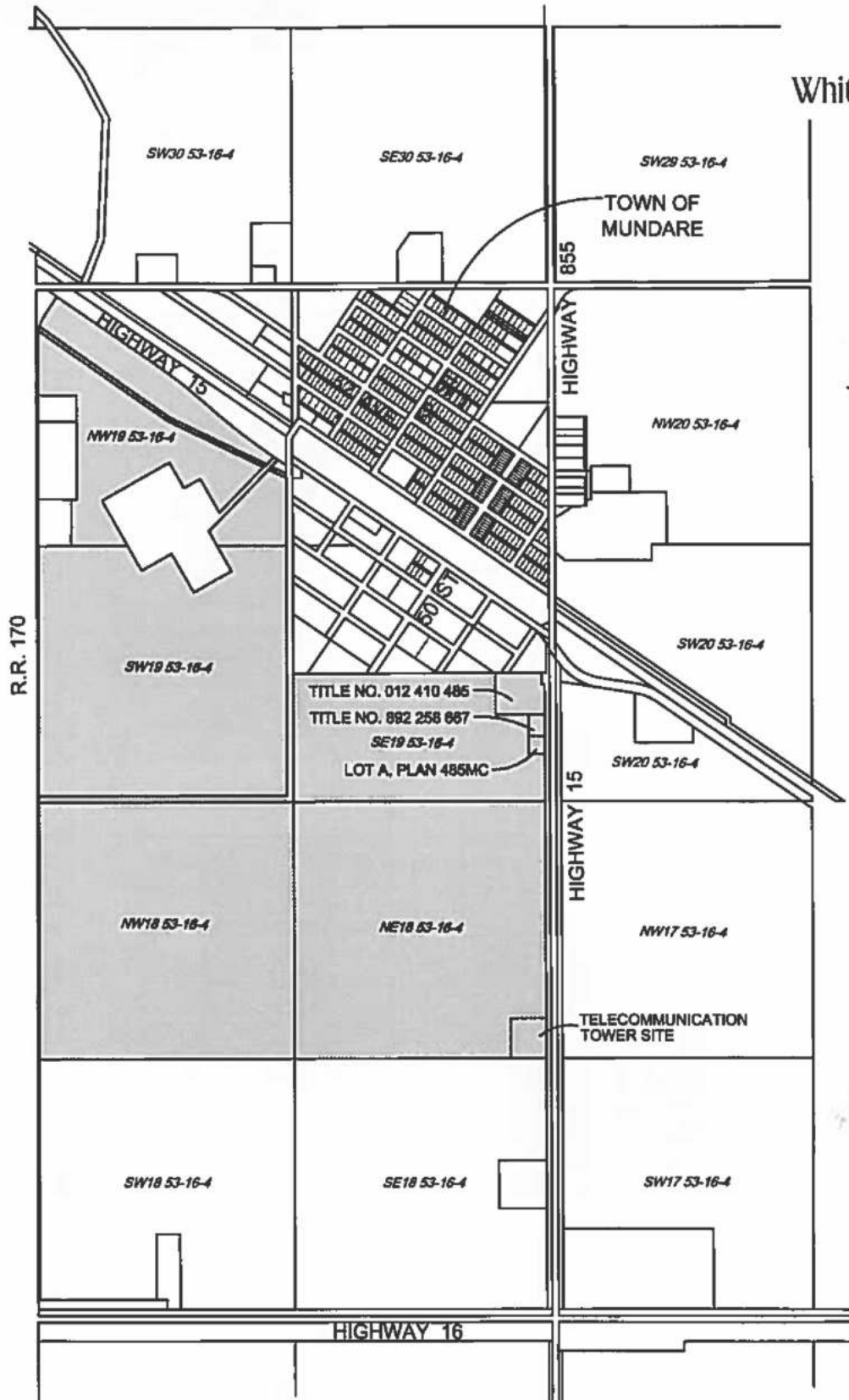
Development of the industrial area would occur strictly on a demand basis; the type of industry expected will not likely warrant municipal water and sewer servicing. Access and power are available, so it would simply involve a land use bylaw, subdivision approval and development agreement, or permit as required.

* * * * *

FIGURES



Whitetail Crossing



LEGEND

ASP AREA



DATE: DEC 17, 2004
 REV: MAY 16, 2005
 FILE: FIG 1-Locplan.dwg
 SCALE 100 80 0 100 200

**WHITETAIL CROSSING
LOCATION PLAN**

FIG. 1






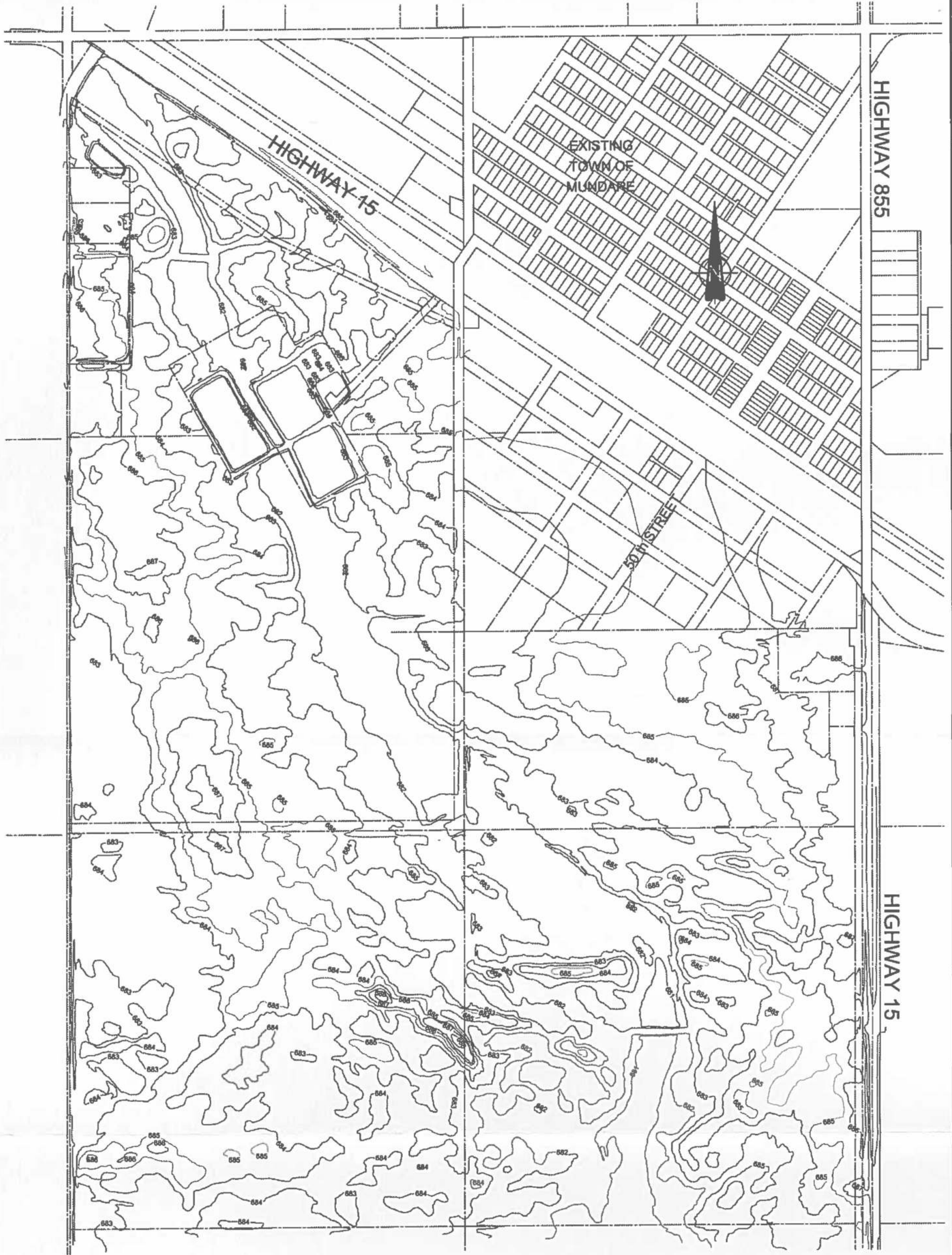
LEGEND

- ASP BOUNDARY - - - - -
- CROWN LAND BOUNDARY — — — — —
- PROPOSED CROWN LAND BOUNDARY - - - - -

WHITETAIL CROSSING
2004 AERIAL PHOTOGRAPH

DATE: DEC 17, 2004
 REV: MAY 16, 2005
 FILE: E:\Kowal..10250..101..101L..FIG 2 photo.dwg
 SCALE 





LEGEND

EXISTING GROUND CONTOURS 

WHITETAIL CROSSING

EXISTING TOPOGRAPHY

DATE: DEC 17, 2004

REV: MAY 16, 2005

FILE: E:\Kowal..10250..101..101L..1FIG 3 topo.dwg

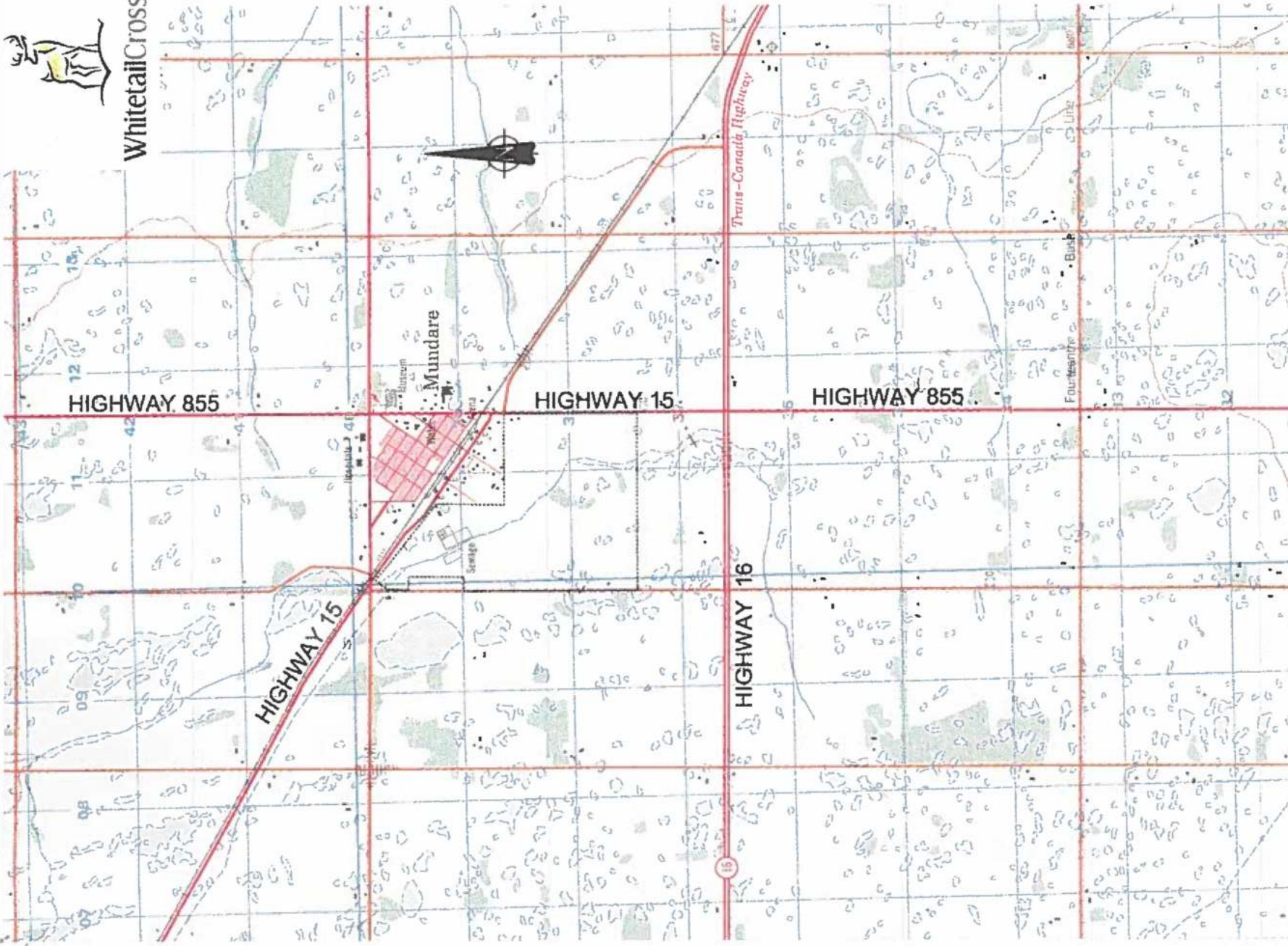
SCALE 

Whitetail Crossing





Whitetail Crossing



WHITETAIL CROSSING

N.T.S.

DATE: DEC 17, 2004
FILE: FIG 4 nts.dwg



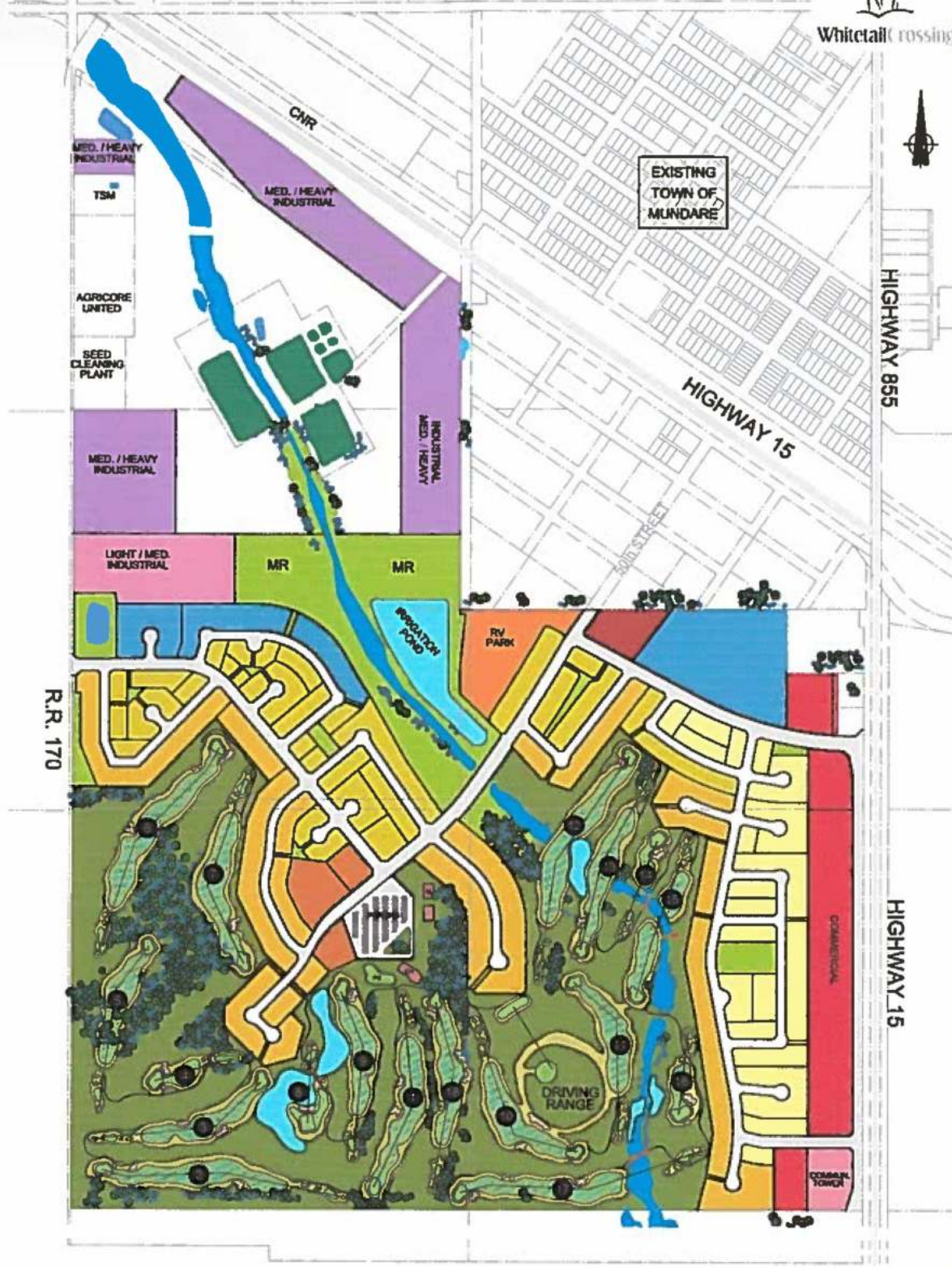
SOURCE: CANADIAN TOPOGRAPHIC MAPS;
NATURAL RESOURCES CANADA, Edition 4, MUNDARE (83 H/9)

FIG. 4





Whitetail Crossing



YELLOWHEAD / HIGHWAY 16

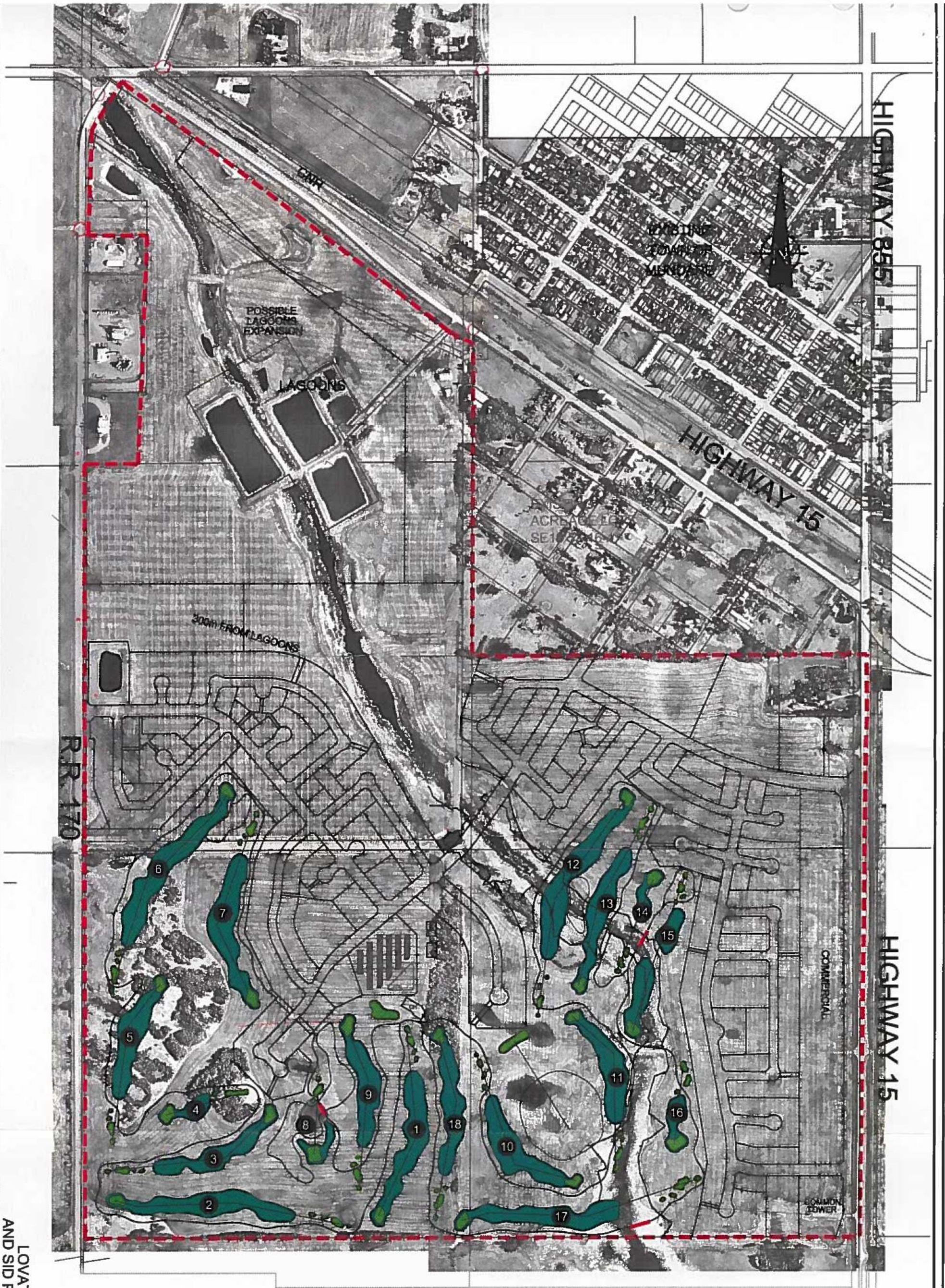
LEGEND	
SMALL LOTS	LIGHT / MED. INDUSTRIAL AREA
MEDIUM LOTS	MED. / HEAVY INDUSTRIAL AREA
LARGE LOTS	RV PARK
ESTATE LOTS	COMMERCIAL
LOW DENSITY MULTI	POSSIBLE ROADWAYS
MED. DENSITY MULTI	MR
WATER HAZARDS	P.L.L. / WATERWAY
STORM MANAGEMENT	
EXISTING DUGOUTS	
	HOLE NUMBER / GREEN LOCATION 15
	GOLF COURSE PROPERTY
	CLUB HOUSE
	MAINTENANCE SHOP

WHITETAIL CROSSING DEVELOPMENT CONCEPT

REV: APRIL 2008
SCALE 1" = 100'



IN ASSOCIATION WITH
LOVATT PLANNING ASSOCIATES
AND SID PUDDICOMBE ASSOCIATES



IN ASSOCIATION WITH
 LOVATT PLANNING ASSOCIATES
 AND SID PUDDICOMBE ASSOCIATES
AL-TERRA
 ENGINEERING

FIG. 6

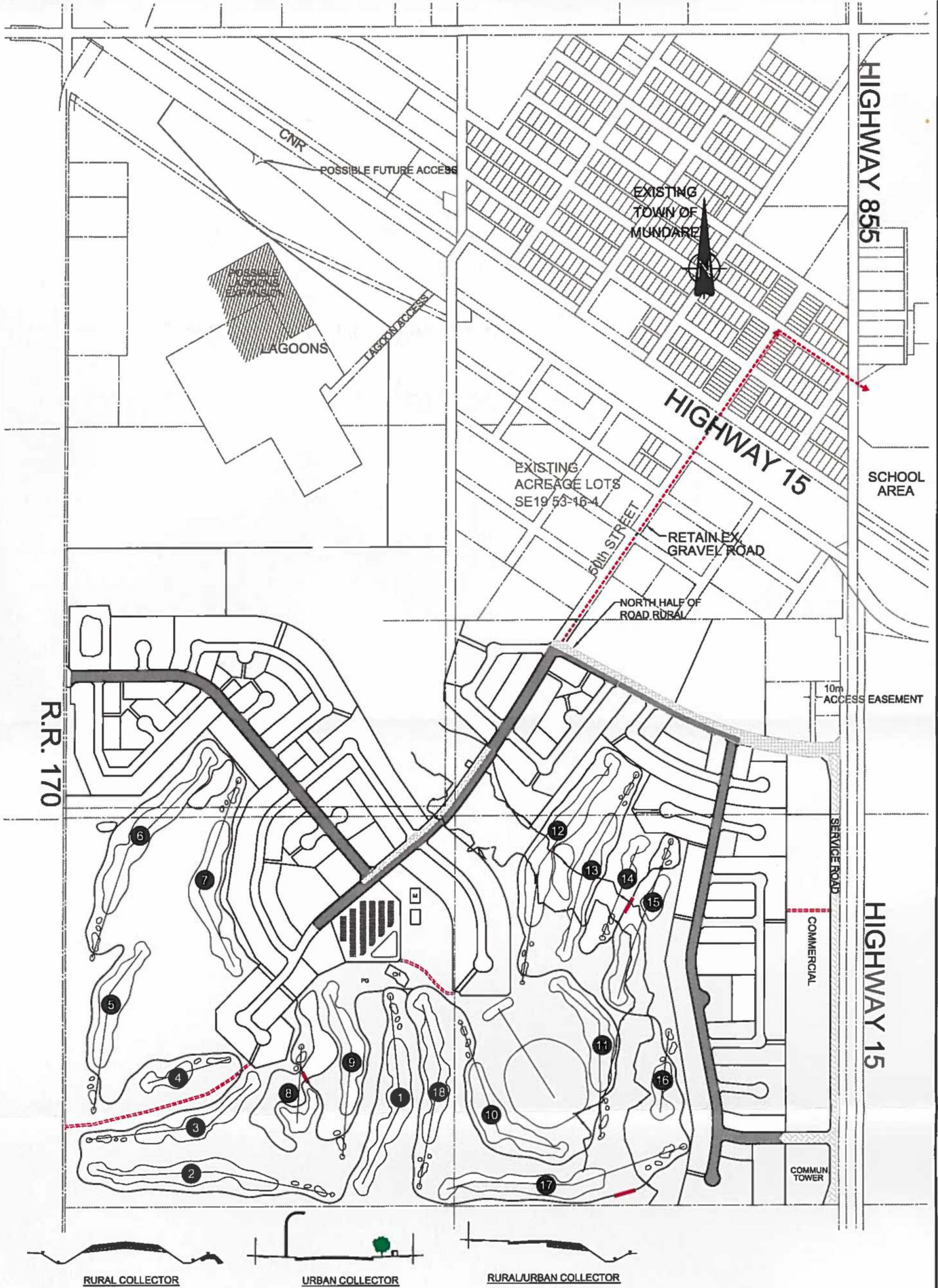
LEGEND
 ASP BOUNDARY - - - - -

WHITETAIL CROSSING
DEVELOPMENT CONCEPT
ON AERIAL PHOTOGRAPH

DATE: DEC 17, 2004
 REV: MAY 16, 2005
 SCALE
100
50
0
100

FILE: C:\9001_1000_W1_011_010.dwg





R.R. 170

HIGHWAY 855

EXISTING TOWN OF MUNDARE

HIGHWAY 15

SCHOOL AREA

EXISTING ACREAGE LOTS SE19 53-16-4

50th STREET

RETAIN EX GRAVEL ROAD

NORTH HALF OF ROAD RURAL

10m ACCESS EASEMENT

HIGHWAY 15

SERVICE ROAD

COMMERCIAL

COMMUN TOWER

RURAL COLLECTOR

URBAN COLLECTOR

RURAL/URBAN COLLECTOR

LEGEND

PEDESTRIAN TRAILS POSSIBLE EMERGENCY ACCESS

ROADWAY CLASSIFICATION:

- URBAN MINOR COLLECTOR 11.5/20.0m R/W
- LOCAL ROAD 9.0/18.0m R/W
- RURAL COLLECTOR 9.5/30.0m R/W
- RURAL/URBAN COLLECTOR (DITCH ON SIDE)

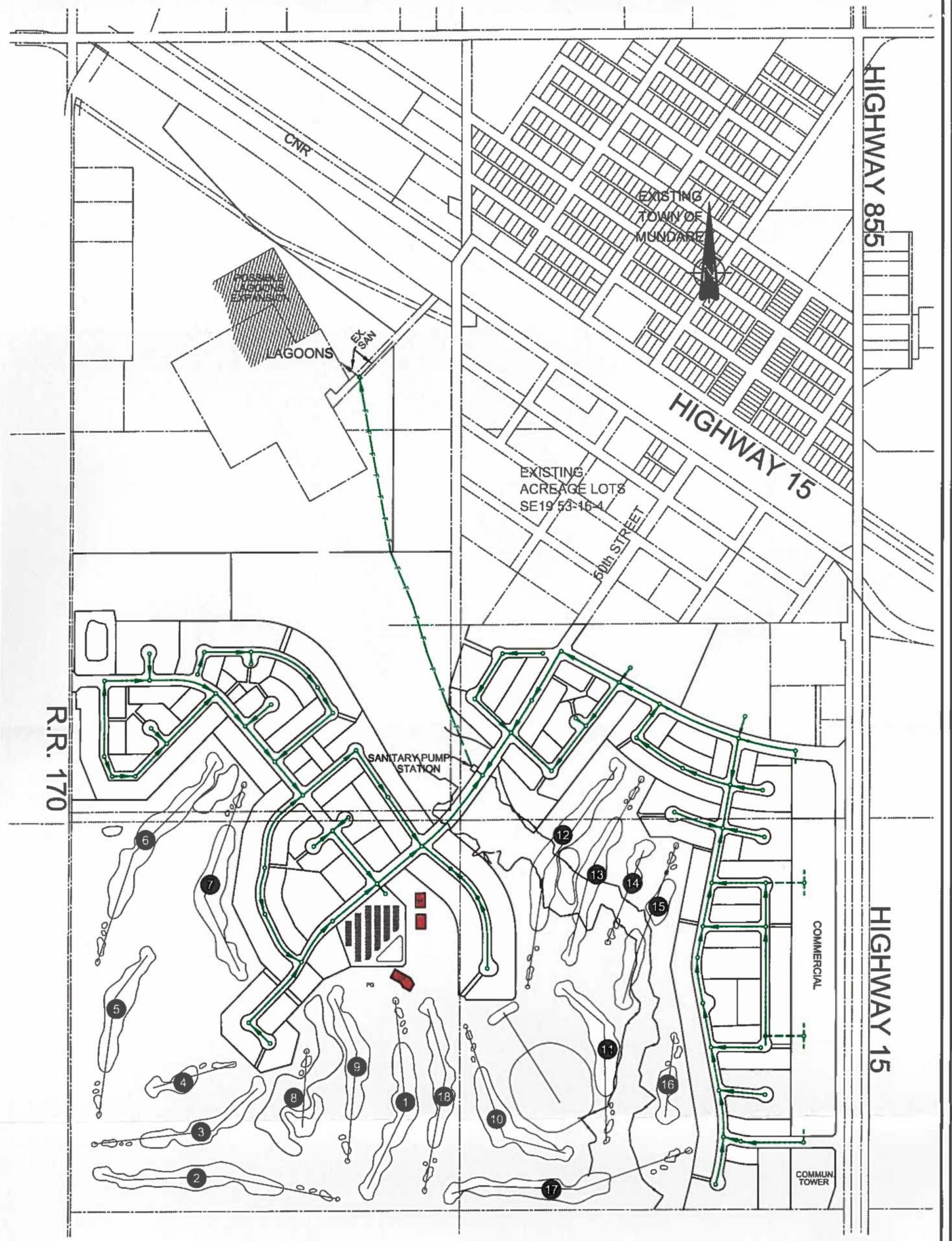
WHITETAIL CROSSING

ACCESS, ROADWAYS & PEDESTRIAN CIRCULATION.

DATE: DEC 17, 2004
 REV: May 30, 2005
 FILE: E:\Kowal\10250\101\101L\FIG 7 peds.dwg
 SCALE

Whitetail Crossing





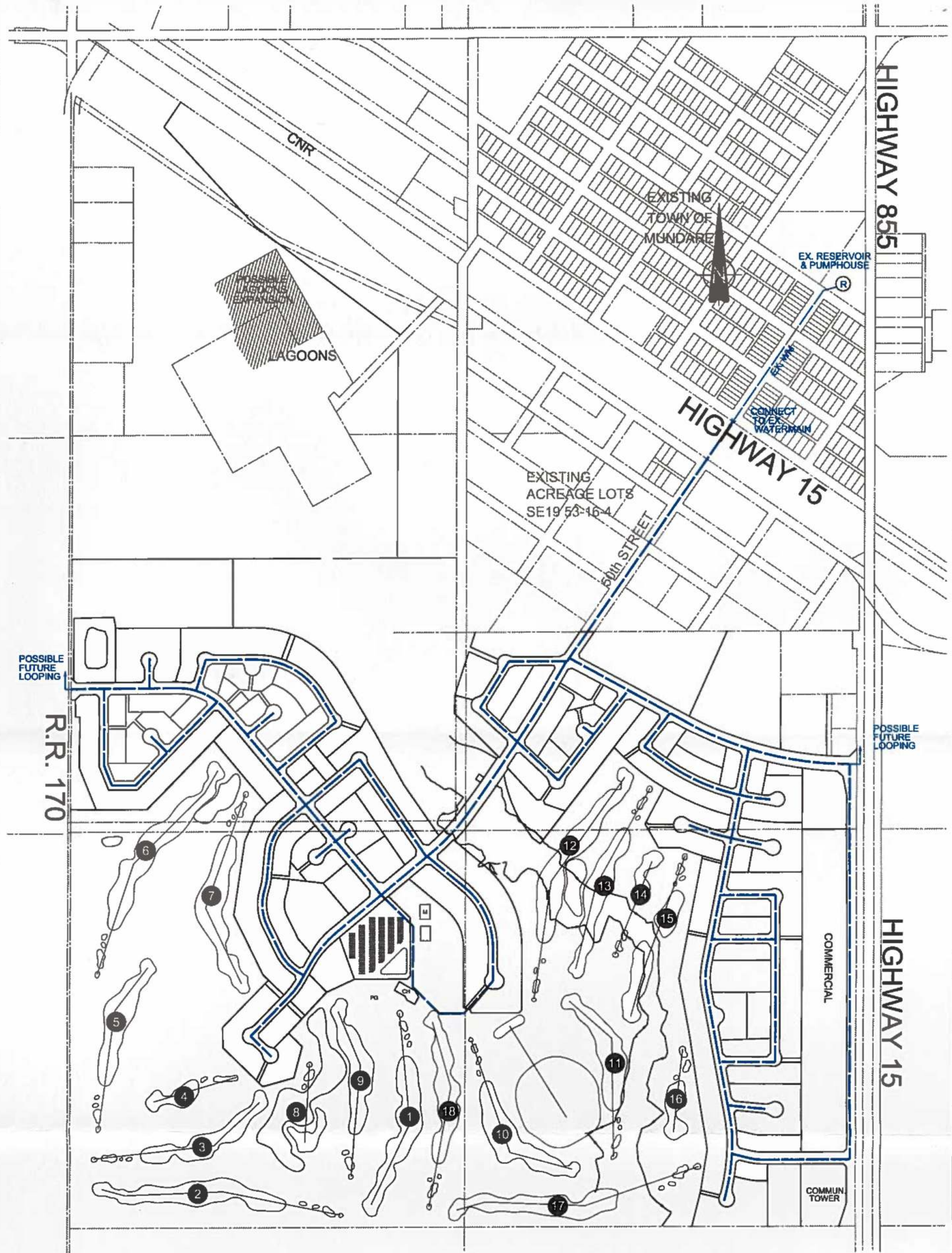
LEGEND

- ON-SITE SANITARY SEWER —○—
- SANITARY FORCEMAIN —F—F—
- ALTERNATIVE SANITARY SERVICING - - -

WHITETAIL CROSSING

**SANITARY SEWER
CONCEPT**

DATE: DEC 17, 2004
 REV: May 16, 2005
 FILE: E:\Kowal..10250..101..101L..FIG 8 san.dwg
 SCALE



LEGEND

PROPOSED WATERMAINS -----
 NOTE: SERVICE LOCATIONS
 FOR SPECIFIC LAND USES
 TO BE DETERMINED
 AT DETAILED DESIGN

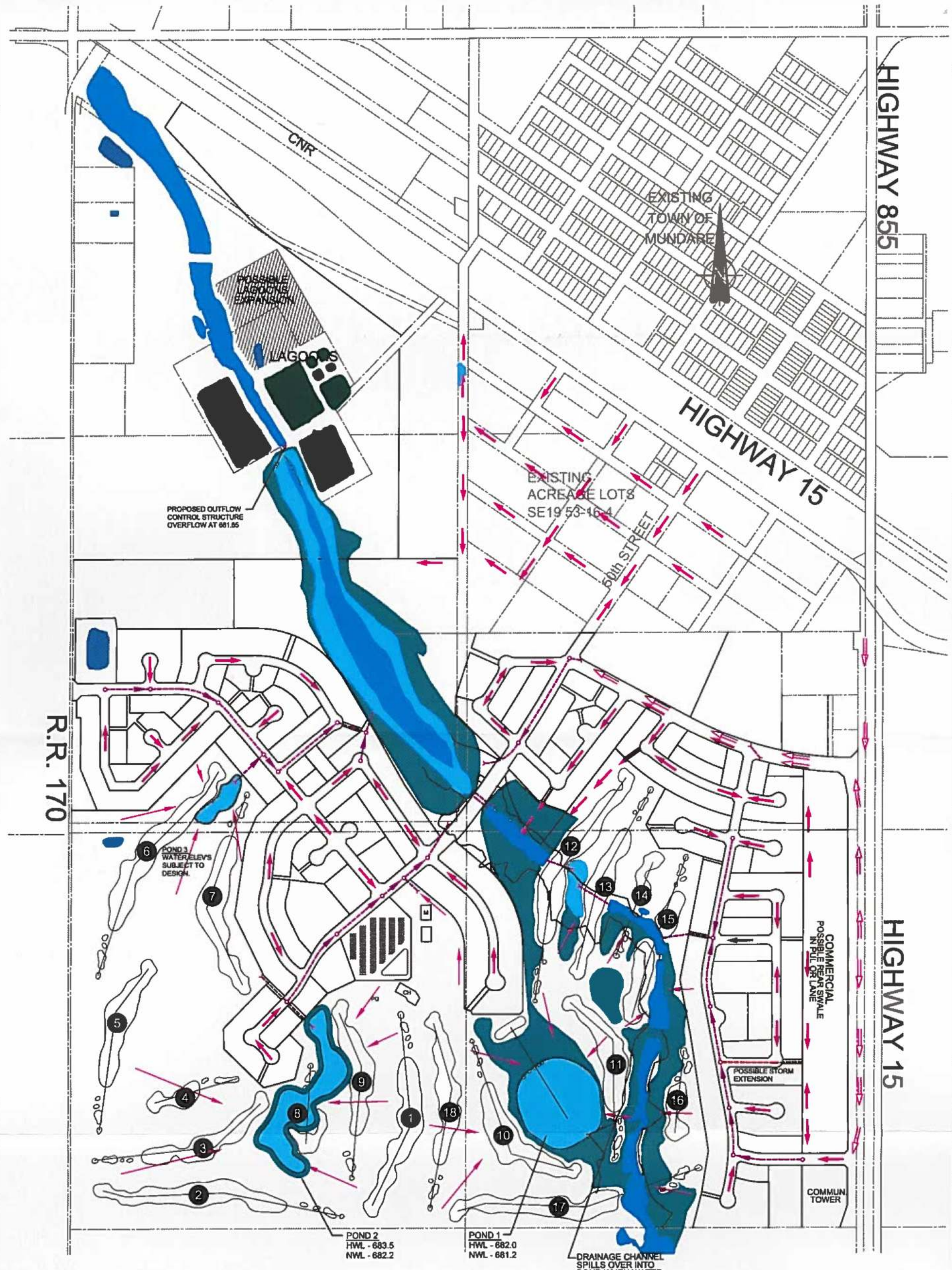
WHITETAIL CROSSING

**WATERMAIN
 CONCEPT**

DATE: DEC 17, 2004
 REV: May 16, 2005
 FILE: E:\Kowal..10250..101..101L..FIG 9 wm.dwg
 SCALE 100 50 0 100

Whitetail Crossing





R.R. 170

HIGHWAY 855

HIGHWAY 15

HIGHWAY 15

LEGEND

- ONSITE STORM SEWER
- (NEW) IRRIGATION/STORM WATER PONDS
- SVIT DRAINAGE CHANNEL
- HIGHWATER FLOOD AREA
- SURFACE DRAINAGE
- GOLF COURSE SURFACE DRAINAGE
- DITCH DRAINAGE
- CULVERTS

**WHITETAIL CROSSING
DRAINAGE AND
STORMWATER MANAGEMENT**

DATE: DEC 17, 2004
 REV: May 20, 2005
 FILE: E:\Kowal..10250..101..101L..FIG 10 stm conc.dwg
 SCALE

WhitetailCrossing



HIGHWAY 855

EXISTING TOWN OF MUNDARE

HIGHWAY 15

EXISTING ACREAGE LOTS SE19 53-16-4

50th STREET

CNR

POSSIBLE ACREAGE LOTS
LAGOONS

R.R. 170

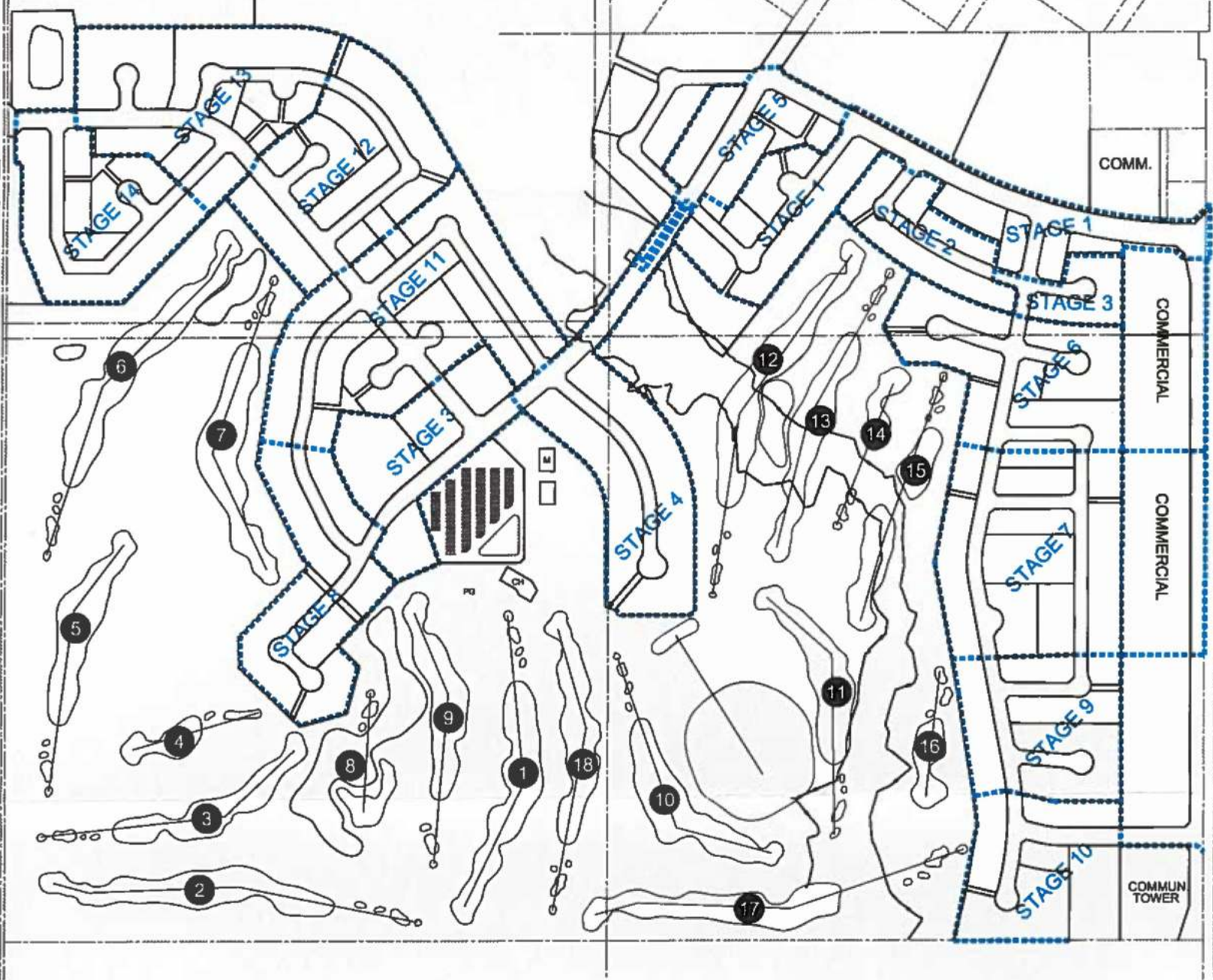
HIGHWAY 15

COMM.

COMMERCIAL

COMMERCIAL

COMMUN TOWER



LEGEND

STAGING BOUNDARY -----

WHITETAIL CROSSING

STAGING

DATE: DEC 17, 2004
 REV: May 16, 2005
 FILE: E:\Kowal..0250..01..01L..FIG 11 staging.dwg
 SCALE

Whitetail Crossing

