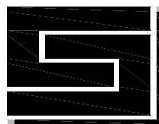


FLAMBOROUGH QUARRY HAUL ROUTE STUDY:
LAND USES REPORT
ST. MARYS CEMENT (CANADA) INC.

Prepared By: Glen Schnarr & Associates Inc.

October 2008



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FLAMBOROUGH QUARRY HAUL ROUTE STUDY: LAND USES REPORT

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Flamborough Quarry Haul Route Study:
Land Uses Report
ST. MARYS CEMENT (CANADA) INC.

1.0 Introduction

St. Marys Cement (Canada) Inc. has proposed to develop a Dolostone Quarry on Part of Lots 1, 2 and 3, Concession 11, Geographic Township of East Flamborough, in the City of Hamilton. The property is located on the north side of 11th Concession, just west of Milborough Line.

In April 2006 Dillon Consulting Limited prepared Terms of Reference for the Quarry Haul Route Evaluation on behalf of the City of Hamilton. Components of the Terms of Reference require that Alternative Haul Routes are identified, the existing baseline conditions of each alternative route are described, and a comparative analysis and evaluation is carried out. iTRANS Consulting Inc. have identified five Alternative Haul Routes, that are described and analyzed in the following report in the context of Land Uses.

This report documents the consultant team, generally describes the land use environment, defines the analysis criteria and indicators, reports the analysis and results, and offers recommendations and mitigating measures.

2.0 Description of Glen Schnarr & Associates Inc.

Glen Schnarr & Associates Inc. is an urban and regional land development consulting firm providing professional planning services to developers and landowners in the Southern Ontario region since 1986.

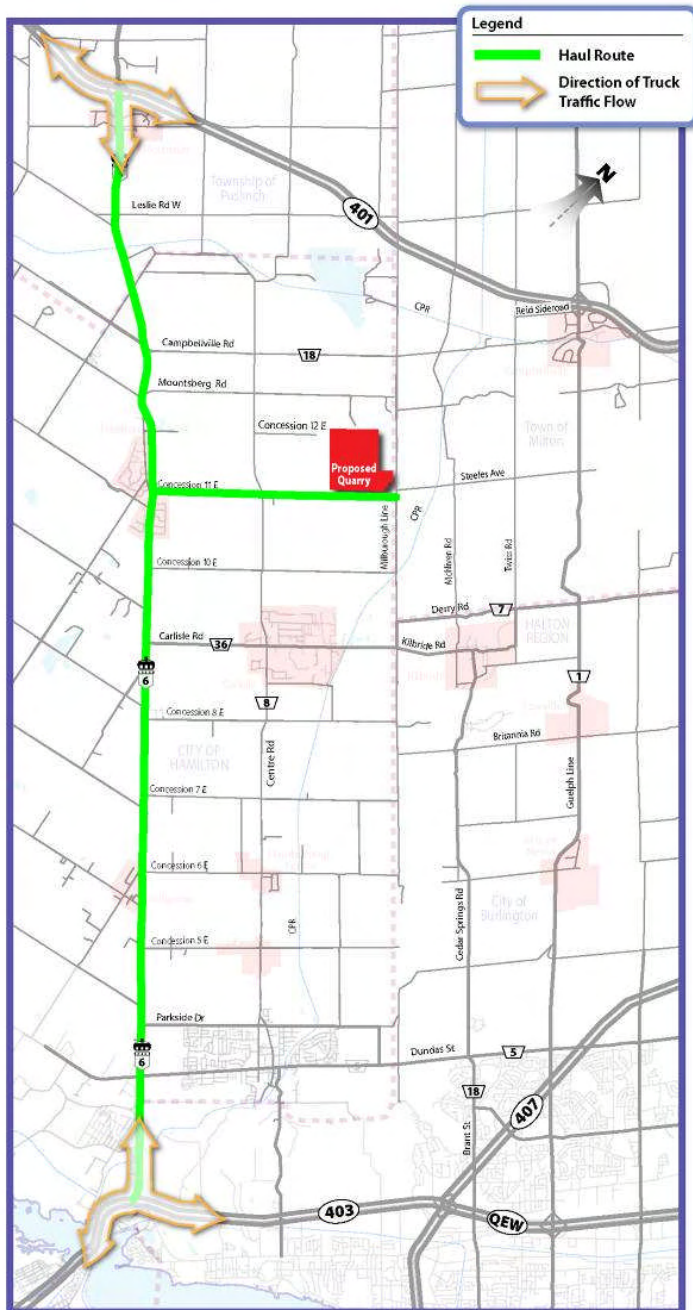
Glen Schnarr & Associates Inc. (GSAI) have the expertise and staff resources to complete a variety of projects. GSAI are comprised of a team of professional land use planning consultants and planning technicians who bring expertise in planning residential, commercial, industrial, institutional and recreational development projects to our clients. GSAI are the land use planning consultants representing St. Marys Cement (Canada) Inc. in connection with the proposed St. Marys Flamborough Quarry.

Glen Schnarr is the company President with over 30 years of professional planning experience in a wide variety of urban planning and development projects in Southern Ontario. Glen is a member of the Canadian Institute of Planners (MCIP), and is a registered professional planner (RPP).

Karen Bennett is a Senior Planner with GSAI and has over ten years of experience as a Planner. Karen is a member of the Canadian Institute of Professional Planners (MCIP), and is a registered professional planner (RPP).

3.0 Description of the Alternative Haul Routes

Alternative Haul Route 1



In the case of Alternative Haul Route 1, truck traffic destined for Highway 401 east would travel west on Concession 11 E, and then north on Highway 6 to the Highway 401 eastbound on-ramp.

Truck traffic destined for Highway 401 west would travel west on Concession 11 E, and then north on Highway 6 to the Highway 401 westbound on-ramp.

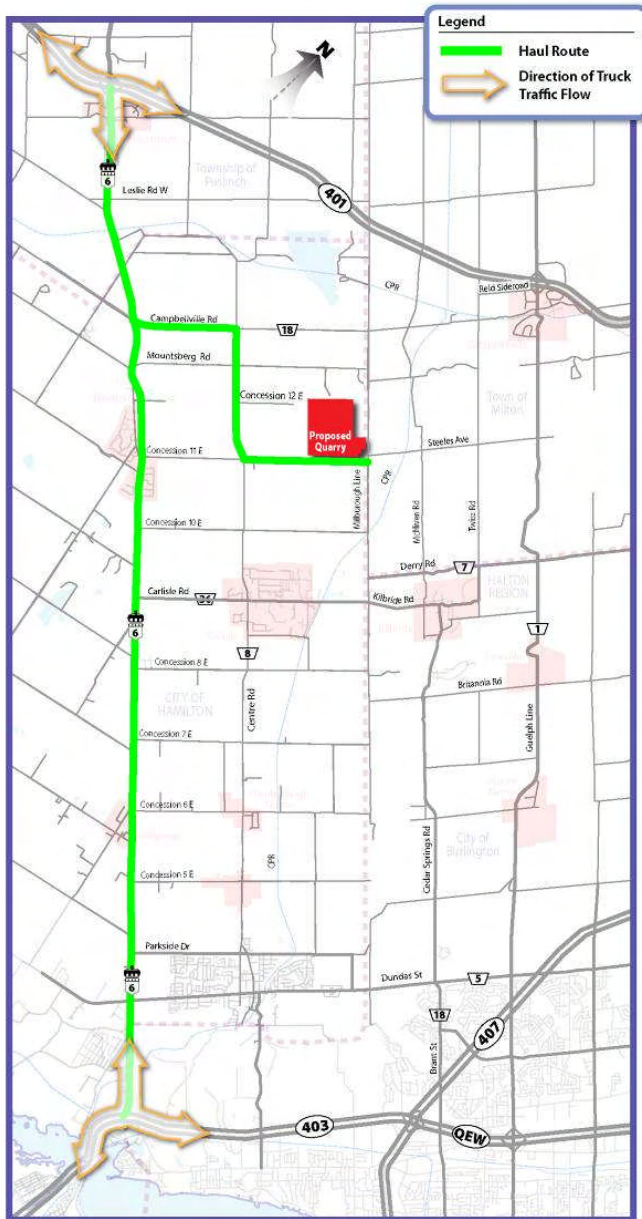
Truck traffic destined for Highway 403 east would travel west on Concession 11 E, and then south on Highway 6 to the Highway 403/QEW eastbound on-ramp.

Finally, truck traffic destined for Highway 403 west would travel west on Concession 11 E, and then south on Highway 6 to the Highway 403/QEW westbound on-ramp.

Figure 1: Alternative Haul Route 1

Alternative Haul Route 2

In the case of Alternative Haul Route 2 truck traffic destined for Highway 401 east would travel west on Concession 11 E, then north on Centre Road, west on Campbellville, and north on Highway 6 to the Highway 401 eastbound on-ramp.



Truck traffic destined for Highway 401 west would travel west on Concession 11 E, then north on Centre Road, west on Campbellville, and north on Highway 6 to the Highway 401 westbound on-ramp.

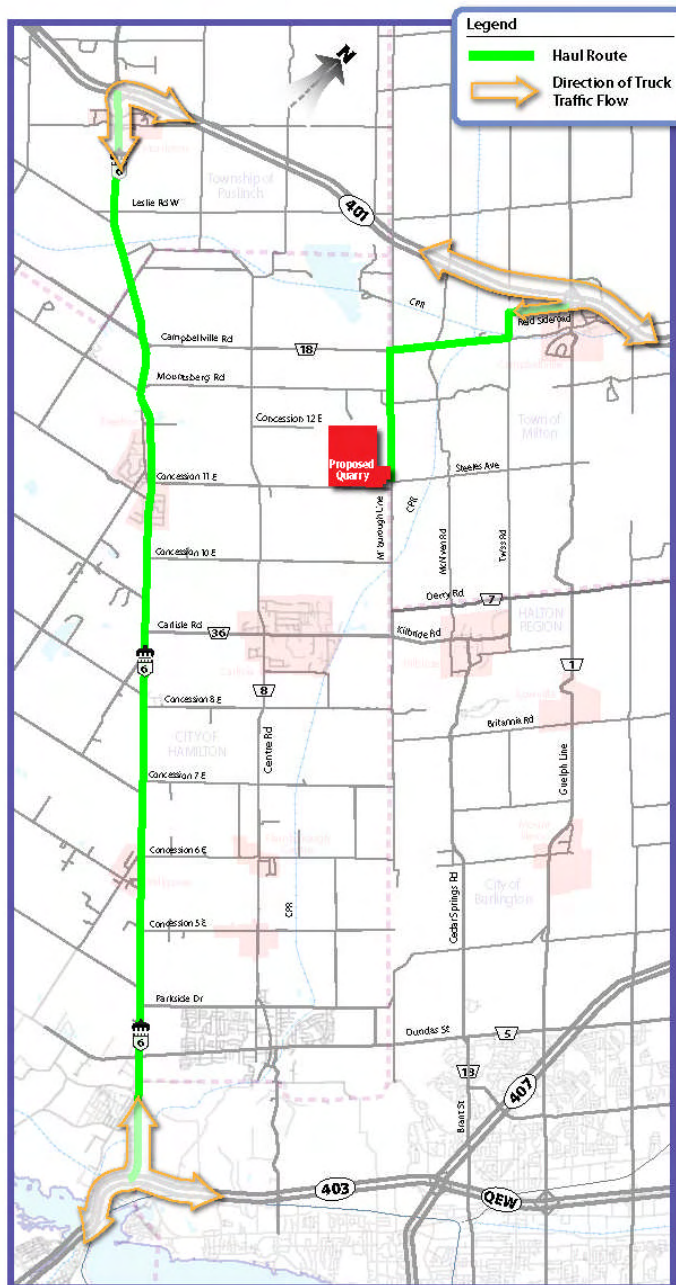
Truck traffic destined for Highway 403 east would travel west on Concession 11 E, then north on Centre Road, west on Campbellville, and south on Highway 6 to the Highway 403/QEW eastbound on-ramp.

Finally, truck traffic destined for Highway 403 west would travel west on Concession 11 E, north on Centre Road, west on Campbellville, and south on Highway 6 to the Highway 403 /QEW westbound on-ramp.

Figure 2: Alternative Haul Route 2

Alternative Haul Route 3

In the case of Alternative Haul Route 3, truck traffic destined for Highway 401 east would travel north on Milborough Line, then east on Campbellville Road, north on Twiss Road, and east on Reid Side Road to the Highway 401 eastbound on-ramp.



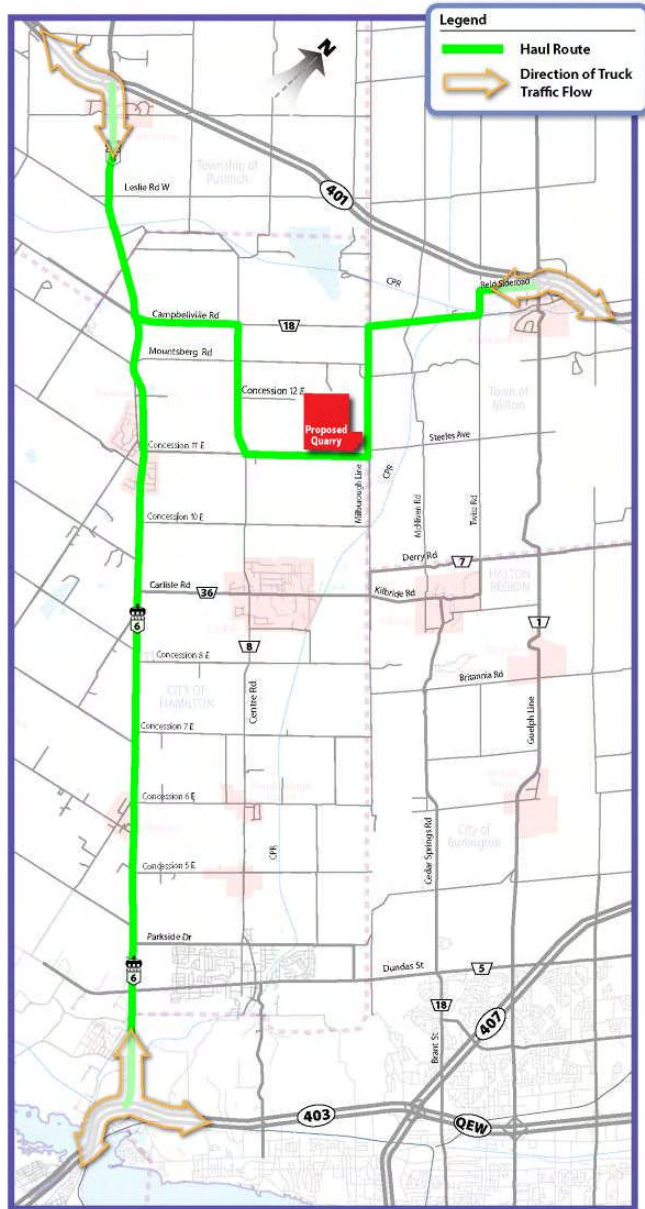
Truck traffic destined for Highway 401 west would travel north on Milborough Line, then east on Campbellville Road, north on Twiss Road, east on Reid Side Road and north on Guelph Line to the Highway 401 westbound on-ramp

Truck traffic destined for Highway 403/QEW east would travel north on Milborough Line, then east on Campbellville Road, north on Twiss Road, and east on Reid Side Road to the Highway 401 eastbound on-ramp. From here, there are several alternatives to reach the destination including taking the 407 ETR south to Highway 403.

Finally, truck traffic destined for Highway 403 west would travel north on Milborough Line, east on Campbellville Road, north on Twiss Road, and east on Reid Side Road to the Highway 401. From here, there are several alternatives to reach the destination including taking the 407 ETR southwest or Highway 6 south to the 403/QEW.

Figure 3: Alternative Haul Route 3

Alternative Haul Route 5



In the case of Alternative Haul Route 5, truck traffic destined for Highway 401 east would travel north on Milborough Line, then east on Campbellville Road, north on Twiss Road, and east on Reid Side Road to the Highway 401 eastbound on-ramp.

Truck traffic destined for Highway 401 west would travel west on Concession 11 E, then north on Centre Road, then west on Campbellville, and then north on Highway 6 to the Highway 401 westbound on-ramp.

Truck traffic destined for Highway 403 east would travel west on Concession 11 E, then north on Centre Road, west on Campbellville, and south on Highway 6 to the Highway 403/QEW eastbound on-ramp.

Finally, truck traffic destined for Highway 403 west would travel west on Concession 11 E, then north on Centre Road, west on Campbellville, and south on Highway 6 to the Highway 403 /QEW westbound on-ramp.

Figure 5: Alternative Haul Route 5

3.1 Description of the Land Use Environment along Alternative Haul Routes

As noted above, five Alternative Haul Routes have been identified by iTRANS Consulting Limited (**Figures 1-6**). Each route provides access to Highway 401 and Highway 403. The five Alternative Haul Routes each consist of a grouping of road segments, referred to as LINKS. The LINKS applicable to each Alternative Haul Route are identified below, and are illustrated on **Figure 6B**:

Alternative Haul Route 1:

- **LINK 17 & 18:** Concession 11 (between Highway 6 and Milborough Line)
- **LINK 23, 24, 25:** Highway 6 (between Highway 401 and Highway 403)

Alternative Haul Route 2:

- **LINK 18:** Concession 11 (between Centre Road to Milborough Line)
- **LINK 1:** Centre Road (between Concession 11 and Campbellville Road)
- **LINK 11:** Campbellville Road (between Highway 6 and Centre Road)
- **LINKS 23, 24 & 25:** (Highway 403 to Highway 401)

Alternative Haul Route 3:

- **LINK 5:** Milborough Line (between Concession 11 and Campbellville Road)
- **LINK 13:** Campbellville Road (between Milborough Line and Twiss Road)
- **LINK 26:** Twiss Road (between Campbellville Road and Reid Side Road)
- **LINK 27:** Reid Side Road (between Twiss Road and Guelph Line)

Alternative Haul Route 4 (combination of Route 1 and Route 3):

- **LINK 17 & 18:** Concession 11 (between Highway 6 and Milborough Line)
- **LINK 23, 24, 25:** Highway 6 (between Highway 401 and Highway 403)
- **LINK 5:** Milborough Line (between Concession 11 and Campbellville Road)
- **LINK 13:** Campbellville Road (between Milborough Line and Twiss Road)
- **LINK 26:** Twiss Road (between Campbellville Road and Reid Side Road)
- **LINK 27:** Reid Side Road (between Twiss Road and Guelph Line)

Alternative Haul Route 5 (combination of Route 2 and Route 3):

- **LINK 18:** Concession 11 (between Centre Road to Milborough Line)
- **LINK 1:** Centre Road (between Concession 11 and Campbellville Road)
- **LINK 11:** Campbellville Road (between Highway 6 and Centre Road)

- **LINKS 23, 24 & 25:** Highway 6 (from Highway 403 to Highway 401)
- **LINK 5:** Milborough Line (between Concession 11 and Campbellville Road)
- **LINK 13:** Campbellville Road (between Milborough Line and Twiss Road)
- **LINK 26:** Twiss Road (between Campbellville Road and Reid Side Road)
- **LINK 27:** Reid Side Road (between Twiss Road and Guelph Line)

Existing Land Uses are defined as the spatial arrangement of existing land uses resulting from land use planning. It is important to note that while natural areas represent a sizable portion of the rural landscape, details related to natural heritage features are discussed in the Natural Environment Report prepared by Savanta Inc. for the Haul Route Study. The following represents a summary of the relevant Official Plan Land Use designations along the LINKS in the Alternative Haul Routes, and a summary of Existing Land Uses that exist along each road LINK within these alternative routes.

3.1.1 LINK 23, 24, 25: Highway 6 (between Highway 401 and Highway 403)

Official Plan Designations:

Highway 6, between Highway 401 and Highway 403, falls within the planning jurisdiction of the County of Wellington (Puslinch), the City of Hamilton, the City of Burlington, and the Niagara Escarpment Commission (**Figure 7**).

County of Wellington (Puslinch):

As shown on **Figure 8**, Schedule A7 (Puslinch Land Use Designations) in the County of Wellington Official Plan, the lands along Highway 6 are designated “Primary Agriculture”, “Secondary Agriculture”, “Core Greenlands”, and “Urban Centre” (Morrison).

Permitted uses within the “Primary Agriculture” and “Secondary Agriculture” designations include agricultural uses, single detached homes, existing uses, forestry, licensed aggregate operations, group homes and kennels. Permitted uses in areas designated “Core Greenlands” are limited to existing natural heritage features and site alterations that are necessary for the management or maintenance of the natural environment. Additional detail related to natural heritage features existing along the alternative haul routes is contained within the Natural Environment Report prepared by Savanta Inc. for the Haul Route Study.

Along Highway 6, just south of Highway 401, is the Urban Centre of Morrison. The Urban Centre of Morrison is identified in the County of Wellington’s Official Plan as having a population of 455 over 160 households in 2007, and the Official Plan anticipates a population of 520 over 185 households by 2012. Lands within the Urban Centre of Morrison are designated “Central Business District”, “Core Greenlands” and “Residential” (**Figure 9**). Within the

“Central Business District” permitted uses include a wide variety of retail, office, service, administrative, religious, cultural and entertainment uses. Further, service uses including restaurants, personal service establishments and financial institutions are permitted. Residential development may be permitted within this designation provided that retail, office or service commercial uses are located at street level. Lands designated “Residential” in Morriston permit a variety of housing types; however, the Official Plan notes that low rise and low density housing forms such as single-detached and semi-detached dwelling units shall continue to predominate. In addition, non-residential uses such as schools, churches, clinics, local convenience stores, home occupations, neighbourhood parks and other public facilities may also be permitted within the “Residential” designation. Garden suites, accessory to existing single detached homes, are also permitted within the “Residential” designation.

City of Hamilton:

The development of a new Official Plan for the City of Hamilton is occurring in two Phases. The first phase culminated in the completion of the Rural Hamilton Official Plan. The next phase will include the development of policies and mapping for the Urban Area. The Official Plan for Rural Hamilton was adopted by Council on September 27, 2006. The adopted Plan has been forwarded to the Minister of Municipal Affairs and Housing for approval and until it is approved, the Region of Hamilton-Wentworth Official Plan and the Town of Flamborough Official Plan are in effect.

This analysis examines the land use designations and policies for lands with Hamilton based on the current Region of Hamilton-Wentworth Official Plan and Town of Flamborough Official Plan, because these are the applicable policies. However, this document also contains an examination of the possible implications of the new Hamilton Rural Official Plan. The analysis looks at the new Plan because it creates a consistent policy framework for the entire Rural Area of the City, and brings the City of Hamilton’s Rural Official Plan policies into conformity with the Greenbelt Plan and the Provincial Policy Statement.

The lands along Highway 6 are designated “Rural Area”, “Rural Settlement”, and “Business Parks” (at the south end near Highway 403) in the Region of Hamilton-Wentworth Official Plan. The lands along Highway 6 are designated “Rural”, “Agricultural”, “Rural Industrial Park”, and “Urban Area” (near Highway 403) in the Town of Flamborough Official Plan. It is important to note that detailed reference to natural areas can be found in Savanta’s Natural Environment Report prepared in connection with the Haul Route.

As shown on **Figure 10**, Schedule D (Rural Land Use Designations) in the Rural Hamilton Official Plan, the lands along Highway 6 are designated “Rural”, “Agricultural”, “Urban Area”, and “Rural Settlement Area”. Permitted land uses within the “Rural” and “Agricultural” designations include agriculturally-related uses, resource-based rural uses, and institutional uses.

Within the “Rural” designation, lands located on the east side of Highway 6, just north of Concession 12, are identified in the Hamilton Rural Official Plan as Site Specific Area R-12 for the Waterdown Sportsman’s Club Mobile Home Park (**Figure 11**). These lands are designated to permit seven existing mobile and manufactured dwelling units, as well as accessory leisure and recreational facilities.

As well, within the “Rural” designation, lands located on the east side of Highway 6, just north of Concession 8, are identified in the Hamilton Rural Official Plan as Site Specific Area R-6(j) (Harper’s Corner) (**Figure 12**). These lands are designated for estate residential development.

At the south end of Highway 6 there are lands designated “Urban Area” in the Hamilton Official Plan. Since the City of Hamilton has not yet completed the Urban Official Plan, planning permission for these lands is currently governed by the (former) Town of Flamborough Official Plan. The Waterdown Urban Area Land Use Plan designates these lands as Flamborough Business Park and the Secondary Plan related to this area designates lands along the Highway 6 corridor in this location as “Prestige Industrial” and “Prestige Industrial–Commercial”.

There are two “Rural Settlement Areas” located along the Highway 6 corridor in the City of Hamilton. The Freelon Rural Settlement Area is located at Highway 6 and Concession 11 in the City of Hamilton. The Freelon Rural Settlement Area Plan (**Figure 13**) designates lands along Highway 6 as “Settlement Residential”, “Settlement Commercial”, “Hazard Lands” and “General Open Space”. Permitted uses in the “Settlement Residential” and “Settlement Commercial” land use designations include single detached dwellings, small-scale institutional uses, home businesses, small-scale commercial and professional or personal service uses. Permitted uses in the “Hazard Lands” designation are limited to conservation, forestry, fish and wildlife management, and permitted uses in the “General Open Space” designation include parks and open space.

The Millgrove Rural Settlement Area is located at Millgrove Sideroad and Millgrove Road, on the west side of Highway 6. The Millgrove Rural Settlement Area Plan (**Figure 14**) designates lands along the Highway 6 corridor as “Settlement Residential”, “Settlement Commercial”, and “Hazard Lands”. As noted above, permitted uses in these designations include single detached dwellings, small-scale institutional uses, home businesses, small-scale commercial and professional or personal service uses, and uses the “Hazard Lands” designation are limited to conservation, forestry, fish and wildlife management.

City of Burlington:

As shown on **Figure 15**, Schedule A (Burlington City Structure) in the City of Burlington Official Plan, the lands along Highway 6 are designated “Land Use Designation to be Determined”. The City of Burlington Official Plan has specifically identified these lands as the “North Aldershot Study Area”, generally bounded by Highway 403 to the south, Highway 6 to the west, Town of Flamborough to the North and the Burlington-Guelph Hydro Line to the east. As noted in the City’s Official Plan, long term policies for this area include “to conduct a

secondary planning and/or major planning studies that establish long term development policies” for these areas. These lands are designated ”Agricultural Rural Area” in the Region of Halton Official Plan, which permits agricultural uses, single detached dwellings on existing lots, recreation uses, home industries, and home occupations.

Niagara Escarpment Commission:

As shown on **Figure 16**, Map 3 of the Niagara Escarpment Plan, lands on the east side of Highway 6 in Burlington are designated “Escarpment Natural Area” and “Escarpment Protection Area”. Permitted uses in the “Escarpment Protection Area” include agricultural operations, single dwellings, limited recreational uses, forest, wildlife and fisheries management, small-scale commercial uses accessory to agriculture, and home occupations. Uses permitted in the “Escarpment Natural Area” are limited to existing agricultural operations, single dwellings, forest, wildlife and fisheries management, and non-intensive recreational uses.

Existing Land Uses:

Existing Land Uses along the Highway 6 corridor are shown on **Air Photos 1 to 9**. Generally, Existing Land Uses along this corridor include Agricultural lands, Industrial uses, Commercial uses, Rural Residential uses, and Settlement Residential and Commercial uses. Specifically, Existing Land Uses, as shown on **Air Photos 1 to 9** (north to south) are described as follows:

Existing Land Uses shown on **Air Photo 1** include Agricultural Uses, Rural Residential dwellings, Settlement Residential dwellings (in Morriston), a car pool at the Highway 401 interchange, Industrial (Construction) business, and Settlement Commercial businesses, including gas station, Solid Oak Furniture, Picard’s Peanuts, Huether’s Garage, convenience store, psychic, restaurant, and Le Bel Furniture (in Morriston).

Existing Land Uses shown on **Air Photo 2** include Agricultural Uses, Rural Residential dwellings, Industrial uses (Bryan’s Farm and Industrial Supply, and an Industrial Building for sale), Institutional use (Seventh Day Church), and Rural Commercial Business uses (farm equipment shops, and Fine Point Painting).

Existing Land Uses shown on **Air Photo 3** include Agricultural Uses, Rural Residential dwellings, Settlement Residential dwellings (in Freelton), and Settlement Commercial uses (in Freelton), and a Rural Industrial use (Benson Chemicals) and Rural Commercial uses (Trucking Company and Pacific Cedar). As well the Hydro Corridor is located parallel to Highway 6, along the west side of the Highway.

Existing Land Uses shown on **Air Photo 4** include Agricultural Uses, Rural Residential dwellings, Settlement Residential dwellings (in Freelton), Institutional use (United Church of Canada) and Rural Commercial uses (kennel, Tractor Sales, Woodland Farm Market). As well the Hydro Corridor is located parallel to Highway 6, along the west side of the Highway, and crosses over the Highway in Freelton.

Existing Land Uses shown on **Air Photo 5** include Agricultural Uses, Rural Residential dwellings, Settlement Residential dwellings (in Harper’s Corner), Industrial use (Self Storage), and Commercial uses (Breezy Corners Family Restaurant, Pioneer Gas Station Texas Grill Restaurant, Shell Gas Station, Tim Horton’s, Li Chin Garden (Chinese food), Petro-Canada Gas Station, Coffee Time, and OLCA Gas Station. As well, the Hydro Corridor is located parallel to Highway 6, along the east side of the Highway.

Existing Land Uses shown on **Air Photo 6** include Agricultural Uses, Rural Residential dwellings, Settlement Residential dwellings (in Millgrove), Industrial use (JDJ Trailer Manufacturer), and Commercial uses (Grasshopper Imports, Market Garden, Pioneer Gas Station, Stafford Rentals, Brad’s Automotive, Flamborough Mix and Brew House, Auto Recyclers, Farm Market, and Oasis Family Restaurant (closed).

Existing Land Uses shown on **Air Photo 7** include Agricultural Uses, Rural Residential dwellings, Settlement Residential dwellings (in Millgrove), Industrial use (Business Pipeline Company), and Commercial uses (Flamborough Patio Centre, Doggie Daycare, Nursery, Terra Garden Centre, Golf Fairway).

Existing Land Uses shown on **Air Photo 8** include Agricultural Uses, Rural Residential dwellings, and Commercial uses (Beverly Tire and Auto, Petro Canada Gas Station, Wendy’s, Tim Horton’s, Gedas Motors, Appliances).

Existing Land Uses shown on **Air Photo 9** include Settlement Residential dwellings, Industrial uses and Commercial uses.

3.1.2 LINK 11: Campbellville Road (between Highway 6 and Centre Road)

Official Plan Designations:

Campbellville Road, in between Highway 6 and Centre Road, falls within the planning jurisdiction of the City of Hamilton. The lands along this corridor are designated “Rural Area” in the Region of Hamilton-Wentworth Official Plan, and “Rural” and “Rural Residential Estate Development” in the Town of Flamborough Official Plan.

As shown on **Figure 10**, Schedule D (Rural Land Use Designations) in the Rural Hamilton Official Plan, these lands are designated “Rural”. Permitted land uses within this designation include agriculturally-related uses, resource-based rural uses, and institutional uses. Further, a parcel of land located in between Centre Road and Highway 6 is identified as Site Specific Area No. R-6(a) in the Rural Hamilton Official Plan (**Figure 17**). These lands are identified as Chestnut Grove Estates and have special policy permission for an estate residential development to consist of 13 single detached estate homes (see Section 5.3.3.3 of this Report).

Existing Land Uses:

Existing Land Uses along this corridor are shown on **Air Photo 10**. Specifically, Existing Land Uses along this corridor include Agricultural lands, Rural Residential dwellings, Institutional use (Mountsberg Baptist Church at NW corner of Centre Road and Campbellville Road), and agriculturally-related Business (an equestrian training centre).

3.1.3 LINK 13: Campbellville Road (between Milborough Line and Twiss Road)

Official Plan Designations:

Campbellville Road, in between Milborough Line and Twiss Road, falls within the planning jurisdiction of the Region of Halton and Town of Milton. The Region of Halton Official Plan designates the lands along Campbellville Road as “Agricultural Rural Area”, “Greenlands A” and “Greenlands B” (**Figure 18**). Similarly, as shown on **Figure 19**, Schedule A (Land Use Plan) in the Town of Milton Official Plan, the lands along Campbellville Road are designated “Rural Area”, “Greenlands A” and “Greenlands B”. Permitted uses in the “Rural Area” include agricultural uses, single detached dwellings on existing lots, recreation uses, home industries, and home occupations. The “Greenlands A” and “Greenlands B” land use designations are intended to protect significant ecological, scenic and heritage resources. Permitted uses in the “Greenlands A” and “Greenlands B” designations are limited to existing agricultural operations, non-intensive recreation uses, forest, wildlife and fisheries management, and essential transportation and utility facilities.

Existing Land Uses:

Existing Land Uses along this corridor are shown on **Air Photo 15**. Specifically, Existing Land Uses along this corridor include Agricultural lands, and Rural Residential dwellings. Detailed reference to natural areas can be found in Savanta’s Natural Environment Report prepared in connection with the Haul Route.

3.1.4 LINK 17, 18: Concession 11 (between Highway 6 and Millborough Line)

Official Plan Designations:

Concession 11, between Highway 6 and Millborough Line, falls within the planning jurisdiction of the City of Hamilton. This corridor is designated “Rural Area” in the Hamilton-Wentworth Official Plan, and “Rural”, “Rural Residential Estate Development”, “Open Space and Recreation”, and “Agriculture” in the Town of Flamborough Official Plan.

As shown on **Figure 10**, Schedule D (Rural Land Use Designations) in the Rural Hamilton Official Plan, the lands along this road are designated “Rural”, “Open Space”, and “Rural Settlement Area”. Permitted uses within the “Rural” designation include agriculturally-related uses, resource-based rural uses, and institutional uses. As well, lands located on the south side of Concession 11, just east of Centre Road, are identified in the Hamilton Rural Official Plan as Site Specific Area R-6(d) (Stonebury Place) (**Figure 20**). These lands are designated for estate residential development.

Permitted uses within the “Open Space” land use designation include public or private areas where the predominant use or function of the land is for recreational activities, including resource-based recreational and tourism uses, recreation / community centres, pedestrian pathways, trails, bikeways and walkways, seasonal campgrounds, marinas, woodlots, forestry and wildlife, hazard lands and cemeteries.

Permitted uses within the “Rural Settlement Area” designation are set out in specific policies for each Rural Settlement Area. The Rural Settlement Area located along Concession 11 at Highway 6 is Freulton, and the Freulton Rural Settlement Area land use schedule is included as **Figure 13**. The lands along Concession 11 in Freulton are designated “Settlement Residential”, as shown on **Figure 13**.

Existing Land Uses:

Existing Land Uses along the Concession 11 corridor are included on **Air Photos 12 and 13**. Specifically, Existing Land Uses along this corridor include Agricultural lands, Rural Residential dwellings, Settlement Residential dwellings in Freulton (fronting onto Concession 11), one campground (Lawson Park Family Camping Resort), and agriculturally-related Business use (equestrian training centre). As well, Stonebury Place, located on the south side of Concession 11, just east of Centre Road, consists of estate residential dwellings. It is important to note that detailed reference to natural areas can be found in Savanta’s Natural Environment Report prepared in connection with the Haul Route.

3.1.5 LINK 1: Centre Road (between Concession 11 and Campbellville Road)

Official Plan Designations:

Centre Road, between Concession 11 and Campbellville Road, falls within the planning jurisdiction of the City of Hamilton. Lands along this corridor are designated “Rural Area” in the Hamilton-Wentworth Official Plan, and “Rural” and “Open Space and Recreation” in the Town of Flamborough Official Plan.

As shown on **Figure 10**, Schedule D (Rural Land Use Designations) in the Rural Hamilton Official Plan, the lands along this road are designated “Rural”. Permitted uses within the “Rural” designation include agriculturally-related uses, resource-based rural uses, and institutional uses.

Existing Land Uses:

Existing Land Uses along the Centre Road corridor are shown on **Air Photo 11** and include Agricultural uses, Rural Residential dwellings, Institutional use (Mountsberg Community Centre at SW corner of Centre Road and Campbellville Road), and agriculturally-related Business use.

3.1.6 LINK 5: Milborough Line (between Concession 11 and Campbellville Road)

Official Plan Designations:

Milborough Line, in between Concession 11 and Campbellville Road, represents the municipal boundary separating the City of Hamilton and the Regional Municipality of Halton. Accordingly, this corridor falls within the planning jurisdiction of the City of Hamilton (west side of the road) and Region of Halton and Town of Milton (east side of the road).

Within Hamilton, the lands along this corridor are designated “Rural Area” in the Hamilton-Wentworth Official Plan. Further, lands along this corridor are designated “Agriculture”, “Rural”, and “Rural Residential Estate Development” in the Town of Flamborough Official Plan.

As shown on **Figure 10**, Schedule D (Rural Land Use Designations) in the Rural Hamilton Official Plan, the lands along the west side of this road are designated “Rural”. Permitted uses within the “Rural” designation include agriculturally-related uses, resource-based rural uses, and institutional uses. As well, land located on the west side of Milborough Line, accessing from Mountsberg Road, are identified in the Hamilton Rural Official Plan as Site Specific Area R-6(b) (Timberrun Court) (**Figure 21**). These lands are designated for estate residential development.

The Region of Halton Official Plan designates the lands along the east side of Milborough Line as “Agricultural Rural Area” and “Greenlands A” (**Figure 18**). Similarly, as shown on **Figure 19**, Schedule A (Land Use Plan) in the Town of Milton Official Plan, the lands along the east side of Milborough Line are designated “Rural Area”, “Greenlands A” and “Greenlands B”. Permitted uses in the “Rural Area” include agricultural uses, single detached dwellings on existing lots, recreation uses, home industries, and home occupations. The “Greenlands A” and “Greenlands B” land use designations are intended to protect significant ecological, scenic and heritage resources. Permitted uses in the “Greenlands A” and “Greenlands B” designations are limited to existing agricultural operations, non-intensive recreation uses, forest, wildlife and fisheries management, and essential transportation and utility facilities. It is important to note

that detailed reference to natural areas can be found in Savanta's Natural Environment Report prepared in connection with the Haul Route.

Existing Land Uses:

Existing Land Uses along the Milborough Line corridor are shown on **Air Photo 14** and include Agricultural uses, Rural Residential dwellings, and Business use (dog kennel located at NW corner of Concession 11 and Milborough Line). Further, Timberrun Court, located just west of Milborough Line, south of Mountsberg Road, consists of estate residential homes. It is important to note that detailed reference to natural areas can be found in Savanta's Natural Environment Report prepared in connection with the Haul Route.

3.1.7 LINK 26: Twiss Road (between Campbellville Road and Reid Side Road)

Official Plan Designations:

Twiss Road, in between Campbellville Road and Reid Side Road, falls within the planning jurisdiction of the Region of Halton and Town of Milton. The Region of Halton Official Plan designates the lands along this corridor as "Agricultural Rural Area" and "Greenlands A". (**Figure 18**). Similarly, as shown on **Figure 19**, Schedule A (Land Use Plan) in the Town of Milton Official Plan designates the lands along this corridor as "Rural Area" and "Greenlands A". Permitted uses in the "Rural Area" include agricultural uses, single detached dwellings on existing lots, recreation uses, home industries, and home occupations. The "Greenlands A" land use designation is intended to protect significant ecological, scenic and heritage resources. Permitted uses in the "Greenlands A" designation are limited to existing agricultural operations, non-intensive recreation uses, forest, wildlife and fisheries management, and essential transportation and utility facilities.

Existing Land Uses:

Existing Land Uses along the Twiss Road corridor are shown on **Air Photo 15** and include Industrial uses (Rockett Lumber, Self-Storage facility), Agricultural uses, and Rural Residential dwellings.

3.1.8 LINK 27: Reid Side Road (between Twiss Road and Guelph Line)

Official Plan Designations:

Reid Side Road west of Guelph Line is within the planning jurisdiction of the Region of Halton and Town of Milton. The Region of Halton Official Plan designates the lands along this corridor as “Hamlet”, “Agricultural Rural Area” and “Greenlands A” (**Figure 18**). Similarly, as shown on **Figure 19**, Schedule A (Land Use Plan) in the Town of Milton Official Plan, the lands along this corridor are designated “Hamlet Area”, “Rural Area” and “Greenlands A”.

The lands designated “Hamlet Area” are identified as the Hamlet of Campbellville, and the Hamlet of Campbellville Land Use Schedule is included as Figure 22. Section C.3.1 of the Official Plan notes that the Hamlet of Campbellville can accommodate 1080 persons in total, and lands along Reid Side Road are designated “Hamlet Industrial”, “Institutional”, and “Hamlet Residential” as shown on **Figure 22**. Permitted uses within these designations include residential, industrial and institutional uses.

Permitted uses in the “Rural Area” along this corridor include agricultural uses, single detached dwellings on existing lots, recreation uses, home industries, and home occupations. The “Greenlands A” land use designation is intended to protect significant ecological, scenic and heritage resources. Permitted uses in the “Greenlands A” designation are limited to existing agricultural operations, non-intensive recreation uses, forest, wildlife and fisheries management, and essential transportation and utility facilities.

Existing Land Uses:

Existing Land Uses along Reid Side Road are shown on **Air Photo 15** and include Hamlet Residential dwellings, Rural Residential dwellings, Agricultural uses, a cemetery, a Commercial use (Ridley Windows and Doors), and an Emergency Response Centre.

3.1.9 Guelph Line (between Reid Side Road and Highway 401)

Official Plan Designations:

A short distance along Guelph Line, in between Reid Side Road and Highway 401, is within the planning jurisdiction of Niagara Escarpment Commission, Region of Halton and Town of Milton. As shown on **Figure 16**, the Niagara Escarpment Plan designates lands along the east side of this section of Guelph Line as “Escarpment Rural Area”. Similarly, the Region of Halton and Town of Milton Official Plans designate the east side of Guelph Line as “Escarpment Rural Area”, consistent with the Niagara Escarpment Plan. Permitted uses within the “Escarpment Rural Area” include agricultural operations, single dwellings, limited recreational uses, forest,

wildlife and fisheries management, small scale commercial uses accessory to agriculture, home occupations and small-scale institutional uses.

Lands along the west side of this stretch of Guelph Line are outside of the Niagara Escarpment Plan, and are designated “Agricultural Rural Area” in the Region of Halton Official Plan, and “Rural Area” in the Town of Milton Official Plan. Permitted uses in the “Rural Area” along this corridor include agricultural uses, single detached dwellings on existing lots, recreation uses, home industries, and home occupations.

Existing Land Uses:

Existing Land Uses along Guelph Line are shown on **Air Photo 15** and include the Highway 401 interchange at Guelph Line.

4.0 Analysis Criteria and Indicators

As noted in the Haul Route Evaluation Terms of Reference (April 2006), the evaluation of the Alternative Haul Routes is to be based on a set of evaluation criteria and indicators. There are three evaluation criteria and associated indicator(s) that have been identified for the assessment of land uses along the Alternative Haul Routes. Below is a summary of the land use criteria and associated indicators, and a discussion related to the importance of each criterion to the haul route evaluation:

1. Criterion: “**Potential for removal of existing land uses for road improvements**” using the following indicator:
 - Area and sensitivity of existing land use eliminated by road improvements

Existing Land Uses are defined as the spatial arrangement of existing land uses resulting from previous development and land use planning. It is important to note that while natural areas represent a sizable portion of the rural landscape, details related to natural heritage features are discussed in the Natural Environment Report prepared by Savanta Inc. for the Haul Route Study. Existing land uses along the five Alternative Haul Routes have been inventoried and summarized. Each of the five Alternative Haul Routes contains a mix of land uses.

In order to ensure optimum pavement and road design for safe and efficient truck traffic and general road user traffic (including pedestrian and cyclists), iTRANS have proposed different cross-sections to alter the road design for each road LINK. In fact, iTRANS have examined the possibility of applying two different types of cross-sections: rural (requires property acquisition) and urban (within the existing right-of-way).

Because the Rural Cross Section requires potential property acquisition, it is the Rural Cross Section which was assessed for the purposes of the evaluation of Criteria No. 1 (potential for

removal of existing land uses for road improvements). iTRANS has developed three different representative road alteration Rural Cross Sections which have been applied to each road LINK, and for certain road LINKS, possible road allowance widening outside the existing right-of-way is anticipated. The above noted criterion and indicator will examine the proportional mix of existing land use types along each Alternative Haul Route, the relative importance of each land use type, and the anticipated road allowance widening along each Alternative Haul Route associated with the proposed road alterations.

2. Criterion: “**Potential for disruptive effects to sensitive planned land uses**” using the following indicators:

- Number, character of planned development areas
- Sensitivity of planned development to increased truck traffic

Planned Land Uses (Planned Development Areas) are defined as areas which are designated for development in long range comprehensive policy documents (i.e. Official Plan), but are not yet built. There are three Planned Development Areas identified along the five Alternative Haul Routes.

The above noted criterion and indicators will examine the three known Planned Development Areas, their character, and their sensitivity to increased truck traffic. This criterion is useful in determining whether the potential for increased truck traffic will significantly affect the character of the Planned Development Areas along the Alternative Haul Routes.

3. Criterion: “**Conformity with applicable plans and policies**” using the following indicators:

- Degree of conformity with Official Plans
- Degree of conformity with the Greenbelt Plan
- Degree of conformity with the Niagara Escarpment Plan

Traditional tools for land use planning and regulation include a combination of provincial, regional and local policy directives, legal instruments, administrative practices and means of promoting community participation in planning.

Applicable Provincial Plans do not identify the location of permitted haul routes / truck routes; however, Provincial policies related to infrastructure and aggregate resources have been examined. Further, information is available in Regional and local Official Plans related to functional classifications and right-of-way widths of major highways and roads. This information is discussed in the analysis of the above noted criterion and associated indicators to illustrate the five Alternative Haul Routes’ conformity with applicable plans and policies

5.0 Analysis

5.1 Data Sources

Data sources used in the analysis of the above noted criteria and indicators include the following:

- Provincial Policy Statement
- Greenbelt Plan
- Niagara Escarpment Plan
- Region of Hamilton-Wentworth Official Plan
- County of Wellington Official Plan
- Region of Halton Official Plan
- City of Hamilton's "Rural Hamilton Official Plan" (not yet approved)
- (former) Town of Flamborough Official Plan
- Town of Milton Official Plan
- City of Burlington Official Plan
- Baseline Conditions for Flamborough Quarry Haul Route Study (April 2008)
- Land Ownership Mapping (iTRANS and Gartner Lee)
- Representative Cross Section Alternatives prepared by iTRANS
- Haul Route Reconnaissance Survey (Karen Bennett, Jan. 4, 2008, Jan. 29, 2008, Feb. 5, 2008, Feb. 29, 2008, and March 6, 2008)

5.2 Analysis of Criteria #1:

Potential for Removal of Existing Land Uses Due to Road Improvements

5.2.1 Assumptions

5.2.1.1 Highway 6

Highway 6 (LINK 23, 24 and 25) is currently a viable transportation corridor which has been planned to accommodate significant truck traffic in a safe, rapid and efficient manner. Accordingly, it has been determined by iTRANS Consulting Limited that no road alterations are required along Highway 6, if Highway 6 is included in the Preferred Haul Route. Similarly, there are no anticipated road alterations required along Reid Side Road, which is a component road LINK in Alternative Route 3, 4 and 5.

5.2.1.2 Rural vs. Urban Cross Section Design and Analysis

For this study two types of cross-sections are proposed: Rural (requires road allowance widening) and Urban (within the existing right-of-way). For the purpose of the analysis, the Rural Cross-Section was applied as it has the most significant impacts due to road allowance widening and was therefore deemed more conservative. However, given the challenges that can be associated with road allowance widening, the urban design that fits the existing right-of-way was also given consideration. It was concluded that this design would not require road allowance widening however it would have a more significant impact on the existing character of the road and has a higher associated cost of construction.

Figure 23, Figure 24, Figure 25, and Figure 26 illustrate the proposed road bed design and shows Rural and Urban Alternative Cross-Sections for both Type 1 and Type 3 sections.

Type 1

With the Rural Cross-Section the proposed right-of-way is 2.0m greater than the existing 20m right of way. This cross-section allows for 3.75m travel lanes, 1.0m paved shoulder, 0.5m gravel shoulder, 0.5m rounding, and a drainage ditch.

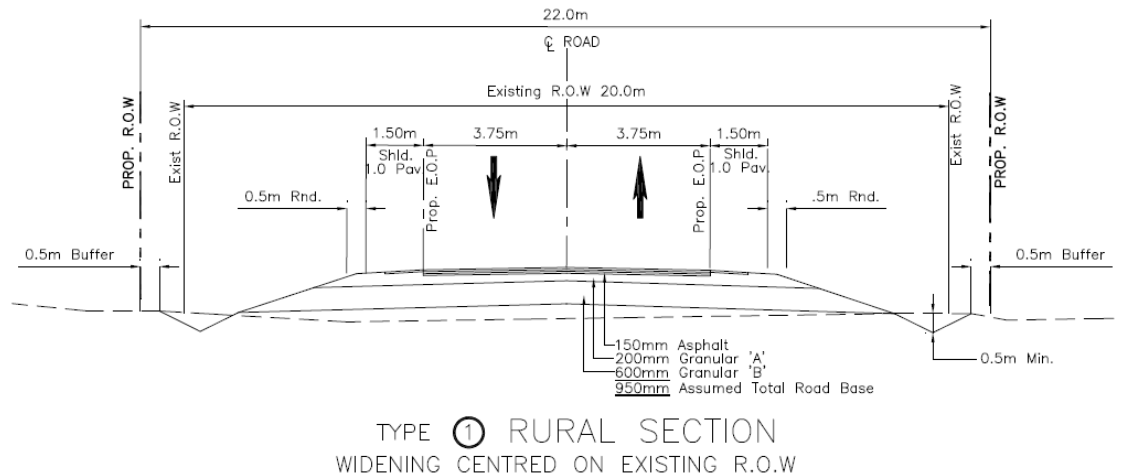


Figure 23: Type 1 Rural Cross-Section

With the Urban Cross-Section the proposed right-of-way fits into the existing 20m right-of-way. The cross-section allows for 3.75m travel lanes, and a 1.5m paved shoulder with curb and gutter.

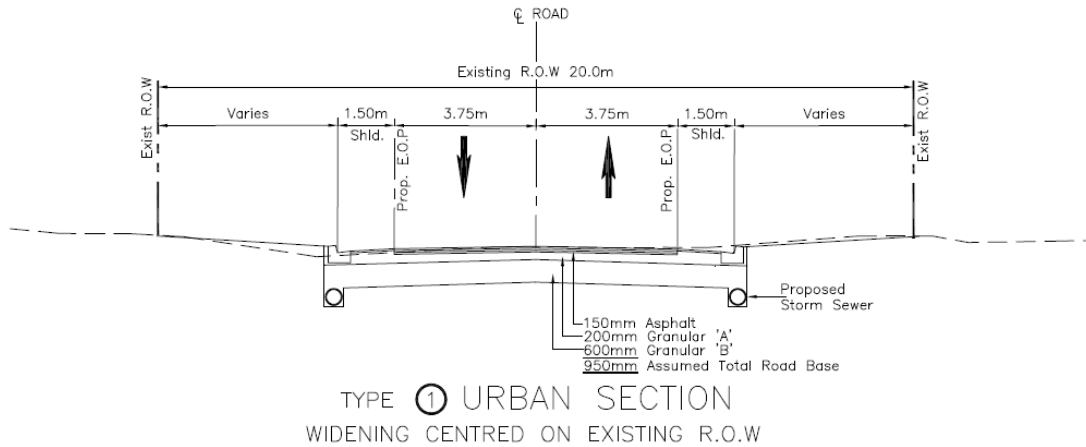


Figure 24: Type 1 Urban Cross-Section

Type 3

With the Rural Cross-Section the proposed right-of-way is 3m to 7.5m greater than the existing right-of-way depending on the varying existing cross-section. This cross-section allows for 3.75m travel lanes, 1.0m paved buffer, 1.5m paved bike lane, 1.0m gravel shoulder, 0.5m rounding, a drainage ditch and a 0.5m buffer.

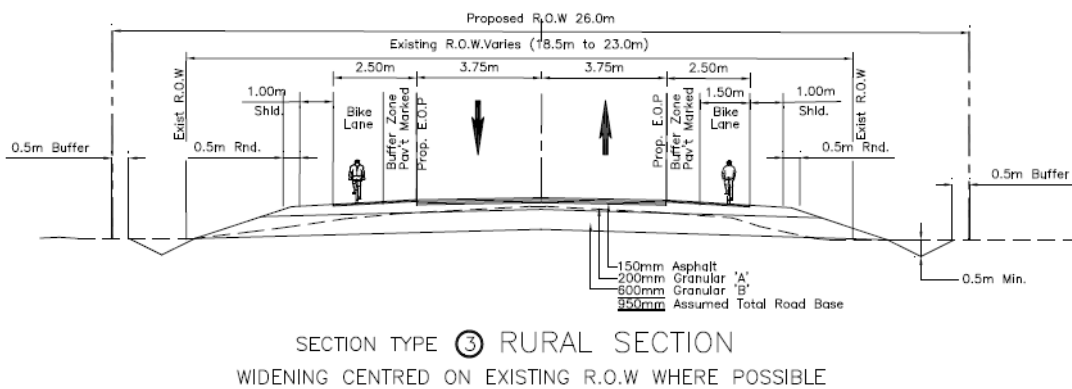


Figure 25: Type 3 Rural Cross-Section

With the Urban Cross-Section the proposed right-of-way can be fit into the existing right-of-way that varies from 18.5m to 23m. The cross-section allows for 3.75m travel lanes, a 1.0m paved buffer, a 1.5m paved bike lane, and curb and gutter with a minimum boulevard of 3m.

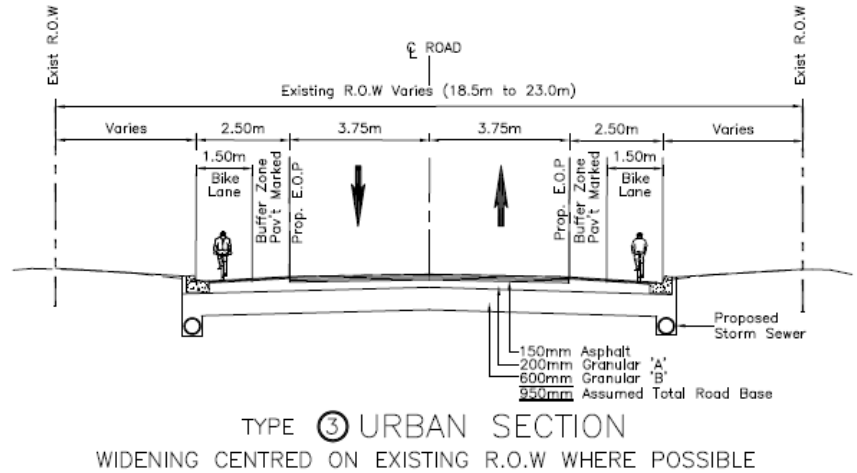


Figure 26: Type 3 Urban Cross-Section

It is important to note that both Type 1 and Type 3 section designs do not account for any changes in the existing profile and assume that widening is at existing profile grade.

While the Urban Cross-Section fits into the existing right-of-ways, the storm sewer infrastructure and appurtenances increase the construction costs approximately 50 percent over the rural design. It is a trade off between the cost (and challenge) of purchasing land and constructing a more expensive infrastructure.

Applying the Rural Cross-Section that would require road allowance widening is a conservative approach for haul route comparative evaluation purposes. The decision on which cross-section to move forward with would be decided at the detailed design stage of an Environmental Assessment when pavement recommendations are finalized. Typically, resolution of the design details would occur during the subsequent Municipal Class EA process.

5.2.1.3 Rural Cross Section Analysis

When the Rural Cross-Section is applied for this analysis, each of the road LINKS proposed in the five Alternative Haul Routes will require some degree of road alteration, with the exception of Highway 6 and Reid Side Road. Accordingly, iTRANS have developed three different representative Rural road improvement cross sections which have been applied to each road LINK for each Alternative Haul Route.

While the Type 1 Rural and Type 3 Rural Cross-Sections are illustrated above (**Figures 23 and 25**, respectively), all three representative Rural Cross Sections are illustrated on **Figure 27**, for ease of reference. These cross sections have been designed by iTRANS to bring each road LINK to design standards acceptable for safe and efficient truck traffic, and to safely accommodate on-street cycling. The proposed Rural Cross-Section type for each LINK relates to the anticipated volume of truck traffic and cyclists on each road LINK.

Existing Right-of Ways (ROW) for roads along the Alternative Haul Routes (excluding Highway 6) vary between 18.5 m and 23 m. As noted on **Figure 27**, the approximate ROW required for Representative Rural Cross-Section Type 1 is 22 m, for Representative Rural Cross-Section Type 2 is 22.5 m, and for Representative Rural Cross Section Type 3 is 26 m. Accordingly, it is anticipated that partial road allowance widening, outside of the existing ROW, may be necessary to accommodate the grading requirements of the proposed Representative Rural Cross-Section.

It is assumed that if partial road allowance widening is required to accommodate the grading requirements for the proposed road alterations, such widening will occur (and be divided across) both sides of the road, where feasible. Furthermore, it is anticipated that if widening is required, it will be balanced to minimize impact on land use types considered to be more sensitive to road alterations (i.e. residential and institutional land uses), where possible.

A summary of the required road alterations (excluding Highway 6 because no alterations are required), including LINK and Rural Cross-Section type proposed, is outlined below:

Alternative Route 1 consists of LINK 17 (Concession 11 west) and LINK 18 (Concession 11 east), and iTRANS is proposing Rural Type 3 Cross-Section (LINK 17) and Rural Type 1 Cross-Section (LINK 18) (**Figure 28**). As noted on **Figure 28**, LINK 17 and LINK 18 currently consist of approximately 20 m ROW. The following Table summarizes the approximate existing ROW, and the anticipated widening associated with the preferred Rural Cross-Section.

Table 1: Haul Route 1 Rural Cross-Section Summary

LINK	Approximate Existing ROW	Proposed Rural Cross-Section		Approximate Widening Outside Existing ROW
		Type	Requirement	
LINK 17	20.0 m	3	26.0 m	6.0 m
LINK 18	20.0 m	1	22.0 m	2.0 m

Alternative Route 2 consists of LINK 18 (Concession 11 east), LINK 1 (Centre Road), and LINK 11 (Campbellville Road), and iTRANS is proposing Rural Cross-Section Type 1 (for LINK 18 and LINK 11) and Rural Cross-Section Type 3 (for LINK 1) (**Figure 28**). As illustrated on **Figure 27**, Rural Cross-Section Type 3 includes bike lanes with a width of 1.5 m, to accommodate the anticipated large volume of cyclists on Centre Road. As noted on **Figure 28**, LINK 18, LINK 1 and LINK 11 all currently consist of approximately 20 m ROW. The

following Table summarizes the approximate existing ROW, and the anticipated widening associated with the preferred Rural Cross-Section.

Table 2: Haul Route 2 Rural Cross-Section Summary

LINK	Approximate Existing ROW	Proposed Rural Cross-Section		Approximate Widening Outside Existing ROW
		Type	Requirement	
LINK 18	20.0 m	1	22.0 m	2.0 m
LINK 1	20.0 m	3	26.0 m	6.0 m
LINK 11	20.0 m	1	22.0 m	2.0 m

Alternative Route 3 consists of LINK 5 (Milborough Line), LINK 13 (Campbellville Road), LINK 26 (Twiss Road), and LINK 27 (Reid Sideroad) and iTRANS is proposing Type 3 Rural Cross Section (for LINK 5 and LINK 13) and Type 1 Rural Cross Section (for LINK 26 and LINK 27) (**Figure 28**). As noted on **Figure 28**, LINK 5 currently consists of approximately 18.5 to 23.0 m ROW, LINK 13 and LINK 26 currently consist of approximately 20.0 m ROW, and LINK 27 currently consists of approximately 25.0 m ROW. The following Table summarizes the approximate existing ROW, and the anticipated widening associated with the preferred Rural Cross-Section.

Table 3: Haul Route 3 Rural Cross-Section Summary

LINK	Approximate Existing ROW	Proposed Rural Cross-Section		Approximate Widening Outside Existing ROW
		Type	Requirement	
LINK 5	18.5 m to 23.0 m	3	26.0 m	3.0 m to 7.5 m
LINK 13	20.0 m	3	26.0 m	6.0 m
LINK 26	20.0 m	1	22.0 m	2.0 m
LINK 27	25.0 m	1	22.0 m	0

Alternative Route 4 is a combination of Alternative Routes 1 and 3, consisting of LINK 17, LINK 18, LINK 5, LINK 13, LINK 26 and LINK 27. The Rural Cross Section Types proposed are shown on **Figure 29**, and consist of Rural Cross Section Types 1, 2 and 3. As noted on Figure 13, LINK 17, LINK 18, LINK 13 and LINK 26 currently consist of approximately 20 m ROW. LINK 5 currently consists of existing ROW of approximately 18.5 m to 23.0 m, and LINK 27 currently consists of existing ROW of approximately 25.0 m. The following Table summarizes the approximate existing ROW, and the anticipated widening associated with the preferred Rural Cross-Section.

Table 4: Haul Route 4 Rural Cross-Section Summary

LINK	Approximate Existing ROW	Proposed Cross-Section		Approximate Widening Outside Existing ROW
		Type	Requirement	
LINK 17	20.0 m	2	22.5 m	2.5 m
LINK 18	20.0 m	1	22.0 m	2.0 m
LINK 5	18.5 m to 23.0 m	3	26.0 m	3.0 m to 7.5 m
LINK 13	20.0 m	3	26.0 m	6.0 m
LINK 26	20.0 m	1	22.0 m	2.0 m
LINK 27	25.0 m	1	22.0 m	0

Alternative Route 5 is a combination of Alternative Routes 2 and 3, consisting of LINK 18, LINK 1, LINK 11, LINK 5, LINK 13, LINK 26 and LINK 27. The Rural Cross Section Types proposed are shown on **Figure 30**, and consist of Rural Cross Section Types 1, 2 and 3. As noted on **Figure 30**, LINK 18, LINK 1, LINK 11, LINK 13, and LINK 26 currently consist of approximately 20 m ROW. LINK 5 currently consists of existing ROW of between 18.5 m and 23.0 m, and LINK 27 currently consists of existing ROW of approximately 25.0 m. The following Table summarizes the approximate existing ROW, and the anticipated widening associated with the preferred Rural Cross-Section.

Table 5: Haul Route 5 Rural Cross-Section Summary

LINK	Approximate Existing ROW	Proposed Rural Cross-Section		Approximate Widening Outside Existing ROW
		Type	Requirement	
LINK 18	20.0 m	1	22.0 m	2.0 m
LINK 1	20.0 m	2	22.5 m	2.5 m
LINK 11	20.0 m	1	22.0 m	2.0 m
LINK 5	18.5 m to 23.0 m	3	26.0 m	3.0 m to 7.5 m
LINK 13	20.0 m	3	26.0 m	6.0 m
LINK 26	20.0 m	1	22.0 m	2.0 m
LINK 27	25.0 m	1	22.0 m	0

5.2.2 Methodology

The methodology involved in analyzing the potential for removal of existing land uses due to road alterations involves defining land use types, assigning a level of relative importance to each defined land use type, and measuring the area of each land use type anticipated to be removed outside of the existing ROW due to grading related to road alterations.