



Corporate Report

DEPARTMENT/ DIVISION	Transportation & Works Engineering	REPORT NO.	2008.172
DATE PREPARED	September 12, 2008	FILE NO.	0031-083
MEETING DATE	November 3, 2008		
SUBJECT	The Active Transportation Plan		

RECOMMENDATION

With respect to Report No. 2008.172 (Engineering & Parks) we recommend that City Council adopt the Active Transportation Commuter Route and Recreational Trail plan and standards as presented in this report;

AND THAT an expansion of the 2009 budget be pre-committed for Parks and Engineering Divisions for an Active Transportation Coordinator;

AND THAT the Active Transportation Coordinator work with the Active Transportation Advisory Committee to continue with its work to assist Administration in completing the development of the Active Transportation Plan.

EXECUTIVE SUMMARY

Active Transportation includes human-powered forms of travel such as walking, cycling, using a wheelchair, in-line skating, skate boarding, canoeing and kayaking.

Administration and the Active Transportation Advisory Committee (ATAC) have completed the first phase of the Active Transportation Plan (ATP) which provides an on road bicycle commuter route plan and a recreational trail plan for the City. The standards of design and construction for these facilities are included in the plan and will be incorporated in future Transportation & Works Roads reconstruction projects and Community Services Trail expansion projects.

DISCUSSION

City Administration, with feedback from the Active Transportation Advisory Committee (ATAC), has been developing an Active Transportation Plan (ATP) which includes the development of a safe and convenient on and off-road non-motorized transportation network that integrates existing and planned roads, sidewalks and proposed bicycle commuter routes along with recreational trail development. This plan will help inform the community of the long term vision for Active Transportation.

The ATAC is comprised of representatives from community groups including school boards, the University, College, LRCA, TBDHU, Thunder Bay Take Heart Coalition, Thunder Bay Recreational Trails Association, University and College Student Unions and the Municipal Accessibility Advisory Committee. Administration is represented by the Parks, Engineering, Planning, Transit, Environment and Roads Divisions as well as Police Services. Also members of the cycling community are represented in the committee.

In carrying out its mandate, the committee has achieved the following objectives:

- Developed a vision, goals and a series of first principles.
- Developed facility design guidelines.
- Developed a draft commuter route plan and reviewed its integration with the recreational trail network.

Vision, Goals and First Principles

The vision was the starting point for the ATAC. "Through leadership, planning and community partnerships, Thunder Bay is a healthy, accessible, environmentally sustainable community, where active transportation is a key component of a safe, innovative, integrated transportation system that links where we all live, work and play."

The vision, goals and first principles were used as checks and balances for reviewing alternative commuter and trail routes and design standards for new facilities. This strategy will be used by the committee as it continues to deal with walk-ability, accessibility, community partnerships and City policy issues related to AT.

Facility Design Guidelines

A study sponsored by the U.S. Department of Transportation recommends that planning for on-street cycling facilities be done with consideration for two distinct groups of cyclists.

Group “A” – Advanced cyclists are experienced riders who can operate under most traffic conditions. These tend to be the current users of arterial and collector streets. They are best served by: direct access to destinations via the street network; the ability to operate at their maximum speed with minimum delays; and sufficient space on the road to reduce the need for either the cyclist or drivers to change position when passing.

Group “B” – Basic cyclists are casual or new adult or teenaged rider who are less confident of their ability in traffic without special provisions for bicycles. Their preferences are: comfortable access to destinations, preferably by a direct route using low volume streets or designated bicycle facilities; and a well defined separation of bicycles on arterial and collector streets (bike lanes or shoulders) or separate bicycle paths.

The Committee reviewed numerous standards and design guidelines for commuter routes and recreational trails.

Information signs provide guidance to cyclists and indicate which streets form part of a commuter route. Signs can also indicate reserved bicycle lanes for exclusive use by bicycles or shared facilities for vehicles and bicycles. Symbols and word pavement markings can supplement standard signs or can be used by themselves; for example, bicycle lanes are identified by a white elongated diamond symbol pavement marking indicating reserved lanes. These signs and symbols are found in the Transportation Association of Canada (TAC) manual and are recognized around North America. Appendix ‘A’ shows the signs that will be used in Thunder Bay’s Commuter Route network.

There are two standards used in most jurisdictions for on road bicycle routes. The ATAC reviewed and debated the pros and cons for dedicated bicycle lanes (BL) and wide curb lanes (WCL). Appendix ‘B’ shows the existing City of Thunder Bay Standard WCL and Appendix ‘C’ shows the two standards side by side. The difference between the two amounts to line painting and dedicating approximately 1.5 m of the outside lane for bicycle use.

The literature is divided among those supporting dedicated bicycle lanes or wide curb lanes. Municipalities also vary in their use of the two standards. There are advantages to both standards which are listed below. There is also support in research for the development of a plan which incorporates a mix of BL and WCL based on whichever facility is most appropriate in a particular location.

Wide Curb Lane Advantages

- Accommodate shared bicycle/motor vehicle use without reducing the roadway capacity for vehicle traffic.
- Minimize both the real and perceived operating conflicts between bicycle and motor vehicles.

- Assists turning vehicles in entering the roadway without encroaching into another lane.
- Accommodates buses and other wider vehicles.
- Requires least amount of additional maintenance.
- More appropriate for bicycle riders who are not easily intimidated by high traffic volumes and speeds (Group A).
- More appropriate with on street parking.
- More appropriate for turning movements at intersections.

Dedicated Bicycle Lane Advantage

- Have a strong channelizing effect on motor vehicles and bicycles.
- Increase cyclists confidence that motorists will not stray into their path of travel if they remain in the bike lane.
- Passing motorists are less apt to swerve towards opposing traffic in making certain they will not hit cyclists.
- More appropriate for bicycle riders who are less confident in riding in traffic in urban areas (Group B).
- Attracts riders on streets with traffic volumes great than 10,000 vpd or speeds greater than 50 km/hr.

A third option is an off road trail/pedestrian path as shown in Appendix D, adjacent to the roadway where sufficient right-of-way is available to permit this standard. There are potential segments in our AT network where we can apply this standard such as the Harbour Expressway, Balmoral Street and Golf Links Road/Junot Avenue.

City administration is recommending we continue to use the WCL standard presently in the Thunder Bay Engineering Standards for all new construction along active transportation commuter routes. This standard incorporates a 4.5 meter wide curb lane with catch basins installed back of curb. The appropriate bicycle route market sign and share the road sign will be posted along these routes as they are implemented. We have also examined the potential to repaint existing lane lines to create WCL ensuring this does not impact vehicular movement.

City administration is also recommending that we select appropriate segments of the commuter route network and apply the dedicated bicycle lane standards as a pilot study and report back to Council as part of the ATP phase II report.

Recreational Trails

The City's standard for the design and construction of asphalt recreation trails has evolved over time. While most of the older trails in the city were built 2.5 metres (8 feet) wide, the Parks Division now has moved to a 3 metre (10 feet) wide asphalt trail with .3 metre (1 foot) gravel shoulders to better accommodate the increasing numbers of users. This is equivalent to having a standard sidewalk width for users in each direction.

In addition, the trail corridor is generally cleared of brush and small trees to a width of 10 metres (33 feet) to promote user safety and provide good sight lines around corners.

As older trails require reconstruction, the Parks Division will be increasing their width to the new 3 metre standard whenever possible.

In general, it has been the practice of the Parks Division not to light trails in the past except where the trails ran through developed parks or were beside roads. Lighting was installed on the trails around Boulevard Lake at the direction of City Council. Trails are becoming increasingly important as commuter linkages and there have been higher levels of use in the winter since Council approved operating funds for plowing. This has prompted the Parks Division to begin looking at options for providing additional trail lighting. The cost of installing lights along a trail can be high when no suitable power source is located nearby. Administration is looking into more cost effective and sustainable forms of lighting such as solar or solar / wind powered for future installations.

Commuter and Recreational Trail Network Plan

City administration presented a draft commuter route and recreational trail plan to public meetings and City Council in February and June 2007. Since the establishment of the ATAC, this plan has seen several revisions with a strategy to test the routes on paper and in the field. The strategy consisted of data collection in the field (measurements, parking, number of lanes), several brain storming sessions where the committee suggested improvements, two public meetings, surveys, young student surveys and finally test rides by volunteers.

Information from public consultations supports the improvement of both the bike-ability and walk-ability of Thunder Bay and the development and implementation of the ATP. Feedback has been incorporated into this report and the proposed bike commuter routes, and will be used to guide future work plans around awareness campaigns, infrastructure, policy and partnerships.

There were four opportunities for the public to provide input:

- A Commuter Route Display outlining route options was set up to collect feedback at Intercity Shopping Centre during the Youthapaloosa Event - April 2008.

- A “Youth Active Transportation Survey” was completed by 136 young people (age 10 – 18) at the Youthapaloosa Event in April 2008.
- Two Active Transportation Open Houses took place in June 2008, one in the North Ward (55+ Centre) and one in the South Ward (Westfort Community Centre). An “Adult Active Transportation Survey” was completed by 117 adults (73.5% of which were age 45 and older).
- 17 individuals were recruited to conduct an On-Street Route Assessment by cycling the proposed bike commuter routes in August 2008, in order to identify anything that would make the route unsuitable.

Administration is presenting Phase I of the commuter route and trail plan (Appendix E) supported by the ATAC.

Implementing Phase I Priorities

Commuter Routes

A major north/south commuting arterial in the City is the Waterloo Street/Balmoral Street/John Street corridor. A second similar arterial is the Junot Street/Golf Links Road/Edward Street/ corridor. These two corridors provide an opportunity for off road commuter routes connecting the north and south parts of the City. Administration is preparing a pre-design report for the Junot Street/Golf Links Road corridor and the AT facilities will be included in the design concept. The Balmoral Street corridor improvements will follow with similar AT facilities.

The Transportation and Works Department will integrate the design and construction of the proposed 110 kilometers of commuter routes as shown in this plan into the Transportation and Works Asset Management Plan and fund the projects as a component of capital budget road reconstruction. New segments of the commuter network will be added as road projects are budgeted and constructed.

Several projects with AT facilities will be included for Council consideration in the 2009 Capital budget for Roads and Parks Divisions. Another phase of Walsh Street from Sprague Street to Waterloo Street will be completed in 2009 as well as John Street between Algoma Street and Water Street. Chapples Drive loop road will be resurfaced and we are examining the potential to widen the Balmoral Street Bridge as part of rehabilitating the structure in 2009.

Administration will also implement additional commuter routes in 2009 by designating routes in existing roads with paved shoulders or the WCL or by modifying lane widths to provide a WCL. Some examples of these routes include Oliver Road, John Street, Walsh Street and Broadway Avenue.

Recreational Trails

Over 2 kilometres of new paved recreation trail was completed in 2008 along the Neebing River from Wolverine Crescent in the Parkdale subdivision to the intersection of James Street and Parkway Drive. The trail has proven to be very successful and provides not only recreational but also commuter access for residents of Parkdale and Northwood.

Future trail developments to be submitted in the Parks Division's 2009 Capital Budget package will also provide recreation and commuter benefits to city residents. The Parks Division is investigating the cost of a bridge over the Neebing River to further enhance the recreational and commuter benefits of the new riverside trail.

In addition, trail connections in George Burke Park (along the west side of River Terrace) will make up the first stages of a proposed commuter route between John Street and Lakehead University / Thunder Bay Regional Hospital. A subsequent phase involves the installation of a bridge over the McIntyre River. Structural assessment and cost analysis will be undertaken on the bridge which formerly crossed the Neebing River at Syndicate Avenue to determine whether it can be re-used for this project.

Other trail development priorities for the Parks Division include the trails around Boulevard Lake. Of particular interest is the development of an alternative route around the dam because of the high costs associated with undertaking the proposed widening of the existing surface.

Early this year, the Parks Division commissioned an update of a consultant's study of options to widen the Boulevard Lake Dam which was completed in 2000. Since that time the costs have risen to between \$ 1.2 and 1.5 Million to upgrade the 100 metres of dam walkway from an original estimate of \$ 750,000. In contrast, a separate pedestrian bridge alongside Cumberland Street is estimated to be \$350 – 550 Thousand.

The benefits of constructing a new bridge and additional recreational trails around the dam from Adelaide Street to Court Street include lower overall costs, improved user safety, a new 1.8 kilometer loop of trails, less conflict between users and routine work on the dam (raising or lowering stop logs).

Based on the current budget allocation for trail development of \$250,000 per year, the alternate route around the dam will need to be a multi year program.

It has become evident through this current planning activity that development of additional off-road trails to better link the existing trail system to the Balmoral / Intercity area is a high priority for commuting cyclists on both sides of the city.

The Parks Division has been working with the organizers of the 2010 World Junior Baseball Championships on plans for better access to and linkages between the principal venues for the event (Port Arthur Stadium and Baseball Central to promote walking and cycling at the Games. Construction of paved off-road trails along Balmoral Street between Beverly St and the Harbour Expressway and along the Harbour Expressway between the McIntyre River and Memorial Avenue would provide a significant legacy project for the Games and, at the same time, meet the needs of commuting cyclists in the city.

It is estimated that the cost to construct the 3.5 kilometres of trail is approximately \$750,000. While these trails have both recreation and Active Transportation benefits, the amount has not been carried forward at this time in either the Parks or Engineering Divisions' Capital forecasts for 2009 / 2010.

EarthWise Thunder Bay Environmental Action Plan

Active transportation plays an integral role in healthy communities. The EarthWise Thunder Bay Community Environmental Action Plan, which was developed with extensive input from all community sectors has a section devoted to active transportation that was created in partnership with the Active Transportation Advisory Committee and is supported by this Corporate Report.

Our Active Transportation plan supports an integrated approach to community planning, recognizing the impact that personal use of single-occupancy vehicles has on our environment, and the significant and constant inputs that are required to support automobile travel. Through the planning that was involved in the EarthWise process and the Active Transportation Advisory Committee, we are beginning to look to the future and invest in other modes of travel that can help to reduce our dependency on fossil fuels, promote personal health, and promote more sense of community by getting people out, walking around and traveling the City through human-powered means.

Active Transportation Coordinator

In order to move into the next phase of the Active Transportation Plan and to quickly achieve the objectives stated in the plan, additional administrative resources are required. Currently, there is no dedicated resource coordinating the various efforts around Active Transportation planning.

A coordinator position can provide support to the two Divisions responsible for the ATP. The coordinator will be a resource to the ATAC and his/her duties will include assisting with the planning, design, implementation and evaluation of commuter routes and trails; communications with outside agencies and creation of partnerships with school boards, TBDHU and WSIB to name a few as well as developing AT policies which affect other City Divisions.

FINANCIAL IMPLICATIONS

Transportation and Works will integrate costs of AT infrastructure into the appropriate year and capital budget section. To begin implementation of the ATP in 2009 we will require funds for signage and lane line modification. An amount of \$50,000 will be included in the 2009 Capital Budget under Pavement Rehabilitation.

The Parks Division capital budget was increased starting in 2007 by \$250,000.00 annually for trail improvements based on a list of priority trail improvements presented previously to City Council.

It is anticipated that the AT Coordinator will be required for two years on a contract basis at an annual cost of \$70,000. Administration will examine grants to fund this position however the City must be prepared to find the resources internally to pay for this vital activity to continue.

Development of new trails along Balmoral and/or the Harbour Expressway would require new funding that is not included in current Departmental allocations or requests. There may be opportunities for outside funding through programs such as FCM's Green Municipal Fund.

Construction of new trails will require a subsequent increase, albeit small, in the annual budget for trail maintenance activities such as sweeping, brushing and plowing. Capital budgets for trail resurfacing and patching will also have to increase over time as new trails come on line. The costs associated with trail renewal are not as high as construction of new trails.

CONCLUSION

It is concluded that City Council should adopt the Active Transportation Commuter Route and Recreational Trail plan and standards as presented in this report.

It is further concluded that an Active Transportation Coordinator is required to facilitate the completion and implementation of the ATP.

BACKGROUND

Council directed administration to develop an Active Transportation Plan as outlined in Report 2007.115 (Engineering). The plan will enable more effective resource allocation and utilization by the Engineering and Parks Division. The plan will also provide the community with a long term vision for human powered transportation as part of the City's transportation network.

REFERENCE MATERIAL ATTACHED

Attachment 'A' – Commuter Route Signs

Attachment 'B' – Commuter Route Wide Curb Lane

Attachment 'C' – Wide Curb Lane and Dedicated Bike Lane

Attachment 'D' – Off Road Bicycle/Pedestrian Path

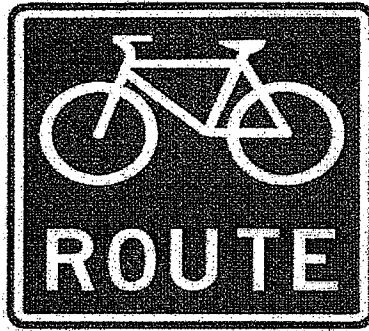
Attachment 'E' – Commuter Route and Recreational Trail Plan **(Distributed Separately)**

PREPARED BY: Pat Mauro, M.A. Sc. P.Eng., Manager - Engineering

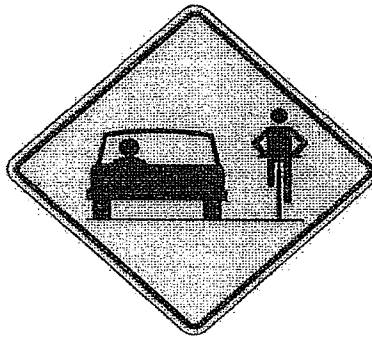
This report signed and verified by John Husiak, Acting General Manager - Transportation & Works on October 22, 2008

ATTACHMENT A

Commuter Route Signs



Bicycle Route Marker Sign



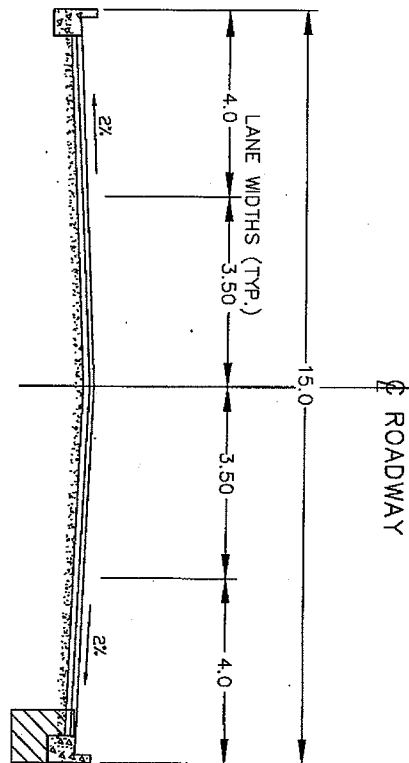
Share The Road Sign



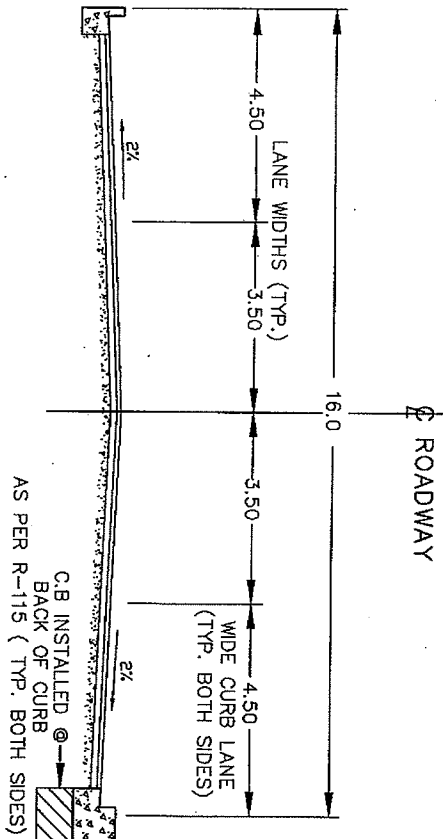
Share The Road Sign

ATTACHMENT B

Commuter Route Wide Curb Lane



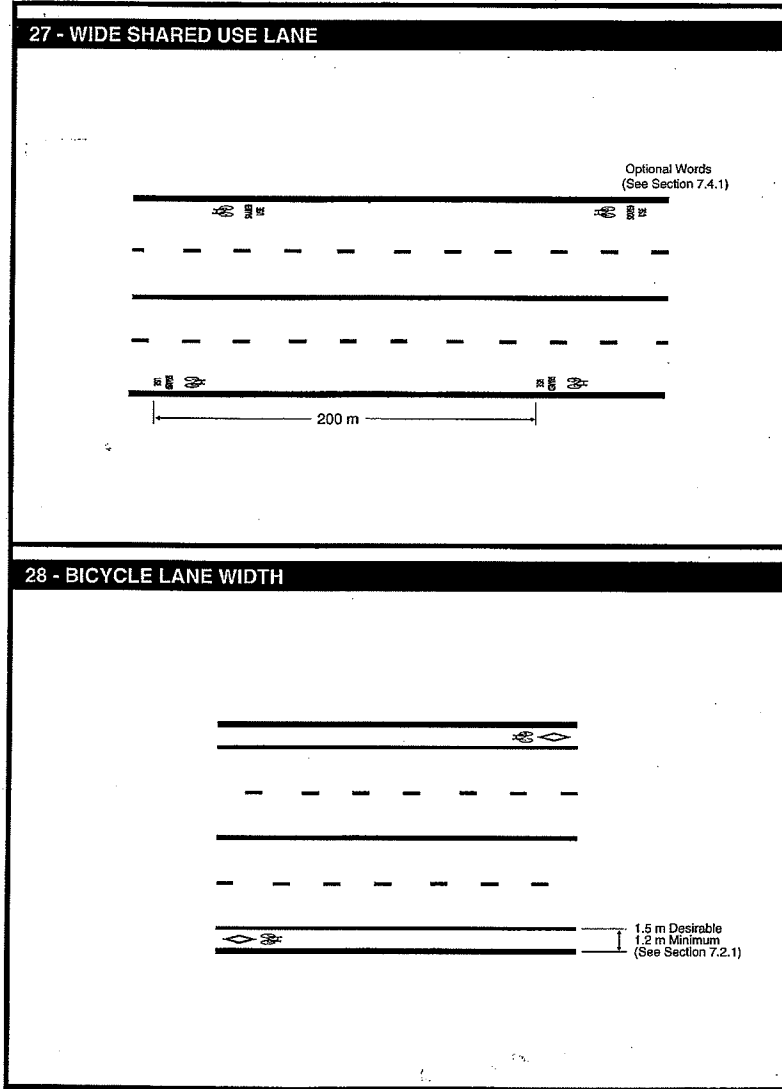
TYPICAL SECTION THROUGH ARTERIAL ROAD



TYPICAL SECTION THROUGH ARTERIAL ROAD
WITH WIDE CURB LANES

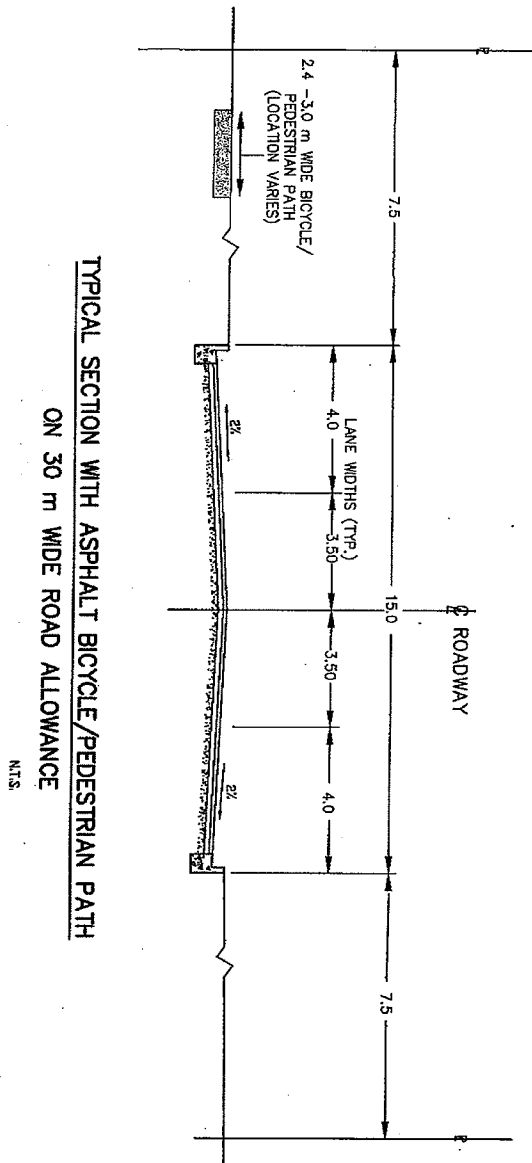
ATTACHMENT C

Wide Curb Lane and Dedicated Bike Lane



ATTACHMENT D

Off Road Bicycle / Pedestrian Path



Report Complete