

BURLINGTON



BIKE PATH



IMPROVEMENT FEASIBILITY STUDY

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Prepared by:



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I. PURPOSE AND NEED OF THE PROJECT

A. INTRODUCTION

The Waterfront Bike Path is a 6.5-mile transportation and recreation corridor that transects Burlington from its northern terminus at the Winooski River to its southern terminus at Oakledge Park along a former railroad bed. It traverses Burlington on the Lake Champlain shoreline, offering spectacular views of the lake and the Adirondack Mountains to the west. The bikepath links six major waterfront parks, as well as Burlington High School, services at the Ethan Allen Shopping Center, the Central Downtown Business District and UVM. The bikepath is also immediately adjacent to the Union Station Commuter Rail Station and the soon to be built Multi Modal Station. Finally, the bikepath is identified as a major corridor in Chittenden County as mentioned in the Burlington Alternative Transportation Path Master Plan and the Lake Champlain Bikeways program.

The Waterfront bikepath was built in 1985 and 1986. It is 15 years old and with an estimated 150,000 users annually, starting to show signs of deterioration. Because of the quantity and various types of uses, conflicts occur. These conflicts occur most during peak use times, which are early evenings on weekdays and afternoons on weekends. There are four major users: bicyclists, walkers, joggers and in-line skaters.

B. GOALS AND OBJECTIVES

The Waterfront bikepath is one of the first of its kind in Vermont. It draws many visitors to Burlington annually and is part of a larger bikepath network that draws many tourists to the region. Residents of Burlington and many surrounding towns use the Waterfront bikepath on a regular basis for transportation, recreation, and fitness. A significant investment has been made in the Waterfront path in the form of both capital costs and maintenance over the last 15 years. The city is committed to upgrading and rehabilitating the path to protect this important asset.

The overall goal of the project is to upgrade the bike path to current standards where possible and make the bike path safer and more user friendly. The path does not currently meet user demand and should be made wider, easier to navigate, and safer wherever possible. Generally the path is too narrow to accommodate bi-directional traffic, has inadequate shoulder space, poor sight distance and aging surface treatments. AASHTO's "Guide for the development of bicycle facilities" and Vermont's "Pedestrian and Bicycle Facility Planning Design Manual" recommend that shared use paths be 3m (10 ft) wide with minimum 2' shoulders on each side with additional lane width at areas of possible conflict such as sharp corners or bridges.

Additional impetus exists to renovate and redesign the bike path to accommodate the projected increase in use (i.e., the Winooski River Bridge

connection to Colchester and other regional links being completed). Recent test programs have the following encouraging results: 1) The Double Ferry Weekend – Involving bike ferry service at both the Burlington to Colchester crossing and the Colchester to South Hero crossing, this one weekend pilot had 2,600 users; 2) Between late May 2001 and July 17, 2001 the Burlington – Colchester bike ferry had 4,160 boardings. These examples speak to the potential for a large increase in users if additional links are permanently constructed.

Finally, the city wishes to preserve existing green space along the corridor, enhance scenic pull-off areas, and provide safe and easy access from neighborhoods along the path.

This study will determine areas where the path is deficient in width, sight distance, turning radius, etc., and investigate whether or not these areas can be upgraded and how. The project report will list these areas and their proposed upgrades with conceptual designs and cost estimates.

C. EXISTING CONDITIONS AND PROPOSED IMPROVEMENTS

The character of the bike path contains distinct north and south sections (the centerpoint being Waterfront Park) each of which have some identifiable characteristics.

For the purposes of this report, the bike path was divided into a number of sections of similar cross section. The areas and their corresponding stationing are as follows:

1. Oakledge Park to Harrison Avenue	Station 0+00 to 15+20
2. Harrison Avenue to Blodgett Bldg.	Station 15+20 to 31+00
3. Blodgett Bldg. to Barge Canal Beach	Station 31+00 to 47+50
4. Barge Canal Beach to Treatment Plant	Station 47+50 to 70+00
5. Treatment Plant to Perkins Pier	Station 70+00 to 81+00
6. Perkins Pier to King Street	Station 81+00 to 85+00
7. King Street to College Street	Station 85+00 to 94+00
8. College Street to Lake Street	Station 94+00 to 111+75
9. Lake Street thru Urban Reserve	Station 111+75 to 145+00
10. Urban Reserve to North Beach	Station 145+00 to 169+00
11. North Beach to Little Eagle Bay	Station 169+00 to 208+00
12. Little Eagle Bay to Shore Road	Station 208+00 to 238+00
13. Shore Road to Staniford Road	Station 238+00 to 253+00
14. Staniford Road to Starr Farm Road	Station 253+00 to 277+00
15. Starr Farm Road to North Avenue Ext.	Station 277+00 to 330+00
16. North Ave Extension to Winooski River	Station 330+00 to 345+00

A map showing these sections is included in Appendix A.

Design Guidelines

The design guidelines discussed here explain many of the recommendations and repairs called for as a result of the existing conditions survey.

A. Signing and Striping

A uniform signing and striping program is recommended to maintain continuity along the length of the path. There are currently several different types of signs along this and other paths throughout the city. A uniform program would help aid local users and tourists alike. This report recommends a more comprehensive inventory of signs and striping throughout the city. Once this inventory is taken, a particular design should be chosen and implemented.

B. Resurfacing

In general, where existing asphalt patches mask an underlying problem with drainage or erosion, pavement rehabilitation is recommended. These areas are outlined in each section. Shoulders (12" to 18" wide) should be either installed or rehabilitated where appropriate (See Typical Cross Section in Appendix B – Design Guidelines). Any former sign or light pole bases within the limits of the path and shoulders should be removed and filled in.

The condition of the pavement has been evaluated on a section by section basis. Recommendations for surface treatment range from no treatment to full reconstruction. Wherever widening or pavement reconditioning is proposed, shoulders 12"-18" wide, consisting of sur-pac, shall be incorporated where feasible. Any areas to be widened should be repaved to ensure a consistent finish grade. The following table describes these treatments in more detail.

Table 1. Surface Treatment Definitions and Associated Costs.

Surface Treatment	Method of Repair	Cost for Repair
No Treatment Recommended	No surface treatment at this time. Monitor sections annually for signs of deterioration.	\$0
Pavement Overlay	Pave over existing asphalt surface	\$1.50/ft ²
Grind and Pave	Grind surface to remove pavement surface, regrade path for proper drainage and pave with 4" asphalt.	\$2.50/ft ²
Surface reconstruction	Excavate pavement and subbase. Replace with new subbase materials, grade for proper drainage and pave with 4" asphalt.	\$4.00/ft ²
Shoulder Reconditioning	Remove grass/vegetation. Install sur-pac.	\$1.00/ft ²

C. Fencing

Any fencing proposed for the purposes of physical separation between users and safety hazards should be a minimum of 42" high and present an effective barrier. There are several different types of physical separation between the path and adjacent safety hazards (roadways, railroad tracks, and steep slopes). It is important that any physical separation employed fit in with the surroundings and be aesthetically pleasing to users and neighbors alike. The three types of fencing are used along the path and are recommended for repair or installation when noted in the existing conditions survey. Recommendations for fence types are based on existing fencing along the path and include wooden split rail, steel or aluminum picket, and chain link where needed to keep vegetation from the railroad right-of-way from encumbering the path. See Appendix B for fence detail sheet.

D. Slope Stability

Eroded and unstable slopes should be stabilized with vegetation, rip rap or slope work wherever necessary. Slopes should not exceed 3:1. If they do, fencing is proposed. Specific issues are addressed individually in the existing conditions survey below.

E. Maintenance

Considerable maintenance is performed each year on this path. Unfortunately, the funding does not exist to budget for preventative maintenance such as paving, striping and other important items. The

following list includes some preventative measures that should be incorporated into annual maintenance schedules as budgeting allows.

Cutting back of aggressive vegetation should occur as often as needed during the warm weather months to maintain safe sight distance and maximize effective width of the path.

Annual pavement condition survey to determine which areas need overlay, grind and pave, or surface reconstruction treatments. This data could be kept in a pavement condition database and reviewed each budget year to allow for paving dollars to be reflected in each maintenance budget.

Annual striping to ensure safety at intersections, rail crossings, and sharp curves.

Annual cleaning of culverts which drain the path and run underneath it to allow for proper drainage and protect pavement.

Existing Conditions Survey and Recommendations

South Sections

1. Oakledge Park to Harrison Avenue (Station 0+00 to 15+20)

This is the southern most section of the path. Station 0+00 is located at the foot of Flynn Avenue. The path, however, continues south through Oakledge Park into South Burlington.

The path is eight feet wide through this section. There is room to expand to ten feet on either side. Informal shoulders exist here which are probably used by runners. The pavement conditions are generally good with a few utility patches in need of repair. Sight distance is good here with the exception of the northern entrance to the bike path bridge crossing Englesby Brook.



Figure 1: It is difficult to tell where path begins and driveway ends. Further delineate this difference to improve safety.

As the path exits the wooded area just north of the bridge, it begins to approach the Harrison Avenue intersection. Generally, the pavement in this area is in need of repair. The shoulders are nonexistent and improper

drainage has caused erosion and carryover of the gravel from an adjacent property making the area dangerous for users. A private driveway runs

parallel and adjacent to the path. Figure 1 (above) shows this driveway is gravel and the interface between the two is indistinguishable.

At the intersection, heading north, there is insufficient signage to warn the users of the path that they are entering an on-road area with traffic. Conversely, traveling south on the path, there is not sufficient signage to direct users across the street at the proper place. In addition, there is a blind intersection for path users heading north conflicting with vehicles heading east exiting the Harbor Watch condos.

An outdated catch basin grate at the intersection presents a hazard to bicyclists and in-line skaters.

Proposed improvements to this section include the following:

Better path delineation is needed through Oakledge Park. This can be accomplished through the use of signage directing path users through the park or with colored or textured pavement, or striping.

Widening to ten feet, pavement overlay, repair to utility/culvert crossings on section south of bridge. Total distance is approximately 1100'. (Station 0+00 to 11+00).

North of the bridge (Station 11+00 to 15+20), 420' of pavement is in need of more extensive repair/rehabilitation. There is room to expand to 10 feet and establish proper shoulders. When shoulders are established, curbing should be added from station 13+20 to 15+20 (200') to properly delineate between the bike path right-of-way and adjacent driveways.

As path is rebuilt through this section, drainage should be directed to the catch basin at intersection of Harrison Avenue and the bike path. This catch basin should be upgraded and fitted with a bike friendly grate.

Signage or pavement markings should be added from all approaches warning users of the change from dedicated path to share the road and vice versa and of eastbound traffic exiting the Harbor Watch Condominium Development.

2. Harrison Avenue to Blodgett Bldg. (Station 15+20 to 31+00)

This section consists of both on and off road sections. The on-road section runs from station 15+20 to station 22+50. This section is a five foot wide bicycle lane located on the North side of the street. Bi-directional traffic is not possible in this narrow lane. Users tend to ride up the middle of the road as it is not a busy street. However, this is an undesirable situation as it raises the number of possible conflict points. Signage and striping is

lacking in areas. Catch basins need replacement. The pavement is in good condition through this section.

Past station 22+50, the path returns to a dedicated path. It travels parallel to the railroad. Through this section, the path is eight feet wide. There is no shoulder here and no room to expand. The pavement is cracking in many places. The 90 degree turn at Station 22+50 presents a hazard to anyone who falls near the guardrail (Figure 2). Sight distance is sufficient through Station 31+00. Growth of vegetation through fence on east side reduces the effective width of the path in some places.



Figure 2: Guardrail where Path meets Harrison Avenue

Proposed improvements to this section include the following:

New striping and installation of bike friendly catch basin grates along Harrison Avenue.(Station 15+20 to 22+50. A new configuration of this street (perhaps by widening the street to the north) would allow for one wider lane or uni-directional lanes on each side of the street

North of station 22+50, pavement is in need of repair. Grind and pave from station 22+50 to 31+00. Cut back vegetation more aggressively to increase effective width of the path here, as there appears to be no room for expansion without taking of private land.

Remove guardrail at 22 + 50 and install proper fencing. Wooden split rail is employed just north of this point and should be used here as well.

3. Blodgett Bldg. to Barge Canal Beach (Station 31+00 to 47+50)

This section consists of the area north of the Blodgett building. Generally, the path is eight feet wide. Sight distance is limited at times due to overgrowth of vegetation on the fence separating the path from the railroad. This section begins at the bridge at Blodgett (Station 31+00 and ends just past Blodgett Beach (Station 47+50). The Blodgett section is eight feet wide with one shoulder on the west side. This shoulder is sunken in and in need of rehabilitation. The pavement is in generally good condition

however, an overlay will be needed soon. Of most concern in this section is the Blodgett "S-curve". Figures 3 and 4 (below) show this area from the north and south respectively.



Figures 3 and 4 (above): Blodgett Curve looking north and south

The path takes a dogleg turn just north of the Blodgett building. Sight distance is very poor. The radius of the turn is too tight making it virtually impossible to navigate while staying on the correct side of the path. In addition, an abandoned rail spur crosses the curve at the most critical point.

Proposed improvements to this section include the following:

Pavement overlay (1650').

Vegetation should be aggressively cut back on the Blodgett building section (Station 31+00 to 35+00). There is no room for expansion along the length of the Blodgett building.

At the location of the S-curve (Station 35+00), the radius should be increased. This may be accomplished by moving the railroad fence back to flatten the curve. We recommend that the Department of Parks and Recreation request, from the railroad, that the fence be moved closer to the rail and the railroad spur to the Blodgett Building be removed. Blodgett Ovens would have to agree to give up the use of the spur as well. In addition to the increase in width

around this curve, centerline striping and pavement markings warning should be added to warn users of the sharp curve. See Appendix C for a conceptual sketch of the proposed improvements.

North of the Blodgett building (Station 35+00 to 47+50), the path is eight feet wide with one shoulder on the west side. The shoulder is in need of rehabilitation. The path can be widened here and a new shoulder established. Some grading will be needed to build up the west shoulder and establish drainage through this section. Trimming of vegetation is important here for sight distance and maintenance of effective path width.

4. Barge Canal Beach to Wastewater Treatment Plant (Station 47+50 to 70+00)

The Barge Canal Beach area stretches from Station 47+50 to Station 58+00. This section ranges from eight to eleven feet wide with no shoulders. A safety rail is located on the western side of the path because the path is elevated on a sea wall for the length of the beach. By moving the safety rail to an outside mount on the seawall, 18-24 inches of pavement can be reclaimed for path width.

Figure 5 below shows the condition of this section of the path.

Figure 5: Path erosion near Barge Canal Beach



There appear to be erosion and other drainage related problems that are causing a number of sinkholes along this section. The pavement is uneven through this section. Surface construction is recommended. Sight distance is good here as this section is very straight and flat.



Figure 6: Poor visibility north of Barge Canal Bridge

At Station 58+00 there is a bridge over the mouth of Barge Canal. North of this bridge (Station 58+00 to 61+00) the bike path is eight feet wide with no shoulders. Sight distance is very poor as the path turns west. This problem is a combination of a fairly sharp corner and an overgrowth of vegetation. (see Figure 6). Resurfacing is needed through this area.

Beyond Station 61+00 the path opens up at Roundhouse Park. North of this small turnaround area the path remains eight feet wide, but with shoulders and room for expansion. The exception to this is from station 68+00 to 70+00. This area is eight feet wide with no shoulders and no room for expansion due to lighting on either side of the path. Pavement condition and sight distance are both good from Station 61+00 to Station 70+00 where this section terminates at the Main Wastewater Treatment Facility.

Proposed improvements to this section include:

The southern portion of this section (Station 47+50 to 58+00) should be rebuilt with new gravel subbase and asphalt. Drainage issues should be investigated prior to repair to alleviate similar problem in the future. This may require some shallow borings be taken along this section. A fabric liner should be installed before new subbase is put down to minimize the number of washouts. Install new safety railing on the outside of the seawall allowing for an additional 1.5' – 2' of width for path use.

Between Station 58+00 and 61+00, aggressive trimming of vegetation is recommended due to very poor sight distance. Provisions should be made here to improve access to the western side of the fence to make maintenance easier. This can be accomplished most easily by installing a gate along this section for access. There is no room for expansion from station 58+00 to 61+00. Pavement overlay through this section 300'.

Because new fencing will most likely be needed along the Barge Canal Beach area, this fence should continue through station 61+00.

North of station 61+00, there is room for widening to ten feet and addition of shoulders along 900' of path. This area is relatively flat and expansion should be straightforward. Widen, add shoulders, and add overlay (900').

5. Wastewater Treatment Plant to Perkins Pier (Station 70+00 to 81+00)

This section consists of three areas: 1) the area passing in front of the treatment facility (Station 70+00 to 75+00); 2) the area just south of the Perkins lot as the path turns east for a short distance (Station 75+00 to 78+00); and 3) the area parallel to Lavalley Lane and Perkins Pier (Station 78+00 to 81+00).

In front of the Treatment Plant (Station 70+00 to 75+00), the path is eight feet wide with no shoulders. The west edge of the path is on the shoreline. Large riprap extends from the water level up to the path. There appears to be no room for expansion unless

Figure 7: Erosion at riprap wall



extensive work is done along the shoreline to extend the retaining wall, see photo above. The pavement condition is fair. Annual patching is required on the western edge of the path due to water damage, see figure 7 above. Sight distance is good here in this flat, straight section.

From station 75+00 to 78+00, the path turns east toward Lavalley Lane. The path in this area is eight feet wide with no shoulders. There is potential for widening in this area provided that some of the grassy area between the bike path and the Perkins lot can be used. Signing and striping are lacking around the turn and are needed due to its poor sight distance. Pavement condition is good in this area.

The 300' stretch of the path parallel to Lavalley Lane is ten feet wide with no shoulders. The pavement condition between stations 80+75 to 81+00 is very poor and the overall condition of the pavement is poor. A more defined boundary between the path and Lavalley Lane is needed. Sight distance is good here but more signage is needed near the Maple Street crossing.

Proposed improvements through this section include:

From station 70+00 to 75+00, expansion to 10 feet would be very costly due to the proximity of the path to the shoreline. Raising the

path through this section by a few inches may stop some of the annual inundation of water from the lake. Install concrete curb retaining wall to raise the path and prevent undermining of subbase during periods of high water. Reconstruct path with new subbase and surface treatment through this section (500').

North of station 75+00, there is room for expansion to the north of the path (75+00 to 78+00). Clearing or relocation of the trees separating the path and Perkins parking lot will be required to capture this area. This property is owned and operated by the City of Burlington. The small berm between the parking lot and the path will have to be removed and flattened to meet the grade of the path. Sight distance is difficult around the corners through this section. Signing should be added warning users of upcoming turns. Widen, add shoulders, and overlay (300').

From station 78+00 to 81+00, the path runs parallel to Lavalley Lane. The path is already 10 feet wide here and does not need widening. This portion of the path (300') should be rebuilt with new subbase and pavement. The path is located on the western edge of the access road to the Vermont Railway railyard. This land belongs to the railroad and because it is an access road which must accommodate travel by large tractor trailers, no large physical barriers such as bollards can be installed. However, in order to better define the separation between the road and the path, a curb should be installed. This barrier is required where there is less than a five foot separation between the path and the road. In addition, the use of colored or textured pavement in this areas may provide better delineation of the path from the railyard access road.

Signing and/or striping are needed for both approaches to the Maple Street intersection warning users of vehicular traffic.

On Maple Street, pavement markings or signage east of the bike path shall be installed to warn motorists of the bike path crossing.

6. Perkins Pier to King Street (Station 81+00 to 85+00)

The path is eight feet wide with no shoulders. There is a large tree on the west side and a fence on the east side. The city should investigate whether or not the fence can be moved closer to the railroad tracks to make room for expansion of the path. At Station 82+50 there is a 90° bend that could be straightened or at least made wider so that the turn is easier to negotiate. Pavement condition is good here but an overlay will be needed within 5 years. Pavement markings are lacking at the intersection to alert westbound vehicular traffic of the path crossing.

Proposed improvements to this section include:

Overlay section 400'.

Based on the survey of the area, realignment could provide more manageable turns through this short section. A letter should be drafted to Vermont Railway on behalf of the Parks and Recreation Department requesting that the city be able to move the fence closer to the railroad tracks. If granted, this will allow expansion of path width and flattening out of the curve at station 82+50. There may be issues with the utility poles at the southern end of this section. The Department of Parks and Recreation should consult with Burlington Electric Department to determine the feasibility of moving any of these poles or pole supports. See Appendix B for a conceptual sketch of the proposed improvements.

The first five bollards on the north end of this section can be moved west to increase the shoulder width.

Signing and/or striping should be added on the bike path at both approaches to the King Street intersection. On King Street, pavement markings and/or signage shall be installed to warn motorists of the bike path crossing.

7. King Street to College Street (Station 85+00 to 94+00)

The path is eight feet wide through this section. This section is the only portion of the path on the east side of the railroad tracks. This section begins to enter the Waterfront area and is heavily used. The path lies between the railroad fence and the Wing building along the southern portion of this section. There appears to be room to expand the path to nine feet here. Beyond the Wing building, the path intersects the commuter rail station. This area has been striped and signed to alert path users to the commuter rail pedestrian crossing. There is little room for expansion here due to the constraints of the train station. A pavement overlay is needed in this area as the pavement condition is fair to poor with medium severity block cracking. Sight distance is good here but better markings may be needed with the expansion of the Basin Science Center and the growth of commuter rail ridership.

North of the train station, the path crosses College Street. At this point, the path crosses the railroad tracks once again. This is a very busy intersection between the vehicular traffic to the Basin Science Center and the Burlington Boathouse in addition to the traffic on the path and pedestrians coming down College Street to Waterfront Park. The crossing is currently striped. Better markings and perhaps textured, colored pavement on the approach to the crossing are needed coming from both directions.

Proposed improvements to this section include:

Ultimately, this section of the path should be relocated to the west side of the railroad to eliminate two rail crossings at King and College Streets and a crossing of the commuter rail platform. In order for this to occur, land owned by Lake Champlain Transportation will be needed for the realignment. The details of this easement have not yet been worked out. For this reason, that project is on hold. In the meantime, the city has added striping that directs users around the commuter rail platform. Colored pavement can be used here to designate path with one color and the commuter rail pedestrian walkway with another color.

The intersections at King and College Streets remain a safety hazard as both cross streets carry a large amount of tourist traffic that is unfamiliar with the bike path crossings. Better signage/striping is recommended at all approaches from both the bike path and the cross streets.

8. College Street to Lake Street (Station 95+00 to 112+00)

This area is known as Waterfront Park. It is the newest area of the path built in 1991. The path is ten feet wide through this corridor. Formal shoulders are not present here, however it is apparent that they are used informally through this section. There is room to expand the path to 12 feet or to install shoulders on both sides. The pavement condition and sight distance is good through this section.

Proposed improvements for this section include:

The path is in very good condition through this section. It may be widened to 12 feet if no impact is determined upon the adjacent double row of Linden trees. Sur-pac shoulders or turf could be added to give runners more room and separation from other path users. Better signage directing bicyclists to stay on the bike path as opposed to riding on the boardwalk is needed.

North Sections

9. Lake Street through Urban Reserve (Station 112+00 to 145+00)

This section is eight feet wide with no shoulders in some areas and narrow worn-down shoulders in others. Just north of the intersection with Lake Street, there are boulders on the east side of the path, separating the path and the gravel access road. These boulders can be removed to allow for path expansion, see figure 9 below. There is adequate width to widen to ten feet. Sight distance is good and pavement condition is poor throughout the

section. An overlay on the entire section is needed. There is ponding near station 121+50 (figure 8), which would be corrected by the resurfacing.



Figure 8: Path intersects with Sailing Center Drive - Ponding Evident

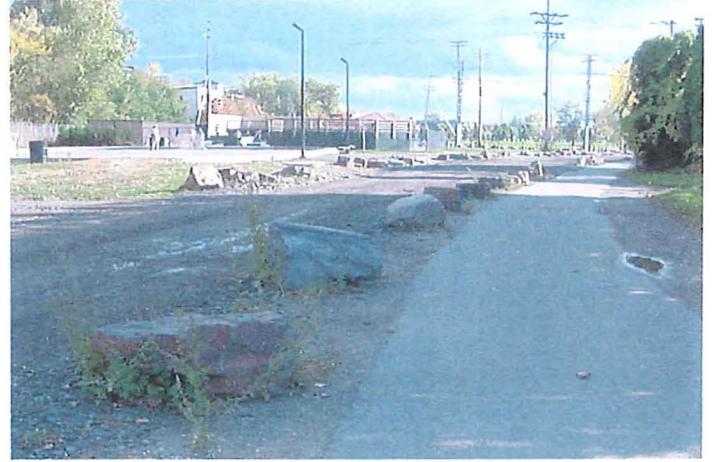


Figure 9: Boulders to shift east for path expansion

The base to a former signpost sits in the middle of the path at station 128+00. This should be removed and filled in. At four locations along this section, fire hydrants sit approximately two feet off the pavement edge. In order to widen the path to the west, these hydrants would have to be moved further away from the path.

At Station 135+00, the brush is overgrown. Clearing is needed here to provide continuous sight distance around the curve.

At station 137+00, shoulders reappear on either side and are in need of rehabilitation. As stated in the beginning of the Existing Conditions Survey, wherever paving is recommended, shoulders should be rehabilitated as well.

Proposed improvements to this section include:

The pavement condition is very poor. Grinding and paving is recommended from Station 112+00 to 145+00.

Widen to the east to 10 feet. This eliminates the need to move hydrants and eliminate utility/sign poles. The road is narrowed under this scenario, however, the road is more than wide enough to accommodate this work. Regrade, prior to paving, to improve drainage and pavement condition.

Clear vegetation more aggressively to improve sight distance around curve.

Maintain/re-install barrier between path and road using boulders, curb or bollards. This will prevent vehicles from damaging the edge of pavement.

Signage should be added to the bike path approach from the north as the path nears the Lake Street intersection. Informational signage informing users of amenities such as the Skate Park, waterfront park, boathouse, food, downtown, etc. These signs would be a part of the comprehensive sign program along the path.

10. Urban Reserve to North Beach (Station 145 to 169+00)

The path is eight feet wide through this section with some shoulders. Widening is possible in most areas on the east side only. The west side has steep slopes that would be very difficult to build up. Widening will not be feasible between stations 164+00 – 165+00 due to the steepness of the ravine through this section.

The pavement condition is poor and in need of an overlay. There are numerous culverts in need of cleaning out. Overland drainage areas show signs of erosion on slopes leading to path.

At North Beach, there is room to widen the path by filling on either sides of the path and filling slope areas just north of beach. There is a lack of signage here to tell users of the amenities at the beach and campground.

Proposed improvement to this section include:

Pavement overlay on entire section (2900').

From station 145+00 to 164+00, expansion to 10 feet is possible to the east. This may require extensive earthwork as the bank will be cut into and the resulting slope must be less than 3:1 to avoid future erosion.

There are some areas to the east where the slope has begun to erode due to footpaths that connect to the woods. In order to prevent further erosion, these slopes should be lined with stone and keyed in at the bottom with larger stone. Another option would be to install stairs on these footpaths. Doing either of these options may be undesirable to the city from a liability and ownership standpoint. If this is the case, these footpaths should be revegetated in an effort to cut back on traffic on these slopes.

All culverts should be cleaned out to prevent washout over the path. Line the swales leading to the culverts with riprap to prevent sediment and debris from building up in the culverts.

On the west side of the path, the split rail fence is in need of replacement. In addition, any areas where the slope is greater than

3:1, fencing should be added. During construction, the slope should be evaluated and stabilized, where needed.

11. North Beach to Little Eagle Bay (Station 169+00 to 208+00)

Section width is eight feet wide with one-foot wide shoulders. The drainage ditches on the west side of the path are wet even during the driest periods due to accumulation of debris and leaves in the ditch. Ponding was noted specifically under the diocese bridge along the walls on both sides at station 189+00. With the exception of the bridge over the beach access road at station 189+00, there appears to be room for expansion on the east side with proper side slope cut back. The shoulder on the west side near the footpath to the bluffs is in need of rehabilitation.

At Little Eagle Bay, from station 207+00 to 209+00, the eight (8) foot path must be maintained due to a legal settlement between the city and an abutting landowner. Signage and striping will be needed to alert users to the narrowing through this section.

Proposed improvements to this section include:

Install warning and promotional signing to alert path users of North Beach and its amenities. (See Figure 11 for photo.) Extend the fencing in each direction over the North Beach access culverts to protect the entire slope. (See Figure 10 for photo.)



Figure 10: Path over North Beach Culvert (left)

Figure 11: Intersection with North Beach Access Road (right)



Widen the path to ten feet from Station 169+00 to 207+00.

Cut back and revegetate slope to gain path width. Overlay section 3100'.

Clean out the drainage swales adjacent to the diocese bridge and enhance with riprap.

12. Little Eagle Bay to Shore Road (Station 208+00 to 238+00)

This section is eight feet wide with room for expansion on either side. Sight distance is good throughout the section. Pavement condition is generally good with some cracking.

Proposed improvements to this section include:

Widen the path to ten feet starting at the northern boundary of Little Eagle Bay. Maintain this width through the entire section. Overlay section (3000').

Install warning and promotional signing to alert path users of Leddy Park and its amenities.

13. Shore Road to Staniford Road (Station 238+00 to 253+00)

This section is eight feet wide throughout with room for expansion. The path currently runs very close to some large trees and slopes on the western edge. There are some tight areas between trees on the east and manholes on the west. There are four manholes along this section. They are raised and pose a hazard as the path swerves around them.

Pavement condition is generally good with minor cracking. Sight distance is adequate at the Shore Road intersection. More signage and striping may be needed at the approaches to the intersection. Sight distance is poor at the Staniford Road intersection due to a raised water main. Raised crosswalks at both intersections alert motorists to the crossing. Signage and striping on the path could be added to warn users of the upcoming intersection.

Proposed improvements to this section include:

Lower the manholes to grade and install covers that are more visible and more bike/roller blade friendly.

Figure 12: Poor Sight Distance at Staniford Road Intersection



Eliminate the vegetation on top of the mound at the northwest corner (see figure 12) of Staniford Road. New pipe or insulating material

which better protects the existing water main from harsh weather conditions may be available for use at this location. Install signs to alert users of poor sight distance.

Widen to ten feet and overlay section (1200'). Exceptions are various pinch points between the four sewer manholes on the west

of the path and large trees on the east of the path. To avoid the manholes, the path can be moved to the east a couple of feet through this section. If the path is not realigned, stripe the centerline of the path as it curves around the manholes.

14. Staniford Road to Starr Farm Road (Station 253+00 to 277+00)

This section is eight feet wide with room to widen to ten feet on either side. Sight distance is good and pavement condition is generally good. The intersection of Starr Farm Road and the path has adequate sight distance. Raised crosswalks on Starr Farm Road help to alert motorists to the path crossing. Signing and striping could be added to alert users of the path of the upcoming intersection.

Proposed improvements to this section include:

Widen the path to ten feet and overlay (2400').

The northern portions of the path have the most road crossings. Possible ways to enhance safety at intersections is to: 1) Flare out the path as it approaches the road to allow users to stop, pull over and look for cars; 2) Aggressively clear and trim back the vegetation at all intersections for improved sight distance.

15. Starr Farm Road to North Ave. Ext. (Station 277+00 to 330+00)

This section is eight feet wide. There is room to widen to at least nine feet and possibly ten feet. Widening should occur to the east in this section to avoid the manhole on the west side of the path at North Gate Apartments and to avoid having to fence the slope on the west side of the path just north of North Gate Apartments. The shoulder on the west side is in good shape and should be maintained. The stairs coming from the North Shore condominiums may need to be redirected if the path is widened. The walkway and steps from North Shore condos are in bad condition. Widening north of the condominiums should occur on the east side.

Sight distance is good at intersections and throughout the section. Pavement is in generally good condition with some cracking.

Proposed improvements to this section include:

Widen to nine feet throughout (600'), and ten feet where possible.

Pave the connection between the North Gate path and the bike path.

Where vegetative barrier cannot be established, install fence on the west side of the path north of the North Gate "overlook."

Slope stabilization is needed north of the overlook. There is approximately 50' of the bank which has slid down toward the lake. Sheet piles may be used to hold the bank in place and allow for widening through this section. If piles are not used, the bank will have to be cut back or filled to achieve a 3:1 slope. This could result in a loss of usable land for the path. This area should be studied in more detail and a solution to the slope stability problem should be implemented as soon as possible to avoid further damage to the path. This may mean that slope stabilization will take place before the entire project begins.

16. North Avenue Extension to Winooski River (Station 330+00 to 345+00)

This section is approximately six and a half feet wide. It should be widened to eight feet. Steep slopes on either side will make widening slightly more difficult and costly. Fencing is missing along the steep slopes throughout section.

The intersection of the path with North Avenue Extension has a steep approach from both north and south. Users must come to a quick stop to avoid rolling down into the road. Figure 13 below does not do justice to the sudden elevation drop prior to the intersection.



Figure 13: Looking North at the North Ave. Extension Intersection

Proposed improvement to this section include:

Advanced warning of the steep grade change at North Avenue Extension should be posted on signs or painted on the path. The grade of the path should be cut back 150' on each side of North Avenue extension. Presently the path is very steep making sight and braking distance an issue.

Widen the path to eight feet keeping within right-of-way.

Where vegetative cannot be established, fence both sides of the path due to steep slopes.

Bike Path Improvement Feasibility Study
 Summary of Proposed Improvements
 8/1/02

Section Treatment	Oakledge to Harrison	Harrison Ave to Blodgett Bldg.	Blodgett Bldg. to Barge Canal Beach	Barge Canal Beach to Treatment Plant	Treatment Plant to Perkins Pier (Maple St.)	Perkins Pier to King Street	King St to College St.	College St. to Lake St.	Lake St. thru Urban Reserve	Urban Reserve to North Beach	North Beach to Little Eagle Bay	Little Eagle Bay to Shore Road	Shore Road to Staniford Road	Staniford Road to Starr Farm Road	Starr Farm Road to North Ave Ext.	North Ave. Ext. to End.	Totals
Overlay	1100'@10'		400'@8' 1250'@10'	300'@8' 900'@10'	300'@10'	400'@10'		1800'@12'		2400'@10'	200'@8' 3700'@10'	3000'@10'	300'@8' 1200'@10'	2400'@10'	5300'@10'	1500'@10'	265700 sf
Grind and Pave	420'@10'	850'@8'							3300'@10'								44000 sf
Surface Reconstruction				1050'@8'	800'@8'												14800 sf
Shoulders (1.5' each side)	1520'		1250'	2250'	600'	400'		1800'	3300'	2400'	3700'	3000'	1200'	2400'	5300'	1500'	91860 sf
Widening*	1520' ₂		1250' ₂	2250' ₂	600' ₂	400' ₂		1800' ₂	3300' ₂	2400' ₂	3700' ₂	3000' ₂	1200' ₂	2400' ₂	5300' ₂	1500' ₁₊	59740 sf
Realign			300'@10'			400'@10'							300'@10'				10000 sf
Improve Drainage (grading, new catch basins)	X	X		X						X	X						
Clean Culverts	X									X	X						
Fence/Curb**	200' ₁			1050' ₁	300' ₁	100' ₂			3300' ₁	2400' ₁	400' ₁				800' ₁	2500' ₁	11050 lf
Signs/Striping	X	X			X	X	X	X	X		X	X	X	X	X		
Clearing		X	X	X					X					X			
Utility Relocation									X				X				
Erosion Control										X	X				X		
Railroad Issues			X			X			X								

* 1 = Widen by 1' 2 = Widen by 2'

** 1 = New/Replacement 2 = Move/Relocate

Note: Overlay and shoulder rehabilitation is recommended wherever widening is proposed.

II. CONCEPTUAL ALIGNMENT

- A. PROJECT BOUNDARIES - The project lies within the limits of the City of Burlington. The bicycle path begins in the south end of the city at Oakledge Park. From there, the path travels north approximately 6.5 miles along the waterfront to the Winooski River. The path runs along the waterfront in areas and along an old railroad bed in other areas. The path passes through parks, by city beaches and through neighborhoods.
- B. ID PROJECT ALIGNMENT - See Appendix A for a map of the Waterfront Bike Path and the existing cross sections.
- C. RECOMMENDED RE-ALIGNMENT AREAS - There are three areas where re-alignment of the path is recommended. The first is at the Blodgett S-curve (Station 35+00). The second is between Maple and King Streets (Station 81+00 to 85+00) and the third is in the north end between Shore and Staniford Roads (Station 238+00 to 253+00). These areas are highlighted in the corridor map in Appendix and discussed in more detail in Section I. The Blodgett S-curve and Maple St. improvements are shown conceptually in Appendix C. In addition, a summary of all proposed improvements is shown in tabular form in Appendix C.

III. RIGHT OF WAY

A. ID LANDOWNERS AND THEIR INTEREST IN THE PROJECT

There are approximately 545 landowners along the bike path corridor. These landowners and their addresses are listed in Appendix D.

Historically abutting landowners have been supportive of the bike path. Many of them have access to the path from their property. They are interested in maintaining their access points as well as seeing that the path is maintained and remains free of trash, debris, brush overgrowth, and general disrepair.

Vermont Railway, which leases the railroad right-of-way from the State of Vermont, is concerned with any improvements that bring the bike path closer to the main rail line. For this reason, this report emphasizes close communication between the city and the railroad to identify and address those areas where expansion or realignment will require some changes to the easements.

Right-of-way acquisition from the Lake Champlain Transportation Company is anticipated for the proposed relocation of the path to the west side of the railroad tracks between King and College Streets. Because this design has not yet been finalized, exact square footage calculations have not yet been made.

IV. UTILITY IMPACTS

A. WHAT EXISTING UTILITIES ARE IN THE AREA

There are many existing utilities in the area of the bike path. In the waterfront area, there are both telephone and fiber optic lines owned by Verizon and AT&T respectively. Overhead utility lines can be found near the waterfront and at each street intersection. These lines are owned by: Burlington Electric; Green Mountain Power Corp.; Adelpia Cable; and Vermont Electric Company. There are no utilities located underneath the path with the exception of culverts that collect rain water on the east side of the path and convey the runoff under the path to its final discharge point. Those utilities (poles, fire hydrants) that are directly adjacent to the path and must be moved, can be relocated through coordination with the Department of Public Works and Burlington Electric Department. A municipal water line runs on the west side of the path north of Staniford Road.

B. HOW WILL THEY BE IMPACTED

Path widening may impact some utility poles and fire hydrants. They can be relocated easily with interdepartmental coordination. If the option to relocate the bike path to the west side of the railroad tracks between King and College Streets is pursued, two telephone and fiber optic manholes may need relocation.

The Staniford Road water line will be replaced with new material which will allow the cutting down of the high vegetation that is currently causing sight distance problems in this area.

V. NATURAL AND CULTURAL RESOURCES

A. NATURAL RESOURCES

See appendix E for GIS maps of the following natural resources in the corridor.

1. WETLANDS

There are some areas adjacent to the bike path that appear to have some wetland characteristics. Most notably on the eastern edge of the path at Leddy Park and further south near Little Eagle Bay. Any proposed improvements in these areas or any others would include a wetland evaluation. The GIS mapping shown in Appendix E represent wetlands recognized by the City's Municipal Development plan. There has been no wetland delineation performed for this corridor.

2. **LAKES/PONDS/STREAMS/RIVERS**
The path runs adjacent to Lake Champlain and terminates at the mouth of the Winooski River. It does not cross either body of water and it is not expected that any improvements to the path would result in any impact to the lake or river.
3. **FLOODPLAINS**
There are areas near the path that appear to be within the high water mark of Lake Champlain. See Appendix E for Floodplain delineation. This delineation represents the floodplain as determined by the 1:9600 Flood Insurance Rate Maps.
4. **ENDANGERED SPECIES**
Appendix E represents significant natural areas as defined by the City's Municipal Development plan. It also includes a letter from the State of Vermont's Nongame and Natural Heritage Program listing rare, threatened, and endangered plant species found in the vicinity of the project. The path will be surveyed by the Nongame and Natural Heritage program prior to any final engineering design or construction.
5. **FLORA/FAUNA**
Appendix E represents significant natural areas as defined by the City's Municipal Development plan. This map does not represent a delineation of endangered species for the city. See Appendix E for Vermont's list of rare, threatened, and endangered species found in the vicinity of the project.
6. **STORMWATER**
Culverts will be cleaned and rehabilitated as part of the project. Additional stormwater from the widening of the path will not impact existing culverts or cause deterioration of existing water quality. Best management practices regarding proper swale rehabilitation and maintenance will be employed along the north end of the path where sewer and stormwater are separated.
7. **HAZARDOUS WASTE**
There is no evidence that hazardous waste will be encountered in any improvements proposed to the bike path.
8. **FOREST**
There are no forested areas along this corridor.

B. CULTURAL RESOURCES

1. HISTORIC

A consultant was hired to conduct a historical resources evaluation on the bike path corridor. According to the consultant's report, there are no significant historical resources located within the proposed area of disturbance. See Appendix F for the complete Historical Resources Evaluation performed for this project.

2. ARCHEOLOGICAL

A consultant was hired to conduct an archaeological resources evaluation on the bike path corridor. According to the report, a review of historic maps for Chittenden County indicates that there are no existing significant historic resources within the project corridor. A field inspection of the corridor revealed sixteen areas sensitive for prehistoric archaeological sites. A phase I study is recommended prior to any construction to determine if the sites are indeed archaeologically sensitive. See Appendix F for the complete Archaeological Resources Assessment performed for this project.

3. ARCHITECTURAL

See Appendix F for the Archaeological Resources Assessment and the Historical Evaluation.

4. PUBLIC LANDS

The bike path passes through six city park areas; Oakledge Park, Perkins Pier, Waterfront Park, North Beach, Leddy Park, Starr Farm Park and is adjacent to the Winooski Valley Park District's park at Mayes' Landing at the mouth of the Winooski River. The bike path is an integral part of all of these parks and will remain so in the future. The path runs parallel to the railroad land owned by the State of Vermont. This land will not be negatively impacted by any proposed bike path improvements.

5. AGRICULTURAL LANDS

There is no agricultural land within the bike path corridor.

VI. PRELIMINARY COST ESTIMATE

The preliminary cost estimate for the proposed improvements is presented in two ways below. Table 3 summarizes all of the improvements and their overall cost. Table 4 presents the costs per section based on the expected phases of construction. The following list describes each of the cost estimate categories:

Overlay: Pave over existing asphalt surface

Grind and Pave: Grind surface to remove pavement surface, regrade path for proper drainage, where necessary, and pave with 4" asphalt.

Rehab: Excavate pavement and subbase. Replace with new subbase materials, grade for proper drainage and pave with 4" asphalt.

Shoulders: Establish shoulders 12"-18" wide by lining path with sur-pac on either side.

Widening: Excavate to proper width, add subbase, grade, compact and pave with 4" asphalt.

Culverts: Remove debris from culverts to allow for proper drainage. At the time of cleaning, evaluate inside of culvert to determine if culvert pipe needs repair or replacement.

Fencing: Installation of new fencing according to proposed design standards. Removal of existing fence may be required in some spots.

Signs/Striping: Addition of signs or striping where proposed.

Clearing: Removal of vegetation which encroaches upon path or reduces visibility.

Utility Relocation: In cases where utilities lie within the limits of proposed work, utility poles, fire hydrants, etc., will be relocated.

Realignment: Realignment is proposed in three areas of the path. Generally, realignment includes excavation of earth to desired width, new subbase, grading for drainage and paving with 4" asphalt. In addition, excavation and installation of sur-pac to either side of path for shoulders is included in this estimate.

Erosion Control: Slopes are to be stabilized through the establishment of vegetation, cutting back of slopes, paving of footpath landings, installation of fence and repair of improper drainage ways. Specifics for each erosion control measure are discussed in Section I.

Mobilization: One time cost to prepare area for construction.

Water Line Modification: This is proposed at the Staniford Road intersection to allow for the removal for the mound of earth which currently presents sight distance hazards for users of the path. This project includes the replacement and/or insulation of approximately 50 feet of water line, earth work and landscaping,

Table 3
Waterfront Bike Path Proposed Improvements Cost Estimate
1-Oct-02

Construction Costs					
	Unit Cost	Unit	Quantity	Cost	
Overlay	1.50	sf	265,700	\$398,550.00	
Grind and Pave	2.50	sf	44,000	\$110,000.00	
Surface Reconstruction	4.00	sf	14,800	\$59,200.00	
Shoulders	1.00	sf	91,860	\$91,860.00	
Widening	4.00	sf	59,740	\$238,960.00	
Clean Culverts	1,000.00	ea	3	\$3,000.00	
New Catch Basin Grates	500.00	ea	2	\$1,000.00	
Fencing	2.50	lf	11,050	\$27,625.00	
Signs/Striping	10,000.00	ls	1	\$10,000.00	
Clearing	5,000.00	ls	1	\$5,000.00	
Utility Relocation	5,000.00	ls	2	\$10,000.00	
Realign	4.00	sf	10,000	\$40,000.00	
Water Line Work	150.00	lf	50	\$7,500.00	
Erosion Control	1,000.00	each	3	\$3,000.00	
Mobilization	20,000.00	ls	1	\$20,000.00	
Subtotal				\$1,025,695.00	
Preliminary Engineering				\$205,139.00	
Right-of-Way				\$102,569.50	
Acquisition				\$0.00	
Project Administration				\$133,340.35	
Subtotal				\$1,333,403.50	
Contingency - 30%				\$400,021.05	
Total				\$1,733,424.55	

There is currently no allotment for land acquisition because the city hopes to obtain easements for any work occurring on non-city property. The best example of this would be at the Blodgett S-curve. If the city realigns the path through this section, it would approach the Blodgett Company about an easement. The funds for obtaining these easements are included in the right-of-way line item.

Table 4
Waterfront Bike Path Improvements Cost Estimate by Section
01-Oct-02

Southern Rehabilitation – Oakledge Park to Perkins Pier

Construction Costs - Southern Rehab - Oakledge Park to Perkins Pier				
	Unit Cost	Unit	Quantity	Cost
Overlay	1.50	sf	41,100	\$61,650.00
Grind and Pave	2.50	sf	11,000	\$27,500.00
Surface Reconstruction	4.00	sf	14,800	\$59,200.00
Shoulders	1.00	sf	16,860	\$16,860.00
Widening	4.00	sf	11,240	\$44,960.00
Clean Culverts	1,000.00	ea	1	\$1,000.00
New Catch Basin Grates	500.00	ea	2	\$1,000.00
Fencing	2.50	lf	1,550	\$3,875.00
Signs/Striping	10,000.00	ls	0.333	\$3,330.00
Clearing	5,000.00	ls	0.333	\$1,665.00
Utility Relocation	5,000.00	ls	0	\$0.00
Realign	4.00	sf	3,000	\$12,000.00
Water Line Work	150.00	lf	0	\$0.00
Erosion Control	1,000.00	each	0	\$0.00
Mobilization	20,000.00	ls	1	\$20,000.00
Subtotal				\$253,040.00

Preliminary Engineering	\$50,608.00
Right-of-Way	\$25,304.00
Acquisition	\$0.00
Project Administration	\$32,895.20
Subtotal	\$328,952.00
Contingency - 30%	\$98,685.60
Total	\$427,637.60

Waterfront Rehabilitation – Perkins Pier to North Beach

Construction Costs - Waterfront Rehab - Perkins Pier to North Beach				
	Unit Cost	Unit	Quantity	Cost
Overlay	1.50	sf	49,600	\$74,400.00
Grind and Pave	2.50	sf	33,000	\$82,500.00
Surface Reconstruction	4.00	sf	0	\$0.00
Shoulders	1.00	sf	23,700	\$23,700.00
Widening	4.00	sf	15,800	\$63,200.00
Clean Culverts	1,000.00	ea	1	\$1,000.00
New Catch Basin Grates	500.00	ea	0	\$0.00
Fencing	2.50	lf	5,800	\$14,500.00
Signs/Striping	10,000.00	ls	0.333	\$3,330.00
Clearing	5,000.00	ls	0.333	\$1,665.00
Utility Relocation	5,000.00	ls	1	\$5,000.00
Realign	4.00	sf	4,000	\$16,000.00
Water Line Work	150.00	lf	0	\$0.00
Erosion Control	1,000.00	each	1	\$1,000.00
Mobilization	20,000.00	ls	1	\$20,000.00
Subtotal				\$306,295.00

Preliminary Engineering	\$61,259.00
Right-of-Way	\$30,629.50
Acquisition	\$0.00
Project Administration	\$39,818.35
Subtotal	\$398,183.50
Contingency - 30%	\$119,455.05
Total	\$517,638.55

Northern Rehabilitation – North Beach to Winooski River

Construction Costs - Northern Rehab - North Beach to Winooski River				
	Unit Cost	Unit	Quantity	Cost
Overlay	1.50	sf	175,000	\$262,500.00
Grind and Pave	2.50	sf	0	\$0.00
Surface Reconstruction	4.00	sf	0	\$0.00
Shoulders	1.00	sf	51,300	\$51,300.00
Widening	4.00	sf	32,700	\$130,800.00
Clean Culverts	1,000.00	ea	1	\$1,000.00
New Catch Basin Grates	500.00	ea	0	\$0.00
Fencing	2.50	lf	3,700	\$9,250.00
Signs/Striping	10,000.00	ls	0.333	\$3,330.00
Clearing	5,000.00	ls	0.333	\$1,665.00
Utility Relocation	5,000.00	ls	1	\$5,000.00
Realign	4.00	sf	3,000	\$12,000.00
Water Line Work	150.00	lf	50	\$7,500.00
Erosion Control	1,000.00	each	2	\$2,000.00
Mobilization	20,000.00	ls	1	\$20,000.00
Subtotal				\$506,345.00

Preliminary Engineering	\$101,269.00
Right-of-Way	\$50,634.50
Acquisition	\$0.00
Project Administration	\$65,824.85
Subtotal	\$658,248.50
Contingency - 30%	\$197,474.55
Total	\$855,723.05

The total cost to perform the project in phases is approximately \$68,000 more than to do it all at once. However, it would be very difficult to justify closing the entire path when work is occurring in one section. It also makes sense to break the project into phases that span more than on fiscal year so that budgeting for the improvements is easier.

VII. PUBLIC INVOLVEMENT

A. PUBLIC SUPPORT

On July 25, 2001, the Department of Parks and Recreation hosted a public meeting to inform citizens and the bicycle/pedestrian community of the bike path improvement study and to gather their input.

About a dozen people attended this meeting. In addition to the comments of those in attendance, many emails were from those who could not attend stating their support and giving suggestions for improvement. The following list is a summary of the comments and recommendations that were made at the meeting or in emails. The responses are shown in italics.

- Signage: generally pertaining to way finding* - *Included in recommendations*
- Private facilities on side of path – *Restroom facilities are located at the Community Boathouse on the Waterfront as well as at North and Leddy Beaches.*
- Unpaved running path beside bike path* - *A sur-pac shoulder is either present or proposed wherever possible.*
- Open up to cross-country skiing by sufficiently packing snow (i.e. with the use of snowmobiles) – *The path is not maintained in the winter in order to allow for skiing and snowshoeing.*
- Improve maintenance of path – e.g. Blodgett's area covered with overgrown branches along path, subject to vandalism* - *Proposed in maintenance guidelines.*
- Install ramp at Blodgett stairs leading down to street* - *A ramp here may not be feasible due to the length needed to install a safe and handicapped accessible structure. There is a fully accessible entrance to the bike path from Sears Lane just one block south of the Lakeside Avenue entrance.*
- Area of path between Little Eagle Bay and Winooski River is of concern to senior citizen and handicapped users; complaining of being run off path by aggressive bikers and rollerbladers onto dangerous shoulders of path. – *Users of the path are encouraged to use and encourage others to use positive behavior on this public corridor.*
- Separate walking path – *A separate walking path is not feasible nor is it needed if users use proper etiquette when using this path.*
- Signs for proper user etiquette (re: passing, speed, etc.)* - *This may be incorporated into the signing program.*
- Commercialism may distract from aesthetics of path. – *Private development is permitted and allowed through the city's planning and zoning process through which the public and all city departments have the right to review and comment.*
- Guidelines should be printed in Free Press before put on signs. – *This is possible.*

- Benches at North End overlooks are always dirty*. – *Added to maintenance guidelines.*
- Use of correctional center for maintenance labor. – *This has been done in the past in the city and may be a possibility in the future.*
- Manicured look at waterfront is nice but not desired for the rest of the path. The untouched areas have their own aesthetic quality. – *The city agrees that each section of the path has its own unique qualities.*
- Painted line down the middle of the path can help with traffic flow. – *Centerline striping is proposed where the path has sharp turns or blind curves.*
- Install mile markers. – *This should be part of the signage improvement plan.*
- Proctor Place is a dangerous corner due to drainage, can it be paved?* - *Improvements are proposed at this intersection.*
- Standing water in between Killarney Drive and North Beach*. – *Improvements are proposed through this section.*
- Add signs to deter littering. – *May be part of the signage improvement program.*
- Picnic tables north of Waterfront Park at railroad. – *Comment not clear, however, amenities are located at city parks and scenic overlooks.*
- Asphalt sealer coating on Stowe Bike Path seems to work well. – *Pavement sealing is included in the proposed paving regimen.*
- Path near seawall is always in bad shape due to flooding*. – *Improvements are proposed for this section.*
- Widen path to 10 feet with crushed stone shoulder for jogging. – *This is proposed where possible.*
- Pavement markings at all intersections*. – *Proposed.*
- Improve drainage with repaving*. – *Proposed.*
- Improve sight distance at intersections by cutting back vegetation and hedges. – *Proposed.*
- Realign path around Blodgett S-Curve to make it safer*. - *Proposed.*
- Rehab and maintain portion of path south of Harrison Avenue*. - *Proposed.*
- Raise elevation of path just north of wastewater treatment to avoid flooding during periods of high water. * - *Proposed.*
- Sweep the path periodically and after heavy rainstorms for user safety. – *Sweeping is done on a biweekly during the summer months by the Dept. of Parks and Recreation.*
- Have railroad boxcars north of the skate park removed for aesthetic purposes. – *This issue has been brought up in the past. The railroad has the right to store trains on its tracks, however, this issue may be reiterated during discussions with the railroad regarding Waterfront Path issues.*
- Increase funding for annual maintenance (potholes, dips and bumps, obstructed views at intersections, drop-offs of shoulders, missing or faded signage and stencils. – *Recommended*
- Create a comprehensive and integrated signage system * - *Proposed.*

- Involve existing groups in bike path stewardship, planning and improvements. – *The city has a very active public involvement process used in any city project.*
- Improve connections with signage, stencils, maps and public awareness campaigns. - *Proposed.*
- Create a link from Howard Street across Barge Canal to bike path*. *There is private land between Howard Street and the bike path not to mention that development in the Barge Canal is severely restricted due to the subsurface contamination. This proposal is not feasible at this time.*
- Install a handicap accessible to the path from Lakeside Avenue*. *As stated, this ramp would be very long and take up a large amount of right-of-way which may not be available. There is a fully accessible entrance to the path at Sears Lane, just one block south of Lakeside Avenue.*
- Create pedestrian stairways from the Old North End to the bike path and waterfront. – *This is a project separate from the path.*
- Create a safe and bike-friendly route from the bike path into downtown. – *Referred to Public Works bicycle and pedestrian coordinator.*
- Provide access to all public open space along the path such as the Lakeview Cemetery. – *Lakeview can be accessed by way of North Beach and Institute Road.*
- Create an easily understood, continuous pathway through Oakledge Park to Austin Drive. - *Proposed.*
- Move the telephone pole next to the Sears Lane crossing in the Lakeside neighborhood.
- Development and installation of public art along the bike path. – *Possible in some areas but constrained in other areas by right-of-way width.*
- Special events celebrating, and potentially raising funds for, the bike path. –
- Address North Avenue extension crossing sloping down to the road so steeply. – *Improvements proposed in this area.*
- Build bikepath bridge over Winooski River. – *Separate project.*
- New separate paved path through Leddy Park to North Avenue and Ethan Allen Park. – *Currently, a share the road path exists on the Leddy Access road. This may be striped to make it more user friendly.*
- Rehab drainage ditches on either side of bike path through rock cut. - *Proposed.*
- New paved path connector to north end of North Beach gravel lot. – *Paved access exists at the south end of North Beach. There is no desire, at this time, to add pavement to this natural area.*
- New North Beach Access – Install new pedestrian bike path bridge, remove old underpass with concrete abutments. – *This is a significant project and requires more study.*
- Address North Beach path intersection. People stop in the middle of the path. – *Users are encouraged to use proper etiquette on the path at all times. This is a heavily congested area during the summer and caution and slow speed should be used.*

- Install and maintain 2-3 ft wide leveled shoulders on both sides of path between Urban Reserve and North Beach. – *1-2 ft shoulders are proposed where possible, including this section.*
- Paved connector through Catholic Diocese property to North Avenue. – *This is private property. This may occur if and when the property is redeveloped.*
- Loop paved path in Urban Reserve to give kids and parents a place to learn how to ride. – *No development is allowed in this area until a master plan is developed.*
- Realign/relocate path west of railroad tracks between King and College Streets. – *Future project.*
- Realign bike path on west side of red brick building near Perkins Pier. – *This idea does not seem feasible due to environmental and right-of-way constraints.*
- Patch holes on seawall section of bike path west of railroad tracks and Barge Canal*. - *Proposed.*
- Work with South Burlington for better signage to get to the South Burlington trails beginning near Oakledge. - *Proposed.*

* **Item that was mentioned more than once**

Many of these comments and suggestions have been incorporated into the report. Others, such as the integrated signage study, have been recommended for further study.

A second meeting was held January 30, 2002 to present the report to the public. A copy of the draft report was made available to the public before the meeting. Approximately a dozen people attended the meeting and had very positive comments about the report and general questions regarding funding and timelines for construction. In addition, the report was presented to the Parks and Recreation Commission for their review and comment as well. Comments from the public, commissioners, and state project manager are incorporated herein.

B. POTENTIAL PROBLEMS

There are no foreseeable controversial issues involving the public that will result from the proposed improvements. All of the proposed improvements are mentioned in the public comments. The city welcomes the public feedback and views the users as a resource for noting changes in conditions of the path.

The major challenge of this project as it relates to public relations is the staging of construction. As mentioned in the Section VIII below, construction will be staged in three sections. Good communication with the public will be important in keeping users updated on which portions of the path are open.

VIII. COMPATILIBITY WITH PLANNING EFFORTS

Improvements to the Burlington Recreation Path are critical to the sustainability of Burlington's on- and off-road network of bicycle and pedestrian routes. The bike path is critical as a transportation mode and recreation path between the south and north ends of the City. In addition, the bike path carries a large volume of bicycle and pedestrian traffic into Burlington's downtown.

The State of Vermont is planning to build a bicycle and pedestrian bridge at the mouth of the Winooski River between Burlington and Colchester sometime next year. This is expected to increase traffic along the existing bike path. The project will enable the Burlington bike path to connect with the Colchester network, improving transportation options in Chittenden County. The south end of the bike path connects with the South Burlington bike path network. It is these types of regional alternative transportation links that are a focus of the Chittenden County Metropolitan Planning Organization.

This winter, the City of Burlington will be working with a consultant to study north/south on-road options for bicyclists and pedestrians traveling to and from the central commercial district. As part of this study, the consultant will also be looking at improving the on-road network by also identifying east/west connections to downtown. The waterfront bike path is an important transportation link with north/south and east/west connections in the City. Improvements to the path will greatly enhance the effectiveness of these alternative transportation modes in the city.

IX. PROJECT TIMELINE

The ideal timeline for work to occur is in the late fall or early spring as the number of users is fewest at these times. The project will most likely be done in phases of the following groups of sections:

Southern Rehabilitation: Oakledge Park to Perkins Pier
(Station 0+00 to Station 85+00)

Waterfront Rehabilitation: Perkins Pier to North Beach
(Station 85+00 to Station 169+00)

Northern Rehabilitation: North Beach to Winooski River
(Station 169+00 to Winooski River)

The material needed to complete the scoping process is largely contained within this report and should not take more than a couple of months to complete. The following table estimates time to design and construct the three phases.

Task	Southern Rehab	Waterfront Rehab	Northern Rehab
Preliminary Engineering	8 months	5 months	4 months
Construction	4 months	4 months	6 months

Preliminary engineering includes permitting, acquisition of right-of-way, design, preparation of bid documents and specifications and the bid process.

Most of the design time on the Southern and Waterfront portions will be spent negotiating with the railroad and securing the proper easements. If the Southern portion is completed first, negotiations for the Waterfront portion should be easier and less time consuming, as the issues are less complicated. The Northern portion alignment is fairly straightforward, however, there are some construction issues with regards to slope that will require the time allotted.

It is expected that construction would occur over the course of about 18 months. The first section would occur in the spring or fall. Construction would then move to the second and third sections 6 and 12 months later respectively.

With the proper funding in place, the City could undertake the design immediately to be ready for the spring 2003 season. Funding sources may include city capital, surface transportation funds, or other grant sources. If the city chooses to pursue funding through the VTrans Bike and Pedestrian Program, the timeline will be pushed back at least two years as the program is fully dedicated in the immediate future.

X. VIABILITY

A. WHY SHOULD VTRANS CONSIDER THE PROJECT PROPOSAL

Improvements to the Burlington bike path are critical to the sustainability of Burlington's on- and off-street road network of bicycle and pedestrian routes. The path is also critical as a transportation mode and recreation path between the south and north ends of the city. In addition, the path carries a large volume of bicycle and pedestrian traffic into Burlington's downtown.

Due to the bike path's age (over 15 years old) and heavy use (150,000 users annually) its condition mandates repairs. Any improvements will adhere to the **1999 AASHTO Guide for the Development of Bicycle Facilities** and the **Draft 2002 Vermont Pedestrian and Bicycle Facility Planning and Design Manual**. The path is a tourist and transportation asset to the city, county and state and would be even more so if the much discussed future links are built. The State of Vermont is planning to build a bicycle and pedestrian bridge at the mouth of the Winooski River between Burlington and Colchester next year. This will increase recreational and commuter traffic on the path by connecting with the Colchester bike network, improving transportation options in Chittenden County. It is these types of

transportation links that are a focus of the Chittenden County Metropolitan Planning Organization.

Currently, Burlington Public Works is working with a consultant to study the north/south on-road options for bicyclists and pedestrians traveling to and from the central commercial district. As part of this study, the consultant will also look at improving the on-road network by identifying east/west transportation connections to downtown. The Burlington waterfront bike path is an important transportation link with north/south and east/west connections in the city. Improvements to the path will greatly enhance the effectiveness of these alternative transportation modes in the city.

B. IS THE PROJECT RESPONSIVE TO A COMMUNITY NEED

This project is very responsive to the community's desire to see more transportation and recreation alternatives for the reasons stated above.

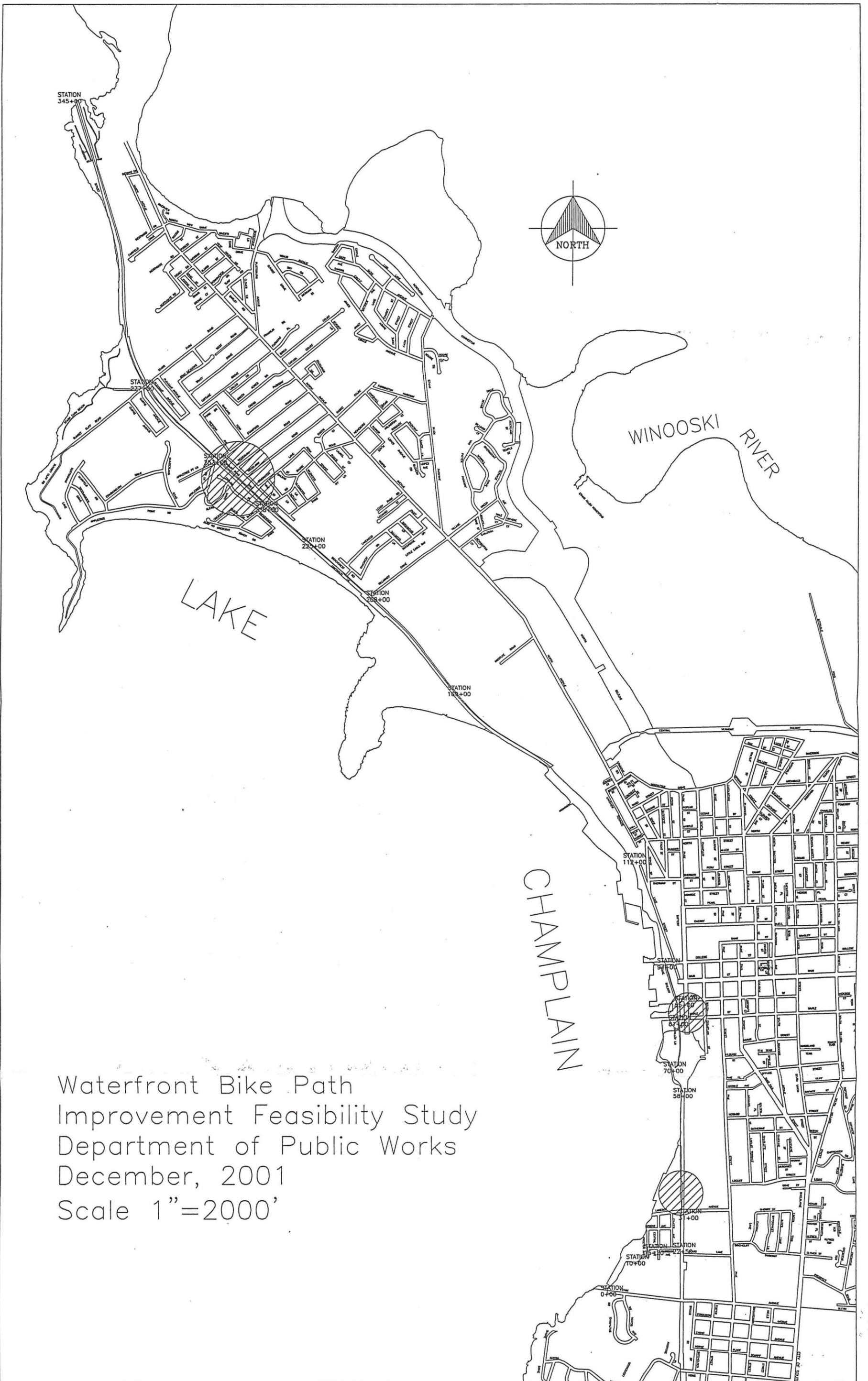
C. IS THE PUBLIC GOOD SERVED BY SPENDING LOCAL, STATE, AND FEDERAL DOLLARS ON THESE IMPROVEMENTS

These improvements are very crucial in the continuing expansion of options to today's average path user and commuter. Due to the large number of current users and the anticipated growth in users the bike path needs to be brought up to the current design standards to ensure safety. There also is the economic side of the issue - with over 1,000 users daily at peak times looking for small amenities, lunch or shopping on Burlington's waterfront of downtown – the path is an economic benefit to the city and state.

D. ARE THERE OTHER CONSIDERATIONS THAT SHOULD BE MADE BEFORE THIS PROJECT IS ADVANCED?

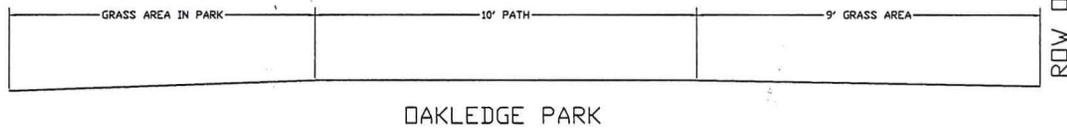
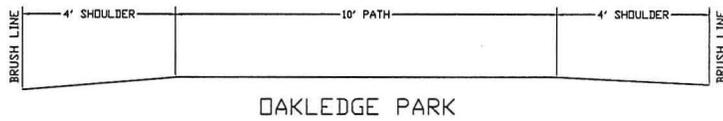
Improvements continue annually on the path, but are restricted to current funding. Current funding allows for maintenance where needed, but could not cover the necessary improvements. The current path was identified 20 years ago as the right location since it is mostly a former railroad right-of-way, travels along the waterfront and is easy to access from Burlington's neighborhoods, its downtown and the waterfront.

APPENDIX A
Reference Map
Existing Cross Sections

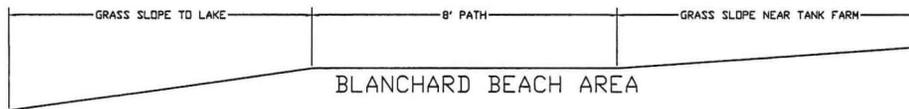


Waterfront Bike Path
 Improvement Feasibility Study
 Department of Public Works
 December, 2001
 Scale 1"=2000'

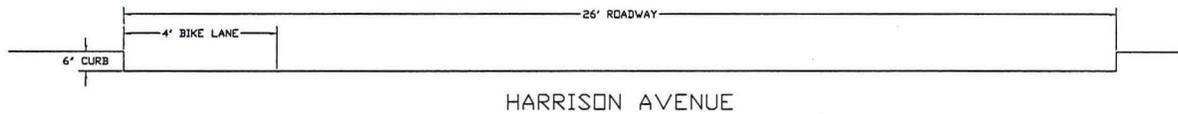
WATERFRONT BIKE PATH CROSS SECTIONS



STATION 0+00 TO 10+00



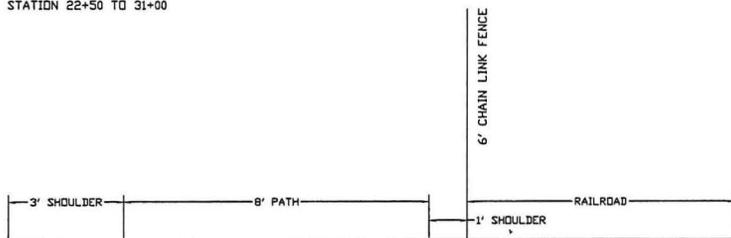
STATION 15+20 TO 22+50



SCALE 1"=5'

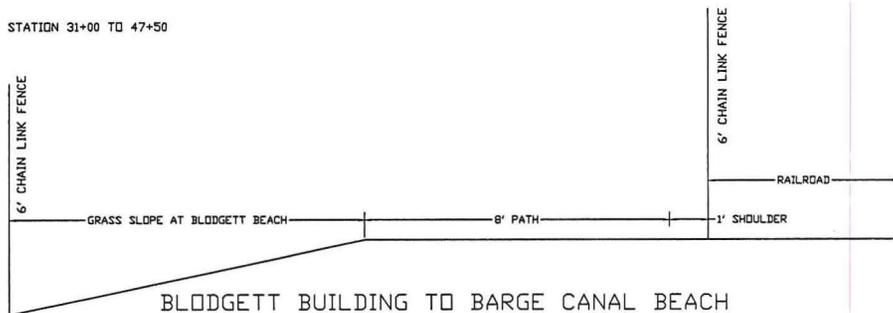
WATERFRONT BIKE PATH CROSS SECTIONS

STATION 22+50 TO 31+00



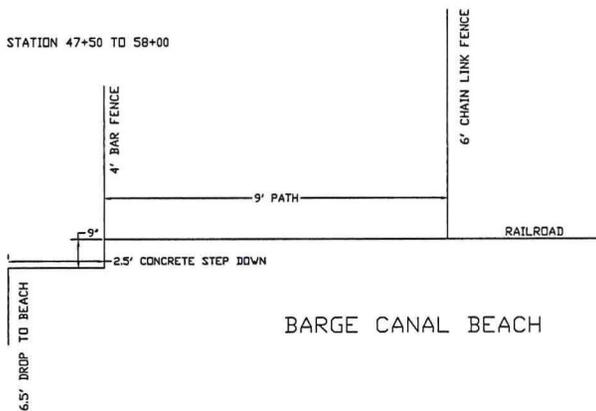
HARRISON AVE TO BLODGETT BUILDING

STATION 31+00 TO 47+50



BLODGETT BUILDING TO BARGE CANAL BEACH

STATION 47+50 TO 58+00

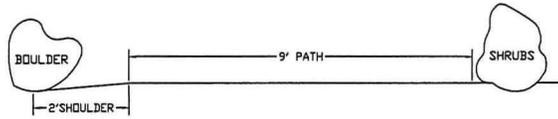


BARGE CANAL BEACH

SCALE 1"=5'

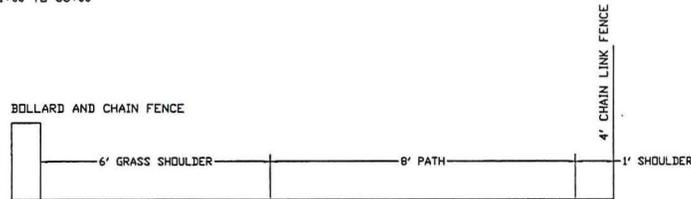
WATERFRONT BIKE PATH CROSS SECTIONS

STATION 70+00 TO 75+00



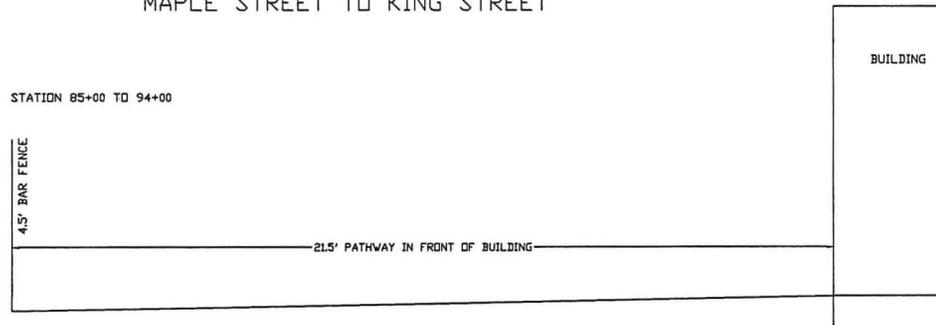
TREATMENT PLANT

STATION 81+00 TO 85+00



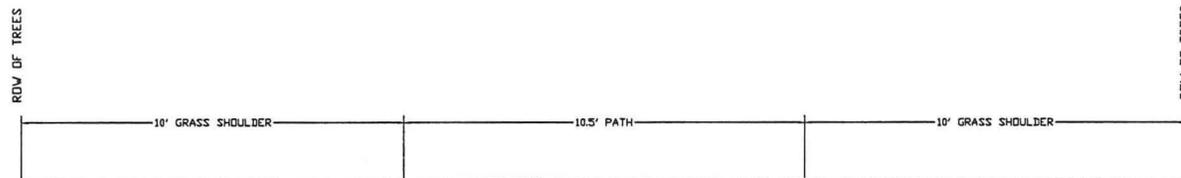
MAPLE STREET TO KING STREET

STATION 85+00 TO 94+00



KING STREET TO COLLEGE STREET

STATION 95+00 TO 112+00

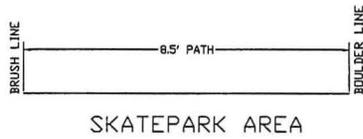


WATERFRONT PARK

SCALE 1"=5'

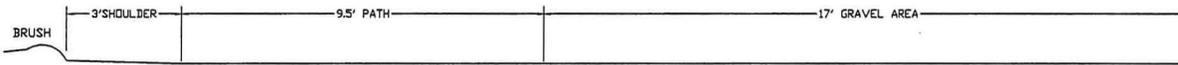
WATERFRONT BIKE PATH CROSS SECTIONS

STATION 114+00



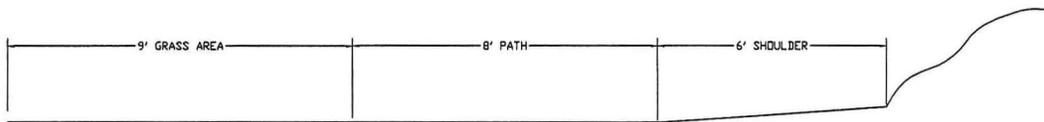
SKATEPARK AREA

STATION 114+00 TO 145+00



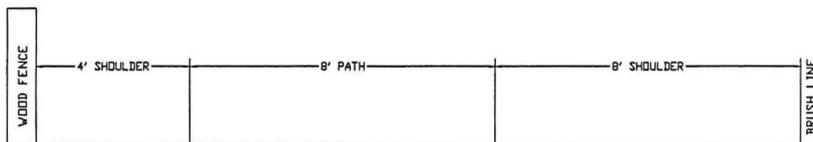
URBAN RESERVE

STATION 145+00 TO 169+00



URBAN RESERVE TO NORTH BEACH

STATION 169+00

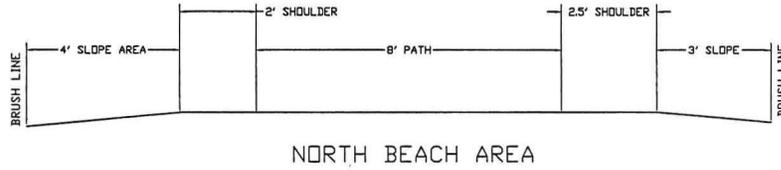


OVERLOOK BEFORE NORTH BEACH

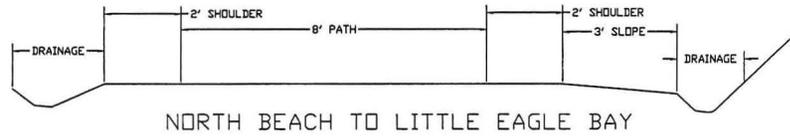
SCALE 1"=5'

WATERFRONT BIKE PATH CROSS SECTIONS

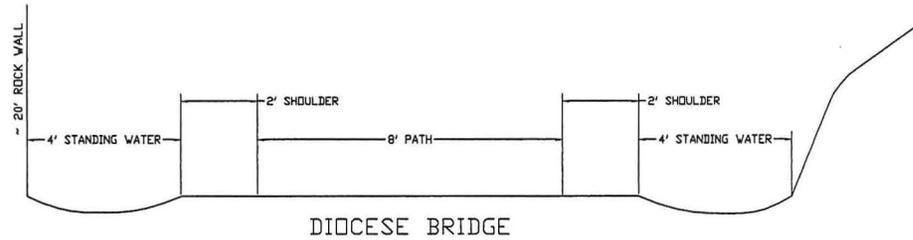
STATION 169+00 TO 189+00



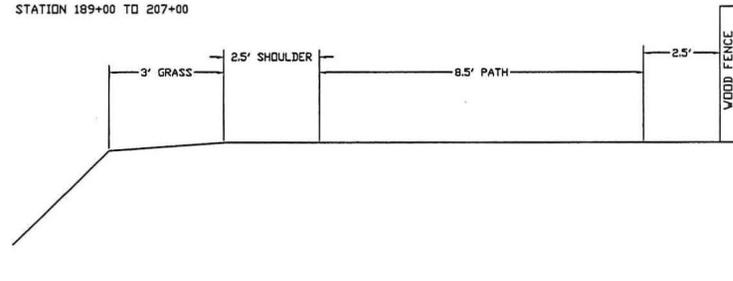
STATION 189+00 TO 207+00



STATION 189+00



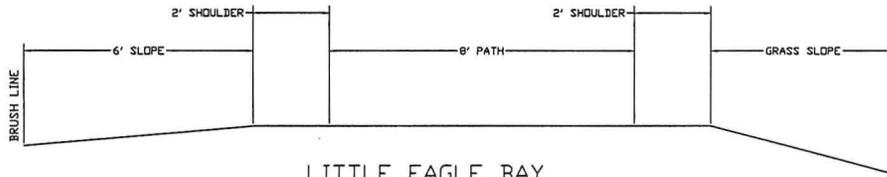
STATION 189+00 TO 207+00



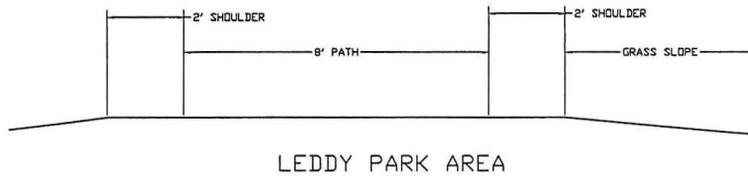
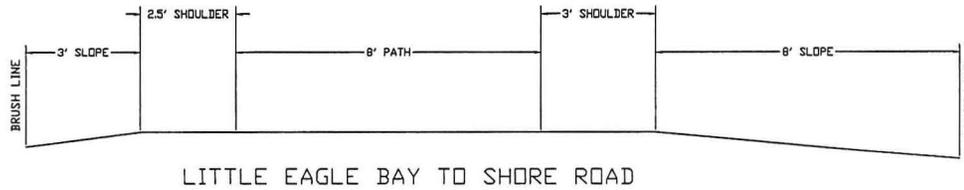
SCALE 1"=5'

WATERFRONT BIKE PATH CROSS SECTIONS

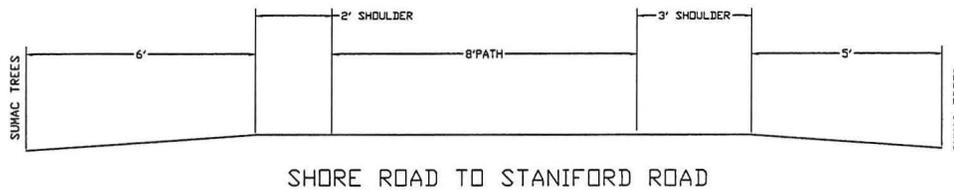
STATION 207+00 TO 209+00



STATION 209+00 TO 238+00



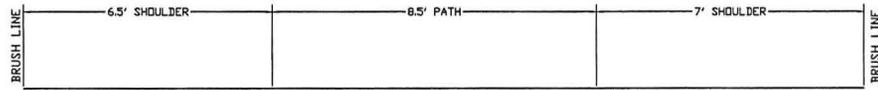
STATION 238+00 TO 253+00



SCALE 1"=5'

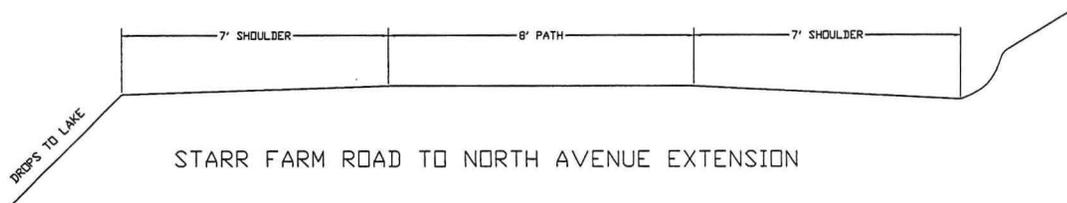
WATERFRONT BIKE PATH CROSS SECTIONS

STATION 253+00 TO 277+00



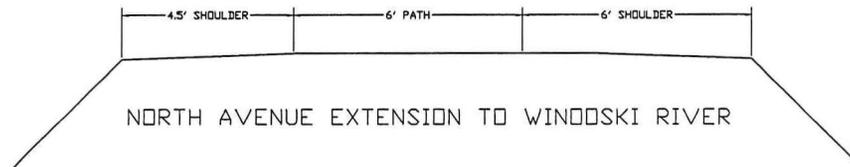
STANIFORD ROAD TO STARR FARM ROAD

STATION 277+00 TO 330+00



STARR FARM ROAD TO NORTH AVENUE EXTENSION

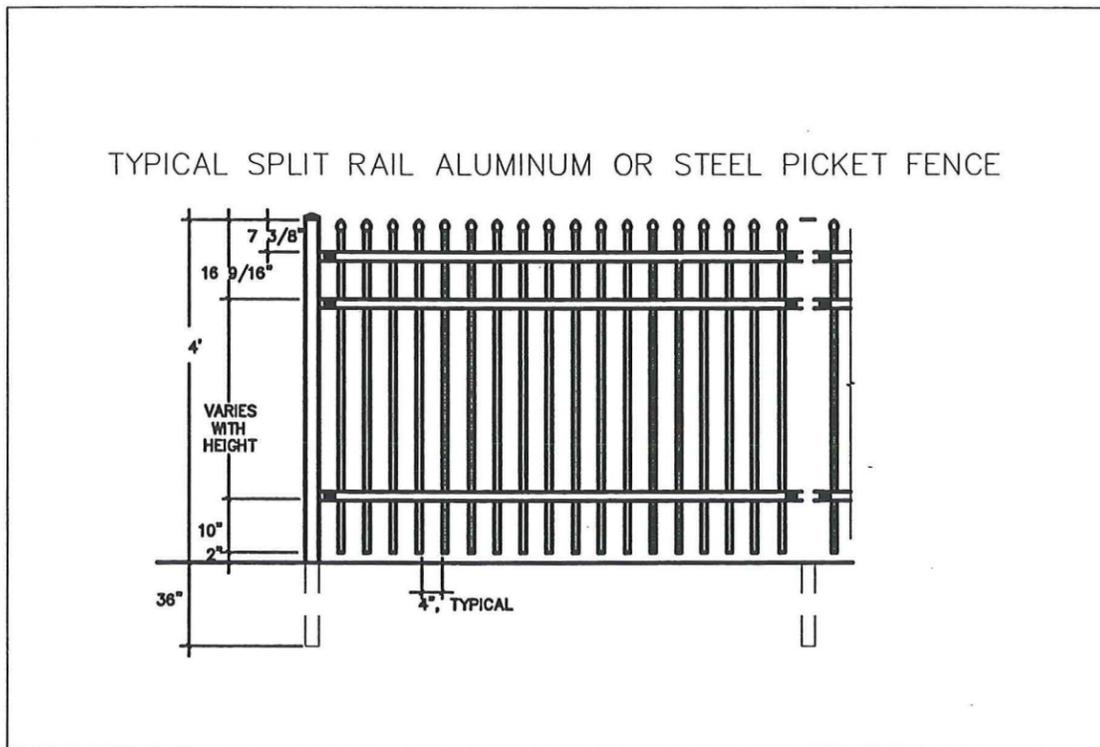
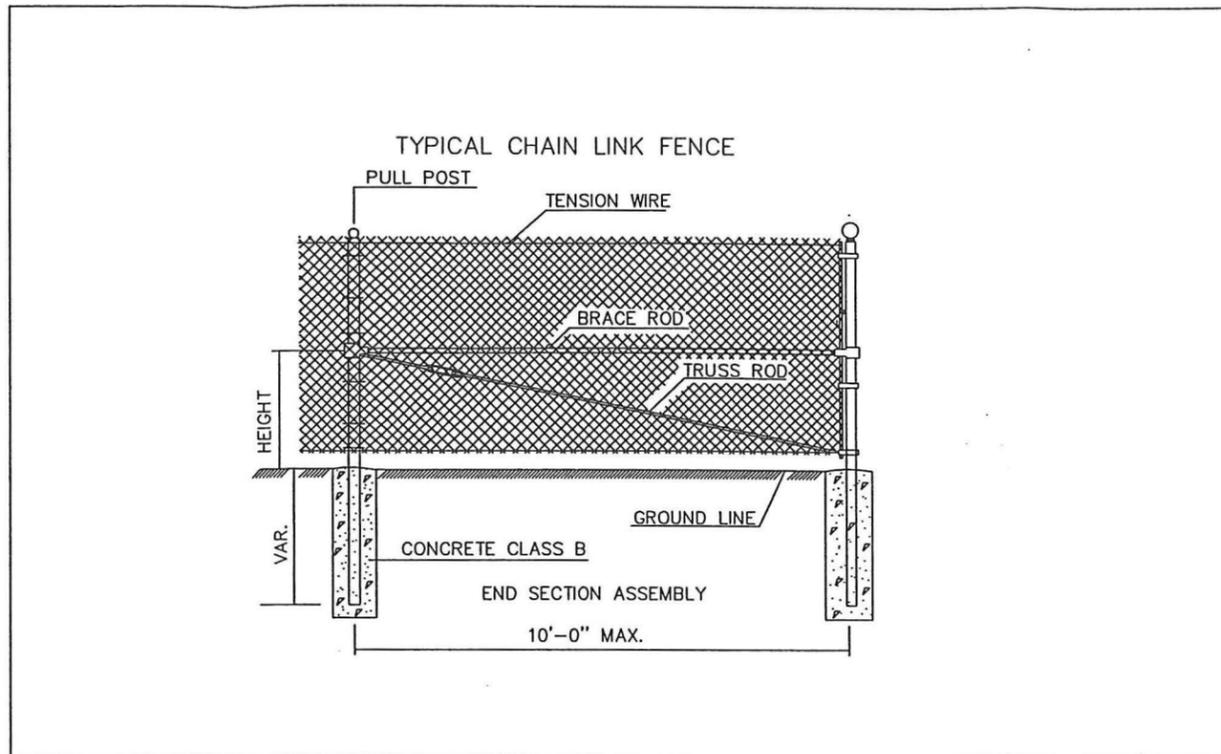
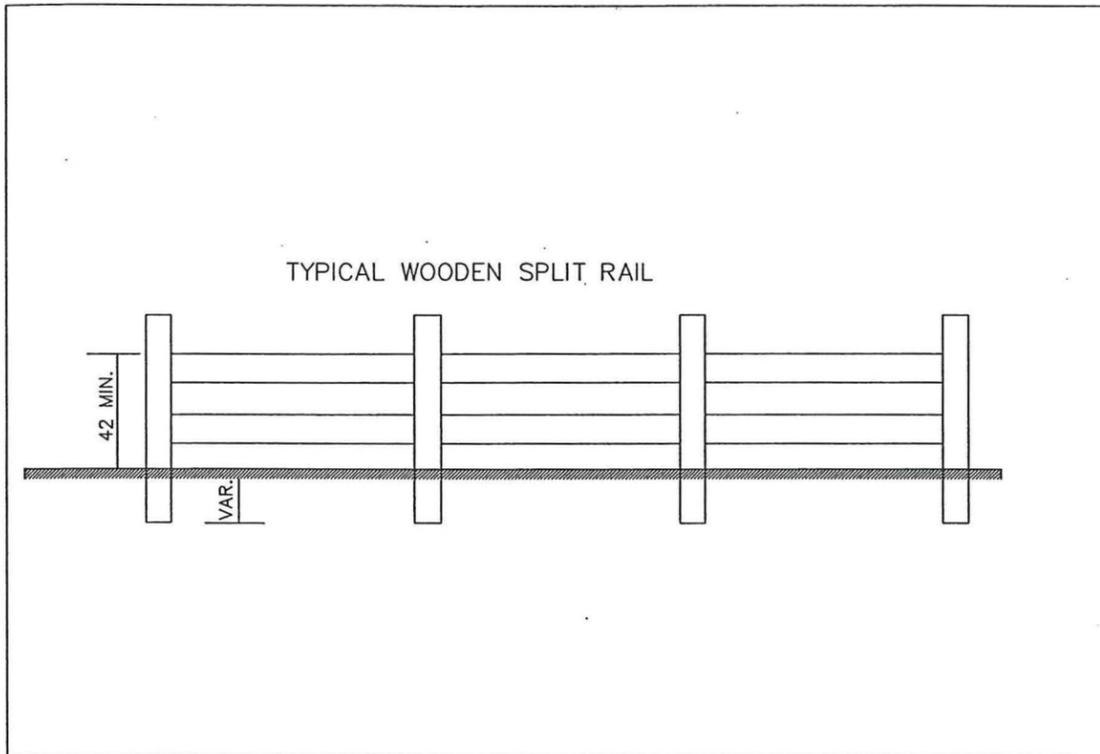
STATION 330+00 TO 345+00



NORTH AVENUE EXTENSION TO WINOOSKI RIVER

SCALE 1"=5'

APPENDIX B
Design Guidelines
Fencing
Typical Cross Section



**BURLINGTON
PUBLIC WORKS**

645 PINE STREET
BURLINGTON, VT 05401
(802) 863-8094
(802) 863-0468 (Fax)

NO.	DATE	REVISION DESCRIPTION	CHECKED

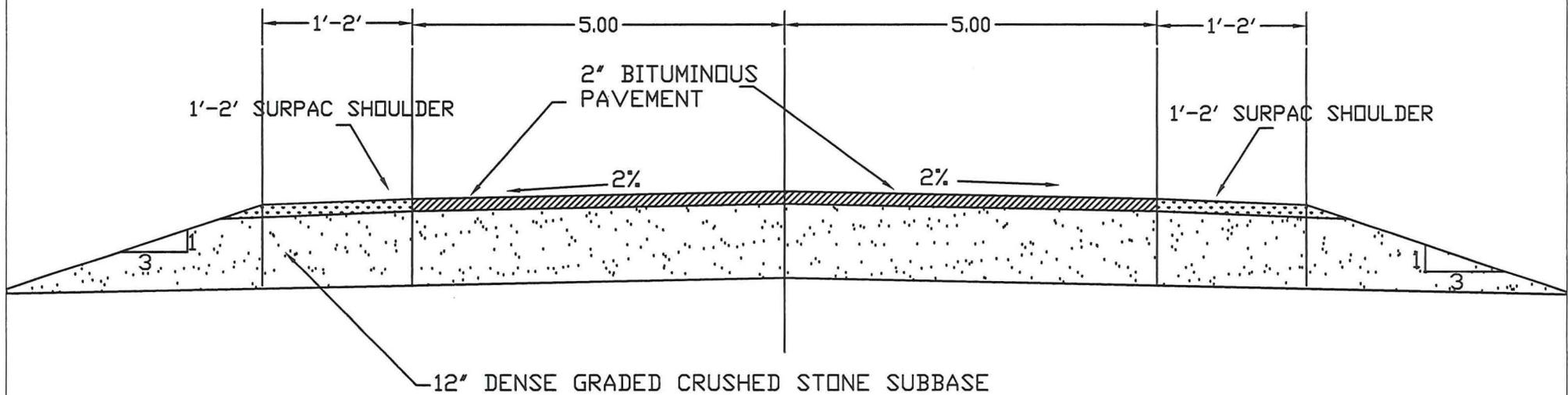


ENGINEERING DIVISION
WATERFRONT BIKE PATH
IMPROVEMENT FEASIBILITY STUDY
FENCING DESIGN GUIDELINES

DESIGNED	PROJECT NO.
DRAWN	SCALE VARIES
CHECKED	DRAWING NO.
DATE 8/12/02	SHEET OF

WATERFRONT BIKE PATH DESIGN GUIDELINES

TYPICAL 10' SECTION



SCALE 1"=2'

APPENDIX C
Proposed Improvements Summary
Conceptual Realignment Sketches

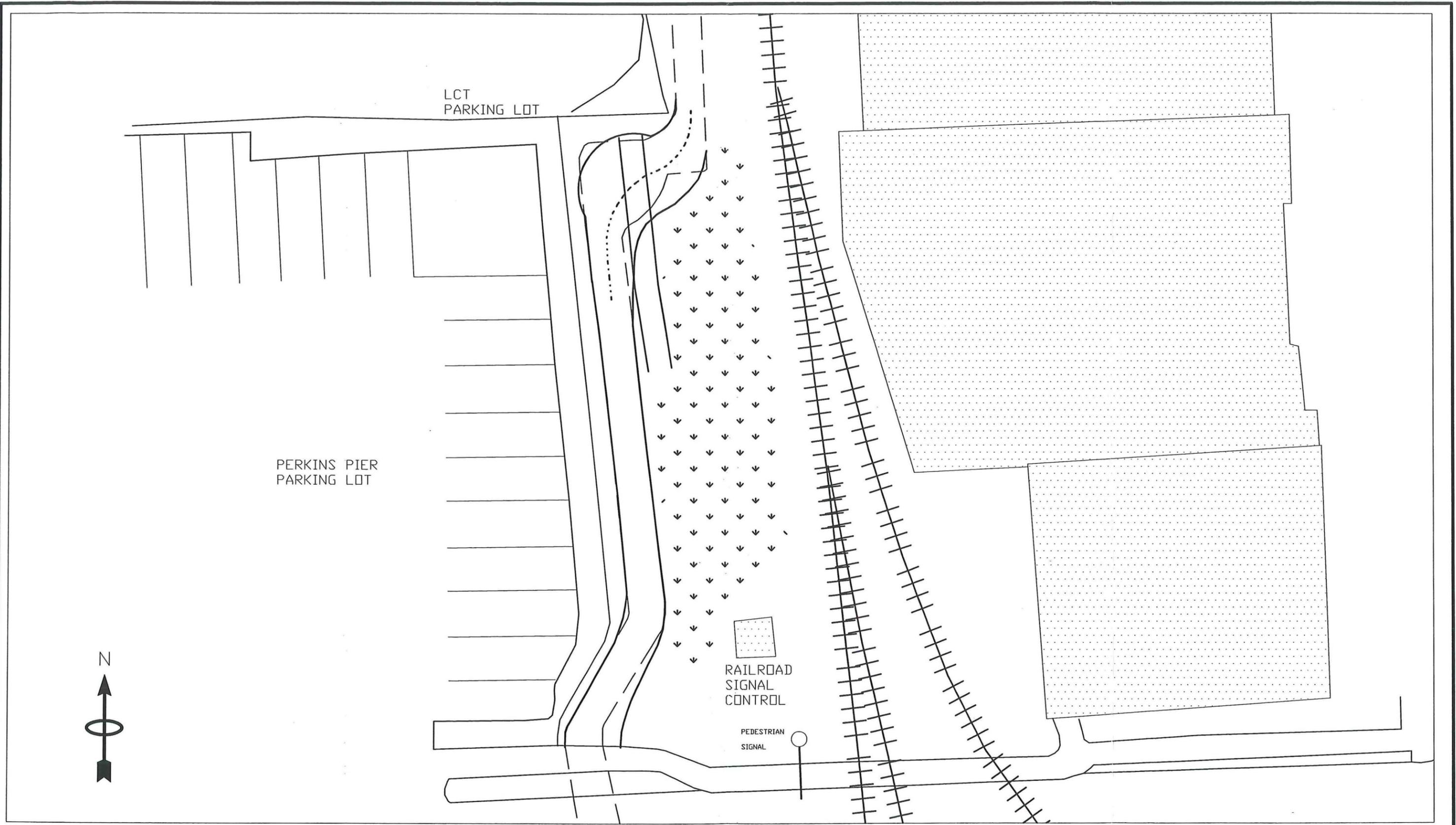
Bike Path Improvement Feasibility Study
 Summary of Proposed Improvements
 8/1/02

Section Treatment	Oakledge to Harrison	Harrison Ave to Blodgett Bldg.	Blodgett Bldg. to Barge Canal Beach	Barge Canal Beach to Treatment Plant	Treatment Plant to Perkins Pier (Maple St.)	Perkins Pier to King Street	King St to College St.	College St. to Lake St.	Lake St. thru Urban Reserve	Urban Reserve to North Beach	North Beach to Little Eagle Bay	Little Eagle Bay to Shore Road	Shore Road to Staniford Road	Staniford Road to Starr Farm Road	Starr Farm Road to North Ave Ext.	North Ave. Ext. to End.	Totals
Overlay	1100'@10'		400'@8' 1250'@10'	300'@8' 900'@10'	300'@10'	400'@10'		1800'@12'		2400'@10'	200'@8' 3700'@10'	3000'@10'	300'@8' 1200'@10'	2400'@10'	5300'@10'	1500'@10'	265700 sf
Grind and Pave	420'@10'	850'@8'							3300'@10'								44000 sf
Surface Reconstruction				1050'@8'	800'@8'												14800 sf
Shoulders (1.5' each side)	1520'		1250'	2250'	600'	400'		1800'	3300'	2400'	3700'	3000'	1200'	2400'	5300'	1500'	91860 sf
Widening*	1520' ₂		1250' ₂	2250' ₂	600' ₂	400' ₂		1800' ₂	3300' ₂	2400' ₂	3700' ₂	3000' ₂	1200' ₂	2400' ₂	5300' ₂	1500' ₁₊	59740 sf
Realign			300'@10'			400'@10'							300'@10'				10000 sf
Improve Drainage (grading, new catch basins)	X	X		X						X	X						
Clean Culverts	X									X	X						
Fence/Curb**	200' ₁			1050' ₁	300' ₁	100' ₂			3300' ₁	2400' ₁	400' ₁				800' ₁	2500' ₁	11050 lf
Signs/Striping	X	X			X	X	X	X	X		X	X	X	X	X		
Clearing		X	X	X					X					X			
Utility Relocation									X				X				
Erosion Control										X	X				X		
Railroad Issues			X			X			X								

* 1 = Widen by 1' 2 = Widen by 2'

** 1 = New /Replacement 2 = Move/Relocate

Note: Overlay and shoulder rehabilitation is recommended wherever widening is proposed.



LEGEND

	BUILDING		PROPOSED PATH CENTERLINE
	EXISTING PATH		FENCE
			RAILROAD

**BURLINGTON
PUBLIC WORKS**

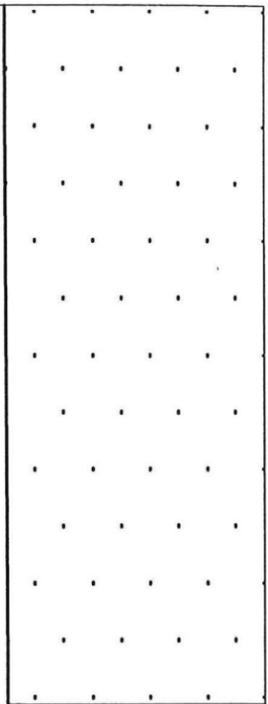
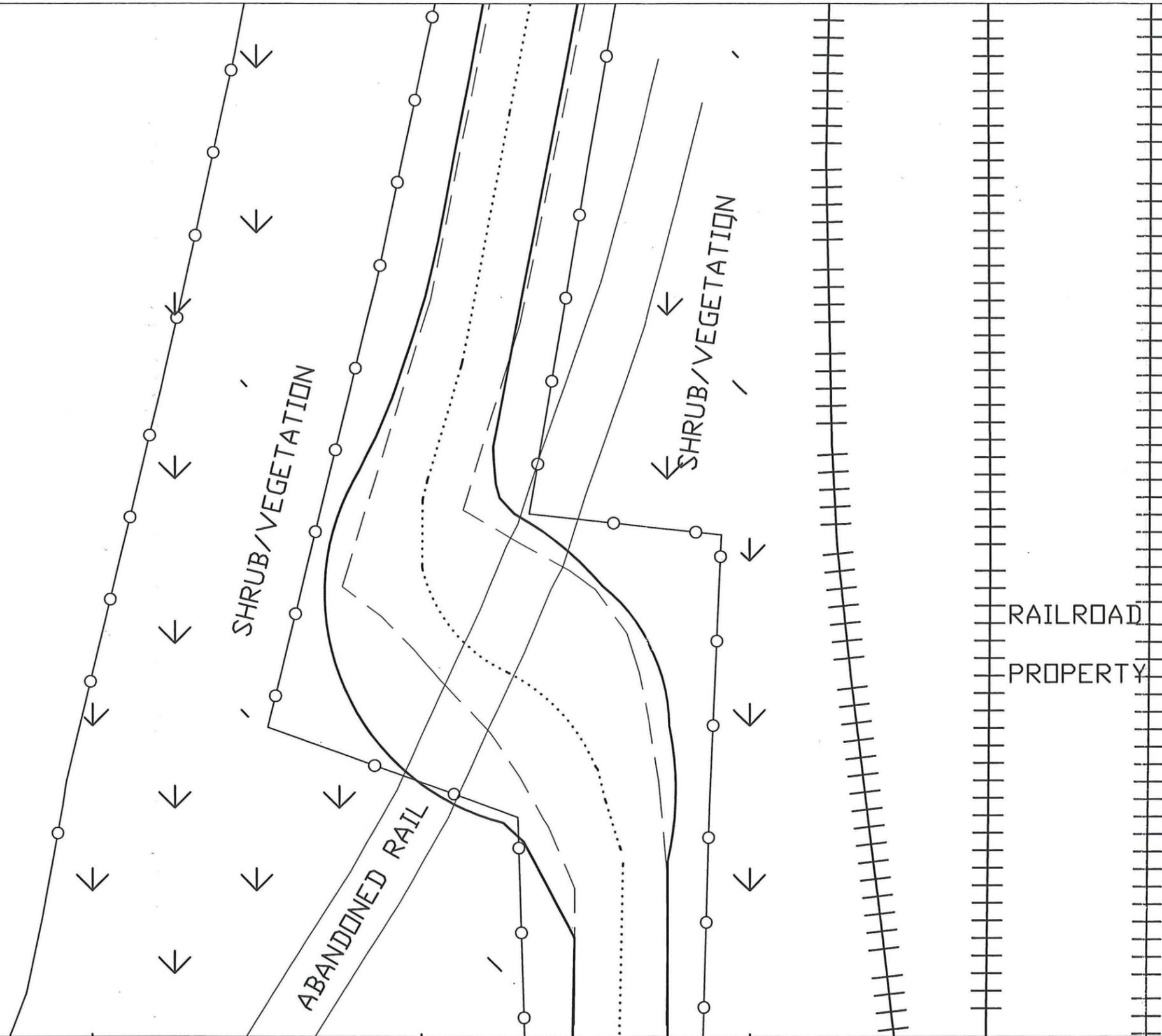
845 PINE STREET
BURLINGTON, VT 05401
(802) 863-9094
(802) 863-0468 (Fax)

NO.	DATE	REVISION DESCRIPTION	CHECKED

ENGINEERING DIVISION		DESIGNED	PROJECT NO.
		CWD/JCR	
WATERFRONT BIKE PATH IMPROVEMENT FEASIBILITY STUDY		DRAWN	SCALE
		RG	1"=20'
CONCEPTUAL REALIGNMENT - BLODGETT CURVE		CHECKED	DRAWING NO.
DATE			SHEET
			OF



BLODGETT
PROPERTY



LEGEND	
	BUILDING
	PROPOSED PATH
	PROPOSED PATH CENTERLINE
	FENCE
	EXISTING PATH
	RAILROAD

**BURLINGTON
PUBLIC WORKS**
645 PINE STREET
BURLINGTON, VT 05401
(802) 863-9094
(802) 863-0466 (Fax)

NO.	DATE	REVISION DESCRIPTION	CHECKED



ENGINEERING DIVISION
**WATERFRONT BIKE PATH
IMPROVEMENT FEASIBILITY STUDY**
CONCEPTUAL REALIGNMENT - KING/MAP

DESIGNED JCR/CWD	PROJECT NO.
DRAWN RG	SCALE 1"=10'
CHECKED	DRAWING NO.
DATE E/12/02	SHEET OF

APPENDIX D
List of Abutting Landowners

TAX YEAR	MAPLOTNO	PIN	OWNER NAME	OWNER
2,001.00	020-3-012-000	298280740577	AUER IDA M ET AL	
2,001.00	020-3-015-000	298378740302	Goldsmith Laurie.	
2,001.00	020-3-016-000	298404740233	PARKER MAURICE & LOIS	
2,001.00	020-3-017-000	298430740160	SHAPPY JOHN A II	
2,001.00	020-3-019-000	298469740063	BORTZ TOR D & LORENA K	
2,001.00	020-3-020-000	298481740025	BORTZ TOR D & LORENA K	
2,001.00	020-3-021-000	298500739976	SHAPPY II JOHN	LAKE CHAMPLAIN CAM
2,001.00	020-3-022-000	298432740788	WINROCK DAVID	
2,001.00	020-3-024-000	298461740698	LABELLE ALFRED GUY	
2,001.00	020-3-026-000	298432740912	WINOOSKI VALLEY PARKS DISTRICT	
2,001.00	020-3-029-000	298293740997	PARKS (CITY) PARKS DEPT	END OF BIKE PATH
2,001.00	021-1-002-000	298528739922	LABOMBARD CHARLES H & IRENA H	
2,001.00	021-1-003-000	298687739901	ROBEAR EDWARE & THELMA	
2,001.00	021-1-004-000	298674739976	SHAPPY DEAN & CATHY BENOIT	
2,001.00	021-1-005-000	298674740048	SHAPPY JOHN ALLEN & BETTY	
2,001.00	021-1-006-000	298652740129	LAFRAMBOISE PAULINE D	
2,001.00	021-1-007-000	298635740204	SHAPPY EMERALD R & MADELINE	
2,001.00	021-1-008-000	298619740267	SHAPPY JAMES R & LISA K	
2,001.00	021-1-009-000	298586740364	McBride Heidi	
2,001.00	021-1-010-000	298526740451	SOUTHWELL GUY L & CONSTANCE E	& HEATHER A
2,001.00	021-2-060-000	298818739740	BROWN LAWRENCE F &	MICHELINE S
2,001.00	021-2-061-000	299096739540	LARKIN JOHN INC	
2,001.00	021-2-064-000	298616739695	BEAUDOIN JESSICA A	
2,001.00	021-2-065-000	298595739779	Spadanuda P. Maria	
2,001.00	021-2-070-000	298695739148	LARKIN JOHN INC	
2,001.00	021-2-211-001	299264738685	HOWE REALE INC	
2,001.00	021-2-211-002	299264738685	MILLS JANICE L	
2,001.00	021-2-211-003	299264738685	KORY MARIANNE	
2,001.00	021-2-211-004	299264738685	BONGAVENE WILLIAM & GAIL R B	
2,001.00	021-2-211-005	299264738685	BREMSEMER MARIE SUNDMAN	
2,001.00	021-2-211-006	299264738685	ANDERSON MEREDITH	
2,001.00	021-2-211-007	299264738685	TAYLOR LINNEA D (TRUSTEE)	
2,001.00	021-2-211-008	299264738685	DEPPMAN JOHN C & CLARA YU	
2,001.00	021-2-211-009	299264738685	HUGHES JANICE T	
2,001.00	021-2-211-010	299264738685	NOONAN GREGORY & NANCY	
2,001.00	021-2-211-011	299264738685	CARSON JOANN Q & HARRY P	
2,001.00	021-2-211-012	299264738685	BURGESS DONALD & JUDITH	
2,001.00	021-2-211-013	299264738685	HORENSTEIN DONALD N &	MARY ANN
2,001.00	021-2-211-014	299264738685	CALL ROBERT & LOIS A	
2,001.00	021-2-211-015	299264738685	BALLARD JOHN F & MICHELLE M	
2,001.00	021-2-211-016	299264738685	ARCAND BARBARA J &	ROGER WOODS & BA
2,001.00	021-2-211-017	299264738685	COUTURE MICHAEL D &	NANCY G CATHCART
2,001.00	021-2-211-018	299264738685	DUVAL DONLON A J & CARMEL M	
2,001.00	021-2-211-019	299264738685	ABRUSCATO JOSEPH	
2,001.00	021-2-211-020	299264738685	NIEF RONALD P & CATHERINE C	
2,001.00	021-2-211-021	299264738685	ROBINSON JEANETTE	
2,001.00	021-2-211-022	299264738685	DWYER SARAH F.	
2,001.00	021-2-211-023	299264738685	YAW W. STEPHEN	
2,001.00	021-2-211-024	299264738685	GREENE JAMES J	
2,001.00	021-2-211-025	299264738685	HOOD VIRGINIA LOUISE	
2,001.00	021-2-211-026	299264738685	WHITCOMB PHYLLIS E	
2,001.00	021-2-211-027	299264738685	FLINTROP ALFONS & PAULA	
2,001.00	021-2-211-028	299264738685	BARROWS HARRIET	
2,001.00	021-2-211-029	299264738685	SCHITTINA MARK A &	JUANITA P
2,001.00	021-2-211-030	299264738685	HOSKER JAMES E & JEAN E	(CO-TRUSTEES)
2,001.00	021-2-211-031	299264738685	YOUNG MARY G	
2,001.00	021-2-211-032	299264738685	LEVI PATRICIA N &	PAUL A JR (CO-TRUS
2,001.00	021-2-211-033	299264738685	CHITTENDEN TRUST CO TRUSTEE OF	SARA O GLICKMAN T
2,001.00	021-2-211-034	299264738685	GRASS MARY G (TRUSTEE)	
2,001.00	021-2-211-035	299264738685	DIMAURO GRACE	
2,001.00	021-2-211-036	299264738685	BESSER HELMUT	

TAX YEAR	MAPLOTNO	PIN	OWNER NAME	OWNER
2,001.00	021-2-211-037	299264738685	SCHALLER HUBERT	37 NORTHSHORE DR
2,001.00	021-2-211-038	299264738685	SMALLWOOD FRANKLIN & ANN L	
2,001.00	021-2-211-039	299264738685	PELLETIER VINCENT D &	CORINNE A
2,001.00	021-2-211-040	299264738685	DUBOIS JOHN & ELIZABETH ROSSLER	13 WESTFIELD POIN'
2,001.00	021-2-211-041	299264738685	MERRIAM RAYLENE M	
2,001.00	021-2-211-042	299264738685	KANAN FADI	
2,001.00	021-2-211-043	299264738685	HINSDALE CLARK W JR	
2,001.00	021-2-211-044	299264738685	BEYERLEIN FREDERICK G (TRUST)	
2,001.00	021-2-211-045	299264738685	CUMMINGS RAE S	
2,001.00	021-2-211-046	299264738685	JOSEPHSON IRA	
2,001.00	021-2-211-047	299264738685	TAUBMAN STEVE	
2,001.00	021-2-211-048	299264738685	GALLAGHER KEVIN &	MICHAEL GILMAN
2,001.00	021-2-211-050	299264738685	TABAKIN BURTON & BEATRICE	
2,001.00	021-2-211-051	299264738685	CLARK NORMAN J & ROSEMARY A	
2,001.00	021-2-211-052	299264738685	DORIS WILLIAM L JR & KAREN N	
2,001.00	021-2-211-053	299264738685	ROMARY FRANK & MARY ROMARY	
2,001.00	021-2-211-054	299264738685	GARNO RICHARD C & ANITA M	
2,001.00	021-2-211-055	299264738685	CONNOR CATHERINE	
2,001.00	021-2-211-056	299264738685	ROOK CHARLES WRLES &	ROOK JEAN B
2,001.00	021-2-211-057	299264738685	Call Robert F.& Call Lois A.	
2,001.00	021-2-211-058	299264738685	POPE K DARIN	
2,001.00	021-2-211-059	299264738685	BRODIE LESLEY	
2,001.00	021-2-211-060	299264738685	PADUA HORACIO A & ADORACION &	HORACIO M JR
2,001.00	021-2-211-061	299264738685	DYE PAUL III ET AL	11 TAMARAC ROAD
2,001.00	021-2-211-062	299264738685	LYMINGTON ASSOCIATES INC	C/O ENVASES VENEZ
2,001.00	021-2-211-063	299264738685	SPAULDING ALBERT C & CAROLE S	
2,001.00	021-2-211-064	299264738685	LANDRY TIMOTHY	
2,001.00	021-2-211-065	299264738685	SANDBANK LISA	
2,001.00	021-2-211-066	299264738685	CANDIDO PAUL L & GAIL ENGELS	
2,001.00	021-2-211-067	299264738685	BOEDY DAVID LEE &	VALERIE J VISCONTI
2,001.00	021-2-211-068	299264738685	DOWE THOMAS W & ELIZABETH A	
2,001.00	021-2-211-069	299264738685	MALONEY JANET	
2,001.00	021-2-211-070	299264738685	DONAHUE FRANK E. AND CAROLYN	
2,001.00	021-2-211-071	299264738685	ADAMS DOROTHY B (TRUSTEE)	
2,001.00	021-2-211-072	299264738685	ALLEGREZZA RICHARD &	HANNELORE E
2,001.00	021-2-211-073	299264738685	WATSON JOHN A & JANE C EATON	
2,001.00	021-2-211-074	299264738685	KIMBRELL JANET L	
2,001.00	021-2-211-075	299264738685	LABRAKE JOANNE T	
2,001.00	021-2-211-076	299264738685	SHAPIRO SANDOR S	
2,001.00	021-2-211-077	299264738685	ROTELLA THOMAS H & SANDRA J	
2,001.00	021-2-211-078	299264738685	HEINS JUNE A	
2,001.00	021-2-211-080	299264738685	VIVIAN PHILIP H JR & ELAINE I	
2,001.00	021-2-211-081	299264738685	ROBOTTI GEORGE U & JEAN M	
2,001.00	021-2-211-082	299264738685	BYMAN DAVID	
2,001.00	021-2-211-083	299264738685	PREEFER RAYMOND R & DOROTHY R	
2,001.00	021-2-211-084	299264738685	RAYMOND ILSE GRAF	
2,001.00	021-2-211-085	299264738685	BERTONI JANE P	
2,001.00	021-2-211-086	299264738685	FOLEY JOHN J	
2,001.00	021-2-211-087	299264738685	GREENE PAUL M. & PAIGE LISA	
2,001.00	021-2-211-088	299264738685	DAIGNAULT ARTHUR C &	JOYCE C DAIGNAULT
2,001.00	021-2-211-089	299264738685	WRIGHT ALAN B & IMOGENE H	
2,001.00	021-2-211-090	299264738685	SABA DOROTHY	
2,001.00	021-2-211-091	299264738685	GOGO PROSPERO	
2,001.00	021-2-211-092	299264738685	HOWARD BANK THE & IRENE LYONS MU	MARIE MATTSON (C
2,001.00	021-2-211-093	299264738685	CASTELLO KATHLEEN	
2,001.00	021-2-211-094	299264738685	PROVOST JAMES & KAROL	
2,001.00	021-2-211-095	299264738685	WIZOWATY JEROLD &	WIZOWATY JUDITH
2,001.00	021-2-211-096	299264738685	BREMER JACK WILLIAM	
2,001.00	021-2-211-097	299264738685	MCCORMICK ANNE	97 NORTHSHORE DF
2,001.00	021-2-211-098	299264738685	ROBERT CONSTANCE F C/O CHIT BANK	ATTN LOUIS BEAULII
2,001.00	021-2-211-099	299264738685	REDMOND DENNIS A & JEAN E	
2,001.00	021-2-211-100	299264738685	MONTANARI HELEN S	

TAX YEAR	MAPLOTNO	PIN	OWNER NAME	OWNER
2,001.00	021-2-211-101	299264738685	MCKEON M. & BARBARA CAITI	101 NORTHSHORE DI
2,001.00	021-2-211-102	299264738685	DUNKLING DELTON R & DIANE	
2,001.00	021-2-211-103	299264738685	ROCK RICHARD W III &	NANCY L ILLEMANN
2,001.00	021-2-211-104	299264738685	WOLYNIES RICHARD & ANNE R	
2,001.00	021-2-211-105	299264738685	CALHOUN PAUL A & JOANNE S	
2,001.00	021-2-211-106	299264738685	GARNO DOUGLAS T & VIRGINIA G	
2,001.00	021-2-211-107	299264738685	TYLER JANET L	
2,001.00	021-2-211-108	299264738685	GLASSBERG MARTIN M & JULIE	
2,001.00	021-2-211-109	299264738685	KOHL BENEDICT M & LINDA	
2,001.00	021-2-211-110	299264738685	TARRANT BRIAN J	
2,001.00	021-2-211-111	299264738685	BEATTY GERARD	
2,001.00	021-2-211-112	299264738685	FACKELMANN FRANZ & ROSA	
2,001.00	021-2-211-113	299264738685	SBARRA ROSEANN M.	
2,001.00	021-2-211-114	299264738685	SHAYER SONJA R	
2,001.00	021-2-211-115	299264738685	RAYMOND CARLA A	
2,001.00	021-2-211-116	299264738685	POPLASKI HENRY JR	
2,001.00	021-2-211-117	299264738685	AUSTIN JAMES F	
2,001.00	021-2-211-118	299264738685	SWARTWOUT THOMAS H &	M. KATHRYN
2,001.00	021-2-211-119	299264738685	ZABRISKIE REV ALEXANDER C &	MARGUERITTE M (CC
2,001.00	021-2-211-120	299264738685	MCELVAIN RALPH C & PEGGY P	
2,001.00	021-2-211-121	299264738685	GELINAS DAVID C & MARGARET A	
2,001.00	021-2-211-122	299264738685	WEIS JAMES J & JENNIFER	
2,001.00	021-2-211-123	299264738685	PASTORE JOHN F	
2,001.00	021-2-211-124	299264738685	RUPE MARY LYNN	
2,001.00	021-2-211-125	299264738685	FELT JEREMY P & BETSY A BERRY	
2,001.00	021-2-211-126	299264738685	GOMEZ ANTONIO	
2,001.00	021-2-211-127	299264738685	KENT STEVEN S &	CHRISTINE L HUTTO.
2,001.00	021-2-211-128	299264738685	SWANSON JOHN C	
2,001.00	021-2-211-129	299264738685	BINKERD CHAD R	
2,001.00	021-2-211-130	299264738685	TREMMEL CARL G & MARY P	
2,001.00	021-2-211-131	299264738685	BRANDENBURG RICHARD G &	MAXINE A (TRUSTEE
2,001.00	021-2-211-132	299264738685	WATSON ROY H III	
2,001.00	021-2-211-133	299264738685	MARMELSTEIN JERRY &	ANNE MARIE STANLE
2,001.00	021-2-211-134	299264738685	SHAPIRO DAVID &	SUSAN KERVAN
2,001.00	021-2-211-135	299264738685	REDFIELD RONALD & MARGARET	
2,001.00	021-2-211-136	299264738685	WHITTIER DENISE M	
2,001.00	021-2-221-000	298947739099	THE VILLAGE AT NORTHSHORE I ASSOC	C/O PARK PLACE MA
2,001.00	023-1-006-000	299180737652	PARKS (CITY)	PARKS DEPARTMEN
2,001.00	023-2-009-000	299373735656	PARKS (CITY)	PARKS DEPARTMEN
2,001.00	027-1-003-000	300138734321	BREW LINDA S	
2,001.00	027-1-004-000	300094734381	HARRIS NEIL S &	JILL S BANNING
2,001.00	027-1-005-000	300049734430	CAAMANO MANUAL &	ALLISON J PLUMLEY
2,001.00	027-1-006-000	300000734502	SUNDARABHAYA NOPADON &	SANDRA B
2,001.00	027-1-007-000	299896734380	SCHOMODY STEPHEN G & SUSAN J	
2,001.00	027-1-008-000	299932734292	CASEY BETSEY K &	FRANCIS J CASEY
2,001.00	027-1-009-000	299977734226	CARDELL JAMES F &	JACQUELINE H
2,001.00	027-1-010-000	300018734177	BENOIT DAVID P & MATTIE R	
2,001.00	027-1-011-000	300071734128	THOMAS GEORGE C & PATRICIA M	
2,001.00	027-1-012-000	300103734067	BROWN LEE MITCHELL &	BARBARA P
2,001.00	027-1-013-000	300148734012	BROWN ABIGAIL C	
2,001.00	027-1-014-000	300213733955	SCHROETER MARK & JANET	
2,001.00	027-1-061-000	298245734244	FLYNN EST J J TRUSTEE C/O STARR FA	ATTN PRISCILLA S K
2,001.00	027-1-061-030	298245734244	FOLLETT BEN B & ELSIE M	
2,001.00	027-1-061-035	298245734244	BOARDMAN DANIEL M & HOLLY A	639 CARPENTER RO
2,001.00	027-1-061-040	298245734244	DUNN CHRISTOPHER W &	KATHLEEN K
2,001.00	027-1-061-045	298245734244	WILLIAMS TIMOTHY J. ET AL	
2,001.00	027-1-061-055	298245734244	ROACH WILLIAM FRANCIS &	JUDITH A
2,001.00	027-1-061-060	298245734244	ALLEN JEFFREY S & SUSAN HETMAN	L/U CYNTHIA E LEAF
2,001.00	027-1-061-065	298245734244	ROBINS PATRICK S ET AL	C/O KATHERINE P P
2,001.00	027-1-061-070	298245734244	TRAHAN JACQUES C & JEAN W	
2,001.00	027-1-061-075	298245734244	BLOHM WILLIAM & PATRICIA	
2,001.00	027-1-061-080	298245734244	PARKHILL WILLIAM &	CAROL HINSON

TAX YEAR	MAPLOTNO	PIN	OWNER NAME	OWNER
2,001.00	027-1-061-085	298245734244	RAMSEY JOHN T &	BEATRICE G (CO-TRU: 143 NASHAWAY ROAD
2,001.00	027-1-061-090	298245734244	CURLEY GERALD L & LAURA C	
2,001.00	027-1-061-095	298245734244	BOARDMAN DAVID M	WILLIAM M & PETER H GERI A REILLY
2,001.00	027-1-061-100	298245734244	SISSON PAUL R & STEPHEN D &	
2,001.00	027-1-061-105	298245734244	SIMONEAU MICHAEL S &	26 STANIFORD ROAD & JOAN LYONS & DAN WILLIAM T & DAVID R
2,001.00	027-1-061-110	298245734244	LEE KENNETH R & KATHLEEN P	
2,001.00	027-1-061-115	298245734244	WIEMANN RICHARD H	VICTORIA S C/O GLENN PARKER SHEA-SMITH SARAH
2,001.00	027-1-061-120	298245734244	FITCH FAMILY TRUST	
2,001.00	027-1-061-125	298245734244	RAMSEY JOHN T JR & CONNIE 1/2	ANDREW W RAMSEY PATRICIA M
2,001.00	027-1-061-130	298245734244	MITCHELL NANCY H & M JAMES &	
2,001.00	027-1-061-135	298245734244	GARDNER KELLEY R & STEPHEN M	KATHERINE A
2,001.00	027-1-061-140	298245734244	PORTEOUS DAVID C &	
2,001.00	027-1-061-145	298245734244	WING CONSULTANTS INC	PATRICIA ANN
2,001.00	027-1-061-150	298245734244	SMITH STEPHEN C &	
2,001.00	027-1-061-155	298245734244	LITTLE THOMAS A	GAIL M SHAMPNOIS WILLIAM D COIL
2,001.00	027-1-061-160	298245734244	SULLIVAN RAYMOND P	
2,001.00	027-1-061-165	298245734244	KOUSEN VIRGINIA L &	DEBORAH ALICIA JON
2,001.00	027-1-061-170	298245734244	MARTONE PASQUALE GEORGE &	
2,001.00	027-1-061-175	298245734244	DOWE THOMAS W & ELIZABETH F	JOANN & CHARLES O ET AL WITH L/U A V T ASSOCIATES LIMITEC
2,001.00	027-3-020-000	301558733281	WEISMAN GERALD & JANETTE E	
2,001.00	027-3-021-000	301491733299	MCNAYR DANIEL B & SUSAN R	ELIZABETH M
2,001.00	027-3-022-000	301410733331	BESSETTE RICHARD &	
2,001.00	027-3-023-000	301327733362	Lorraine, Jr. Derek & Jimmo Christy	JOAN GALLINI
2,001.00	027-3-024-000	301271733415	SCHMITT NEALE P & JOANNE M	
2,001.00	027-3-025-000	301174733528	LAVERY PETER A & CAROL G	
2,001.00	027-3-026-000	301133733589	LAVERY PETER A & CAROL M	
2,001.00	027-3-027-000	301085733645	LAVERY PETER A & CAROL M	
2,001.00	027-3-028-000	301027733706	SABIN RAYMOND H & CLARA B	
2,001.00	027-3-029-000	300953733762	BAREWICZ JOHN & CHAROTTE B	
2,001.00	027-3-124-000	300699733692	STRONG BARBARA A	
2,001.00	027-3-125-000	300615733775	ROSSI FRANCIS & MONICA	
2,001.00	027-3-126-000	300569733816	SHEEHAN PATRICK E & SUSAN S	
2,001.00	027-3-127-000	300523733869	ROSS THOMAS O & MARY M	
2,001.00	027-3-128-000	300479733917	QUINLAN RAYMOND & HELEN	
2,001.00	027-3-130-000	300416733995	NEARY HOWARD E & SYLVIA E	
2,001.00	027-3-131-000	300366734049	BURKE PATRICIA L	
2,001.00	027-3-132-000	300313734110	BEATTIE STEPHEN A & AMY L	
2,001.00	027-3-133-000	300267734171	KULIN JOSEPH J & AVA F	
2,001.00	027-3-134-000	300223734226	ZEIGLER MICHAEL J JR &	
2,001.00	027-3-135-000	300207734289	O'CONNOR FRANK J	
2,001.00	027-3-162-000	300240733901	SHAMPNOIS THOMAS E JR &	
2,001.00	027-3-163-000	300293733844	GREEN ROBERT L &	
2,001.00	027-3-164-000	300335733791	FOREHAND FRED C & CYNTHIA J	
2,001.00	027-3-165-000	300374733738	JONES FLAVE L & CAROLYN K &	
2,001.00	027-3-166-000	300430733681	BLOOD ERNEST B JR & PEGG	
2,001.00	027-3-167-000	300489733597	NOTO JOSEPH & AUDREY	
2,001.00	027-3-176-000	301223733472	SCHMITT RICHARD J & MARY	
2,001.00	027-4-003-000	301587732917	PRIM TIMOTHYDALE E	
2,001.00	027-4-006-000	301561733079	MARRIER JOHN A JR & MARNIE A	
2,001.00	027-4-007-000	301521733133	BEDARD TIMOTHY J	
2,001.00	027-4-010-000	301794732750	CURLEY BRUCE E & PATRICIA S	
2,001.00	027-4-011-000	301767732837	BOISVIN ANITA J &	
2,001.00	027-4-012-000	301679732820	BLACK JOY M. & BUNDY LYNN S.	
2,001.00	027-4-019-000	301335732696	WICK HILTON & BARBARA & APPLETREE	
2,001.00	027-4-024-000	301161732866	WICK ANN W	
2,001.00	027-4-047-000	301561732616	SOUTIERE CLEMENT W & JUDY	
2,001.00	027-4-048-000	301636732524	SHAVER EUGENE H & MARY C	
2,001.00	027-4-049-000	301737732459	WALTERS LAWRENCE E &	
2,001.00	028-2-023-000	302975731637	MURPHY FRANK D & SUSAN	
2,001.00	028-2-024-000	302913731686	MONGEON DORIS L &	
2,001.00	028-2-025-000	302855731735	DANDRIDGE AMANDA B	
2,001.00	028-2-026-000	302767731797	MCKEOWN THOMAS M.	

TAX YEAR	MAPLOTNO	PIN	OWNER NAME	OWNER
2,001.00	028-2-027-000	302624731694	MCGRATH JOSEPH & BOBBI J	
2,001.00	028-2-037-000	302095732093	ROUGHGARDEN JULIE ANN	
2,001.00	028-2-038-000	302148732052	MILENS SANDERS H. & MILENS OLIVIA B.	48 STIRLING PLACE
2,001.00	028-2-039-000	302214732008	BREEN MICHAEL W & MAUREEN M	
2,001.00	028-2-040-000	302279731960	RIGO EDITH & CSABA ET AL	34 STIRLING PLACE
2,001.00	028-2-041-000	302353731915	RUSSACK KENNETH R &	JANICE K LARA
2,001.00	028-2-042-000	302451731849	MCKENZIE CHRISTOPHER P &	MARIE A
2,001.00	028-2-043-000	302494731782	NYBORG WESLEY L	
2,001.00	028-2-044-000	302678731895	WICK NANCY C	
2,001.00	028-2-045-000	302615731948	LECCESSE CONCETTA I &	ANTHONY LECCESE
2,001.00	028-2-046-000	302560731997	BEHNKE FREDERICK W & JOAN M	
2,001.00	028-2-047-000	302508732052	LOUDON CRIS K & COLLETTE M	
2,001.00	028-2-048-000	302456732104	FITZGERALD JOEL K &	BETHANY E
2,001.00	028-2-049-000	302401732153	ROY LOIS D &	DEBRA J & G S ROY
2,001.00	028-2-050-000	302354732213	CALL ROBERT & HARRIET	
2,001.00	028-2-051-000	302279732254	LETOURNEAU WAYNE A &	ALLISON R
2,001.00	028-2-052-000	302255732303	TROTMAN VERNITA	
2,001.00	028-2-053-000	302213732344	RILEY ELAINE R	
2,001.00	028-2-054-000	302172732386	BURNS EVERETT C & BARBARA A	
2,001.00	028-2-055-000	302131732434	MESSIER BRIAN D & NICOLE G	
2,001.00	028-2-056-000	302090732476	MATOT DAVID L & DIANA O	
2,001.00	028-2-057-000	302045732520	DUMAS ANNA	
2,001.00	028-2-058-000	302001732559	WORCESTER CHARLES A &	JANICE M
2,001.00	028-2-059-000	301977732625	PETERSON JAMES W & ANA A	
2,001.00	028-2-061-000	301879732605	BOOSKA SETSUKO M & FLOYD A	
2,001.00	028-2-062-000	301855732665	BROWN JEFFREY P	L/U TO DEWEY
2,001.00	028-2-063-000	301842732729	PROVOST LARRY A & DONNA L	
2,001.00	028-2-230-000	302013732175	BOMBARD DAVID P & LINDA R	
2,001.00	028-2-231-000	301923732270	COMEAU BARRY ARTHUR &	LAUREN BOWERMAN
2,001.00	028-2-232-000	301824732394	CONNOLLY THOMAS W &	KATHERINE S
2,001.00	032-1-002-000	303217731451	MENNING WILLIAM M & JOYCE A	P O BOX 23
2,001.00	032-1-003-000	303145731499	SMITH EVEREST & LORRAINE E	
2,001.00	032-1-004-000	303093731561	SUSSMAN LEWIS K & MARGARET I	
2,001.00	032-1-016-000	302693731582	HANDY CHARLIE & JODY	
2,001.00	032-1-017-000	302751731513	BAKER ROBERTA A	
2,001.00	032-1-018-000	302821731442	SMITH DORIS ANNE (TRUSTEE)	
2,001.00	032-1-019-000	302849731373	ROSE ANDREW D & MICHELE A	
2,001.00	032-1-020-000	302873731241	BIZZOZERO RITA G TRUSTEE OF	HER OWN REV TRUS
2,001.00	032-3-010-000	304783729989	WAGNER H V & MARGARET L	
2,001.00	032-3-011-000	304700730020	CORNWELL FRIESE BETH	
2,001.00	032-3-012-000	304624730091	FARKAS JEREMY I & MICHELLE N	
2,001.00	032-3-013-000	304552730167	STRONG NANCY S	
2,001.00	032-3-014-000	304423729997	LAKEWOOD EST BCH CLUB	ATTN TREASURER
2,001.00	032-3-015-000	304311730050	MURPHY THOMAS F & JANE	
2,001.00	032-3-016-000	304221730132	MULLOWNEY JAMES J & MARY JAY	
2,001.00	032-3-017-000	304130730215	MAEDER ROGER & CAROLE D	
2,001.00	032-3-018-000	304035730298	SENECAL ALFRED R JR &	CHERYL L
2,001.00	032-3-019-000	304463730274	LONERGAN JOHN F & MARGARET B	
2,001.00	032-3-020-000	304374730331	LEOPOLD JULES J &	LEOPOLD GERTRUI
2,001.00	032-3-021-000	304307730384	WEBER NANCY B	
2,001.00	032-3-022-000	304244730452	DOANE LAWRENCE M & ANNE T	
2,001.00	032-3-051-000	303443730700	PARKS (CITY)	PARKS DEPARTMEN
2,001.00	032-3-052-000	305167731350	PARKS (CITY)	PARKS DEPARTMEN
2,001.00	032-4-001-000	305076729714	PRESEALT J PAUL & PATRICIA	
2,001.00	032-4-002-000	305036729816	RIDER T FENN & S BRONWYN	
2,001.00	032-4-003-000	304597729882	LAKEWOOD ESTATE BEACH CLUB	ATTN: TREASURER
2,001.00	032-4-004-000	304889729614	IRELAND STUART & MARGARET	
2,001.00	032-4-005-000	304984729533	KILLARNEY DRIVE INC	C/O JAMES MCNAM,
2,001.00	033-2-005-000	305153729685	MCNAMARA JAMES J & ELEANOR B	
2,001.00	033-3-008-000	305155729389	BURL LODGE 916 BPOE	
2,001.00	037-3-004-000	306876728595	EPISCOPALIAN DIOCESE	OF VERMONT
2,001.00	037-3-004-001	305353727675	EPISCOPALIAN DIOCESE	OF VERMONT

TAX YEAR	MAPLOTNO	PIN	OWNER NAME	OWNER
2,001.00	037-3-004-002	305353727675	EPISCOPALIAN DIOCESE	OF VERMONT
2,001.00	037-3-004-003	305353727675	EPISCOPALIAN DIOCESE	OF VERMONT
2,001.00	037-3-004-004	305353727675	EPISCOPALIAN DIOCESE	OF VERMONT
2,001.00	037-3-004-005	305353727675	EPISCOPALIAN DIOCESE	OF VERMONT
2,001.00	037-3-004-006	305353727675	EPISCOPALIAN DIOCESE	
2,001.00	037-3-004-007	305353727675	EPISCOPALIAN DIOCESE	OF VERMONT
2,001.00	037-3-004-008	305353727675	EPISCOPALIAN DIOCESE	OF VERMONT
2,001.00	037-3-004-009	305353727675	EPISCOPALIAN DIOCESE	OF VERMONT
2,001.00	037-3-004-010	306876728595	EPISCOPALIAN DIOCESE OF VERMONT	
2,001.00	037-3-005-000	307471727364	PARKS (CITY)	PARKS DEPARTMENT
2,001.00	038-1-002-000	308917726980	CEMETERY (CITY)	LAKE VIEW CEMETEF
2,001.00	038-2-001-000	309903725227	CENTRAL VT RAILWAY CO	MGR OF REAL ESTAT
2,001.00	038-2-006-000	309570725201	CENTRAL VT RAILWAY CO	MGR OF REAL ESTAT
2,001.00	038-4-011-000	310491725058	HAMLIN MARIE A	
2,001.00	038-4-012-000	310444725085	BRAND SHERWOOD W & CELIA	
2,001.00	038-4-013-000	310425725122	CURTIS DORIS S (TRUSTEE)	
2,001.00	038-4-014-000	310407725183	BJERKE ALAN &	VALERIE HOCKERT-L
2,001.00	038-4-015-000	310494725331	CORNELL CHRIS & APRIL	
2,001.00	038-4-019-000	310404725381	WINANT EDWARD R	
2,001.00	038-4-021-000	310484725526	OSBORNE LORRAINE H (TRUSTEE)	
2,001.00	038-4-022-000	310457725569	MAGUIRE THOMAS C	
2,001.00	038-4-023-000	310455725629	Mandel Geoffrey	
2,001.00	038-4-024-000	310125726025	ROMAN CATHOLIC DIOCESE	DIOCESAN OFFICES
2,001.00	038-4-025-000	309065726081	ROMAN CATHOLIC DIOCESE	DON BOSCO
2,001.00	043-3-003-000	311087723964	BURLINGTON COLLEGE	
2,001.00	043-3-004-000	311069724000	RIDDELL LESLIE	13 LAKEVIEW TERRA
2,001.00	043-3-005-000	311052724028	BARDIN BARBARA	13 LAKEVIEW TERRA
2,001.00	043-3-007-000	310980724134	HANDL GWENDOLYN A &	IRENA LABOMBARD E
2,001.00	043-3-008-000	310953724169	BAILEY JOHN D & JEAN W	
2,001.00	043-3-009-000	310928724210	SUITOR FRANK I & SUSAN M	
2,001.00	043-3-010-000	310902724254	TIERNEY MARTIN S & LINDA R	
2,001.00	043-3-011-000	310875724295	GROSS KENNETH I & MARY LOU	
2,001.00	043-3-012-000	310849724332	HOWLAND JOHN H JR & KATHLEEN M B	
2,001.00	043-3-013-000	310852724390	RYAN DANIEL W ET AL	C/O THOMAS M RYAN
2,001.00	043-3-014-000	310826724432	LAVERY JOHN P ET AL	C/O CHARLES LAVER
2,001.00	043-3-015-000	310798724475	ZUCKER BARBARA M	
2,001.00	043-3-016-000	310765724510	GOLDSTEIN IVAN H	
2,001.00	043-3-017-000	310717724537	BRONSON LEMAN F	
2,001.00	043-3-018-000	310675724576	LONERGAN MARTHA E & G BALDWIN	C/O MARHTA E LONE
2,001.00	043-3-019-000	310650724621	COATES WILLIAM III & DAVID R	
2,001.00	043-3-020-000	310616724661	BRONGER CHRISTINA	
2,001.00	043-3-021-000	310597724705	BLONDIN NANCY L	
2,001.00	043-3-022-000	310579724755	PETER ODELE & ANNE	
2,001.00	043-3-023-000	310571724806	CAMPBELL JANE ROBBINS &	CLARA A ROBBINS
2,001.00	043-3-024-000	310564724858	CARLISLE E GRAFTON &	LILLIAN B (TRUSTEE)
2,001.00	043-3-025-000	310540724905	SIGHTLER RANDAL &	ELIZABETH MEAD
2,001.00	043-3-026-000	310529724958	CARLISLE E GRAFTON &	LILLIAN B (TRUSTEE)
2,001.00	043-3-027-000	310494724995	LAIS JUNE A & JOHN A	
2,001.00	043-3-156-001	311018724079	BARDIN BARBARA J	
2,001.00	043-3-156-002	311018724079	LEFF HERBERT L & ELLEN W	
2,001.00	043-3-156-003	311018724079	COE RICHARD D & PENELOPE A	
2,001.00	043-3-183-000	311261723896	BURLINGTON COLLEGE	
2,001.00	043-3-208-000	311290723520	CITY OF BURLINGTON	149 CHURCH STREE
2,001.00	043-4-001-000	311724721578	PARKS (CITY)	
2,001.00	043-4-002-000	310925722714	UNITED STATES OF AMERICA	U S COAST GUARD
2,001.00	043-4-007-000	311724721578	TREASURER (CITY)	
2,001.00	043-4-007-001	311724721578	TREASURER (CITY)	
2,001.00	043-4-009-001	311520722896	GOLEC LOUISE DAVIES &	MATTHEW NEIL GOL
2,001.00	043-4-009-002	311520722896	MOWERY DANIELLE	
2,001.00	043-4-009-003	311520722896	CURREN RICHARD W.	LUKS RACHEL
2,001.00	043-4-009-004	311520722896	LYON JASON H	
2,001.00	043-4-009-005	311520722896	MCGONAGLE GWEN E	

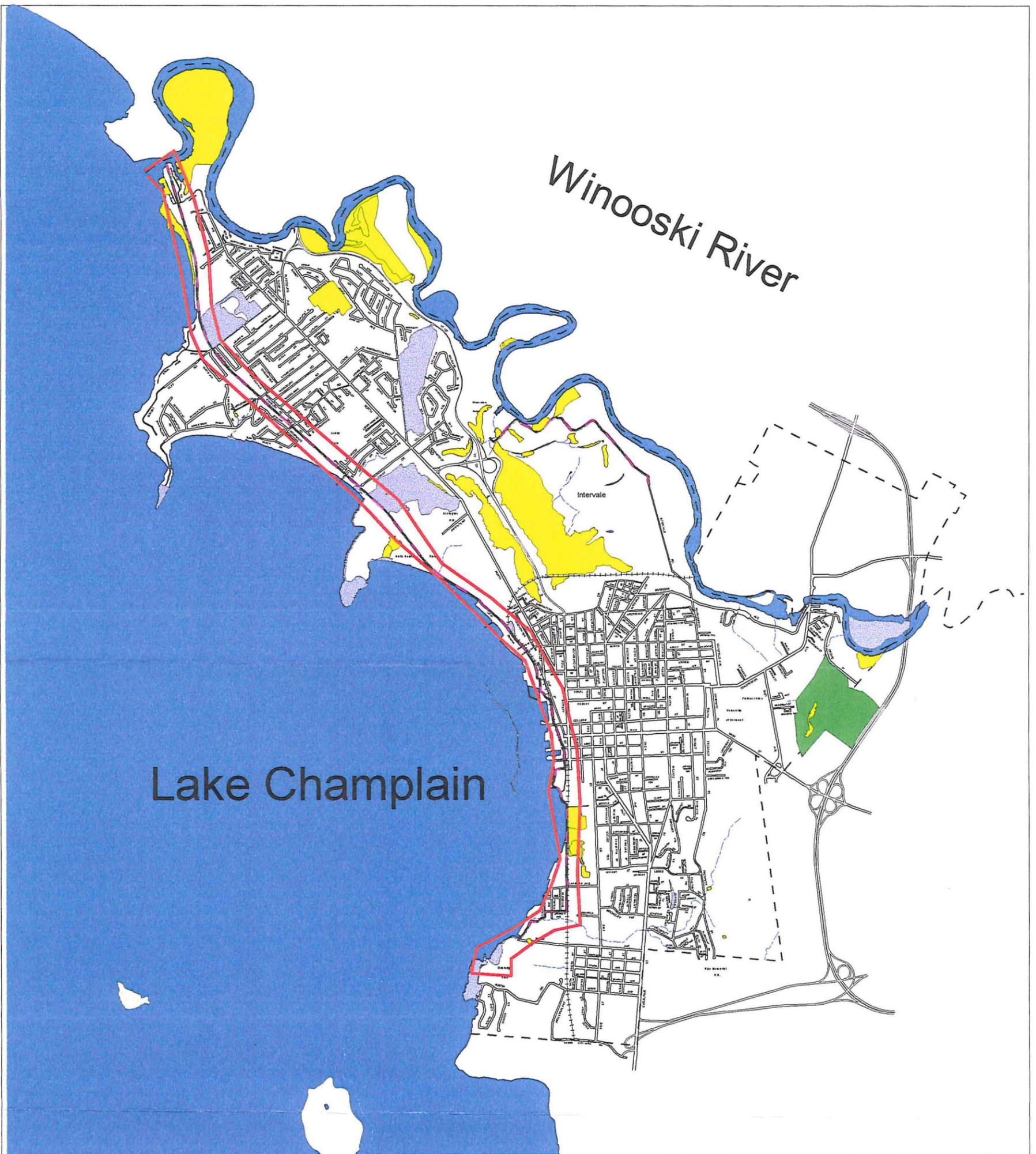
TAX YEAR	MAPLOTNO	PIN	OWNER NAME	OWNER
2,001.00	043-4-009-006	311520722896	BOURGEOIS BRYAN J	
2,001.00	043-4-009-007	311520722896	SIMSON GEOFFREY	
2,001.00	043-4-009-008	311520722896	SEAGER JONI	
2,001.00	043-4-009-009	311520722896	CARLSON BEVERLY S	
2,001.00	043-4-009-010	311520722896	MINCAR RICHARD G	
2,001.00	043-4-009-011	311520722896	ATKINSON A HARRY	
2,001.00	043-4-009-012	311520722896	ATKINSON A HARRY	
2,001.00	043-4-009-013	311520722896	Benson Gail	
2,001.00	043-4-009-014	311520722896	ATKINSON A HARRY	
2,001.00	043-4-009-015	311520722896	Luks Rachel	
2,001.00	043-4-010-000	311663722660	HARBOR INVESTMENTS	
2,001.00	043-4-010-001	311663722660	CHRISTOPHER DUNN &	KATHLEEN DUNN
2,001.00	043-4-010-002	311663722660	MCVICKER JULIET & C K SMITH	200 LAKE STREET #2
2,001.00	043-4-010-003	311663722660	MCNALLY JOHN & CHRISTINE	
2,001.00	043-4-010-004	311663722660	Cavanaugh James& Cavanaugh Lois	
2,001.00	043-4-010-005	311663722660	RICHARDSON LETITIA D	
2,001.00	043-4-010-006	311663722660	LEWIS CONSTANCE E	
2,001.00	043-4-010-007	311663722660	TAYLOR JAMES W &	BARBARA A POTTER
2,001.00	043-4-010-008	311663722660	FINLEY STEPHEN M	
2,001.00	043-4-010-009	311663722660	BOCKWOLDT CLAUS & DANGUOLE	
2,001.00	043-4-010-010	311663722660	KINCAID MANFRED F &	JACQUELINE E
2,001.00	043-4-010-011	311663722660	GRABINSKI MICHAEL JOHN& MARSCH LI	200 LAKE ST. UNIT 11
2,001.00	043-4-010-012	311663722660	Sprayregen Sarah W.	
2,001.00	043-4-010-013	311663722660	HARBOR INVESTMENTS	
2,001.00	044-2-001-000	311860722352	MAIN STREET LANDING CO	
2,001.00	049-1-075-000	312230720220	STONE STORE HOLDINGS LLC	
2,001.00	049-1-076-000	312215720415	SPILLANE LOWELL & SUSAN G	
2,001.00	049-1-078-000	311876720765	LAKE CHAMPLAIN TRANSPORTATION	COMPANY
2,001.00	049-1-079-000	312203720647	CLIFFORD PETER	2740 N.E. 9TH COURT
2,001.00	049-1-080-000	312040720934	MAIN STREET LANDING CO	
2,001.00	049-1-080-001	312040720934	MICHAUD ALAN & NIKOLAS	104 WEST BAY PLAZA
2,001.00	049-1-080-002	312040720934	LAWRENCE JOHANNA & EMILY	
2,001.00	049-1-080-003	312040720934	KELLY ANDREA	
2,001.00	049-1-080-004	312040720934	STEWART CARYL J	
2,001.00	049-1-080-005	312040720934	MAIN STREET LANDING COMPANY	
2,001.00	049-1-080-006	312040720934	MILLHAM ERIC E & KARENZ	
2,001.00	049-1-080-007	312040720934	WALLMAN ELIZABETH ROSALIE &	LESTER JULIAN WALL
2,001.00	049-1-080-008	312040720934	MAIN STREET LANDING COMPANY	
2,001.00	049-1-083-000	311772721103	PARKS (CITY)	
2,001.00	049-1-085-000	311877721538	TREASURER (CITY) ROOM 10	CITY HALL
2,001.00	049-2-040-000	311820719153	WASTEWATER (CITY)	WATER RESOURCES
2,001.00	049-2-041-000	312070720020	PARKS (CITY)	PARK DEPARTMENT
2,001.00	053-1-009-000	312363718176	VERMONT RAILWAY INC	
2,001.00	053-1-010-000	312388717885	DAVIS DEVELOPMENT CORP	THE MALTEX BUILDIN
2,001.00	053-1-011-000	312391717425	BCV ASSOCIATES INC	C/O RICK DAVIS
2,001.00	053-1-012-000	312388716969	CLOVERLEAF PROPERTIES INC	C/O G S BLODGETT C
2,001.00	053-2-009-000	312552715122	GP BURLINGTON SOUTH LLC	C/O GILBANE PROPEI
2,001.00	053-2-010-000	312519715998	GP BURLINGTON NORTH LLC	C/O GILBANE PROPEI
2,001.00	053-2-011-000	311925715783	CLOVERLEAF PROPERTIES INC	C/O G S BLODGETT C
2,001.00	053-2-012-000	311963716080	CLOVERLEAF PROPERTIES INC	C/O G S BLODGETT C
2,001.00	053-2-013-000	312168715525	KIRBY RENE C &	JON T & DONALD E
2,001.00	053-2-040-000	312152715308	ALBRIGHT EARL M JR &	JACQUELINE
2,001.00	056-2-017-000	310102713507	PARKS (CITY)	PARKS DEPARTMENT
2,001.00	056-3-004-000	311114714143	SOCONY MOBIL OIL CO C/O MOBIL ADMI	PROPERTY TAX DIV
2,001.00	056-3-010-000	311612714747	JODOIN ARTHUR & RACHEL L	
2,001.00	056-3-011-000	311515714564	HATHAWAY DONNA LEA &	JENNIFER LEA STOD'
2,001.00	056-3-012-000	311512714695	LANDINGS ASSOCIATES	C/O M K KENNEDY
2,001.00	056-3-013-000	311565714857	JODOIN ARTHUR H & RACHEL L	
2,001.00	056-3-022-001	311178714752	LIMOGE RICHARD A & RITA P	
2,001.00	056-3-022-002	311178714752	MILLER KENNETH W & RHEA I	
2,001.00	056-3-022-003	311178714752	WARD RICHARD S	
2,001.00	056-3-022-004	311178714752	BALCH FRANK A (TRUSTEE)	C/O R & V LUMBER IN

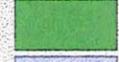
TAX YEAR	MAPLOTNO	PIN	OWNER NAME	OWNER
2,001.00	056-3-022-005	311178714752	NEWMARK TAMMY	
2,001.00	056-3-022-006	311178714752	PECOR RAYMOND C SR &	LORRAINE T
2,001.00	056-3-022-007	311178714752	LIMOGE ROBERT J	
2,001.00	056-3-022-008	311178714752	SCHILLHAMMER RICHARD W & ALLEN R	IRENE R SCHILLHAMM
2,001.00	056-3-022-009	311178714752	HENNESSEY JOHN W JR (TRUSTEE)	
2,001.00	056-3-022-010	311178714752	CHAN PETER & DELL	
2,001.00	056-3-022-011	311178714752	BURNS CHAUNCEY E & MARY S	
2,001.00	056-3-022-012	311178714752	HESS RICHARD & CAROL	
2,001.00	056-3-022-013	311178714752	EMERSON FAITH G &	ROBERTA B SCHWALE
2,001.00	056-3-022-014	311178714752	REISS, TRUSTEE ALBERT& REISS, TRUS	2774 SOUTH OCEAN B
2,001.00	056-3-022-015	311178714752	BEVAN ROBERT S & JEAN L	
2,001.00	056-3-022-016	311178714752	KENNEDY M KATHERINE &	THOMAS D BROCCO
2,001.00	056-3-022-017	311178714752	CHOINIERE PAUL H & DIANE M	
2,001.00	056-3-022-018	311178714752	LEBORGNE MICHEL & ANNE M	
2,001.00	056-3-022-019	311178714752	LIMOGES JOHN R & CYNTHIA B	
2,001.00	056-3-022-020	311178714752	CARROLL WESLEY P & BETTY L	
2,001.00	056-3-022-021	311178714752	GAIDA JOSEPH A & BARBARA J	
2,001.00	056-3-022-022	311178714752	CALDWELL MICHAEL D & PAIGE R	
2,001.00	056-3-022-023	311178714752	SCHELL ELENA & WALTER	
2,001.00	056-3-022-024	311178714752	ALTHER LISA & SARA ALTHER	BOSTWICK TRUSTEE:
2,001.00	056-3-022-025	311178714752	SCHNUR RONALD I &	LAWRENCE M BROCK
2,001.00	056-3-022-026	311178714752	DONEHOWER PATRICIA	
2,001.00	056-3-022-027	311178714752	LARKIN FAMILY PARTNERSHIP	
2,001.00	056-3-022-028	311178714752	LARKIN JOHN P	
2,001.00	056-4-045-001	310789713054	BARONE SHELBE A & MARK E	
2,001.00	056-4-045-002	310789713054	Davidson Robert	
2,001.00	056-4-045-003	310789713054	GOODRICH MARK S & DIANE M	
2,001.00	056-4-045-004	310789713054	ALLARD DONALD E & SALLY A	
2,001.00	056-4-045-005	310789713054	VAN RAALTE BARBARA (TRUSTEE)	
2,001.00	056-4-045-006	310789713054	POST FAITH J	AS TRUSTEE
2,001.00	056-4-045-007	310789713054	BRECKENRIDGE EVA M & ALAN IN TRUS	E BRECKENRIDGE RE
2,001.00	056-4-045-008	310789713054	HINKEL CAROL B	
2,001.00	056-4-045-009	310789713054	KUSCHEL MARIAN L	
2,001.00	056-4-045-010	310789713054	MCCOY PETER L	
2,001.00	056-4-045-011	310789713054	RUTHERFORD LAWRENCE A &	DEBRA A ZECHER
2,001.00	056-4-045-012	310789713054	HUNKINS SUSAN A	
2,001.00	056-4-045-013	310789713054	WOOD ELIZABETH R	
2,001.00	056-4-045-014	310789713054	TUSSEY SANDRA E	
2,001.00	056-4-045-015	310789713054	TYLER EDWARD J & CAROL	
2,001.00	056-4-045-016	310789713054	ORR ROBERT D & JOYCE W	
2,001.00	056-4-045-017	310789713054	SCHNEIDER SIDNEY D & FAYE	
2,001.00	056-4-045-018	310789713054	FRIES TIMOTHY JAMES	
2,001.00	056-4-045-019	310789713054	MCKENZIE JUDITH A &	GEORGE A JR (CO-TR
2,001.00	056-4-045-020	310789713054	BOUCHARD ANTONIA L	
2,001.00	056-4-045-021	310789713054	TOKAT ELLIOT & KAREN E HUDSON	
2,001.00	056-4-045-022	310789713054	JENKINS ROBERT G & SUSAN M	
2,001.00	056-4-045-023	310789713054	MARTIN JOAN C &	HERBERT L (CO-TRUS
2,001.00	056-4-045-024	310789713054	SCHAEFFER WARREN (TRUSTEE)	
2,001.00	056-4-045-025	310789713054	FITZGERALD DONOSON E &	ELIZABETH P
2,001.00	056-4-045-026	310789713054	ROGAVIN DEBRA A	
2,001.00	056-4-045-027	310789713054	STEVENSON CHRISTOPHER &	KATHERINE J
2,001.00	056-4-045-028	310789713054	SANKOWSKI CAROL H &	STANLEY J
2,001.00	056-4-045-029	310789713054	GIOFFRE KATHRYN R	
2,001.00	056-4-045-030	310789713054	TEMPLIN CHARLES R & EDITH K	
2,001.00	056-4-045-031	310789713054	MASSONNEAU MARY CAROL (TRUST)	
2,001.00	056-4-045-032	310789713054	ADAMS RANDALL S	
2,001.00	056-4-045-033	310789713054	GAND JEANNE-MARIE	
2,001.00	056-4-045-034	310789713054	DROLETTE DELORES A	
2,001.00	056-4-045-035	310789713054	JARVIS KENNETH W & KATHRYN M	
2,001.00	056-4-045-036	310789713054	Fitzgerald Nancy B.	
2,001.00	056-4-045-037	310789713054	WEISBURGH BERNARD & DIANE M	
2,001.00	056-4-045-038	310789713054	WHITE MELINDA H	

TAX YEAR	MAPLOTNO	PIN	OWNER NAME	OWNER
2,001.00	056-4-045-039	310789713054	LEVINSKY JOHN & JANE L	
2,001.00	056-4-045-040	310789713054	CASSANI RICHARD L & SONIA L	
2,001.00	056-4-045-041	310789713054	JACKSON ANNE	
2,001.00	056-4-045-042	310789713054	FERRIS FRANCINE	
2,001.00	056-4-045-043	310789713054	ST PIERRE DOMINIQUE &	REJEANNE
2,001.00	056-4-045-044	310789713054	POMERLEAU ROSEMARY MURPHY	
2,001.00	056-4-045-045	310789713054	DUBIE PHYLLIS F	
2,001.00	056-4-045-046	310789713054	SORKIN REUBEN & SELMA	
2,001.00	056-4-045-047	310789713054	MCARTHUR HERBERT &	C/O RICHARD WHEAT
2,001.00	056-4-045-048	310789713054	DETTERRMAN DANIEL K	DETTERRMAN KAREN
2,001.00	056-4-045-050	310789713054	MARCELLINO ROBERT A & NORMA E	
2,001.00	056-4-045-052	310789713054	WEITZENFELD ARTHUR S &	SHERRY E SMITH
2,001.00	056-4-045-054	310789713054	SEGAL MAXINE G (TRUST)	
2,001.00	056-4-045-058	310789713054	FORCIER LAWRENCE K. &	ANNE TRASK
2,001.00	056-4-045-060	310789713054	KUNIN MADELEINE MAY	
2,001.00	056-4-045-062	310789713054	MECKERT WILLIAM G. III	HENDRICKSON KJIRE
2,001.00	056-4-045-064	310789713054	THOMAS HERMAN S & MAVIS C	
2,001.00	056-4-045-902	310789713054	SHAEFFER JAMES O & JEAN D	
2,001.00	056-4-045-904	310789713054	FAUL RICHARD T & SANDRA E	
2,001.00	056-4-045-906	310789713054	GRASS ANTHONY E	
2,001.00	056-4-045-908	310789713054	CHAMBERLAIN VALERIE M	
2,001.00	056-4-045-910	310789713054	CHASE RICHARD &	PATRICIA JAMIESON
2,001.00	056-4-045-912	310789713054	Sandage Larry Delane& LaBombard Marie L	
2,001.00	056-4-045-914	310789713054	PACKARD SARA	
2,001.00	056-4-045-916	310789713054	BOSS RALPH F & BEVERLEY M	(CO-TRUSTEES)
2,001.00	056-4-045-918	310789713054	CHTERN DONAT & SVETLANA	
2,001.00	056-4-045-920	310789713054	POKLUKAR HERMAN &	MARIJA VALENCAK
2,001.00	056-4-045-922	310789713054	REEVES ERMA J &	ROBERT M ORTH
2,001.00	056-4-045-924	310789713054	PAQUETTE ELAINE	
2,001.00	056-4-045-926	310789713054	HERYFORD ROBERT E &	CATHERINE A
2,001.00	056-4-045-928	310789713054	PIERSON ROGER B &	DAN BUSBEE (CO-TRI
2,001.00	057-1-020-000	312089715200	CLAIRMONT ROBERT E	
2,001.00	057-1-021-000	312089715109	CLAIRMONT ROBERT E	
2,001.00	057-1-022-000	312092715040	AUSTIN ROBERT C JR &	NANAYMIE K
2,001.00	057-1-023-000	312089714984	DAHLSTEDT NINA C &	MELVIN H BUSS
2,001.00	057-1-025-000	312035714854	BUSHEY DONALD & CINDY &	
2,001.00	057-1-026-000	312035714854	BUSHEY PAUL E & LORRAINE K	
2,001.00	057-1-027-000	312086714861	GELINAS PIERRE H & DORIS H	
2,001.00	057-1-028-000	312145714886	PLANKEY GEORGE & LINDA	
2,001.00	057-1-029-000	312147714655	KIRBY RENE C & JON T	
2,001.00	057-1-030-000	312084714655	THERRIEN ALAINE H &	ROCHELLE B
2,001.00	057-1-031-000	312025714655	KIRBY RENE C & JON T	
2,001.00	057-1-032-000	311978714655	BRODOWSKI JUDITH ANN	
2,001.00	057-1-033-000	311950714647	BROWN JEAN A ET AL	
2,001.00	057-1-034-000	311920714643	O'FOLAN BRIAN P & CAROL P	
2,001.00	057-1-035-000	311892714651	KIRBY DONALD E &	JANET M & RENE C
2,001.00	057-1-036-000	311848714655	LANGE GARY W	
2,001.00	057-1-037-000	311798714738	HAYES THERESA	
2,001.00	057-1-038-000	311770714738	ELY TIMOTHY J & EMMA C	
2,001.00	057-1-039-000	311731714740	BLAIR MARK A & MARIE L	

APPENDIX E
Natural Resources Maps

Natural Resources Evaluation Waterfront Bike Path



-  Study Area
-  Wetland
-  Forest Area
-  Rare Flora/Fauna



1 0 1 Miles



Burlington Public Works
November 26, 2001

Steve Goodkind, P.E.
PUBLIC WORKS DIRECTOR

Carol Duncan, P.E.
PROJECT ENGINEER



P.O. BOX 849
BURLINGTON, VT
05402-0849
(802)863-9094 P
(802)863-0466 F

October 1, 2002

Everett Marshall
Information Manager
Vermont Nongame and Natural Heritage Program
Department of Fish and Wildlife
103 South Main Street
Waterbury, VT 05671-0501

Dear Mr. Marshall:

The Department of Public Works is conducting a Bike Path Improvement Feasibility Study for the Waterfront Bike Path in Burlington. The project will address the feasibility of bringing the bike path up to current standards for lane and shoulder width, sight distance, proper slopes, signing, and striping. Many of these improvements, especially the widening of the path will require construction beyond currently paved areas by two to four feet.

This report, funded by VTrans' Bicycle and Pedestrian Program, will be used as a scoping report for an eventual construction project which will seek local, state, and federal funding. Many environmental clearances are required to complete the scoping, one of which is a letter from the Nongame and Natural Heritage Program regarding Endangered Species and Flora/Fauna.

I would like to request information about the known presence of endangered species and flora/fauna within the bike path corridor. This corridor is highlighted in yellow in the enclosed map. This information will be included in the report and used in the future for planning and engineering of proposed improvements.

The report is currently in its final draft. We would like to request that this information be sent to this department by November 1, 2002.

Thank you in advance for your cooperation on this request. If you have any questions, please do not hesitate to contact me at (802) 865-5830.

Sincerely,

Carol Duncan



State of Vermont

AGENCY OF NATURAL RESOURCES

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation



DEPARTMENT OF FISH AND WILDLIFE
103 South Main Street, 10 South
Waterbury, Vermont 05671-0501

Tel.: (802) 241-3700
TDD: 1-800-253-0191

Nongame & Natural Heritage Program
November 22, 2002

Carol Duncan
PO Box 849
Public Works Department
City of Burlington
Burlington VT 05402-0849

Re: Bike Path Improvement Feasibility Study

Dear Carol:

Sorry to be slow in getting back to you on this project. I am enclosing a list of rare, threatened and endangered plant species that are found in the vicinity of the project. While we don't have specific information of any of these species occurring within the project distance of the bike path, most of them are in close proximity or are known historically from the area. Because of this, I recommend that the path be surveyed for rare plants by our program or a competent botanist if you plan to proceed with this project. Field work would need to be conducted in July or August. If you have any questions, I'll be out until December 2.

Sincerely,

A handwritten signature in black ink, appearing to read "EM", written over a printed name.

Everett Marshall
Biologist/Data Manager
Tel: 802-241-3715
Email: everettm@fwd.anr.state.vt.us

Equal Opportunity Employer

Regional Offices - Barre/Essex Jct./Pittsford/Springfield/St. Johnsbury

Vermont Nongame & Natural Heritage Program
Department of Fish and Wildlife
Explanation of Legal Status and Information Ranks

State Status As per the Vermont Endangered Species Law (10 V.S.A. Chap. 123)

E: Endangered: in immediate danger of becoming extirpated in the state
T: Threatened: with high possibility of becoming endangered in the near future

Information categories only; not established by this law

SC: Special Concern: rare; status should be watched
PE: Proposed for endangered
PT: Proposed for threatened

Federal Status As per the Federal Endangered Species Act (P.L. 93-205)

LE: Listed endangered
LT: Listed threatened

NATURAL HERITAGE RANKING Informational categories only; not established by law.
Developed by the Science Division of The Nature Conservancy.

State Ranks of Plants, Animals, and Natural Communities

State ranks are assigned by the Nongame & Natural Heritage Program based on the best available information. Ranks are reviewed annually. For bird species the ranks refer to breeding status only.

S1: Very rare, generally 1 to 5 occurrences believed to be extant and/or some factor(s) making it especially vulnerable to extirpation from the state
S2: Rare, generally 6 to 20 occurrences believed to be extant and/or some factor(s) making it vulnerable to extirpation in the state
S3: Uncommon, believed to be more than 20 occurrences and/or there is some threat to it in the state
S4: Apparently secure in state, often with more than 100 occurrences
S5: Demonstrably secure in state
SA: Accidental in state
SE: An exotic established in state
SH: Known from historical records only
SR: Reported from the state, but without persuasive documentation
SRF: Reported in error but this error persisted in the literature
SP: Possible in the state but no reported or documented records
SSYN: No longer considered a taxon in the state.
SZ: Not of practical conservation concern because there are no definable occurrences
SX: Extirpated from the state
SU: Status uncertain
?: Denotes provisional rank

Breeding Status (primarily birds) only for species which have distinct breeding and or nonbreeding populations

B: Breeding status e.g. S1B is a very rare breeder
N: Nonbreeding status e.g. S1N is a very rare nonbreeder; and SZN is a migrant that occurs in an irregular, transitory, and/or dispersed manner

Global Ranks of Plants, Animal, and Natural Communities

Global Ranks are assigned by the international network of Natural Heritage Data Centers. The ranks are tracked by The Nature Conservancy and by The Natural Heritage Programs. They reflect the rarity and endangerment of species worldwide.

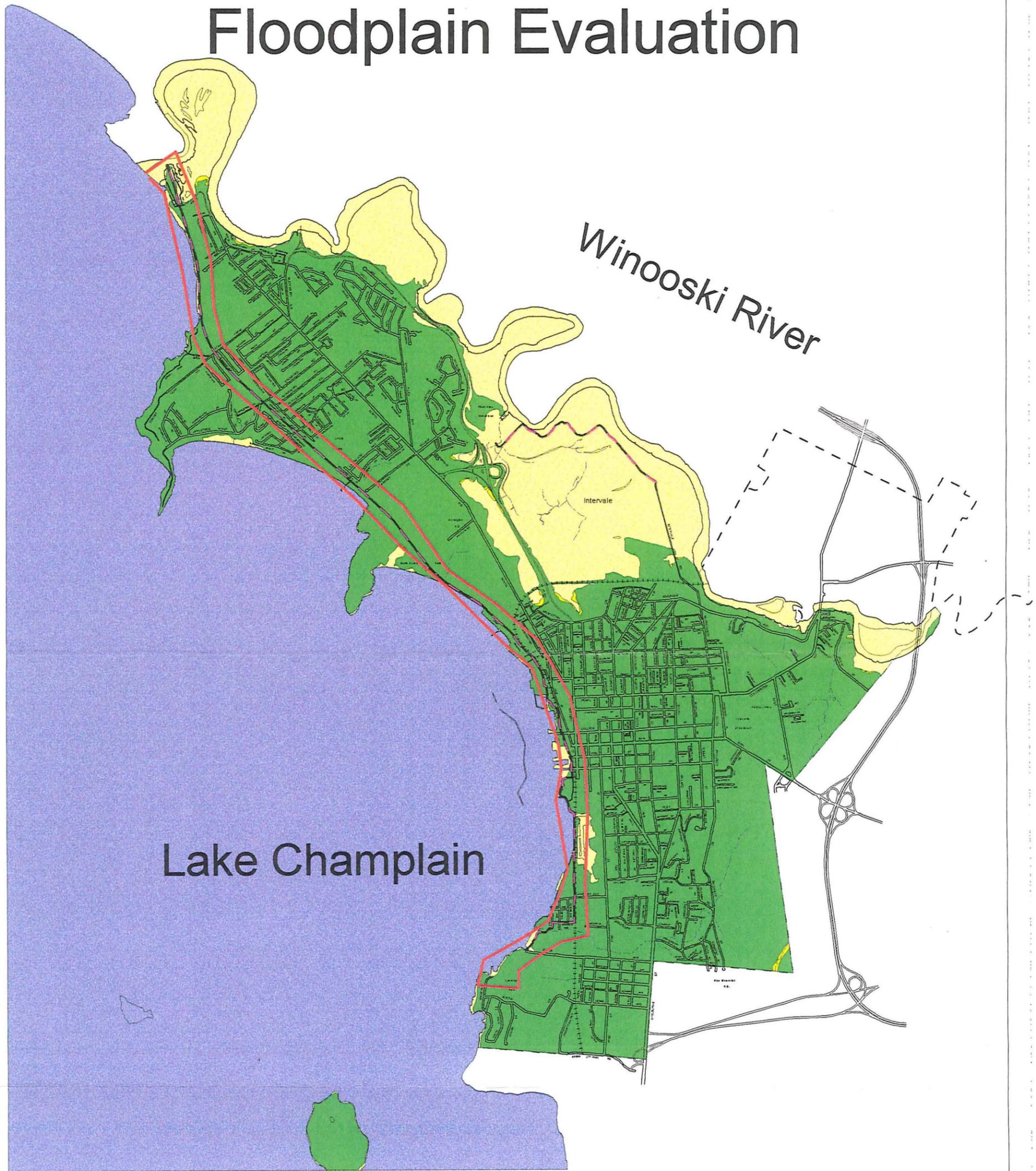
G1: Critically imperiled globally (on the order of 1-5 occurrences worldwide)
G2: Endangered globally (ca. 6-20 occurrences worldwide)
G3: Threatened globally: rare and/or local
G4: Apparently secure globally, though perhaps locally rare
G5: Demonstrably secure globally
T: Subrank for subspecies and varieties; 1-5 ranking similar to G ranks
Q: Questionable taxonomic assignment
?: Denotes provisional rank
NE: Exotic established in nation
GU: Status uncertain

For further information contact the Vermont Nongame and Natural Heritage Program, Dept. of Fish and Wildlife, Waterbury, VT 05671-0501

Rare, Threatened and Endangered Species
 Found in the Vicinity of the Burlington Bike Path
 November 22, 2002
 Vermont Nongame and Natural Heritage Program

Scientific Name	Common Name	State Rank	Global Rank	State Status	Federal Status
<i>Diphasiastrum sabinifolium</i>	Ground-fir	S2S3	G4		
<i>Aristida longespica</i>	Spiked grass	S1	G5		
<i>Ceanothus herbaceus</i>	Prairie redroot	S1	G5	E	
<i>Helianthemum bicknellii</i>	Plains frostweed	S2S3	G5	T	
<i>Polygala sanguinea</i>	Field milkwort	S2S3	G5		
<i>Carex houghtoniana</i>	Houghton's sedge	S1	G5		
<i>Carex argyrantha</i>	Hay sedge	S2	G5		

Waterfront Bike Path Floodplain Evaluation



- Study Area
- Bikepath
- Floodplain Data
 - Flood Hazard Area
 - Flood Hazard Area
 - No Flood Zone
 - Surface Water



1 0 1 Miles

Burlington Public Works
November 26, 2001

APPENDIX F
Cultural Resources Assessment
Archaeological Resources Assessment
Historical Resources Assessment



The
UNIVERSITY
of VERMONT

CONSULTING ARCHAEOLOGY PROGRAM

November 1, 2001

Carol Duncan
Burlington Public Works
645 Pine Street
Burlington, VT 05401

Dear Carol,

Attached, please find an Archaeological Resources Assessment (ARA) for the proposed Waterfront Bike Path Evaluation, Burlington, Chittenden County, Vermont. Sixteen archaeologically sensitive areas were identified throughout the project's Area of Potential Effects (APE). We have recommended a Phase I site identification survey be conducted in these sensitive areas prior to project construction to determine the presence/absence of significant prehistoric Native American sites.

We would be happy to prepare a cost estimate for the Phase I study in the event that the sensitive areas cannot be avoided. Please feel free to contact me if you have any questions.

Sincerely,

Charles Knight, Ph.D.
Assistant Director

cc: Scott Dillon, VDHP

**Archaeological Resources Assessment for the
Waterfront Bike Path Evaluation, Burlington, Chittenden County, Vermont**

Submitted to:

Carol Duncan
Burlington Public Works
645 Pine Street
Burlington, VT 05401

Submitted by:

Charles Knight, Ph.D.

University of Vermont
Consulting Archaeology Program
112 University Heights
Burlington, VT 05405

Report No. 324

November 1, 2001

Archaeological Resources Assessment for the Waterfront Bike Path Evaluation, Burlington, Chittenden County, Vermont

Project Description

The University of Vermont's Consulting Archaeology Program (UVM CAP) conducted an Archaeological Resources Assessment (ARA), as part of the Section 106 cultural resources review for the proposed Waterfront Bike Path Rehabilitation Project for the City of Burlington, Chittenden County, Vermont. This review is required by the National Historic Preservation Act of 1966, as amended, given that the project is supported by federal funds through the Vermont Agency of Transportation (VAOT). Proposed project elements include the widening of the path and shoulders, the addition of signage, fencing along sloped areas, enhanced drainage and other improvements. The project area encompasses a 7.6 mile corridor along the eastern shore of Lake Champlain, from Oakledge Park in the south, to the mouth of the Winooski River in the north (Figure 1).

Study Goal

The goal of an archaeological resources assessment (or "review") is to identify portions of a specific project's Area of Potential Effects (APE) that have the potential for containing prehistoric and/or historic sites. An ARA is to be accomplished through a "background search" and a "field inspection" of the project area. For this study, reference materials were reviewed following established guidelines. Resources examined included the National Register of Historic Places (NRHP) files; the Historic Sites and Structures Survey; and the USGS master archaeological maps that accompany the Vermont archaeological inventory. Relevant town histories and nineteenth-century maps also were consulted. Based on the background research, general contexts were derived for prehistoric and historic resources in the vicinity of the study area.

Prehistoric Archaeological Site Potential

Several prehistoric sites are known within the proposed project's APE (Figure 2). Field Site 76 (FS-CH-76) represents an isolated projectile point, recovered from the rocky outcrop next to the beach at the end of Flynn Avenue in Oakledge Park. Site VT-CH-081 dates to the Late Archaic period (4000 – 900 B.C.) and the Late Woodland Period (A.D. 1050 – 1600), and covers the beachfront from Oakledge Park to the barge canal, based on the recovery of numerous artifacts in the early and middle part of the 20th century. Several sites may be represented here. Site VT-CH-161 is located behind and around the renovated Holloway Block Buildings that front on Battery Street along the Burlington Waterfront. In addition to numerous historic artifacts, several prehistoric quartzite flakes were recovered from these sites, reflecting a prehistoric component. Field Site 173 (FS-CH-173) represents a water-worn Late Archaic period (4000 –

900 B.C.) projectile point recovered from North Beach. Site VT-CH-264 is located just north of this area and consists of two artifact areas that produced a combined total of over 50 lithic flakes. Site VT-CH-119 consists of lithic flakes and a stemmed projectile point, which were recovered at the end of Lone Rock Point, at the northern extreme of North Beach. Finally, site VT-CH-847 was identified approximately 200 m east of Station 253+00 of the bike path. This site includes materials that date to the Late Archaic period (4000 – 900 B.C.). More, as yet unidentified sites undoubtedly exist in the general area as well.

Historic Archaeological Site Potential

A review of historic maps of Chittenden County indicates that there are no existing significant historic archaeological sites within the proposed project's APE. There are no properties identified on the historic 1857 Walling's map, the historic 1869 Beers' map (Figure 3), or the 1906 USGS map (Figure 4). One property, that of J. A. Arthur on the 1869 Beers Map, is the only one that is near the railway line from downtown Burlington to the mouth of the Winooski River, but was not affected by it. A significant amount of historic disturbances related to waterfront industry, including large areas of landfill associated with the development of the lumber and rail industries, makes it unlikely that significant historic sites exist intact within the study corridor. As a result of the pre-existing railway corridor, a general lack of historic settlement along this corridor, and historic disturbance related to waterfront industry, no historic sites are likely to be impacted by the proposed project.

Field Inspection

A field inspection of the project area was undertaken on September 27, 2001, by Dr. Charles Knight, Assistant Director of the UVM CAP. The project area received a high sensitivity score of 44 based on the variables in the "Draft Environmental Model for Locating [Prehistoric] Archaeological Sites," since it parallels the eastern shore of Lake Champlain, crossing several streams, intermittent streams, and ending near the Winooski River. Sixteen areas sensitive for prehistoric archaeological sites were identified during the inspection. These sensitive areas were characterized by linear sections on either side of the bike path, often near drainages (Figures 5-7).

Areas 1 and 2

Areas 1 and 2 are located in Oak Ledge Park, south of Station 0+00. Area 1 is a linear swath, parallel to the east side of the existing Bike Path, from the tennis courts to the washroom facilities building (Figure 5). Area 2 is located on the west side of the existing bike path, parallel to Area 1. The southern end of Area 2 is just north of the tennis courts, and extends from the bike path to the shore of Lake Champlain. It continues north and east along the bike path, ending where the washroom facilities' building is located (Figure 5). Bike Path widening and turn-around construction will affect these sensitive areas, which lie within or near known field site FS-CH-76.

Area 3

Area 3 is located in the northern tip of Oak Ledge Park, on the northern edge of a drainage, which itself is located at the end of Flynn Ave, just north of the park entrance, at, or near, Station 0+00 (Figure 5). The sensitive area parallels the bike path on its east side, but also includes the northern edge of the drainage. Bike path widening, turn-around construction, and drainage rehabilitation will affect this sensitive area, which lies within or near known site VT-CH-81.

Areas 4 and 5

Area 4 is located along the southern edge of the existing bike path, in-between the bike path and the northern limit of a compound with large oil tanks at Station 10+00, just before the bike path crosses a wood bridge over a drainage onto Harrison Avenue (Figure 5). Area 5 is located on the northern edge of the bike path from Area 4, and includes the wooded section between the bike path and the drainage, also at Station 10+00. Bike path widening, turn-around construction, and drainage rehabilitation will affect these sensitive areas, which lie within or near known site VT-CH-81.

Area 6

Area 6 is located on the north edge of the drainage which borders Areas 4 and 5, parallel to the southern edge of the existing bike path, just before the bike path turns onto Proctor Avenue at Station 15+20, and eventually Harrison Ave (Figure 5). Bike path widening and turn-around construction will affect this sensitive area, which lies within or near known site VT-CH-81.

Area 7

This area is located along the stretch between Stations 31+00 and 58+00, at the point where the landform to the west of the bike path converges with the bike path. This sensitive area is a small triangular shaped piece of land (Figure 5). Bike path widening or turn-around construction will affect this sensitive area, which lies within or near known site VT-CH-81.

Area 8

Area 8 is a wedge-shaped linear section on the west side of the existing bike path, south of where the bike path crosses a driveway to the parking facilities at North Beach, and just south of Station 169+00 (Figure 6). Bike path widening or turn-around construction will affect this sensitive area.

Area 9

Area 9 is located north of North Beach, on the eastern edge of the existing Bike Path, approximately at Station 169+00 (Figure 6). It is a linear area parallel to the existing bike path. Bike path widening and turn-around construction will effect this sensitive area, which lies in

close proximity to known site VT-CH-264.

Areas 10 and 11

Area 10 is located on the west side of the existing bike path in an undeveloped area south of the western terminus of Killarney Drive, approximately at Station 208+00 (Figure 6). It is a linear area, parallel to the bike path and will be impacted by bike path widening and turn-around construction. Area 11 is located across the bike path from Area 10, parallel to the eastern edge of the path.

Area 12

Area 12 is located on the northeast corner of the area of the bike path that is crossed by a small road just north of the western terminus of Killarney Drive, north of Station 208+00 (Figure 6). It is located next to a ravine and just south of a house. It is a triangular shaped area that will be impacted by bike path widening, turn-around construction and drainage rehabilitation.

Area 13

Located approximately two blocks north of Area 12, Area 13 is a linear area parallel to the eastern edge of the existing bike path, on the western edge of the back lawns of the three northern-most houses on the west side Beachcrest Road, between Stations 208+00 and 225+00 (Figure 6). Bike path widening and turn-around construction will affect this sensitive area.

Area 14

Area 14 is a 100 m long linear area parallel to the western edge of the existing bike path, extending south from the bike path stop sign at Shore Road, north of Leddy Park, approximately at Station 238+00 (Figure 7).

Area 15 and 16

Area 15 is located on the western edge of the bike path at the southern terminus of the development on Northshore Drive, where a small rest stop for Bike Path users is located, just north of Station 277+00 (Figure 7). It is triangular shaped in its southern extreme, narrowing to a linear area paralleling the western edge of the bike path. Area 16 is located on the eastern edge of the bike path, just across from Area 15. Both areas will be impacted by bike path widening, and turn-around construction.

Conclusions and Recommendations

The City of Burlington proposes the Waterfront Bike Path Rehabilitation Project, which includes the widening of the path and shoulders, the addition of signage, fencing along sloped areas, enhanced drainage and other amenities (Figure 1). The UVM CAP conducted an ARA of the proposed project area as part of the Section 106 cultural resources review, and a total of 16 archaeological sensitive areas were identified. A Phase I Site Identification Survey is recommended to determine the presence/absence of sites within the areas designated Areas 1-16, if they cannot be avoided by proposed path widening, turn-around construction, or drainage rehabilitation.

Charles Knight, Ph.D.
Assistant Director

Bibliography

Beers, F. W.

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U.S. Geological Survey

1906 SW/4 South Burlington 15" quadrangle. United States Geological Survey, Washington D.C.

Walling, H.F.

1857 *Map of Chittenden County, Vermont*. Baker and Tilden Co., New York.

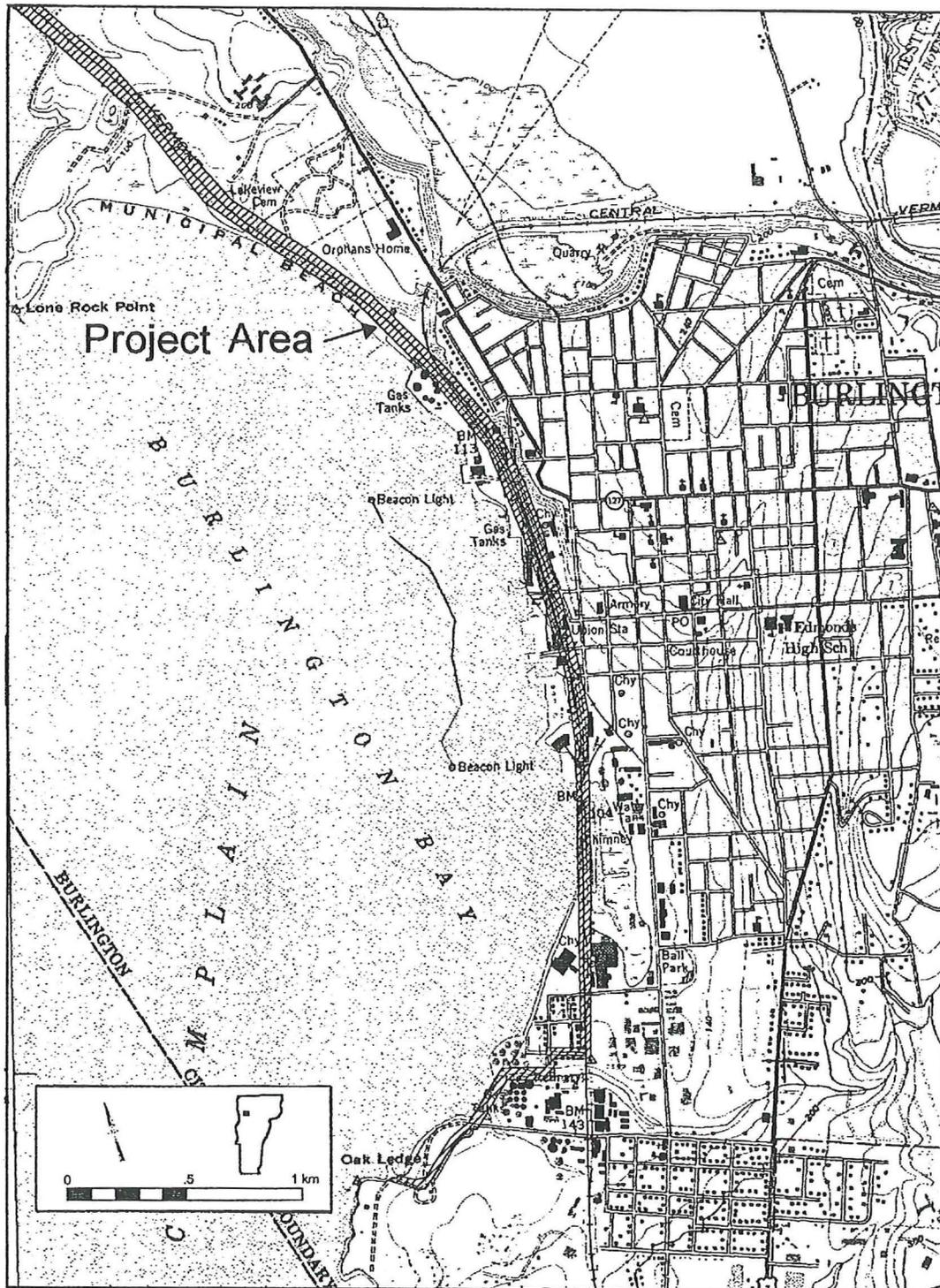
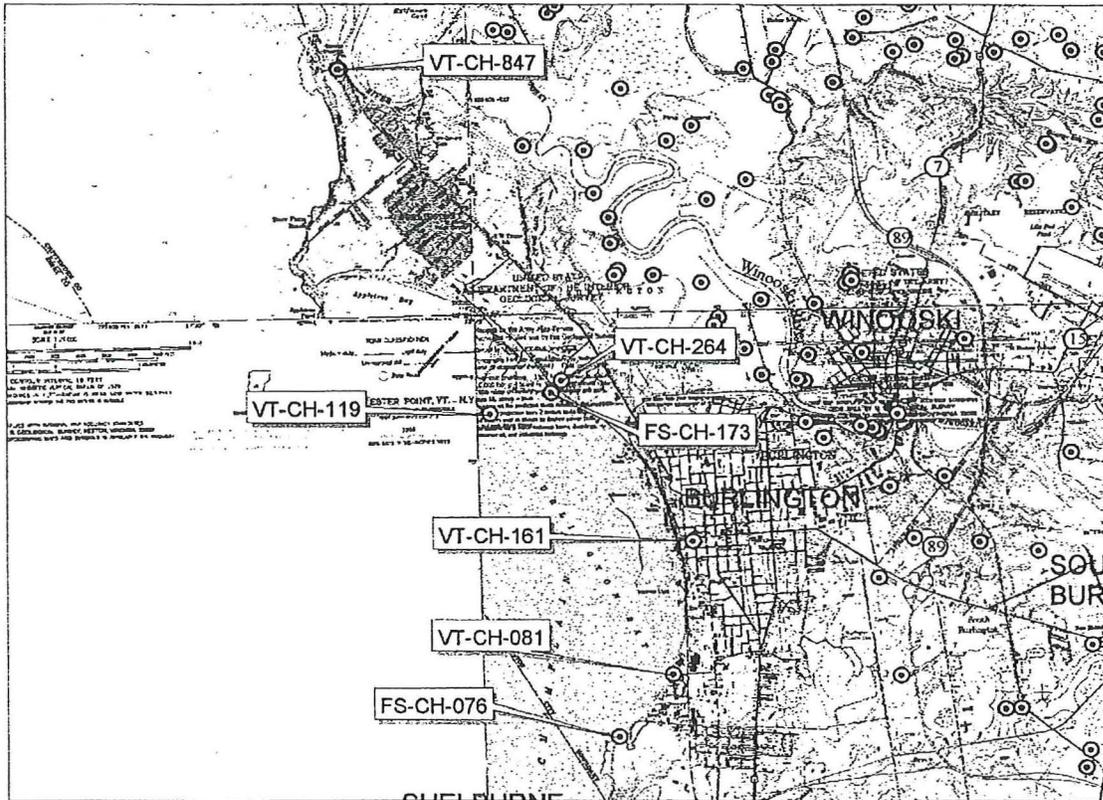


Figure 1. Location of the proposed Waterfront Bike Path Rehabilitation Project, Burlington, Chittenden County, Vermont.



- ⊙ All chittenden county phist unknown only.shp
- ⊙ All chittenden county site components.shp

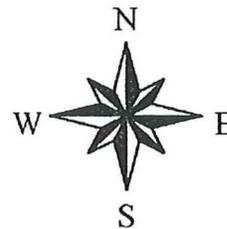
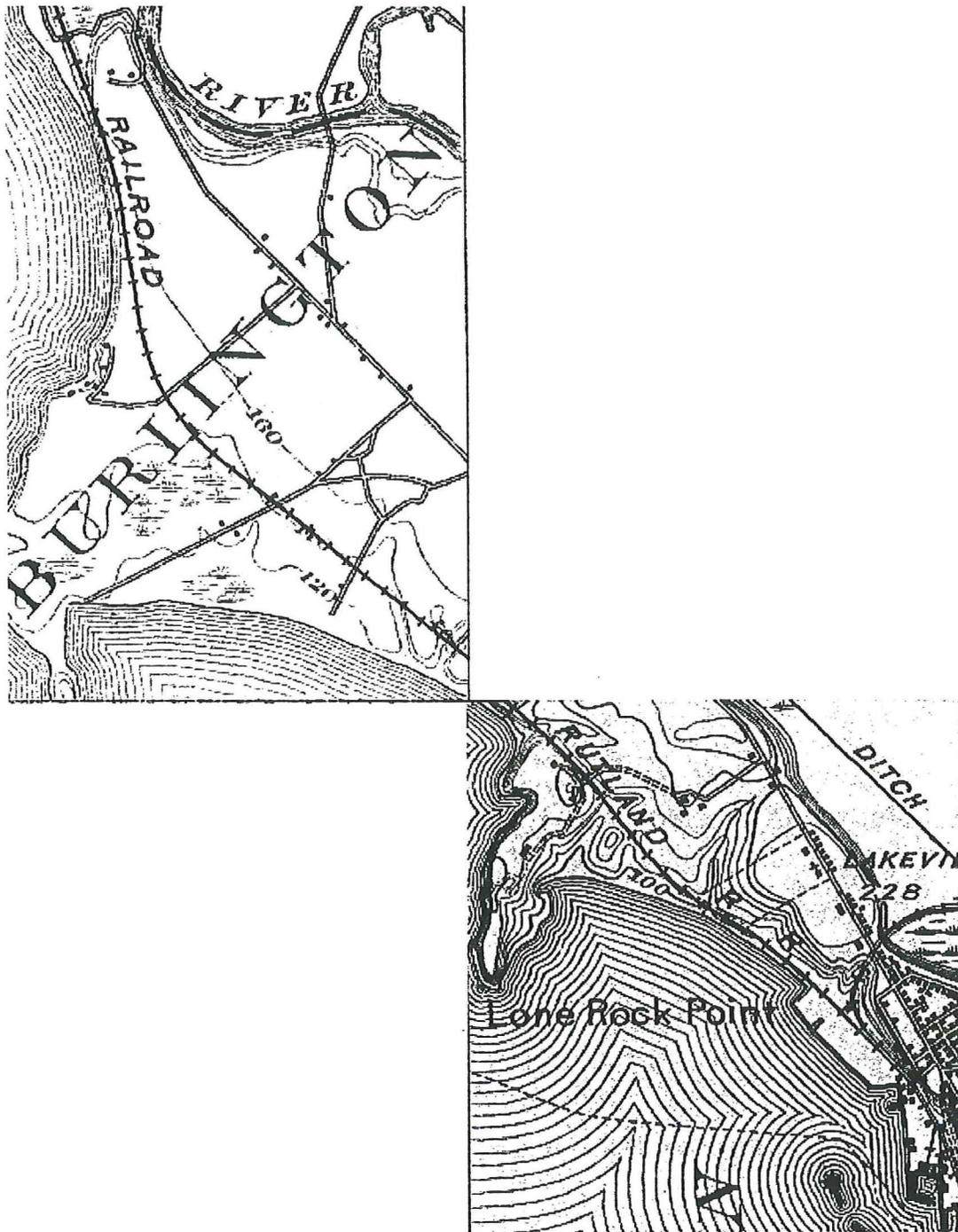


Figure 2. Location of prehistoric archaeological sites near the proposed Waterfront Bike Path Rehabilitation Project, Burlington, Chittenden County, Vermont.



Beers 1869

Figure 3. 1869 Beers map showing the location of the area affected by the proposed Waterfront Bike Path Rehabilitation Project, Burlington, Chittenden County, Vermont.



1906 USGS

Figure 4. 1906 USGS map showing the location of the area affected by the proposed Waterfront Bike Path Rehabilitation Project, Burlington, Chittenden County, Vermont.

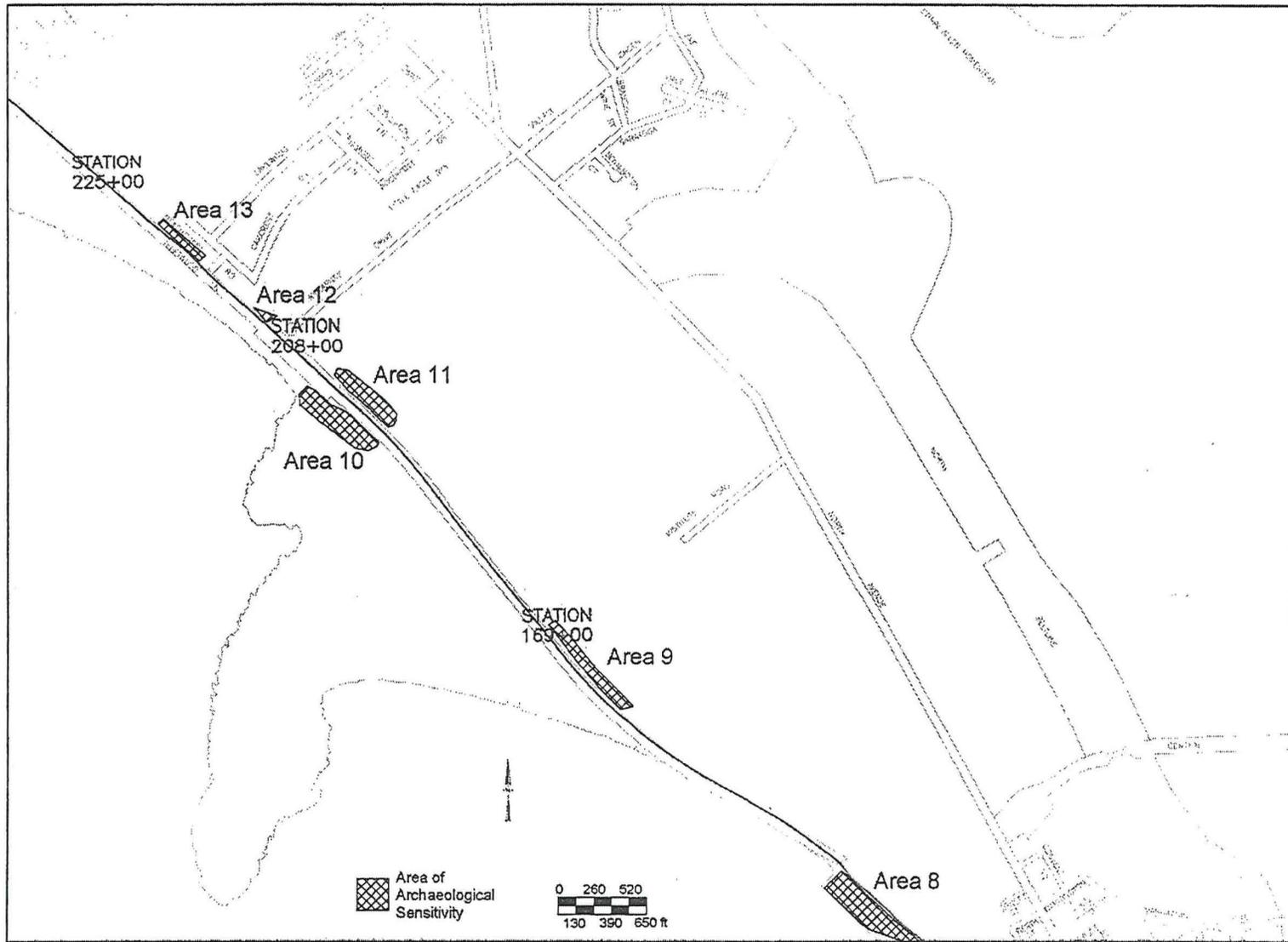


Figure 6. Location of Archaeological Sensitive Areas 8 - 13, along the Waterfront Bike Path, Burlington, Vermont.

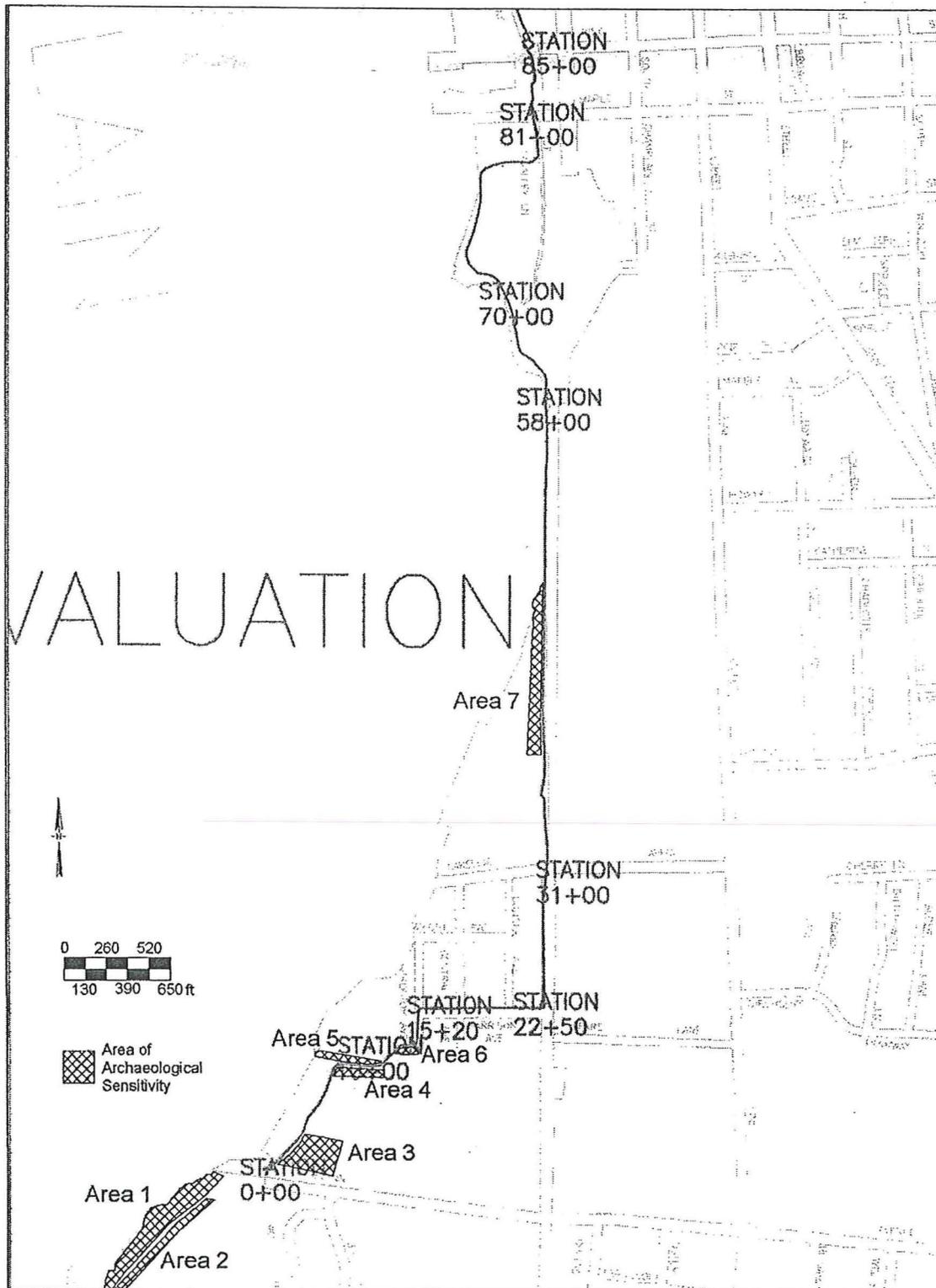


Figure 5. Location of Archaeological Sensitive Areas 1 - 7, along the Waterfront Bike Path, Burlington, Vermont.

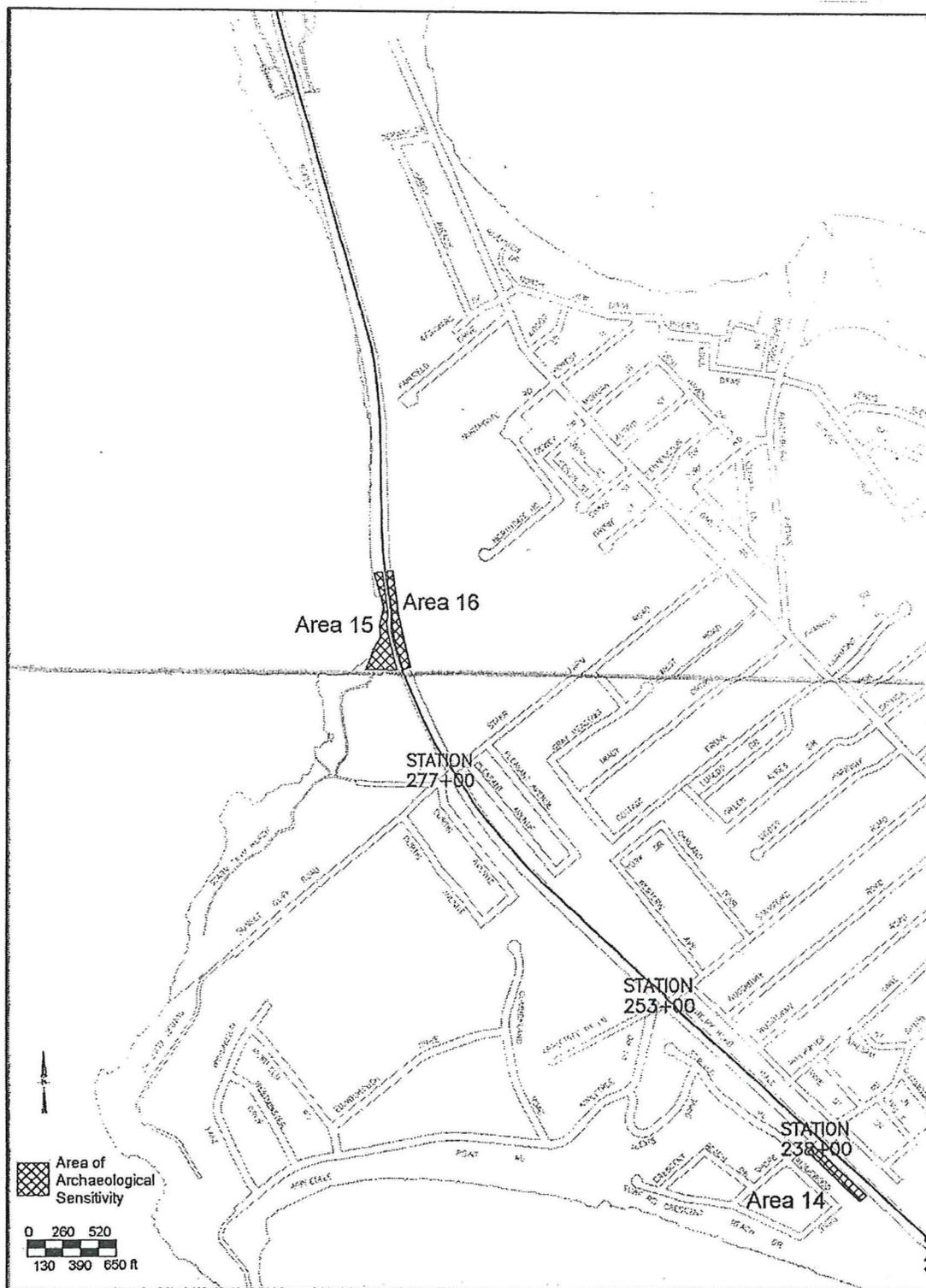


Figure 7. Location of Archaeological Sensitive Areas 14 - 16, along the Waterfront Bike Path, Burlington, Vermont.

**Historic Resources Assessment for the Waterfront Bike Path Evaluation
Burlington, Vermont
Chittenden County**

Submitted to:

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Submitted by:

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February 15th, 2002

**Historical Resources Assessment for the Waterfront Bike Path
Burlington, Vermont
Chittenden County**

Project Description

The proposed project, funded by the Vermont Agency of Transportation (VAOT) involves improving the Waterfront Bike Path, located along a 7.6 mile corridor on Lake Champlain in Burlington Vermont. Planned improvements to the path include: widening the path to 10 feet and creating two, 1 foot shoulders on either side, adding signage, fencing and enhancing drainage.

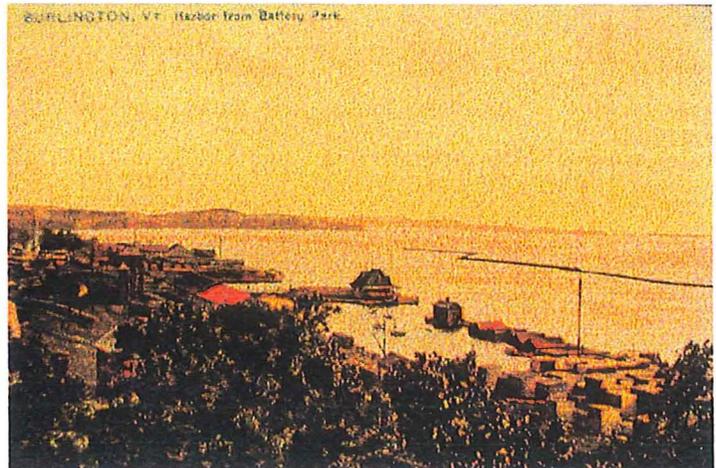
The National Historic Preservation Act of 1966 requires that all projects supported by federal funding that may effect historic properties, landscapes or archaeologically sensitive areas undergo a review of such resource prior any renovations, new construction or alterations.

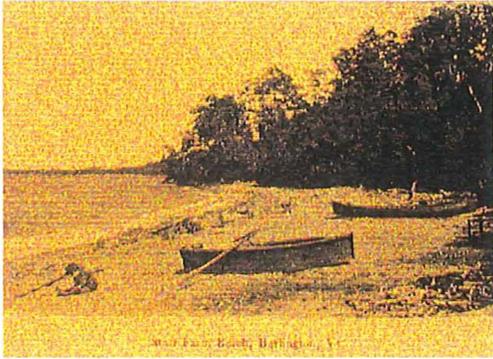
Goal of Historical Resources Assessment

The goal of the historical resources assessment is to identify any historic properties or historically significant resources along the 7.6 mile corridor that may be effected by the planned improvements. Under the National Historic Preservation Act (NHPA) the term “undertaking” is defined as any project, activity or program and any of its elements that has potential to have an effect on an historic property and that is under or assisted by a Federal agency. It will be determined through field inspection and a combination of historic research using maps, postcards, books of local history and deeds (when necessary), if any part of the planned improvements for the Waterfront Bike Path would be considered an “undertaking” as defined by the NHPA of 1966.

Historic Sites

The waterfront in Burlington has been an integral part of the town’s economic and cultural vitality since the 1790’s. The Battery street area, where town officials established the original plans for the city, was also the earliest center for commerce on Lake Champlain. The canal and shipping industries thrived in this area with both the Erie and Champlain Canals bringing business from New York to Canada.





The railroads became the predominant form of transportation in the mid-1800s with the construction of the Rutland Railroad. Today's Lake Champlain Transportation Company is a direct descendent of the Champlain Transportation Company, which is reputedly the oldest steamboat company in the world.

In the 1800s, the waterfront began to see more recreational users. In the late spring and summer, people would sail and enjoy scenic rides on self-propelled or horse and steam powered ferries. In 1914, the town established the North Beach recreation area to provide more access to the beaches along the coast of Lake Champlain. At the most northern end of the Bike Path, there are fishing camps and small camp shops, established in the late 1800s and early 1900, which thrived during the Great Depression of the 1930s.

Most buildings on the southern end of the Bike Path are industrial in nature and were constructed in the mid to late 1900s. The Lakeside Historic District, located just north of Oakledge Park is the only area of the Bike Path that runs through a residential district. This area consists of tenement housing, established from 1894 – 1920 by the Queen City Cotton Company. Other structures along the path include warehouses, the Burlington boathouses, The Basin Science Center, a wastewater treatment plant, condominiums, fishing camps, and buildings associated with the railroad.

A review of the Walling's 1857 map and the Sanborn Maps dating from 1898 to 1912 reveals several areas of historic significance. No properties appear to be within a close enough proximity to be negatively impacted by the proposed improvements. The following section gives a detailed report of each area, proposed improvements and possible impact to historic resources.

Field Inspection

A field inspection of the 7.6 mile corridor was conducted on various days from January 14th – January 24th by Lisa Ryan, Historic Preservation Consultant. Several areas contain historic resources, however, few areas would appear to be negatively impacted by the proposed widening of the path. The following section addresses each area according to the Station Markers designated by the City of Burlington, Department of Public Works.

1. Station 0+00 – 15+20

Oakledge Park to Harrison Ave.

Once home to Oakledge Manor, a summer resort built by Dr. William Seward Webb in 1881, this area is now a lakefront park. In the summer of 1970, the Burlington fire department destroyed the Manor in a controlled burn leaving no evidence of the grand home that once stood on this site. There are condominiums to the east of the park and Lake Champlain to the west.

Proposed improvements in the area include: widening the path to ten feet, repair pavement, establish proper shoulders, improve drainage and add signage and pavement markings.

These improvements would have no impact on the historic relevance or integrity of this area. There are no historic properties or resources within the Oakledge Park area that intersect or overlap with the current Bike Path.

2. 15+20 – 22+50

Harrison Avenue to Sears Lane

The Lakeside Historic District, which is a small community on the west side of the Bike Path between Lakeside Avenue and Harrison Avenue, is the only area of the recreation path that runs along a road. The Queen City Cotton Company constructed this neighborhood of multi-family residential units between 1898 and 1920.

Proposed improvements to this area include removal of a guardrail at the intersection of Harrison Avenue and improved signage.

The proposed improvements to this area would have no negative impact on any historic properties.

3. 22+50 – 31+00

North from Harrison Avenue to Blodgett Building

This eight-foot section of the Bike Path runs parallel to the railroad tracks. There is a six-foot chain link fence on the east side of the path and the backyards of several properties to the west. Many of these properties contain outbuildings that are within six feet of the current trail.

Proposed improvements to this area include: repairing cracked pavement, cutting back vegetation along the corridor to improve mobility and sight and the removal of a guardrail at the intersection of the Bike Path and Harrison



View south to intersection with Harrison Ave.

Avenue. There are no plans to widen the path through this area, as there is no room for expansion.

None of these improvements poses any threat to the properties that sit on the western side of the path. There are no historic resources in the area that would be negatively effected by the proposed improvements to this area.

4. 31+00 – 47+50

Blodgett Building to Barge Canal Beach



S-Curve at Station 35+00.



Path along Barge Canal Beach

This area of the Bike Path includes the G.S. Blodgett building, constructed in the summer of 1945 and enlarged in both 1947 and 1980. Blodgett established himself in Burlington in 1892 as a manufacturer of ovens. North of the Blodgett building is a stretch of Bike Path that runs parallel to Lake Champlain. This area of the recreation path runs along a steel and concrete sea wall constructed in 1947 by the Blodgett Company.

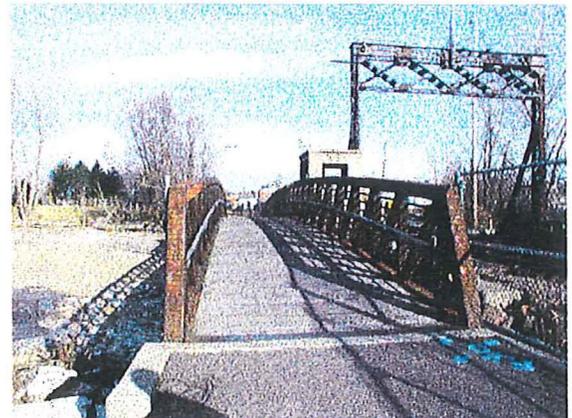
Planned improvements to this area include: cutting back vegetation near the Blodgett building, realigning the recreation path at the S-curve (Station 35+00) and the establishment of a new shoulder along the west side of the path near Barge Canal Beach (Station 37+00 – 47+50).

The proposed improvements to this area pose no direct or indirect threat to the historic resources.

5. 47+50 – 58+00

Barge Canal Beach to Bridge over Barge Canal

From Barge Canal Beach there is stretch that is eight feet wide with no shoulders. The Barge Canal Bridge is located at Section 58+00. This bridge is located on the site of the original drawbridge, built in 1868. This area was an



View North from Barge Canal Beach

essential stopping point along the canal route to and from Canada for the lumber industry throughout the 19th and early 20th century. Boats and barges transferred large, duty free cargoes of unfinished lumber from Canada that were stored in warehouses in Burlington and later sold for a high profit in the USA.

Planned improvement to this area includes rebuilding the trail located at section 47+50 and improving drainage.

The proposed improvements to this area pose no threat to the historic resources along this stretch of the corridor.

6. 58+00 – 70+00

Bridge over Barge Canal to Wastewater Treatment Plant

The Bike Path runs along the west side of the railroad tracks from Station 58+00 – 70+00. The path winds its way to Roundhouse Park and on to the Wastewater Treatment Plant located at Station 70+00.

Planned improvements to this area include improving drainage, re-building the trail with new gravel sub-base and asphalt, expanding the shoulder and installing a new railing.

There are no historic resources in the area that would be negatively impacted by the proposed improvements.

7. 70+00 – 81+00

Wastewater Treatment Plant to Perkins Pier

The eight-foot wide Bike Path runs on the west side of the Wastewater Treatment Plant and turns north along Lake Champlain to Perkins Pier.

Proposed improvements to this area include: widening the path between Station 70+00 – 75+00 to ten feet, installing a curb along the western edge of the path, re-building the path north of Station 75+00 and improving sight distance by relocating trees and trimming back vegetation.



View to the Wastewater Treatment Plant

There are no historic properties in the area that would be negatively impacted by the proposed improvements.

8. 81+00 – 85+00

Perkins Pier to King Street

This section of the Bike Path is eight feet wide with several curves in the path that are somewhat difficult to negotiate. The path has railroad tracks with a fence on the east and trees on the west side.

Proposed improvements to this area include: re-aligning the path to create a more manageable curve, moving several cement bollards at the intersection with King Street and adding signage and striping.

These improvements have no negative impact on the historic resources in this area.

9. 85+00 – 94+00

King Street to College Street

From King Street to College Street the bike path parallels the train tracks on the east side. This area is ten feet wide but contains some dangerous intersections.

The waterfront at the western end of King Street is home to the only shipyard in Burlington and is the site of construction for the second commercial steamboat built in 1809. Although no historic buildings remain along the waterfront, this area is of great historic significance to Burlington and its character should be retained.



College Street looking south to King Street

Proposed improvements to the area include: re-aligning the bike path to the west side of the railroad track and improving signage.

There are no historic buildings in this area that would be negatively impacted by the proposed improvements. However, any realignment of the path should take into account the historic character of the area and strive to maintain the historic landscape, which still exists.

10. 94+00 112+00

College Street to Lake Street

The Waterfront Park was built in 1991. The path is ten feet wide with and in very good condition. There are numerous trees lining the path.

This area of has much historic significance for the City of Burlington. This bay provided access to transportation routes that were essential to the commercial and economic growth of the city. The Champlain Canal and the shipping industries were the first to make use of this harbor in Vermont. Later, the railroad and trucking industries were established and enabled increased trade with Canada and New York State.



Entrance to Bike Path at Waterfront Park

Although there are no historic buildings that in the direct path of the proposed improvements to the recreation corridor, this area is of great significance to Burlington and the State of Vermont.

11. 112+00 – 169+00

Lake Street to North Beach

The Bike Path is eight feet wide in this area and runs along the west side of the old railroad tracks. Several old railcars remain on an elevated area of track as evidence of this area's history with the Rutland Railroad.

Proposed improvements to the area include widening the path to ten feet, re-paving, improving signage and maintaining a barrier between the road and the path crossing.

There are no historic buildings that would be negatively impacted by the proposed improvements to this area.

12. 169+00 – 208+00

North Beach to Little Eagle Bay

North Beach is the site of the first established recreation area in Burlington. In 1914, Burlington town officials addressed the problem of diminishing access to the beaches along Lake Champlain. The first bath house for beach visitors was built in 1919 and included a changing area and lockers for storage.



View north to Diocese Bridge

In 1921, the first automobile campgrounds were established. The bath house located at North Beach today was constructed in 1977.

Proposed improvements to this area include improving signage and drainage, and widening the path to ten feet.

The proposed improvements to this area will have no negative impact on historic resources.

13. 208+00 – 238+00

Little Eagle Bay to Shore Road

This area of the Bike Path is eight feet wide with some significant slopes on the west side.

Proposed improvements to this area include widening the path to ten feet and improving signage at the Leddy Park intersection.

There are no historic resources in the area that would be impacted by the proposed improvements.

14. 238+00 – 253+00

Shore Road to Staniford Road

This eight-foot area of the path crosses over several roads with automobile traffic. There are no historic neighborhoods or structures along this stretch of the Bike Path.

Proposed improvements include widening the path to ten feet, and improving signage.

There are no historic resources in the area that would be impacted by the proposed improvements.

15. 253+00 – 277+00

Staniford Road to Starr Farm Road

This area of the Bike Path is currently eight feet wide and crosses an intersection at Appletree Point Lane and Starr Farm Road.

Planned improvements for this area include: widening the path to ten feet, trimming vegetation and possibly widening the path at the intersections with roads to allow



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16. 277+00 – 345+00

Starr Farm Road to North Avenue Extension

This section of the Bike Path is eight feet wide from Station 277+00 – 330+00 and narrows to six and a half feet with steep slopes from Section 330+00 to 345+00.

The area north of the North Avenue Extension contains many fishing camps that were established in the early 1900s. Only few structures remain from that time while modular units replaced most. According to one long time resident of this area, these camps thrived during the early 30s, when families would come to fish at the mouth of the Winooski River. Often, the men of the family would take boats out onto the lake while the women and children remained on land, enjoying the beautiful landscape of this area. When the fishermen returned, a large meal was prepared and often times the proprietor of the camp would provide music. This proud resident would like to see a revival of that atmosphere and hopes that the Bike Path will again bring visitors to his shop.

Proposed improvements to this area include: widening the Bike Path to ten feet in the area south of Station 330+00 and widening the path to eight feet from Station 330+00 to 345+00, improving signage and installing fencing along the steep slopes.

The proposed improvements to the path pose no threat to the historic resources in this area.

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