

Shoreland Permit Application

for a **Shoreland Protection Permit** under
Chapter 49A of Title 10, § 1441 *et seq.*

For Shoreland Permitting Use Only

Application Number:



VERMONT DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
**WATERSHED
MANAGEMENT DIVISION**
LAKES & PONDS PROGRAM

Public Notice: At the same time this application is filed with Shoreland Permitting, a copy of this application must be provided to the municipal clerk for posting in the municipality in which the project is located.

Submission of this application constitutes notice that the person in Section A intends to create impervious surface and/or cleared area within the Protected Shoreland Area, and certifies that the project will comply with Chapter 49A of Title 10, § 1441 *et seq.* All information required on this form must be provided, and the requisite fees (Section G) must be submitted made payable to the State of Vermont, to be deemed complete. Refer to *The Vermont Shoreland Protection Act - A Handbook for Shoreland Development* and related instructions for guidance in completing this application.

A. Parcel Information

1. Landowner's Name: City of Burlington, c/o Jesse Bridges, Director and Harbormaster, Department of Parks Recreation & Waterfront

2a. Physical Address (911 Address): **645 Pine Street**

2b. Town - County: Burlington - Chittenden

2c. Zip: 05401

114-035-13642 mbs 7/1/16

3. SPAN (The School Parcel Account Number is required for your application to be deemed complete. It can be obtained from your property tax bill. If you cannot locate your property tax bill, please obtain this information from your Town Clerk) : ~~038-2-006-000~~

4. Phone: (802) 864-0123

5. Email: jbridges@burlingtonvt.gov

6. Name of lake/pond: Champlain Lake (Burlington Bay)

7. Total shore frontage: (feet)

8. Was the parcel of land created before July 1, 2014? Yes No

9. Are there wetlands associated with this parcel? Yes No

Contact the Wetlands Program: (802) 828-1535 or watershedmanagement.vt.gov/wetlands.htm.

10. Have you ever applied for a permit with the Department of Environmental Conservation associated with this parcel?

Yes No

11. What is the surface area of your parcel within the Protected Shoreland Area (PSA): 5,200 (square feet)

See The Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix C, Determining Lakeside Zone & PSA

12. What is the surface area of existing impervious surface on your parcel within the PSA: 2,000 (square feet)

See The Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix F, Calculating Percent Impervious Surface

13. What is the surface area of existing cleared area on your parcel within the PSA: ~~4,500~~ **2,775** (square feet)

See The Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix E, Calculating Percent Clearing **mbs 7/11/16**

B. Applicant Contact Information

1. Name: City of Burlington Department of Parks, Recreation & Waterfront c/o Jesse Bridges

2a. Mailing Address: **645 Pine Street**

2b. Municipality: Burlington

2c. State: VT

2d. Zip: 05401

3. Phone: (802) 864-0123

4. Email: jbridges@burlingtonvt.gov

C. Application Preparer Information (If the individual preparing the application is not the landowner.)

1. Name: VHB (Carla Fenner, Environmental Scientist)

2a. Mailing Address: 40 IDX Drive, Building 100, Suite 200

2b. Municipality: South Burlington

2c. State: VT

2d. Zip: 05403

3. Phone: (802) 497-6100

4. Email: cfenner@vhb.com

D. Project Description

1. Describe the proposed project. For this application to be considered administratively complete you must attach site plans that denote existing and proposed cleared areas and impervious surface and their distances from mean water level, no fewer than three photos of the project area, and dimensions and associated surface areas of cleared areas and impervious surfaces.

The overall project is a rehabilitation of the Burlington Bike Path (Project). The Project is being implemented in phases, and Phase 1b, the subject of this permit application, is a segment of the path from approximately just north of the skate park (near the Moran Plant) to the North Beach access, proposed to be constructed in 2016. The Project will generally include rehabilitation of the existing Bike Path and realignment of one segment onto the alignment of an unused railroad track, closer to the Lake's edge. Many areas of existing impervious surfaces (asphalt and concrete) will be removed to improve the nature and connectivity of the area, and maintenance and repair of existing shoreline protection revetments and rip rap armoring are proposed. The Project will include selective limited tree cutting, the installation of a stormwater management system, and construction and operation of the Project require the implementation of erosion prevention and sediment control (EPSC) plans. Revegetation in the Project area will include seeding herbaceous species and installation of more than 200 shrubs and trees: **using a replacement mitigation ratio of greater than 1:1 for planted woody stems. mbs 7/5/16**

2. For developed parcels, how far is the existing habitable structure from Mean Water Level 1 (feet), and How far will new cleared area or impervious surface be from MWL 1 (feet)?

OR

For undeveloped parcels, how far will new cleared area or impervious surface be from MWL _____ (feet)?
See The Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix A – Estimating Mean Water Level

3. Can all new cleared area or impervious surface be set back at least 100 feet from MWL? Yes No
If no, explain why below (attach support information as needed):

See Attachments 6 & 7.

Existing impervious surfaces account for approximately 2,560 sf of the total 5,200 sf area within the State-protected shoreland area (State-PSA), all of which occur within 100 ft of the mean water line (MWL) of 95.5 elevation. As this is a redevelopment and rehabilitation project, there is no practicable way to locate impervious surfaces beyond a 100 ft set back. See the Public Recreation Addendum and this application's supplemental narrative for additional information about the project's location requirements.

- 4a. What is the slope of the project site area: 15.00 %
See The Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix B, Determining Slope

- 4b. Is the slope of the project area less than 20%?
 Yes No If yes, skip 4c.

- 4c. If no above (4b), describe the measures taken to ensure the slope is stable, resulting in minimal erosion and impacts to water quality (attach support information as needed):

Average slopes within the Project area are mapped as less than 15% on the Agency of Natural Resources Atlas, a suggested reference in the Shoreland Permit Appendix B. A portion of the PSA currently consists of rip rap for shoreline protection, and some localized rip rap slopes exceed 20% per the Project's survey data, however that steepness is not representative of the overall shoreline slope in the Project parcel. Refer to the Project site plans (Attachment 7) for detailed depiction of contours within the State-PSA and adjacent City-PSA, which extends 250 lateral feet from the 100 ft elevation line.

Also refer to Supplemental calculations sheet which details all areas within the State-PSA which contain calculated slopes greater than 20%. mbs 7/1/16

- 5a. What is the surface area of new impervious surface associated with this project: 1,725 square feet (square feet) **mbs 7/1/16**

- 5b. What is the total resulting impervious surface after completion of the project and prior to implementation of best management practices: 3,725 square feet (square feet) **mbs 7/1/16**

For D5b, add A12 to D5a

See The Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix F Calculating Percent Impervious Surface

- 5c. Is the total in 5b. 20% or less of the parcel area within the PSA? Yes No
If 5a is 0, check the n/a box, otherwise divide 5b by A11 and multiply by 100 for percentage. Total percentage = 71.6% **mbs 7/1/16**

- 5d. If no above (5c), describe the best management practices used to manage, treat and control erosion from stormwater from the portion of impervious that exceeds 20% (attach support information as needed):

The resulting impervious surface area within the State-PSA exceeds the 20% threshold, which has been determined to be necessary per the Applicant's stated project goal for increased public recreational opportunity and accessibility. The addition of new impervious surfaces will be mitigated through the implementation of Best Management Practices (BMPs): the overall Project requires an operational phase stormwater permit and as such, new impervious areas both within and beyond the State-PSA and City-PSA will be managed and authorized under a General Permit 3-9015, which will include the design and implementation of stormwater management practices. Additionally, the Project will require a construction phase stormwater permit (General Permit 3-9020) which will include specific EPSC measures to be employed during Project construction.

Best management practices involve removing existing impervious surface as described in the site plans for the entire project including the state-protected shoreland area and city-protected shoreland area. The overall project will result in a net decrease of impervious surface of 0.67 acre or 29,185 square feet within the entire protected shoreland area of the parcel. mbs 7/5/16

<p>6a. What is the surface area of new cleared area associated with this project: 70000 (square feet)</p> <p>See The Vermont Shoreland Protection Act – A Handbook for Shoreland Development, Appendix E, Calculating Percent Clearing</p>	<p>6b. What is the total resulting cleared area after completion of the project and prior to implementation of best management practices: <u>5,200</u> (square feet)</p> <p>For 6b, add A13 to D6a.</p>
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6c. Is the total in 6b. 40% or less of the parcel area within the PSA? Yes If yes, skip 6d. No

If 6a is 0, check the n/a box, otherwise divide 6b by A11 and multiply by 100 for percentage. Total percentage = 100 % N/A

6d. If no above (6c), describe the best management practices used to provide erosion control, bank stability, and wildlife habitat functionally equivalent to clearing less than 40% (attach support information as needed).

Of the approximately 5,200 sq ft within the State-PSA, approximately 86% is currently in an existing cleared condition (i.e., not covered by tree cover, shrub cover, or typical natural organic duff and herbaceous ground cover). The Project will require clearing of 700 sq ft of woody vegetation within the State-PSA in order for safe access to areas of shoreline protection maintenance and repair. There will be at least 700 sq ft of new tree/shrub planting within the State-PSA, which is identified in the Shoreland Protection Act as a BMP to mitigate for necessary clearing within the PSA. The approximate location of tree planting is depicted on the Project site plans (Attachment 7). Refer to the Supplemental Narrative (Attachment 4) for a further description of tree cutting and revegetation for Phase 1B.

E. Landowner Certification A replacement mitigation ratio of greater than 1:1 for planted woody stems Project-wide will be used. mbs 7/5/16

As APPLICANT, I hereby certify that the statements presented on this application are true and accurate and recognize that by signing this application, I agree to complete all aspects of the project as authorized. I understand that failure to comply with the foregoing may result in violation of the Shoreland Protection Act, 10 V.S.A. Chapter 49A, and the Vermont Agency of Natural Resources may bring an enforcement action for violations of the Act pursuant to 10 V.S.A. chapter 201.

Applicant/Landowner Signature: Jesse Bridges Digitally signed by Jesse Bridges
DN: cn=Jesse Bridges, o=City of Burlington,
ou=Parks, Recreation & Waterfront,
email=jbridges@burlingtonvt.gov, c=US **Date:** 5/9/16

F. Application Preparer Certification (if applicable)

As APPLICATION PREPARER, I hereby certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Application Preparer Signature: [Signature] **Date:** 04/27/2016

- G. Additional Required Documentation** *(Please check to ensure you have completed the following)*
- All sections of the application are complete (or otherwise indicate "not applicable")
 - Application includes site plans denoting existing and proposed cleared area and impervious surface and distances from mean water level
 - Application description includes dimensions and surface areas of cleared areas and impervious surfaces
 - Application includes photos of project area

H. Permit Application Fees		
<i>Administrative Fee:</i> \$125.00		\$ 125.00
<i>Impervious Area Fee:</i> \$0.50 per square foot	Enter new impervious area as entered in item (5a.) <u>3,725.00</u> x .5	\$ 1,862.50
Total:		\$ 1,987.50

Print Form

Submit this form and application fee, payable to:
State of Vermont
Vermont Department of Environmental Conservation
Watershed Management Division
Shoreland Permitting
1 National Life Drive, Main 2
Montpelier, VT 05620-3522

**Shoreland Permit
Application Addendum**
for a **Shoreland Protection Permit** under
Chapter 49A of Title 10, § 1443(g)
Public Recreation Areas



VERMONT DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
**WATERSHED
MANAGEMENT DIVISION**
LAKES & PONDS PROGRAM

This Public Recreation Areas Addendum is intended to accompany a completed *Shoreland Permit Application* in instances of proposed impervious surface and cleared area that serves the general public and promotes a public trust use and otherwise would not meet the Shoreland Protection Act standards.

Submission of this Public Recreation Areas Addendum constitutes notice that the person in Section A of the attached *Shoreland Permit Application* intends to create impervious surface and/or cleared area within the Protected Shoreland Area, and certifies that the project will comply with Chapter 49A of Title 10, § 1443(g). All information required on this form must be provided to be deemed complete.

D. Project Description

1. Describe the proposed project and how it provides access to the water for the general public and promotes public trust uses of the water. On separate pages attach site plans, photos, calculations of impervious surface and cleared area, and any other relevant supporting documents:

The Burlington Bike Path is recognized by the City of Burlington Department of Parks, Recreation & Waterfront as being the crown jewel of the City's parks system, serving as an immensely popular attraction during the summer, fall and spring and even in the winter months with multi-modal winter recreation and transportation like skiing and fat bikes. Approximately eight miles of paved path, with aggregate shoulders for runners and walkers, the path in Burlington runs from just south of Oakledge park to the Winooski River to the north, and along the way runs through and connects many major parks and facilities situated on the Lake Champlain shoreline. The path also connects many residential neighborhoods and is situated close to several commercial districts. The Path interconnects with the Island Line Trail, which gives walkers, runners, and bikers the opportunity to extend their adventure north to the Colchester Causeway and to North Hero at the Allen Point Access, making up a 14 mile trail. The Phase 1B Project will rehabilitate the existing path to improve the surface conditions, partially realign it to extend along an existing railroad bed, and add three "pause places," which will allow path users to access the Lake shore and water. By creating established access locations at the pause places, not only will use and enjoyment of the Lake water be promoted, but also the safety and visibility of that access will be improved for all. The Project will necessarily include work within the PSA as regulated by the State and under the City's Delegated Municipal Authority, which starts at 100 feet elevation AMSL and extends 250 feet laterally (City-PSA). Within the State PSA between 95.5 feet and 100 feet AMSL (State-PSA), proposed work includes the installation of pause place infrastructure (steps) impervious surface, and the repair and maintenance of existing shoreline armoring (rip rap), another impervious surface. In order to conduct this work, limited tree cutting is required to allow access to the construction areas and allow a safe work area. See attached site plans, supplemental narrative, representative photographs, and calculations of regulated activities within the PSA.

2. Describe why the new impervious surface and/or cleared area within the Protected Shoreland Area are necessary to achieve the recreational purpose and function of the project:

The new impervious surface area within the State-PSA is limited to ~~3,725~~ ^{1,725} square feet, which is required per the engineered design for the steps of a pause place located at approximately Station 149+75 (see Attachment 7, Site Plans). The proposed new impervious area is negligible when considered in the context of the existing impervious surface along the Lake edge and within the combined State-PSA and City-PSA areas. Existing impervious surfaces include stone rip rap, concrete rip rap, bituminous pavement and concrete from former buildings, the Bike Path itself, and an existing rail road bed. Although there is ~~3,725~~ ^{1,725} square feet of proposed new impervious area within the State-PSA, there will be a reduction in overall impervious area within the combined State-PSA and City-PSA of 0.67 acre. New impervious area proposed within the State-PSA will be in the form of pause place steps, as well as an area of repair and maintenance of shoreline protection rip rap. The Project requires a construction and operational phase stormwater permits, and as such the runoff from all new impervious surface will be managed through the design and installation of stormwater management practices. The Project also will require a construction phase stormwater permit, and therefore will be required to install and maintain Erosion Protection and Sediment Control (EPSC) measures throughout the duration of construction. As such, although new impervious surface is required within the PSA in order to meet the goals of the Project, impacts from stormwater and erosion have been minimized and mitigated for to the greatest extent practicable. As described in Section 1 above, limited woody vegetation clearing within the PSA will be required in order for construction access. A total of 700 square feet of tree clearing is required within the State-PSA, which is necessary in order that the shoreline protection infrastructure maintenance activities can be completed and so that the pause place steps may be installed. Without the repairs to shoreline armoring the safety and longevity of the Project would be at risk, and without construction of the pause place, Bike Path users would not have the designated access and safe approach that the pause place would offer, including steps and a handrail (see cross section of pause place steps, sheet 13 of Attachment 7, Site Plans).

3. Describe the best management practices used to protect habitat and water quality of the lake while achieving the public recreational purpose. On separate pages attach site plans, photos, and any other relevant supporting documents:

The Project's overall goal of increasing and enhancing the existing public recreational and multi-modal transportation opportunities provided by the Bike Path will not come at the expense of wildlife habitat or water quality. Within the State-PSA of 95.5 feet and 100 feet AMSL, there will be approximately 700 square feet of woody vegetation clearing. Revegetation of this 700 square foot area within the State-PSA is not feasible, largely because the shoreline is protected with rip rap and other infrastructure which could be damaged or compromised by the growth of tree roots in place and if tipped or uprooted during storms. Revegetation within the State-PSA as a BMP is also not feasible because this narrow band of shoreline is subject to seasonal flooding and annual storm and ice damage, and conditions for a successful planting are not present within the largely rip rapped and modified protected shoreline. Project-wide, within the City-PSA there will be approximately 52 trees cut, and up to approximately 0.95 acre of tree clearing across the entire Project. In order to evaluate the potential impacts to protected wildlife (State and Federally listed bat species) from the proposed tree cutting, the Project consulted with the Vermont Department of Fish and Wildlife ("FWD"). FWD corroborated that there would be no concern for direct take or indirect impacts to protected bat species from the proposed tree cutting.

In order to mitigate for the Project's tree removal and also to enhance an overall wooded shore aesthetic and character, the City has designed a revegetation plan which includes approximately 200 trees and shrubs to be planted. As such, although the 700 square feet of woody vegetation removal within the State-PSA will not be mitigated for within the same portion of the State-PSA, the BMP to establish a comparable (1:1 area ratio as described in the Shoreland Protection Act, 2014) of revegetation elsewhere within the PSA will be met when the State-PSA is considered in combination with the City-PSA. The tree and shrub planting locations, as well as an inventory of existing woody vegetation and proposed trees and shrubs to be cut, are included on the Project Site Plans, Attachment 7.

Submit this form as an addendum to a complete Shoreland Permit Application to:

**Vermont Department of Environmental Conservation
Watershed Management Division
Shoreland Permitting
1 National Life Drive, Main 2
Montpelier, VT 05620-3522**

Direct all correspondence or questions to Shoreland Permitting at:
ANR.WSMDSshoreland@state.vt.us

For additional information visit: www.watershedmanagement.vt.gov



Photograph 1: View looking north along the shoreline approximately at the proposed new staircase “pause place”, where impervious surface within the State-PSA is required. Photo taken 6/1/14 by VHB/Ketterling.



Photograph 2: Photograph looking south towards the proposed location of the staircase and pause place; representative character of conditions in State-PSA are not conducive to revegetation. Photo taken 6/1/14 by VHB/Ketterling.



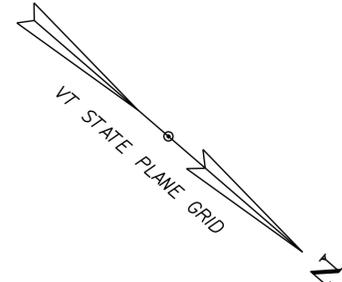
Photograph 3: Representative view of shoreline revetment that will be repaired as part of the Project, location near larger pause place at northwest corner of Urban Reserve. View to south. Photo taken 4/13/13 by VHB/Ketterling.



Photograph 4: Representative view of shoreline revetment that will be repaired as part of the Project, location is between jetty and northwest corner of Urban Reserve. View to north. Photo taken 6/1/14 by VHB/Ketterling.



Photograph 5: Representative view of existing shoreline rip rap needing repair and maintenance, approximately at Station 157+50. Photo taken 6/1/14 by VHB/Ketterling.



EXCAVATION OF SURFACES & PAVEMENTS
 STA. 151+75 TO 157+50, ALL

**SOLID ROCK EXCAVATION
 (REMOVAL OF CONCRETE)**

CLEARING AND GRUBBING
 STA. 155+75 TO 157+50, WITHIN L.O.D.

4 INCH YELLOW LINE
 STA. 151+75 TO 157+50 (DASHED)

STA. 154+14 TO 154+66, ALL
 STA. 155+20 TO 155+75, ALL
 STA. 156+55 TO 157+40, ALL

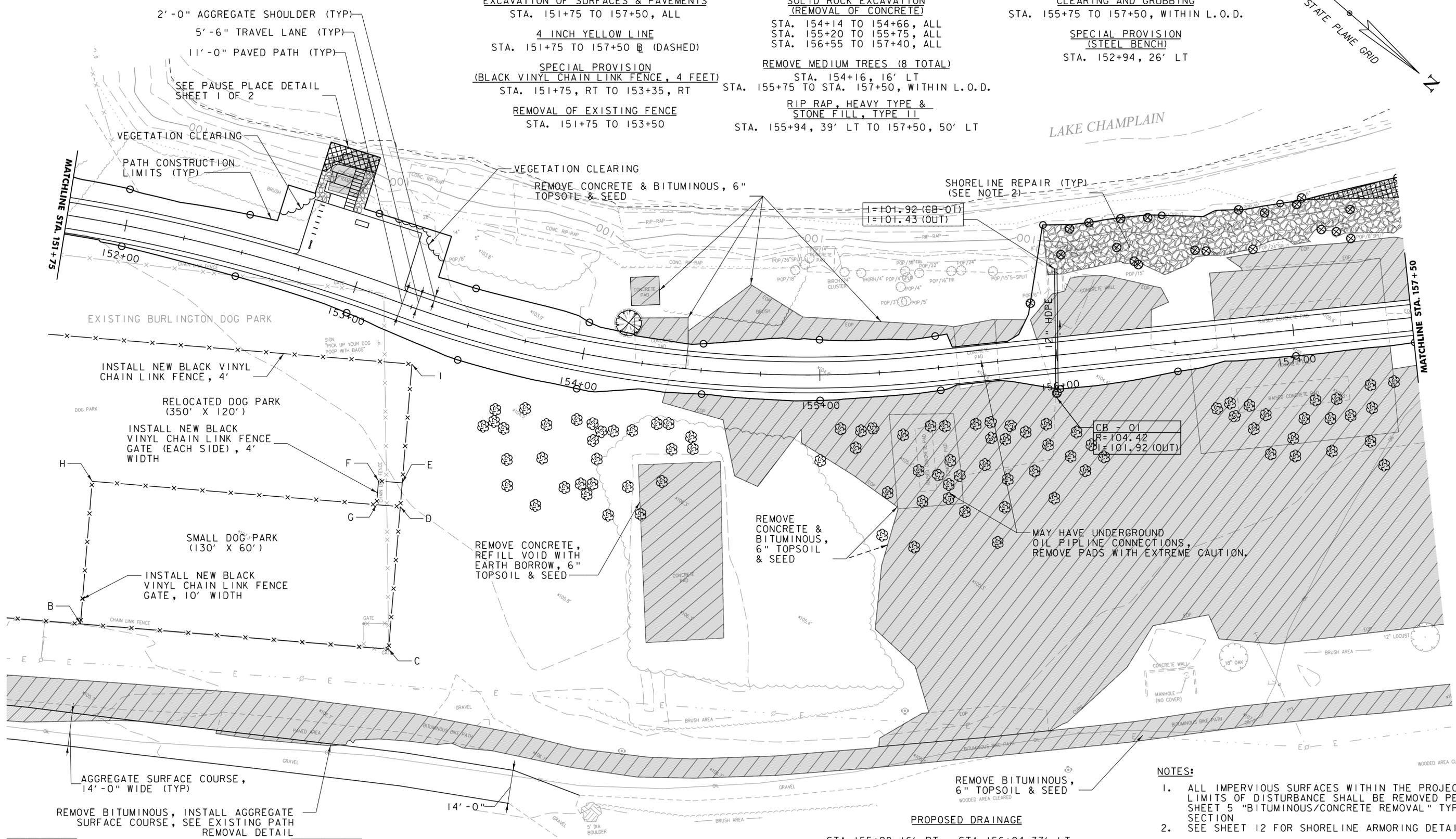
**SPECIAL PROVISION
 (STEEL BENCH)**
 STA. 152+94, 26' LT

**SPECIAL PROVISION
 (BLACK VINYL CHAIN LINK FENCE, 4 FEET)**
 STA. 151+75, RT TO 153+35, RT

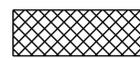
REMOVE MEDIUM TREES (8 TOTAL)
 STA. 154+16, 16' LT
 STA. 155+75 TO STA. 157+50, WITHIN L.O.D.

REMOVAL OF EXISTING FENCE
 STA. 151+75 TO 153+50

**RIP RAP, HEAVY TYPE &
 STONE FILL, TYPE II**
 STA. 155+94, 39' LT TO 157+50, 50' LT



- NOTES:**
- ALL IMPERVIOUS SURFACES WITHIN THE PROJECT LIMITS OF DISTURBANCE SHALL BE REMOVED PER SHEET 5 "BITUMINOUS/CONCRETE REMOVAL" TYPICAL SECTION
 - SEE SHEET 12 FOR SHORELINE ARMORING DETAILS

	= NEW IMPERVIOUS SURFACE WITHIN STATE PROTECTED SHORELAND AREA		= REMOVE EXISTING CONCRETE/BITUMINOUS SURFACE
	= TREE PLANTING		= REMOVE TREE

SCALE 1" = 20'-0"
 20 0 20

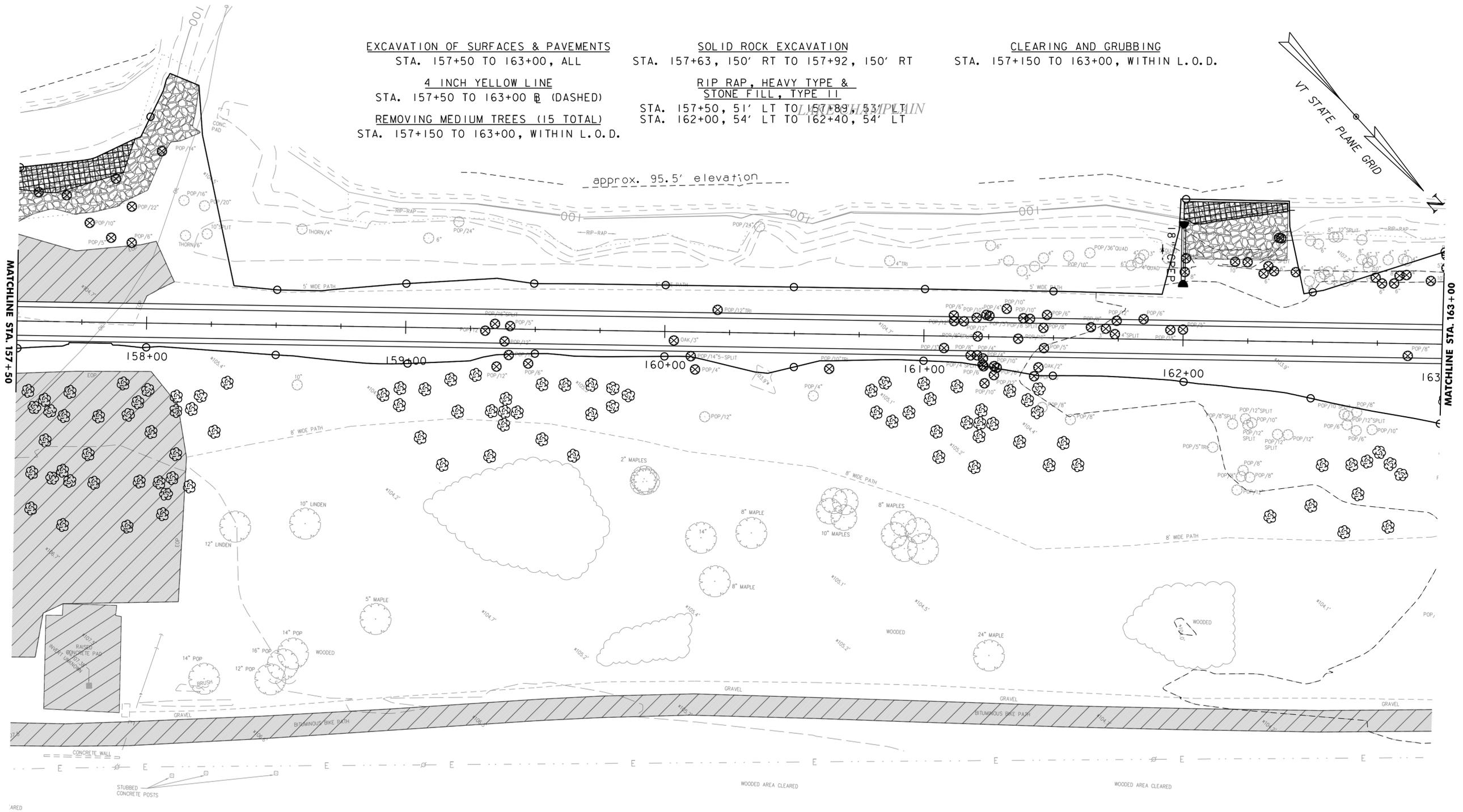
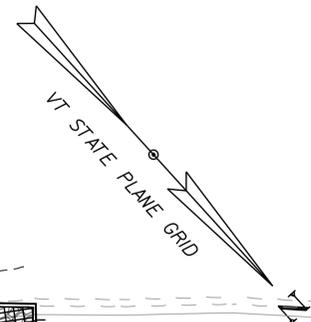


PROJECT NAME: BURLINGTON BIKE PATH	
PROJECT NUMBER: 57634.00	
FILE NAME: z57634bdr_nul.dgn	PLOT DATE: 4/5/2016
PROJECT LEADER: M.A. COLGAN	DRAWN BY: P.A. MILLER
DESIGNED BY: E.B. PARIZO	CHECKED BY: E.B. PARIZO
LAYOUT SHEET (5 OF 11)	SHEET 16 OF 22

EXCAVATION OF SURFACES & PAVEMENTS
 STA. 157+50 TO 163+00, ALL
4 INCH YELLOW LINE
 STA. 157+50 TO 163+00 (DASHED)
REMOVING MEDIUM TREES (15 TOTAL)
 STA. 157+150 TO 163+00, WITHIN L.O.D.

SOLID ROCK EXCAVATION
 STA. 157+63, 150' RT TO 157+92, 150' RT
RIP RAP, HEAVY TYPE & STONE FILL, TYPE II
 STA. 157+50, 51' LT TO 157+89, 53' LT
 STA. 162+00, 54' LT TO 162+40, 54' LT

CLEARING AND GRUBBING
 STA. 157+150 TO 163+00, WITHIN L.O.D.

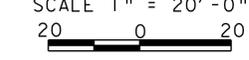


MATCHLINE STA. 157+50

MATCHLINE STA. 163+00

-  = NEW IMPERVIOUS SURFACE WITHIN STATE PROTECTED SHORELAND AREA
-  = TREE PLANTING
-  = REMOVE EXISTING CONCRETE/BITUMINOUS SURFACE
-  = REMOVE TREE

PROPOSED DRAINAGE
 STA. 162+00, LT. 23' - STA. 162+00, LT. 43'
 NEW 20 LF X 18" CPEP (SL)
 NEW 18" CPEPES AT INLET, +00, LT. 23'
 18" INV. AT INLET = 103.80
 NEW 18" CPEPES AT OUTLET, +00, LT. 43'
 18" INV. AT OUTLET = 103.40

SCALE 1" = 20'-0"


- NOTES:**
- ALL IMPERVIOUS SURFACES WITHIN THE PROJECT LIMITS OF DISTURBANCE SHALL BE REMOVED PER SHEET 5 "BITUMINOUS/CONCRETE REMOVAL" TYPICAL SECTION
 - SEE SHEET 12 FOR SHORELINE ARMORING DETAILS

PROJECT NAME: BURLINGTON BIKE PATH	
PROJECT NUMBER: 57634.00	
FILE NAME: z57634bdr_nul.dgn	PLOT DATE: 4/5/2016
PROJECT LEADER: M.A. COLGAN	DRAWN BY: P.A. MILLER
DESIGNED BY: P.A. MILLER	CHECKED BY: E.B. PARIZO
LAYOUT SHEET (6 OF 11)	SHEET 17 OF 22



LAKE CHAMPLAIN

EXCAVATION OF SURFACES & PAVEMENTS
STA. 163+00, 150' RT TO 165+90, 32' RT

4 INCH YELLOW LINE
STA. 163+00 TO 168+75 (DASHED)

REMOVING MEDIUM TREES (29 TOTAL)
STA. 163+00 TO STA. 168+75, WITHIN L.O.D.

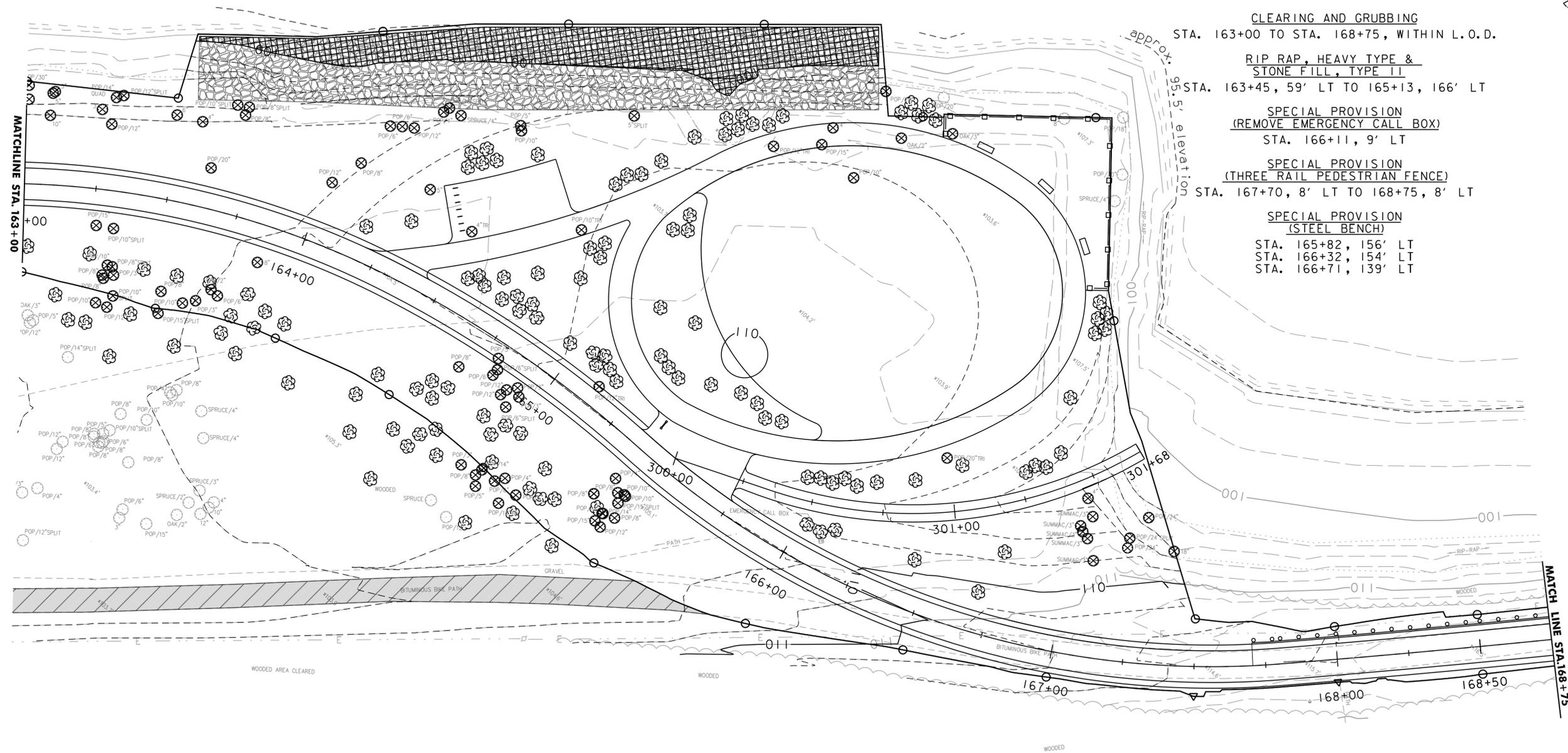
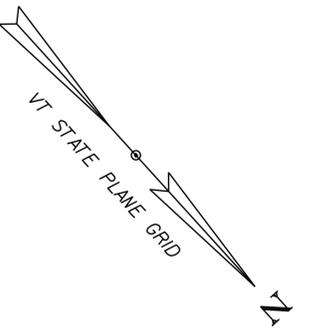
CLEARING AND GRUBBING
STA. 163+00 TO STA. 168+75, WITHIN L.O.D.

RIP RAP, HEAVY TYPE &
STONE FILL, TYPE II
STA. 163+45, 59' LT TO 165+13, 166' LT

SPECIAL PROVISION
(REMOVE EMERGENCY CALL BOX)
STA. 166+11, 9' LT

SPECIAL PROVISION
(THREE RAIL PEDESTRIAN FENCE)
STA. 167+70, 8' LT TO 168+75, 8' LT

SPECIAL PROVISION
(STEEL BENCH)
STA. 165+82, 156' LT
STA. 166+32, 154' LT
STA. 166+71, 139' LT



-  = NEW IMPERVIOUS SURFACE WITHIN STATE PROTECTED SHORELAND AREA
-  = TREE PLANTING
-  = REMOVE EXISTING CONCRETE/BITUMINOUS SURFACE
-  = REMOVE TREE

SCALE 1" = 20'-0"
20 0 20

NOTES:

1. ALL IMPERVIOUS SURFACES WITHIN THE PROJECT LIMITS OF DISTURBANCE SHALL BE REMOVED PER TYPICAL SECTIONS UNLESS OTHERWISE NOTED
2. SEE SHEET 12 FOR SHORELINE ARMORING DETAILS

PROJECT NAME: BURLINGTON BIKE PATH
PROJECT NUMBER: 57634.00

FILE NAME: z57634bdr_nul.dgn
PROJECT LEADER: M.A. COLGAN
DESIGNED BY: E.B. PARIZO
LAYOUT SHEET (7 OF 11)

PLOT DATE: 4/5/2016
DRAWN BY: P.A. MILLER
CHECKED BY: E.B. PARIZO
SHEET 18 OF 22



May 17, 2016

Ref: 57634.00

Michaela Stickney
Environmental Analyst
Vermont DEC Lakes & Ponds Program
1 National Life Drive, Main 2
Montpelier, VT 05620



Re: Shoreland Permit Application– Burlington Bike Path Rehabilitation Phase 1B

Dear Michaela:

On behalf of Burlington Parks, Recreation & Waterfront (“Applicant” or “BPRW”), VHB has prepared the enclosed application for a Shoreland Permit for Phase 1B of construction for the Burlington Bike Path Rehabilitation Project (“Project”). This application addresses Project activities within the Protected Shoreland Area (“PSA”) of Lake Champlain in Burlington, Vermont. Riparian and Littoral Conservation Zone (“Riparian Zone”) and the Special Flood Hazard Area (“SFHA”) pursuant to Chapter 49A of Title 10, §1441 *et seq* of Vermont statute, which defines the PSA as the lateral width of 250 feet as measured from the mean water level (“MWL”) of a lake or pond. For Lake Champlain, the MWL has been designated as 95.5 feet elevation above mean sea level (“AMSL”). VHB understands, through consultations with the City and with Misha Cetner of the Lakes & Ponds Program (“L&P”) that on June 22, 2015 the City was granted a Designated Municipal Authority of the PSA, starting at 100 feet elevation AMSL and extending to the outer, or upland edge of the 250 laterally measured shoreland zone (“City-PSA”). The State, therefore retains jurisdiction of the area between 95.5 feet and 100 feet elevation AMSL (“State-PSA”). This application request applies to Project construction and operational activities within the State-PSA for the completion of Phase 1B of the overall Project, which is generally bounded by the south end of the Urban Reserve and terminating at the entrance to North Beach Park. Although not under the State’s jurisdiction, Project activities within the City-PSA have been summarized in portions of the permit application form and in supporting materials, including a Public Recreation Area Addendum to the application, so that the proposed activities within the State-PSA can be considered in the context of the larger Project and the overall protected shoreland zone.

This application includes the following materials, which are provided electronically on the enclosed CD:

- Attachment 1: Site Location Map
- Attachment 2: Shoreland Permit Application Form
- Attachment 3: Public Recreation Area Addendum
- Attachment 4: Supplemental Narrative
- Attachment 5: Representative Photographs
- Attachment 6: Select Plan Sheets depicting Project activities within the State-PSA
- Attachment 7: Burlington Bike Path Rehabilitation Project – Phase 1B Plan Set (includes plan set for existing and proposed conditions, erosion prevention and sediment control, revegetation)

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Ms. Michaela Stickney
Ref: 57634.00
Page 2 of 2
May 17, 2016



The overall Project encompasses the entire length of the Burlington Bike Path, roughly 7.9 miles from Austin Drive to the Winooski River Bridge. The Applicant completed Phase 1A construction in the summer of 2015 and included approximately 1.70 miles of path rehabilitation from Perkins Pier through Waterfront Park. Phase 1B, slated for construction in summer of 2016, will run through the Urban Reserve to North Beach.

Proposed regulated activities within the State-PSA include:

- Clearing approximately 700 square feet of woody vegetation;
- Construction of ~~3,725~~ 1,725 square feet of new impervious surfaces. 1,725 square feet
mbs 7/11/16

Best Management Practices ("BMPs") to mitigate for regulated activities within the State-PSA are proposed to occur both within the State-PSA and the City-PSA. As described in the application form, addendum, and shown on the site plans, the overall impervious surface area within the combined State-PSA and City-PSA will be reduced during Project construction, as numerous existing impervious surfaces will be removed and those areas revegetated. The necessary tree clearing within the State-PSA will be mitigated for within the City-PSA, where more than 200 trees and shrubs are planned for planting: a replacement mitigation ratio of greater than 1:1 for planted woody stems Project-wide. Details of both impervious area and tree cutting within the State-PSA are described fully in the enclosed application materials, and have been deemed necessary by the Applicant in order to meet the goal of creating an enhanced recreation and multi-modal transportation amenity for Burlington's residents, workforce, and visitors. Because of this clear Project objective to create and improve recreational opportunity and accessibility along the Lake Champlain shoreline, VHB understands that the defined standards in the Shoreland Protection Act may be waived for certain regulated activities per the Public Recreation Area Addendum, enclosed as a permit attachment.

Thank you for your time and consideration in reviewing the enclosed application and supporting materials. Please do not hesitate to contact me if you have any questions.

Sincerely,

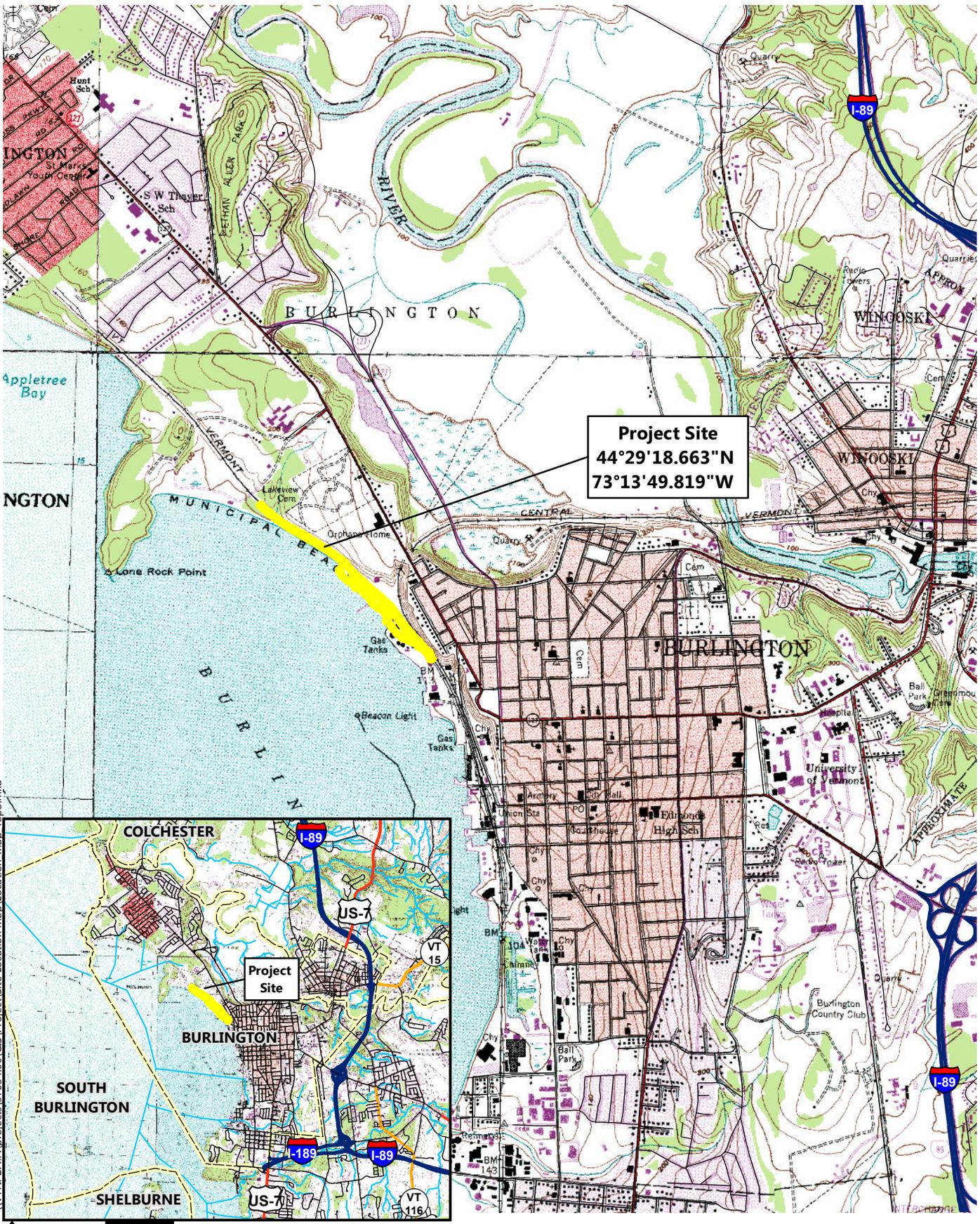
A handwritten signature in blue ink, appearing to read "Carla Fenner", written over a light blue circular stamp.

Carla Fenner
Environmental Scientist

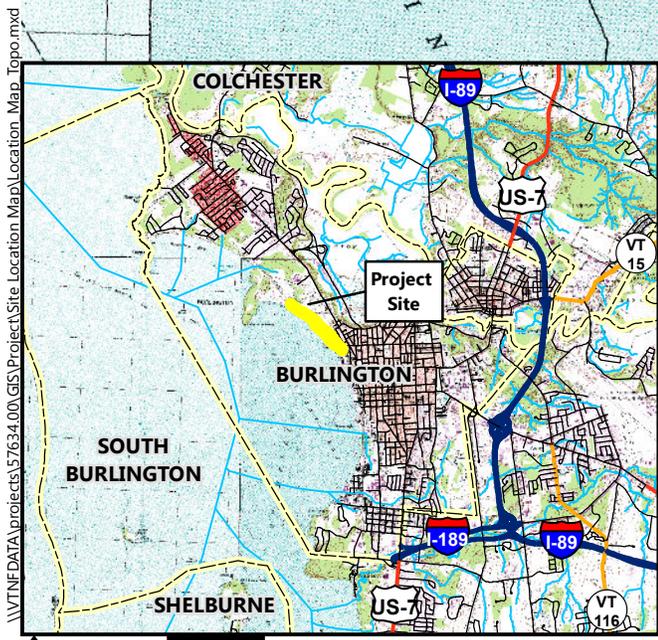
CAF/jkw

Enclosures

cc: Jesse Bridges, Director and Harbormaster, Burlington Parks, Recreation & Waterfront
Michael A. Adams, Project Manager, U.S. Army Corps of Engineers
City of Burlington City Clerk's Office (for posting)



Project Site
 44°29'18.663"N
 73°13'49.819"W



Burlington Bike Path Rehabilitation Project- Phase 1B

- Site Outline (VHB)
- Road (VTrans)
- Interstate
- US Highway
- State Highway
- Town Road

Location Map

Sources:
 USGS Topo Background (1996)
 VTrans (Vermont Department of Transportation - 2015)
 VHB - 2016



**City of Burlington
Department of Parks, Recreation & Waterfront
Burlington Bike Path Rehabilitation Project – Phase 1B
Burlington, Vermont**

**Vermont Department of Environmental Conservation Watershed Management Division
Lakes & Ponds Program
Shoreland Protection Permit Application - Supplemental Narrative**

April 27, 2016

Introduction

The proposed project involves Phase 1B of rehabilitation of the Burlington Bike Path, located approximately between the Waterfront Access North area (to the east and north of the Moran Plant) and the southern access point for North Beach in Burlington, Vermont. Improvements are varied along the project and may include full-depth reconstruction, widening, removing adjacent impervious surface, and re-alignment as well as shoreline protection repairs and maintenance. The Project is within the Lake Champlain watershed, which is not included on the State of Vermont 303(d) List of Waters, Part A (2014) for stormwater. The proposed path alignment is located between 25 and 150 feet from the shore of Lake Champlain.

Site History

The City of Burlington waterfront and more specifically Waterfront Park and the lands within what is currently known as the Urban Reserve have a long history of land use and disturbance by human activity. Historically, the area was filled in the mid-1800s for the expansion of railroad tracks, and historic industrial land uses consisted of lumber storage (Sanborn Maps 1888, 1889, 1906, 1912, 1919, 1926), rail road yard, oil storage, and auto junk yard/scrap yard (Sanborn Maps 1942 and 1950). Industrial and commercial activities ceased in 1979.¹ The City of Burlington ("City" or "Applicant") purchased the parcels that make up the Urban Reserve and merged them in the 1990s. The Project site would occur entirely within these areas of long-standing disturbance and modifications to the natural conditions. Existing conditions within and immediately adjacent to the Project site are largely developed, including a shoreline consisting of rip rap armoring, the existing paved Bike Path, the existing remnant rail line, and existing areas of pavement and concrete left in place from previous industrial uses. This portion of the Bike Path is heavily used as it is within close proximity to the urban population center of Burlington, and in close proximity to an existing dog park and the amenities of Waterfront Park.

Project Components and Construction Summary

The overall Project encompasses the entire length of the Burlington Bike Path, roughly 7.9 miles from Austin Drive to the Winooski River Bridge. The Applicant was granted prior approval for Phase 1 construction, from Perkins Pier through North Beach through a City Zoning Permit, number #14-1181CA/CU. Phase 1A construction was completed in the summer of 2015 and included approximately 1.70 miles of path rehabilitation from Perkins Pier through Waterfront Park. Phase 1B, slated for construction in summer of 2016 will run through the Urban Reserve

¹ Weston, Inc. Designer and Consultants. 1986. Initial Screening Investigation for Petroleum Hydrocarbon Contamination. Central Vermont Railway Northern Properties, Burlington, Vermont. WO #2715-01-01

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Shoreland Protection Permit Application
Supplemental Narrative**

to North Beach, as shown on the Site Location Map (Shoreland Permit Application, Attachment 1). The overall Project Phase 1B will include many components, which can be summarized in the following general categories:

- rehabilitation and partial realignment of the Bike Path, with realigned sections being located closer to the shoreline and abandoned sections removed;
- removal of existing impervious surfaces both along the existing bike path alignment and within the Urban Reserve parcel, reducing the total impervious surface area in the Project parcel post-construction;
- construction of “pause places” for path users to rest and access the Lake and shoreline;
- construction of stormwater management practices;
- modification of extent of the dog park;
- tree planting and revegetation, which will result in a net increase in tree cover when compared to the number of trees cut during construction; and
- maintenance and repair of shoreline armor in discrete locations of the shoreline where erosion or damage to existing infrastructure has affected the integrity and longevity of the protection measure.

Collateral Permitting

The Project has been designed to avoid and minimize impacts to natural resources to the greatest extent practicable. To address local, state, and federal environmental regulations, the Project requires authorization for a number of permits, as identified in Table 1 below. The application package for each of these has not been included with this Shoreland Protection Permit, however can be provided at the request of the Lakes & Ponds Program (“Lakes & Ponds”).

Table 1. Collateral Environmental Permits for Burlington Bike Path– Phase 1B		
Permit Name	Regulatory Agency	Contact Information
Section 404 Water Quality Permit	U.S. Army Corps of Engineers	Mike Adams Michael.S.Adams@usace.army.mil
Section 401 Water Quality Certification	DEC Wetlands Program	Megan McIntyre Megan.McIntyre@vermont.gov
Construction Phase Stormwater Permit	DEC Stormwater Program	Jenna Calvi Jenna.Calvi@vermont.gov
Operational Phase Stormwater Permit	DEC Stormwater Program	Jenna Calvi Jenna.Calvi@vermont.gov
City of Burlington Erosion and Sediment Control Plan	Burlington Department of Public Works	Megan Moir mmoir@burlingtonvt.gov
Zoning Permit	Burlington Development Review Board	Scott Gustin Sgustin@burlingtonvt.gov
Shoreland Permit	DEC Lakes & Ponds Program	Misha Cetner misha.cetner@vermont.gov

**City of Burlington – Burlington Bike Path Rehabilitation Project – Phase 1B
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Impervious Surface Summary

The Urban Reserve parcel in which the Project will be constructed has a significant area of existing impervious surfaces, both bituminous pavement and concrete, left in place from previous industrial land use. The Project proposes to remove these impervious surfaces and restore them to vegetated cover. Additionally, a portion of the existing Bike Path will be removed and the reconstructed path will be installed on a new alignment closer to the water. Overall, this results in a minimized total area of impervious surface and allows Bike Path users and the general public the opportunity for increased views and enjoyment of the Lake shore. The final constructed Project (including previous Phase 1A and anticipated future stages) will involve more than 1 acre of impervious surface, and as such an operational phase stormwater permit from the Vermont Department of Environmental Conservation (“DEC”) Stormwater Division will be required. As detailed in Table 2 below, the Project will result in a net decrease in impervious surfaces of approximately 0.67 acre.

Table 2: Summary of Impervious Surfaces (Existing and Proposed) for Burlington Bike Path, Phase 1B	
Existing Conditions Impervious Cover (ac)	2.54 ac
Proposed Conditions Impervious Cover (ac)	1.87 ac
Net Change in Impervious Cover (ac)	-0.67 ac
Percent Change in Impervious Cover	-26%

The narrow corridor of shoreland between the mean water level (“MWL”) of 95.5 feet and 100 feet elevation above mean sea level (“AMSL”) defines the protected shoreland area (“PSA”) under jurisdiction of the State (“State-PSA”). The lateral width of 250 feet landward from the 100 foot elevation AMSL line is a PSA under jurisdiction of the City of Burlington (“City-PSA”) per a Delegated Municipal Authority (“DMA”) from the DEC. Within the State-PSA, there is 3,725 square feet of proposed new impervious surface area, which is addressed on the Shoreland Permit Form and on the Public Recreation Area Addendum.

Woody Vegetation Clearing Summary

The current character of woody vegetation within the Project area is varied, and includes individual mature and young/immature trees, clusters of mature and immature trees, areas of brush and shrub cover, and many localized areas of opportunistic young woody vegetation (saplings and stunted shrubs) emerging from within rip rapped shoreline areas and along the edges and in between areas of existing pavement and concrete. During the repair and maintenance of shoreline protection infrastructure and during removal of existing impervious surfaces, most of the opportunistic saplings and shrubs will necessarily be cut and/or removed during construction. Naturalized mature and immature trees will be left in place to the greatest extent practicable, and the Project anticipates the need to cut or remove up to approximately 0.95 acre of trees Project-wide. Within the combined State-PSA and City-PSA, this amounts to removal of 52 trees. Within the City-PSA, there will be approximately 700 square feet of woody vegetation removal. The 700 square feet within the State-PSA as well as all other areas of woody vegetation removal, will be mitigated for to a greater than 1:1 ratio through the installation of a robust planting plan which

City of Burlington – Burlington Bike Path Rehabilitation Project – Phase 1B
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includes approximately 200 trees and shrubs to be planted within the Project area and largely within the City-PSA. As such, the overall vegetative cover, wildlife habitat, and the protection of water quality that is provided by wooded/vegetated shorelands would not be compromised as a result of the Project: in fact, woody vegetation cover within the combined area of the State-PSA and the City-PSA will be increased. Proposed vegetation cutting and mitigation through the use of BMPs is addressed in the Shoreland Permit Form and the Public Recreation Area Addendum.

\\vtnfdata\projects\57634.00\docs\Permits\SEP\attachments\Attachment 4 Supplemental Narrative.doc

DELEGATION AGREEMENT

THIS DELEGATION AGREEMENT (“Agreement”) is made and entered into as of the 22 day of June 2015, by and between the Vermont Agency of Natural Resources (“Agency”), acting through its Secretary, Deborah Markowitz (“Secretary”), and the City of Burlington, acting through its Director of Planning and Zoning, David E. White (“Municipality”).

RECITALS

WHEREAS, The Municipality has made application to the Agency pursuant to the municipal delegation provisions set forth in 10 V.S.A. Chapter 49A for delegation of authority to permit the construction, creation, or expansion of impervious surface or cleared area;

WHEREAS, pursuant to 24 V.S.A. Chapter 117, the Municipality has adopted a Comprehensive Development Ordinance as of January 7, 2008, as amended as of July 18, 2014, and Chapter 26 of the City Code of Ordinances as of December 15, 2008, amended as of 2010, regulating the construction of impervious surface or creation of cleared area in a protected shoreland area (See “Comprehensive Development Ordinance and Chapter 26 of the City Code of Ordinances” attached as Exhibit A);

WHEREAS, the Secretary has determined that, except for in the area over which the Agency shall maintain jurisdiction pursuant to Section 2 of this Agreement and except for as conditioned herein with regards to the protection of vegetative cover, the Municipality’s Comprehensive Development Ordinance and Chapter 26 is functionally equivalent to the standards for construction of impervious surface or creation of cleared area and the standards for vegetation protection in a protected shoreland area set forth in 10 V.S.A. §§ 1444, 1445, 1446, and 1447; and

WHEREAS, the Secretary has determined that the Municipality provides adequate resources for the administration and enforcement of its Comprehensive Development Ordinance and Chapter 26;

NOW, THEREFORE, in consideration of the mutual promises, covenants, and agreements contained herein, the Agency and the Municipality agree as follows:

AGREEMENT

1. Delegation of Authority. Pursuant to 10 V.S.A. § 1448, the Agency hereby delegates to the Municipality authority to permit the construction of impervious surface and the creation of cleared area according to the processes set forth in the Municipality’s Comprehensive Development Ordinance and Chapter 26 as may be amended, subject to the limitations and requirements set forth herein. All permits issued by Municipality pursuant to this grant of delegation shall have the same force and effect as if issued by the Agency under 10 V.S.A. Chapter 49A.

2. Special Condition.

- (a) Until the Municipality complies with the requirements of subsection (c)(i) of this Section, the Agency retains jurisdiction over the area of land between 100 feet above mean sea level, which is defined as the ordinary high water elevation in the Municipality's Comprehensive Development Ordinance, and 95.5 feet (National Geodetic Vertical Datum 1929).
 - (b) Until the Municipality complies with the requirements of subsection (c)(i) of this Section, the Municipality shall inform landowners proposing projects within the area of land defined in subsection (a) of this Section that the creation of new cleared area or impervious surface within that area may require a permit under the State's Shoreland Protection Act.
 - (c) To maintain delegation under 10 V.S.A. Chapter 49A, the Municipality shall, within two years of signing this Agreement,
 - (i) amend its Comprehensive Development Ordinance to include within the Municipality's Riparian and Littoral Conservation Zone the area of land defined in subsection (a) of this Section; and,
 - (ii) amend its Comprehensive Development Ordinance to include within Sec. 4.5.4(a) additional language stating that the purposes of the Natural Resource Protection Overlay District also include the preservation of natural shoreland vegetative cover when reasonably possible, and the protection of native plants and vegetative cover that provide shoreland wildlife habitat, to the greatest extent possible.
 - (d) Pursuant to 10 V.S.A. § 1448(b)(1), if the Municipality does not amend its Comprehensive Development Ordinance as required by subsection (c) of this Section, the Agency may terminate this Agreement in accordance with Section 7 of this Agreement.
3. Concurrent Enforcement Authority. If the Municipality has the resources to do so, the Municipality shall take timely and appropriate enforcement actions pursuant to its Comprehensive Development Ordinance and Chapter 26 for violation of its Comprehensive Development Ordinance or Chapter 26 or violation of a permit issued pursuant to the Comprehensive Development Ordinance or Chapter 26. Notwithstanding the delegation of authority granted herein, following consultation with the Municipality, the Agency may initiate enforcement proceedings, pursuant to the Agency's authority under 10 V.S.A. Chapter 201, to address noncompliance with the Comprehensive Development Ordinance or Chapter 26 in any instance where the Municipality is unable to or lacks authority or resources to do so.
4. Intent. The sole purpose of this Agreement is to set forth the terms and conditions for the delegation of authority herein. No section of this Agreement shall be interpreted in such a way as to violate or create any conflict with the statutory basis for this delegation.
5. Term. This Agreement shall commence as of the date first set forth above and shall continue in effect until terminated in accordance with Section 6 or 7 of this Agreement.

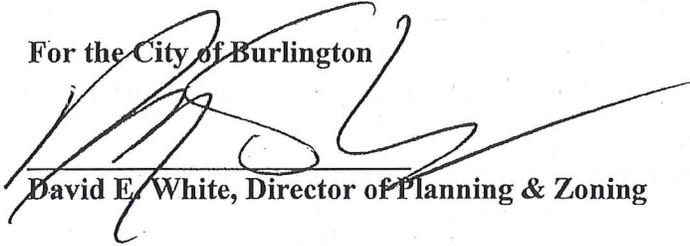
6. Termination by Municipality. The Municipality may terminate this Agreement upon 90 days' written notice to the Agency.
7. Termination by the Agency. The Agency may terminate the Agreement following notice of defect, a meeting with the Municipality to discuss such defect, and a reasonable opportunity for Municipality to cure the defect, which shall not be less than 180 days. For the purpose of this Section, "defect" includes any violation of the Municipality's obligations under the Agreement or the Comprehensive Development Ordinance or Chapter 26; any amendment or revision to the Comprehensive Development Ordinance or Chapter 26 so that it is no longer functionally equivalent, as determined by the Agency, to the standards set forth in 10 V.S.A. §§ 1444 – 1447; any amendment to 10 V.S.A. Chapter 49A, which results in the Comprehensive Development Ordinance or Chapter 26 no longer being functionally equivalent, as determined by the Agency, to the standards set forth in 10 V.S.A. §§ 1444 – 1447; or failure to provide adequate resources for administration and enforcement of the Comprehensive Development Ordinance or Chapter 26.
8. Other Laws in Effect. This Agreement does not relieve the Municipality from compliance with all other applicable state and federal laws and regulations.
9. Fees and Fines. The Municipality shall collect and retain all permit review fees and enforcement related fines associated with the Municipality's administration and enforcement of the Comprehensive Development Ordinance or Chapter 26 for projects reviewed, permitted, and enforced by the Municipality under the Agreement. The Agency shall retain enforcement fines resulting from enforcement cases undertaken, pursuant to Section 2 of this Agreement, by the Agency or the Vermont Office of the Attorney General on behalf of the Agency.
10. Costs. The Municipality shall be responsible for all costs of administering the Comprehensive Development Ordinance or Chapter 26, including staff salaries and benefits, transportation costs, and internal administrative expenses; provided, however, that the Agency shall be responsible for its own costs incurred in the administration of this Agreement or as a result of enforcement proceedings undertaken by the Agency pursuant to Section 2 of this Agreement.
11. Amendment. This Agreement may be modified by the Agency following 30 days' notice to the Municipality of a change in Agency's delegation authority under 10 V.S.A. § 1448; otherwise, this Agreement may be modified only in a writing signed by the Municipality and the Agency.
12. Municipal Records; Reporting. A copy of this Agreement and all records of permits, denials of permit applications, revocations of permits, and other decisions made by the Municipality pursuant to this Agreement shall be retained for public inspection in the Municipality's Planning & Zoning office, located at City Hall, Burlington. Such records shall be provided to the Agency by electronic copy on a routine basis not less than quarterly, or else made available for inspection by the Agency on a website accessible to the public.
13. Project Review. The Municipality shall encourage applicants to contact Agency permit specialists and complete a project review sheet in order to determine whether other Agency permits are needed before beginning construction of impervious surface or creation of cleared area pursuant to a permit issued under this Agreement.

14. Annual Report. The Municipality shall submit an annual report by February 15 each year, on a form provided by the Agency, summarizing all permits, permit denials, revocations, and other information relevant to the Agreement.
15. Audit. The Agency may perform audits for quality control, information gathering, or in response to a complaint. The Municipality shall give representatives of the Agency the authority to enter the Municipality's property during normal working hours, to review documents related to the Municipality's responsibilities under this Agreement. The Municipality shall maintain all records so that such an audit will not be delayed.
16. Previously Issued Permits. If, prior to the effective date of this Agreement, the Secretary issued a permit to a person under the Shoreland Protection Act (10 V.S.A. Chapter 49A), the Secretary shall maintain jurisdiction and enforcement authority over such permit until such time that the Municipality issues a new permit for the creation of cleared area or impervious surface for the same parcel. If a person has yet to commence construction of a project for which the Secretary has issued a permit under the Shoreland Protection Act, then, pursuant to 3 V.S.A. 814, the person may request that the Secretary revoke the permit, and if the Secretary revokes the permit, the person may proceed with his or her project under the requirements of the Municipality's bylaw/ordinance and any other applicable federal, state, and local laws and regulations.

Signature Page Follows

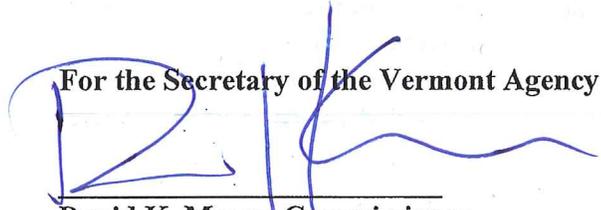
IN WITNESS WHEREOF, the parties have executed this Agreement as of the date and year first above written.

For the City of Burlington

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David E. White, Director of Planning & Zoning

For the Secretary of the Vermont Agency of Natural Resources

A handwritten signature in blue ink, appearing to be 'D. Mears', written over a horizontal line.

**David K. Mears, Commissioner
Department of Environmental Conservation**

EXHIBIT A
COMPREHENSIVE DEVELOPMENT ORDINANCE (CDO) AND CHAPTER 26 OF
THE CITY CODE OF ORDINANCES

SUBMITTED:

1. Riparian and Littoral Conservation Zone of the Natural Resource Protection District map, dated 7/18/14
2. CDO, Section 4.5.4, Natural Resource Protection Overlay District, dated 7/18/14
3. CDO, Section 5.5.3, Stormwater and Erosion Control, dated 7/18/14
4. Article 3, Stormwater & Erosion Control, of Chapter 26 of the City Code of Ordinances: Wastewater, Stormwater, and Pollution Control, dated 4/21/10