



**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

645 Pine Street, Suite A
Post Office Box 849
Burlington, VT 05402-0849
802.863.9094 VOICE
802.863.0466 FAX
802.863.0450 TTY
www.burlingtonvt.gov/dpw

Chapin Spencer
DIRECTOR OF PUBLIC WORKS

M E M O R A N D U M

To: Amy Bovee, Clerks Office
From: Chapin Spencer, Director
Date: September 10, 2015
Re: Public Works Commission Agenda

Please find information below regarding the next Commission Meeting.

Date: **September 16, 2015**
Time: 6:30 – 9:00 p.m.
Place: **645 Pine St – Main Conference Room**

A G E N D A

ITEM

- 1 Call to Order – Welcome – Chair Comments
- 2 Agenda
- 3 10 Min Public Forum
- 4 5 Min Consent Agenda
 - A New Accessible Space at 7 Canfield St
 - B New Accessible Space at 79 Archibald St
 - C Accessible Space Removal at 194 South Champlain ST
 - D Accessible Space Removal 70 Rose St
 - E Relocation of Three Accessible Spaces for New CCTA Transit Station
 - F State of RFS Backlog

Non-Discrimination

The City of Burlington will not tolerate unlawful harassment or discrimination on the basis of political or religious affiliation, race, color, national origin, place of birth, ancestry, age, sex, sexual orientation, gender identity, marital status, veteran status, disability, HIV positive status or genetic information. The City is also committed to providing proper access to services, facilities, and employment opportunities. For accessibility information or alternative formats, please contact Human Resources Department at 865-7145.

- 5 10 Min Unrestricted Parking on Sears Lane
A Communication, D. Roy
B Commissioner Discussion
C Public Comment
D Action Requested - Vote
- 6 20 Min Process For Concluding Downtown & Residential Parking Studies
A Oral Communication, C. Spencer
B Commissioner Discussion
C Public Comment
D Action Requested - None
- 7 25 Min FY 16 & FY 17 Capital Planning
A Communication, C. Spencer & M. Keenan
B Commissioner Discussion
C Public Comment
D Action Requested - None
- 8 10 Min Pedestrian Crosswalk Design Guidelines
A Oral Communication N. Baldwin
B Commissioner Discussion
C Public Comment
D Action Requested - None
- 9 5 Min Minutes of 7-15-15
- 10 10 Min Director's Report
- 11 10 Min Commissioner Communications
- 12 **Adjournment & Next Meeting Date – October 21, 2015**



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Chapin Spencer
DIRECTOR OF PUBLIC WORKS

MEMORANDUM

TO: PUBLIC WORKS COMMISSION
FM: CHAPIN SPENCER, DIRECTOR
DATE: SEPTEMBER 10, 2015
RE: PUBLIC WORKS COMMISSION MEETING

Enclosed is the following information for the meeting on September 16, 2015 at 6:30 PM
at **645 Pine St – Main Conference Room**

1. Agenda
2. Consent Agenda
3. Unrestricted Parking on Sears Lane
4. FY 16 & FY 17 Capital Planning
5. Minutes of 7-15-15

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Chapin Spencer
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M E M O R A N D U M

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From: Chapin Spencer, Director
Date: September 10, 2015
Re: Public Works Commission Agenda

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 - E Relocation of Three Accessible Spaces for New CCTA Transit Station
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B Commissioner Discussion
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- 9 5 Min Minutes of 7-15-15
- 10 10 Min Director's Report
- 11 10 Min Commissioner Communications
- 12 **Adjournment & Next Meeting Date – October 21, 2015**



MEMORANDUM

August 19, 2015

TO: Public Works Commission
FROM: Damian Roy, DPW Engineer Technician *DRR*
CC: Norm Baldwin, City Engineer
RE: New Accessible Space @ 7 Canfield Street

Background:

Staff received a request from Ed Smith of 7 Canfield Street to install an on-street accessible parking in front of his residence. Mr. Smith states that he has suffered a number of injuries that inhibit his movement. Mr. Smith presented VT Disable Parking ID Placard P67103 which has been verified by the Burlington Police Department.

Observations:

Canfield Street is classified as a local residential roadway. The roadway is twenty-six (26) feet wide with unrestricted parking available on the south side leaving two nine (9) foot travel lanes. There are currently no accessible spaces or other restrictions on Canfield Street. There is space for a single accessible space immediately in front of 7 Canfield Street that would best serve Mr. Smith. *See attached picture showing the requested space.* On July 28th Staff notified the residents of Canfield Street via flyers requesting feedback on Mr. Smith's request by August 14th. Staff has received no negative feedback regarding Mr. Smith's request.

Conclusions:

Mr. Smith is a registered disabled resident in need of on-street accessible parking. No negative impact to area residents are anticipated by installing this accessible space as indicated by the the lack of negative response received by staff.

NB 8/20/15

Recommendations:

Staff recommends that the Commission adopt:

- The addition of a new Accessible Space on the south side of Canfield Street in front of 7 Canfield Street.

6/3/15

TO WHOM IT MAY CONCERN,

I WOULD LIKE TO REQUEST A HANDICAPPED PARKING SPACE IN FRONT OF 7 CANFIELD STREET AS I HAVE A NUMBER OF INJURIES THAT INHIBIT MY MOVEMENT. DUE TO THE LIMITED AMOUNT OF PARKING SPOTS ON CANFIELD STREET IT MAKES IT VERY DIFFICULT AT TIMES TO BE ABLE TO FIND A SUEITABLE PARK SPACE TO PARK IN AND WITH MY SPINAL INJURY DIFFICULT FOR ME TO GET TO MY HOME WHEN I HAVE TO PARK ON ANOTHER STREET. THANK YOU IN ADVANCE FOR ANY HELP THAT YOU MAY GIVE ME ON THIS REQUEST.

Ed Smith

ED SMITH

881-1584

652-0186

**IMPORTANT: REMOVE BEFORE
DRIVING VEHICLE**

P67103

Disabled Parking Identification



EXPIRES:

**NO
EXPIRATION**

VERMONT

PERMANENT



Dear Canfield Street Residents,

The Department of Public Works (DPW) received a request from a disabled resident asking to install a Accessible Parking Space in front of 7 Canfield Street. At this time, DPW does not see an issue making a recommendation to the Public Works Commission to grant this request but we would like to give the residents of Canfield Street the opportunity to voice any concerns they might have. Please contact me with any concerns or questions regarding this before Friday August 14th.

Thank you!

Damian Roy, Engineering Technician

Burlington Public Works Department

645 Pine St. Burlington VT 05401

Desk: 802.865.5832

Cell: 802.563.5353

Email: droy@burlingtonvt.gov

Web: www.burlingtonvt.gov/dpw





MEMORANDUM

August 26, 2015

TO: Public Works Commission

FROM: Damian Roy, DPW Engineer Technician *DR*

CC: Norm Baldwin, City Engineer

RE: New Accessible Space @ 79 Archibald Street

Background:

Staff received a request from Thea Lewis on behalf of her mother Claire Gestner of 79 Archibald Street to install an on-street accessible parking in front of her residence. Ms. Lewis states that her mother has suffered a number of injuries that inhibit her movement and presented Vermont License Plate A7121 to staff which has been verified by the Burlington Police Department to be valid and belonging to Ms. Claire Gestner of 79 Archibald Street.

Observations:

Archibald Street is classified as a residential collector roadway. The roadway is thirty (30) feet wide with unrestricted parking available on the south side leaving two eleven (11) foot travel lanes. There are currently no accessible spaces or other restrictions on this block of Archibald Street. There is space for a single accessible space immediately in front of 79 Archibald Street that would best serve Ms. Gestner. *See attached picture showing the requested space.* On August 13th Staff notified the residents of Archibald Street via flyers requesting feedback on Ms. Gestner's request by August 26th. Staff has received no negative feedback regarding Ms. Gestner's request.

Conclusions:

Ms. Gestner is a registered disabled resident in need of on-street accessible parking. No negative impact to area residents are anticipated by installing this accessible space as indicated by the lack of negative response received by staff.

Recommendations:

Staff recommends that the Commission adopt:

- The addition of a new Accessible Space on the south side of Archibald Street in front of 79 Archibald Street.



79 Archibald Street
Burlington, VT

Existing / Proposed Conditions



**BURLINGTON
PUBLIC WORKS
ENGINEERING DIV.**

645 PINE STREET
BURLINGTON, VT 05401

DESIGNED DRR	RFS NO. 8402
DRAWN DRR	SCALE NTS
CHECKED NJB	DRAWING NO.
DATE	



MEMORANDUM

August 31, 2015

TO: Public Works Commission

FROM: Damian Roy, DPW Engineer Technician *DR*

CC: Norm Baldwin, City Engineer *NB*

RE: Accessible Space Removal @ 194 South Champlain Street

Background:

Staff received a request from Erik Hoekstra of 194 South Champlain Street to remove an on-street accessible parking space in front of his residence. Mr. Hoekstra states that the space was used by the previous occupant of his residence and that it is no longer in used.

Observations:

South Champlain Street is classified as a collector street with a mix of commercial businesses and residential housing. On this block of S. Champlain between King Street and Maple Street parking is restricted on the west side with unrestricted parking on the east side. There are two 30-minute parking spaces and a loading zone immediately north of Maple Street. The next available space north is the accessible space which Mr. Hoekstra wishes to remove.

Conclusions:

Staff distributed flyers on July 31st to the surrounding residents and businesses on this block of South Champlain Street asking if any other residents have use, or is using, the accessible space. No response has been received by staff within the two week deadline stated in the flyer. Staff anticipates no negative impact to nearby residents by removing the accessible space.

9/3/15 NB

Recommendations:

Staff recommends that the Commission adopt:

- The removal of the Accessible Space on the east side of South Champlain Street in front of 194 South Champlain Street.

Requests for Service (/Main.aspx)

#7580 Assigned

New

Technical Services

Traffic Requests

Location: 194 South Champlain St

I recently purchased property at 194 S. Champlain Street. There is a handicapped parking space on the street in front of the building that was installed for a former occupant, but is no longer necessary. Who should I contact to arrange to have the sign removed? Attached is a photo of the sign.

Assigned to: Damian Roy **Requested by:** Erik Hoekstra**Opened:** 6/1/2015**Entered By:** Valerie Ducharme**Due:** 7/31/2015**Work History**[Add Work History](#)

No Work History

Attachments

Attach Date	Staff	Attachment
06/01/2015 11:40 AM	Valerie Ducharme	View File (/Attachments/1480.jpg)

[Browse...](#) No file selected.[Upload Attachment](#)



Dear South Champlain St Residents,

The Department of Public Works (DPW) has received a request from a resident of S. Champlain St. to remove the accessible space in front of 194 S. Champlain St. DPW would like to make sure no other resident of S. Champlain is in need of this space. Please let us know if you or someone in your household is registered disabled and is in need of using this space. Please respond via email or phone call before 8/15/15.

Thank you!

Damian Roy, Engineering Technician

Burlington Public Works Department

645 Pine St. Burlington VT 05401

Desk: 802.865.5832

Cell: 802.563.5353

Email: droy@burlingtonvt.gov

Web: www.burlingtonvt.gov/dpw



MEMORANDUM

August 26, 2015

TO: Public Works Commission
FROM: Damian Roy, DPW Engineer Technician *DRZ*
CC: Norm Baldwin, City Engineer *NB*
RE: Accessible Space Removal @ 70 Rose Street

Background:

Staff received a request from Harold Kaplan of Rose Street on October 22nd 2014 to remove the accessible space at 70 Rose Street. Mr. Kaplan is a neighbor of 70 Rose Street and states that the accessible space has not been in use for some time as the resident it served ~~is~~ now deceased. The accessible space primarily served Charles Blow of 70 Rose Street who passed away July 29, 2012 according to the Burlington Free Press obituaries.

Observations:

Rose Street is classified as a residential local roadway. The roadway is twenty-six (26) feet wide with unrestricted parking available on the east side leaving two nine (9) foot travel lanes. Staff visited 70 Rose Street to find the accessible space sign had been removed without authorization leaving only an empty sign pole remaining. Staff did not conduct public outreach to remove this accessible space as it had already been removed without any public complaints to DPW staff.

Conclusions:

The accessible space sign has already been removed from 70 Rose Street by other members of the public. There has been no negative feedback from the residents of Rose Street regarding this and there have been no requests for installing an accessible space at any other

NB 9/3/15

location on Rose Street. The City Ordinance should be updated to reflect the current conditions of no accessible space in front of 70 Rose Street.

Recommendations:

Staff recommends that the Commission adopt:

- The removal of the accessible space regulation at 70 Rose Street from the City Ordinance.



MEMORANDUM

August 27, 2015

TO: Public Works Commission

FROM: Damian Roy, DPW Engineering Technician *DRR*

CC: Norman Baldwin, Asst. Director/City Engineer *NB*

RE: Relocation of Three Accessible Spaces for New CCTA Transit Station

Background:

Staff received a communication from Brian Lowe, Projects Coordinator to the Mayor of Burlington, and from Henry Mays of the Vermont Department of Buildings & General Services (BGS) and Steve Carlson of CCTA to relocate three van accessible spaces currently located on Saint Paul Street serving the Zampieri State Office Building. The Zampieri Building is divided by two tenants to the north and south, each of these tenants offer services to the disabled community and require accessible parking spaces within reasonable distance to their entrances. The existing accessible spaces are designated van accessible spaces to help encourage vans to use these spaces instead of cars as the nearby parking garages cannot accommodate accessible vans.

The three existing accessible spaces must be relocated to accommodate the new CCTA Transit Station that removes all non-CCTA related on-street parking from this section of Saint Paul between Pearl Street and Cherry Street. In an effort to facilitate the project which is currently underway, DPW has placed temporary accessible space bags over nearby metered spaces to serve the disabled community and the Zampieri Building until permanent spaces are established.

Observations:

The three existing accessible spaces are located on the north and south end of the east side of Saint Paul Street. Two spaces are located on the southern end and are situated back to back immediate to the north east corner of Saint Paul and Cherry. The third space is located on the northern end and is the last available space before the intersection with Pearl Street. Staff reviewed the new CCTA Transit Station final design plans to determine the extent of the

NB ddr

redesign within the City's Right of Way and to identify where the closest locations for the three accessible spaces to be relocated might be. Staff also visited the area to observe these locations and how they would best serve the disabled community in accordance with the Public Right-of-Way Accessibility Guidelines (PROWAG). Staff has identified two locations suitable:

- On south side of Pearl Street immediately in front of the Masonic Temple entrance at 151 Pearl Street. This space offers clear side and rear ramp unloading due to the bump out behind the space and reasonable distance to ramp to access the sidewalk.
- At the intersection of Cherry and Saint Paul, the existing second and third metered spaces from the north east corner on the north side of Cherry Street. The first space from this corner will be removed by a bump out as part of the CCTA project. The next two spaces on the north side offer clear sidewalk for side exiting ramps. The Cherry Street accessible ramp to the Zampieri Building is at this location to provide immediate access for these two spaces.

Please refer to the attached pictures and drawings showing the three existing spaces to be removed and their three proposed locations.

Staff presented this item to the Accessibility Committee on August 18th during their mobile meeting on Church Street. The mobile meeting visited the Cherry Street location where two of the relocated spaces are proposed. The Committee was supportive of staff's proposal to relocate these three spaces to the aforementioned locations with the conditions that the existing bike rack adjacent to one of the spaces on Cherry Street be relocated. Staff visited the location again to be sure the bike rack was still in the way and it was already removed during construction.

Conclusions:

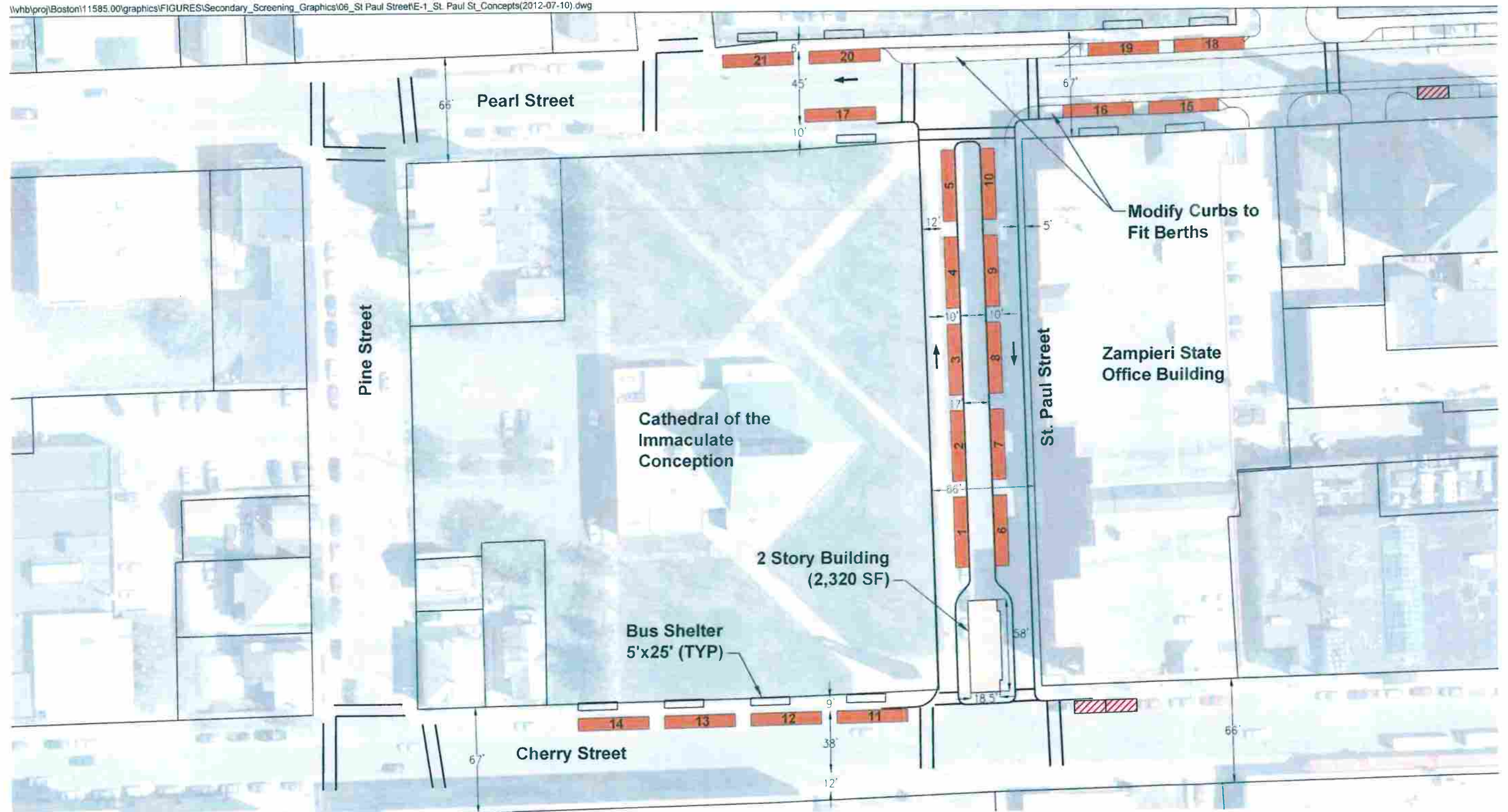
The city has established transit services as a priority. Given its degree of importance the proposed Downtown Transit Center was approved by council to be located on St. Paul Street. To accommodate the facility public on-street parking needed to be displaced. Of particular importance is the need to accommodate people with disabilities, especially those seeking to access the state office building on St. Paul Street. Working closely with the State of Vermont Buildings and Ground we have prepared a proposed solution to accommodate the disabled community. We are seeking your approval and support for the proposed solution.

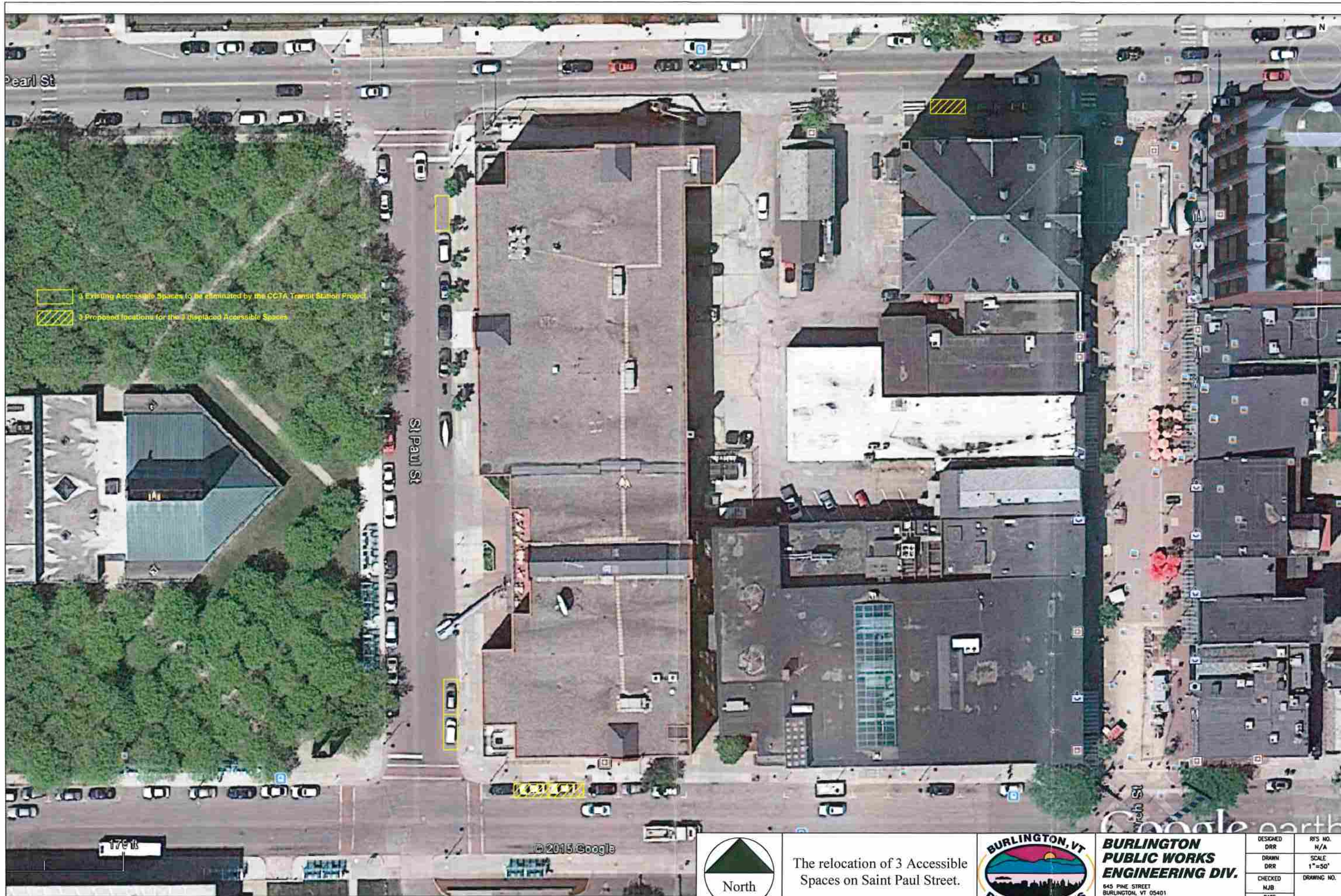
Recommendations:

Staff recommends that the Commission adopt the relocation of the three van accessible spaces on Saint Paul Street to the following locations:

- On the south side of Pearl Street in front of 151 Pearl Street.
- On the north side of Cherry Street in the first space east of Saint Paul Street after the completion of the CCTA Transit Station construction.

- On the north side of Cherry Street in the second space east of Saint Paul Street after the completion of the CCTA Transit Station construction.



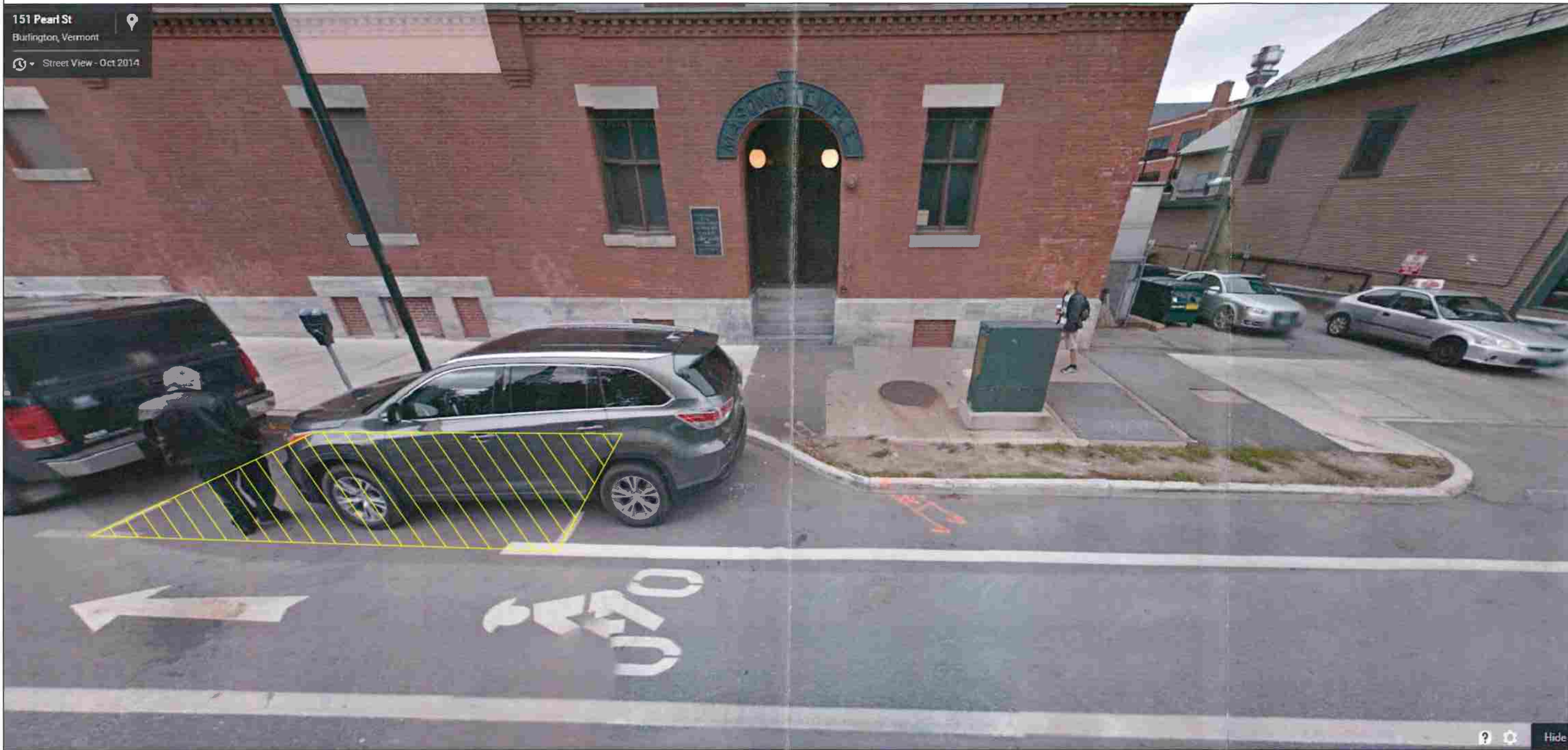


The relocation of 3 Accessible
Spaces on Saint Paul Street.



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PUBLIC WORKS
ENGINEERING DIV.**
645 PINE STREET
BURLINGTON, VT 05401

DESIGNED DRR	R/S NO. N/A
DRAWN DRR	SCALE 1"=50'
CHECKED HJB	DRAWING NO.
DATE	



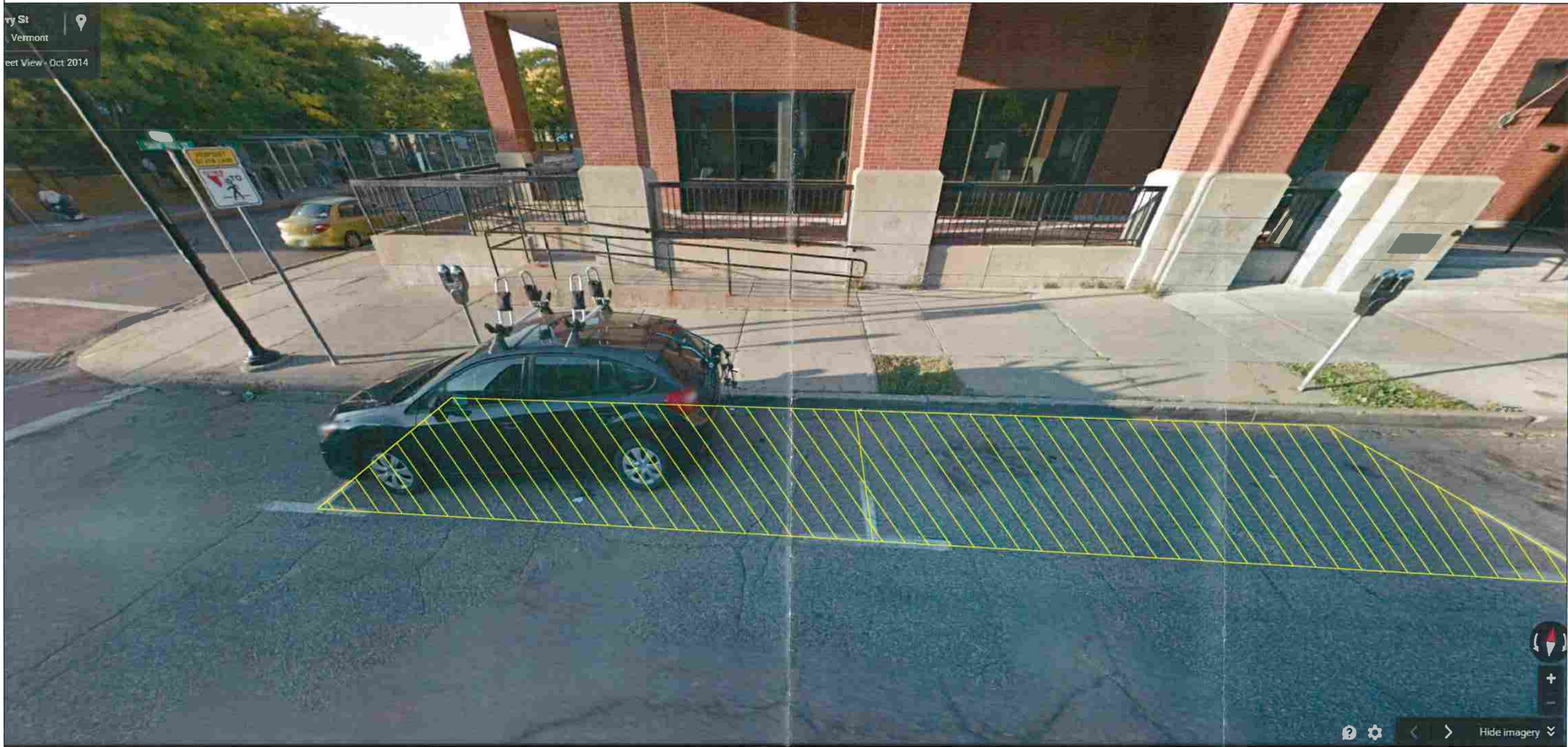
Proposed Accessible Space in
front of 151 Pearl Street



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ENGINEERING DIV.**

645 PINE STREET
BURLINGTON, VT 05401
(802) 851-0000

DESIGNED DRR	RFS NO. N/A
DRAWN DRR	SCALE NTS
CHECKED HJB	DRAWING NO.
DATE	



Two Proposed Accessible
Spaces on Cherry Street



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(802) 863-9094

DESIGNED DRR	RFS NO. N/A
DRAWN DRR	SCALE NTS
CHECKED NJB	DRAWING NO.
DATE	

Mayor's Advisory Committee On Accessibility
August 18, 4:00-6:00 pm
Church Street & Cherry Street Transit Station

MINUTES

Members Present: Ron Redmond, Sam Handy, Ralph Montefusco, Shelly Waterman, Michael Watson, Elaine Zimmerman, Cleary Buckley, Emma Allen

Members Absent: Ben Johnson

Others Present: Kesha Ram, Nate Besio, Damian Roy, Jordan Posner, Councilor Tom Ayres, Jenny Morse

The meeting commenced at 4:00 pm.

Introductions

Introductions were made before the mobile tour of Church Street and the Cherry Street Transit Center.

Mobile Tour, Church Street Marketplace

Ron Redmond led the committee and others present on a mobile tour of the Church Street Marketplace (CSM). He estimates that the CSM sees approximately 17,000 to 20,000 visitors on a busy day based on tracking data. He asked committee members to note deviances and impediments to the rules governing the spacing of right of ways. The committee noted several areas where signage, built infrastructure, and restaurant entrances present encumbrances. Ron noted that some of those impediments are being discussed with stakeholders for long-term solutions.

Mobile Tour, Cherry Street Transit Station

Damian Roy from DPW led a discussion of the relocation of three accessible parking spots from St. Paul Street and lower Cherry Street to:

- Two spots on the block of Cherry Street between Church Street and St. Paul
- One spot on Pearl Street between Church Street and St. Paul

The committee reviewed the proposed Cherry Street spots and expressed support for the general relocation. They did note, however, that bike rings and other infrastructure

created impediments for safe and convenient unloading. They also expressed desire to see the spots moved east slightly so that at least one spot could take advantage of the existing curb cut. The committee members did not feel the need to view the Pearl Street spot but noted that the general principles of removing impediments on the curbside be followed.

The meeting adjourned at 5:30 pm.

Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way

July 26, 2011

UNITED STATES ACCESS BOARD
A FEDERAL AGENCY COMMITTED TO ACCESSIBLE DESIGN

shall provide a minimum clear space complying with R404 entirely within the shelter. Where seating is provided within transit shelters, the clear space shall be located either at one end of a seat or shall not overlap the area within 460 mm (1.5 ft) from the front edge of the seat. Environmental controls within transit shelters shall be proximity-actuated. Protruding objects within transit shelters shall comply with R402.

Advisory R308.2 Transit Shelters. The clear space must be located entirely within the transit shelter and not interfere with other persons using the seating.

R309 On-Street Parking Spaces

R309.1 General. On-street parking spaces shall comply with R309.

Advisory R309.1 General. R214 specifies how many accessible parking spaces must be provided on the block perimeter where on-street parking is marked or metered. Accessible parking spaces must be identified by signs displaying the International Symbol of Accessibility (see R211.3 and R411). Accessible parking spaces should be located where the street has the least crown and grade and close to key destinations.

R309.2 Parallel Parking Spaces. Parallel parking spaces shall comply with R309.2.

Advisory R309.2 Parallel Parking Spaces. The sidewalk adjacent to accessible parallel parking spaces should be free of signs, street furniture, and other obstructions to permit deployment of a van side-lift or ramp or the vehicle occupant to transfer to a wheelchair or scooter. Accessible parallel parking spaces located at the end of the block face are usable by vans that have rear lifts and cars that have scooter platforms.

R309.2.1 Wide Sidewalks. Where the width of the adjacent sidewalk or available right-of-way exceeds 4.3 m (14.0 ft), an access aisle 1.5 m (5.0 ft) wide minimum shall be provided at street level the full length of the parking space and shall connect to a pedestrian access route. The access aisle shall comply with R302.7 and shall not encroach on the vehicular travel lane.

Advisory R309.2.1 Wide Sidewalks. Vehicles may park at the curb or at the parking lane boundary and use the space required by R309.2.1 on either the driver or passenger side of the vehicle to serve as the access aisle.

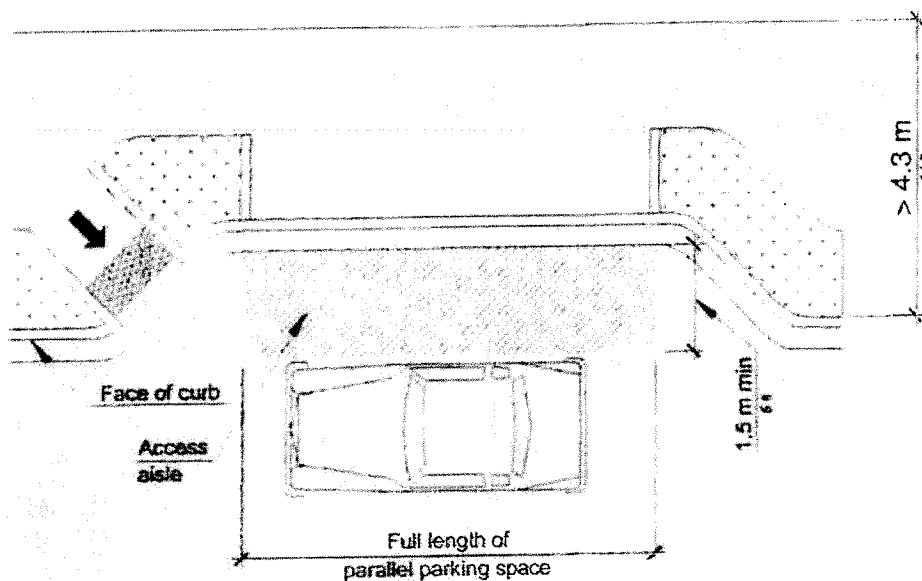


Figure R309.2.1
Wide Sidewalks

R309.2.1.1 Alterations. In alterations where the street or sidewalk adjacent to the parking spaces is not altered, an access aisle shall not be required provided the parking spaces are located at the end of the block face.

R309.2.2 Narrow Sidewalks. An access aisle is not required where the width of the adjacent sidewalk or the available right-of-way is less than or equal to 4.3 m (14.0 ft). When an access aisle is not provided, the parking spaces shall be located at the end of the block face.

Advisory R309.2.2 Narrow Sidewalks. Vehicle lifts or ramps can be deployed on a 2.4 m (8.0 ft) sidewalk if there are no obstructions.

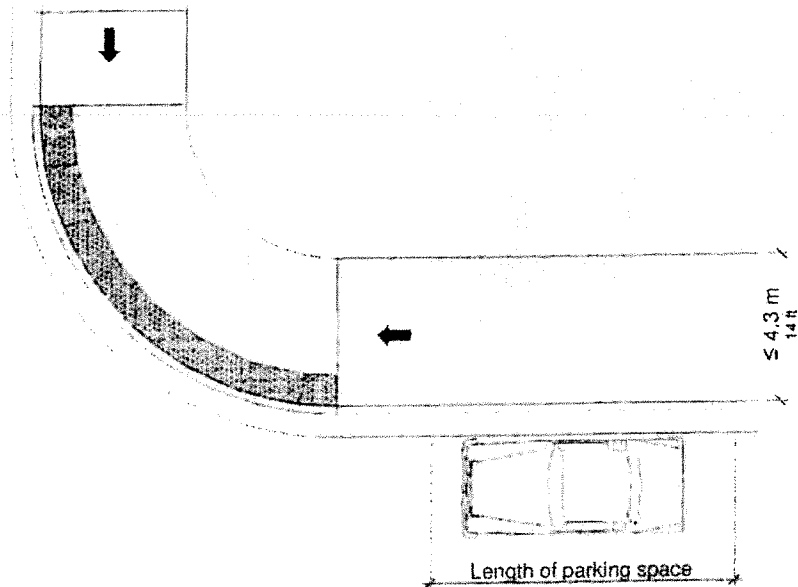


Figure R309.2.2
Narrow Sidewalks

R309.3 Perpendicular or Angled Parking Spaces. Where perpendicular or angled parking is provided, an access aisle 2.4 m (8.0 ft) wide minimum shall be provided at street level the full length of the parking space and shall connect to a pedestrian access route. The access aisle shall comply with R302.7 and shall be marked so as to discourage parking in the access aisle. Two parking spaces are permitted to share a common access aisle.

Advisory R309.3 Perpendicular or Angled Parking Spaces. Perpendicular and angled parking spaces permit the deployment of a van side-lift or ramp.

STATE OF TRAFFIC RFS BACKLOG

9/10/2015
DRR

A = TOTAL TRAFFIC REQUESTS ON JULY 15 = 93

B = NEW TRAFFIC REQUESTS SINCE JULY 15 = 9

C = TRAFFIC REQUESTS SUBMITTED AT SEPTEMBER 16 = 6

D = EXPECTED BALANCE OF RFS AS OF SEPTEMBER 16 = A + B - C = 96*

RFS BREAKDOWN BY TYPE**

Accessible Space:	11
Resident Only Parking:	12
Crosswalks:	15
Driveway Encroachments:	14
Signage:	12
Loading Zone:	1
Area/Intersection Study:	7
Parking Prohibition:	7
Bus Stop:	2
Adding Parking:	4
Geometric Issues:	3
Parking Meters:	1
Other:	1
TOTAL:	90

*This number reflects the formula above, however this does not accurately portray the Backlog as some commission items affect two or more RFSs and past RFSs that have been decided on but haven't been installed are not reflected.

**This list was updated 9/10/15 and accurately reflects what is currently in the system.



MEMORANDUM

August 19, 2015

TO: Public Works Commission

FROM: Damian Roy, DPW Engineer Technician *DRR*

CC: Norman Baldwin, City Engineer *NB*

RE: Unrestricted Parking on Sears Lane

Background:

The Public Works Department received a request from Martin Courcelle of Champlain Consulting Engineers (CCE) on behalf of Doug Nedde of Nedde Real Estate to install unrestricted parking along the north side of Sears Lane on February 27th 2015. This request is in conjunction with the redevelopment of the former Burlington Food Service building located at 747 Pine Street. The building will be renovated and converted to offices and commercial space. The wastewater permit allows up to one hundred twenty (120) employees for the renovated building. There are eighty-six (86) on-site parking spaces accounted for in the designed with loading docks and overhead doors for delivery services. Mr. Courcelle states that the request to install unrestricted on-street parking on the north side of Sears Lane is to provide additional parking for this building and nearby businesses. The goal date for tenants to occupy the renovated building is September 1 2015.

Observations:

Sears Lane is a thirty (30) foot wide low volume local commercial street with no weight restrictions. Currently there is no parking allowed on either side with no sidewalks to serve pedestrians. With the redevelopment of 747 Sears Lane three hundred (300) feet of new sidewalk will be installed and accepted by the city on the north side of the street to serve pedestrians. Sears Lane serves six (6) businesses other than the former Burlington Food Service, these are Pierres Repair, Greers professional Fabricare Services, Noyes Automotive and Tire, Champlain College Physical Plant, RLPhoto Inc, and Havoc Gallery. Staff contacted these businesses regarding this request via flyers and met with staff from several of them. Of these

NB 9/3/15

businesses RLPhoto Inc., Greers Drycleaning, and Havoc Gallery are not in favor of opening on-street parking. *Please see their emails to staff attached below.* Given Sears Lane's overall pavement width, installing unrestricted parking on the north side will leave twenty-two (22) feet of travel lane for eastbound and westbound traffic resulting in two eleven (11) foot lanes. This width is adequate for commercial vehicles. Sears Lane runs east to west off of Pine Street and turns abruptly northward on the western end leading into the Champlain College Lakeside Parking Lot. This request is limited in scope to within the city's ROW which extends seven hundred (700) feet west down Sears Lane from Pine Street where the portion of Sears Lane owned by the city ends. Staff estimates that nineteen (19) parking spaces could be created if unrestricted parking were installed on the entire north side of Sears Lane.

Conclusions:

Sears Lane has sufficient width to support parking on one side but does not have sufficient width to support parking and pedestrian use at the same time. Sears Lane acts as a primary route for school-age pedestrians commuting from Lakeside and Harbor Watch neighborhoods to the Champlain Elementary School. Safe pedestrian access must be given priority over on-street parking. The redevelopment project for 757 Sears Lane includes approximately three hundred (300) feet of sidewalk along the north side of Sears Lane beginning at the intersection with Pine Street. Staff recommends installing on-street parking on the north side of Sears Lane only where adjacent to the recently installed sidewalk. This will give pedestrians commuting from the neighborhoods to the west an eight (8) foot on-street walking lane safe from traffic up until the sidewalk begins. Mr. Courcelle of CCE estimates installing unrestricted parking for this length of roadway will yield six (6) spaces. *Please see the attached drawing.*

Recommendations:

Staff recommends that the Commission adopt:

- The installation of unrestricted parking on the north side of Sears Lane alongside and adjacent to the existing sidewalk on the north side.

February 27, 2015

Mr. Damian Roy
C/o CITY OF BURLINGTON
Department of Public Works
P.O. Box 849
Burlington, VT 05402-0849

Re: SEARS LANE – Request to Establish On-Street Parking

Dear Mr. Roy:

I am writing to formally request on-street parking be established on the north side of Sears Lane in support of our proposed redevelopment of 747 Pine Street, formerly the Burlington FoodService Company.

I can be reached at 651-6888 or 343-4110 if you have any additional questions concerning my request.

Sincerely,

COOPER CRESTA NEDDE LLC



Doug Nedde

Damian Roy

From: Martin Courcelle <mcourcelle@champlainconsulting.net>
Sent: Wednesday, July 08, 2015 10:40 AM
To: Damian Roy; dnedde@neddere.com
Cc: Norm Baldwin
Subject: RE: 747 Pine Street - Sears Lane
Attachments: 14132_C1-C3_03-24-15.pdf

Hi Damian,

Below are our responses to your questions *(in green)*. Please let me know if you have any further questions.

Sincerely,

Marty

Martin E. Courcelle, P.E.
Champlain Consulting Engineers
85 Prim Road, P.O. Box 453
Colchester, Vermont 05446

(802) 863-8060
(802) 864-1878 (fax)
www.champlainconsulting.net

>>> Damian Roy <droy@burlingtonvt.gov> 6/30/2015 2:42:40 PM >>>

Hello Martin,

I am sorry to say that I have yet to give this request any attention. Although this being tied to current development in the area I will give it priority in the next coming weeks.

In the meantime, can you provide me with this additional information:

- A summary of the development, what is being built and for what purpose.
 - *The project is the redevelopment of the former Burlington Food Service building located at 747 Pine Street. The redevelopment includes renovating the building and converting the warehouse to offices and commercial space. Site work includes utility upgrades, new parking areas and stormwater improvements.*
- How many people will be using this facility?
 - *The wastewater permit for the building allows up to 120 employees.*
- What on-site parking accommodations are being provided for occupants, visitors, customers, delivery trucks, etc?

- *There are 86 on-site parking spaces. 19 are in the existing parking area in the front of the building off Pine Street. There are 2 parking areas accessed off of Sears Lane. One of these areas has 8 spaces and loading docks. The other parking area off Sears Lane has 59 parking spaces and additional overhead doors for deliveries. Of the 59 spaces in this lot 22 will be constructed of porous asphalt.*
- Why does the developer feel it necessary to open on-street parking on Sears Lane?
 - *To provide additional parking for this building and surrounding buildings.*
- What other impacts to City ROW will this development have in this area?
 - *There are new underground utility connections being made in the City ROW. A new sidewalk on Sears Lane is being constructed for improved pedestrian circulation along Sears Lane. No other new impacts are proposed.*

What is the timeline for construction completion?

- *Construction is ongoing with the hope to occupy the renovated building beginning September 1.*
- Can you provide some design drawings to support the information requested above?
 - *Attached, please find the drawings approved by Planning and Zoning.*

These items will help me address your request thoroughly to better ensure a smooth presentation to the Public Works Commission.

Regards,

Damian

Damian Roy, Engineering Technician
 Burlington Public Works Department
 645 Pine St. Burlington VT 05401
 Desk: 802.865.5832
 Cell: 802.598.8356
 Email: droy@burlingtonvt.gov
 Web: www.burlingtonvt.gov/dpw

Damian Roy

From: Rick Levinson <rick@rlphoto.com>
Sent: Tuesday, July 14, 2015 3:45 PM
To: Damian Roy
Subject: Sears Lane parking

I received a letter about the request for unrestricted parking along Sears Lane. I would rather this not happen it seems to only benefit the old Burlington Food Service building currently under renovation and would inevitably clog the street if the building ends up being over leased/occupied. This is what happened down the road with Dealer. When a building of low occupancy is converted to potential high occupancy, parking needs should be adequately addressed in the renovation of the building and should not affect its neighbors when the plans prove inadequate. Currently all businesses on Sears Lane manage their parking needs on their own property and so should they. Already, construction vehicles and equipment at times parked on the street make turning onto Sears Lane and onto Pine St difficult and at times dangerous.

Sincerely -Rick Levinson

RICK LEVINSON
RLPHOTO, INC.
27 SEARS LANE
BURLINGTON, VT 05401
studio 802.540.3081
mobile 802.238.2323
rlphoto.com
ricklevinsonphoto.com

Damian Roy

From: Greers Professional Fabricare <dan@greersdrycleaning.com>
Sent: Thursday, July 16, 2015 3:37 PM
To: Damian Roy
Subject: Sears Lane

Hi Damian,

I am the general manager with Greers Drycleaning and I just wanted to voice my opinion on the parking proposal for the north side of Sears Ln.

I honestly can see no positives in this, it adds an element of danger for the motorists, it reduces the road width by 27% and even more when cyclists are riding on the road alongside the parked cars. If the city wants to improve the road, add a bicycle lane. If the developer wants more parking, I am sure our landlord would rent space.

Thank you,

Dan Poplawski
General Manager

Greers Professional Fabricare
27 Sears Ln, Burlington, VT 05401
802 862-3707
dan@greersdrycleaning.com

Damian Roy

From: brmdesign2010@gmail.com on behalf of Bruce Robinson MacDonald
<bruce@brmdesign.com>
Sent: Friday, July 17, 2015 11:59 AM
To: Damian Roy; Rick Levinson; Marty Fitzpatrick
Subject: Regarding the parking on the north side of Sears Lane

Hi Damian,
Bruce MacDonald here.

We chatted briefly in my gallery regarding the parking issue. I just wanted to put my feedback in writing in regards to the proposal.

- 1) Cars and trucks have been parking along the north side of the street since the beginning of the reconstruction of the building fronting Pine St. Entering and exiting Sears has become even more of a challenge than usual as the sight lines are obstructed by the cars parked right on the corner. Safety is seriously compromised by these vehicles parked near the corner.
- 2) Sears Lane is used by a constant stream of car carriers driving way to fast to service the lots at the end of the road. These are oversize and overlong and are driven by men on a mission. Constraining the street by instating parking on the north side would make these even more hazardous. In tandem with these car carriers is a steady traffic of dealerships drivers moving inventory in and out.
- 3) City buses use Sears Lane as a drag strip to nowhere. Presumably there are no passengers when the buses are on the street, therefore the drivers can be certain no one will complain when they charge west at 40 mph. There is a constant stream of these buses.
- 4) There are a great deal more than 22 spaces of parking available in the lots on the south side of the street. I'm guessing there is parking for 60-80 cars currently and that is without any sort of upgrades to the current lots.
- 5) Most critically, Sears Lane is the conduit to the elementary school across Pine Street. Moms and kids on bicycles, dad strolling to school carrying children's poster board projects, parents with toddlers in strollers holding hands with kindergarteners walk and ride down Sears Lane for 9 months of the year. The Lakeside neighborhood and the rest of the South End wanting to use the bike path so their small kids are on city streets the LEAST amount of time possible utilize Sears Lane to get to the crossing guard in front of Noyes. My two boys grew up in the South Cove neighborhood and would have rode bikes for years on the bike path and through the park and onto Sears Lane to get safely to school. Small children on bikes are a challenge to keep safe. We have the utmost responsibility to minimize the jeopardy small children on bikes have to face while bumblng their way to school.

This trumps ALL other concerns. Narrowing this already too fast and busy street is wrong.

Please feel free to contact me regarding this issue. I will be happy to attend a hearing and voice these concerns personally.

I am a professed expert on Sears Lane traffic. Possibly more than any other individual, I see and hear the constant flow of life on this road. My front door is a 12' x 14' roll up observation post. I cannot wait until the construction is over and the road is paved. I hope speed bumps are installed to slow the car carriers and city buses. The current dust plume is dire enough for me to keep my door shut during these hot days when I ordinarily count on the breeze to cool my work space. I am not by nature a Luddite and believe strongly in the vitality of the South End and its bright future. I do believe that making parking available on this road would be irresponsible city management and would override safety concerns for the many and the smallest and quietest by the very few and most vested and vocal.

Feel free to come by and get some education on the state of this street first hand.

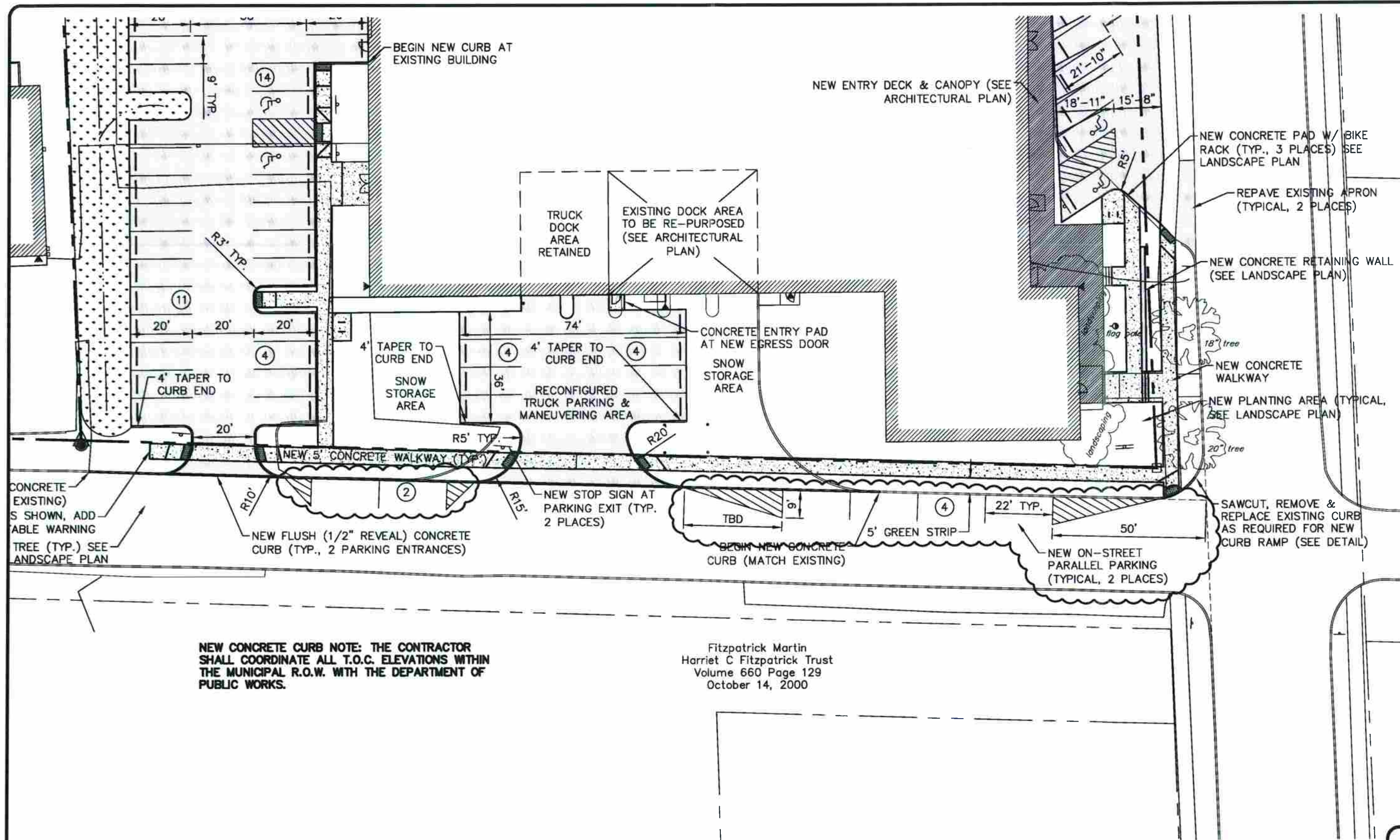
Thanks,

Keep us posted,
All best,
Bruce R. MacDonald

www.HAVOCgallery.com
www.youtube.com/user/BruceRMacDonald
www.facebook.com/HAVOCgallery

Truth is beauty is magic.

\\sdisk\proj\14132\Construction\Sketches\14132_LSK08.dwg Mon Aug 17 13:32:35 2015 CCF/MLC



NEW CONCRETE CURB NOTE: THE CONTRACTOR SHALL COORDINATE ALL T.O.C. ELEVATIONS WITHIN THE MUNICIPAL R.O.W. WITH THE DEPARTMENT OF PUBLIC WORKS.

Fitzpatrick Martin
Harriet C Fitzpatrick Trust
Volume 660 Page 129
October 14, 2000

1
CSK08

REVISIONS TO SEARS LANE ON-STREET PARKING

1" = 30'



**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

645 Pine Street, Suite A
Burlington, VT 05401
802.863.9094 VOICE
802.863.0466 FAX
802.863.0450 TTY
www.burlingtonvt.gov/dpw

Chapin Spencer
DIRECTOR OF PUBLIC WORKS

2015 Construction Season Capital Projects

Version 9-8-15

WATER

- Install a new 400 HP pump at the water plant to increase reliability and save energy
- Reline our two storage reservoirs
- Rebuild an Automatic Backwash (ABW) filter at the water plant
- Potentially reline a water main instead of open-dig replacement
- Water main and valve replacement in numerous areas.
- Water service replacements

WASTEWATER

- Install a new roof at Main plant
- Continue relining sewer pipes
- Minor pump station upgrades

STORMWATER

- Construct an infiltration system as part of an offset for the CCTA bus station
- Rebuild a pervious concrete parking lot near ECHO
- Pervious paver installation as part of new sidewalk project on S. Winooski/Main Street
- Re-lining of corrugated metal pipes (Colchester Ave and Van Patten Pkwy)
- Catch basin repair (numerous)
- Stormwater improvements to Lake Street (completed in May)

ROADWAY & TRAFFIC CAPITAL PROJECTS:

- **Waterfront Access North:** Construction all summer, with completion anticipated for late fall this year or early 2016.
- **Pine Street – Lakeside Avenue Traffic Signal Improvements:** Design work completed in summer. Construction Fall 2015.
- **Queen City Bridge:** Repairs to the bridge deck, and new pavement. Fall 2015.
- **Henry Street Bumpouts:** Summer 2015.
- **Wayfinding:** Replacing hairpin signs, improved signage for vehicles, pedestrians. Fall 2015
- **Cliff Street Sidewalks:** New Sidewalk on the north side of Cliff St between South Willard and Summit St. Work Fall 2015.
- **Flynn Ave Sidewalks:** New sidewalk on the north side of Flynn Ave between Pine and Shelburne St. Work Fall 2015.

Non-Discrimination

The City of Burlington will not tolerate unlawful harassment or discrimination on the basis of political or religious affiliation, race, color, national origin, place of birth, ancestry, age, sex, sexual orientation, gender identity, marital status, veteran status, disability, HIV positive status or genetic information. The City is also committed to providing proper access to services, facilities, and employment opportunities. For accessibility information or alternative formats, please contact Human Resources Department at 865-7145.

- **New Pedestrian Signals at Park and Manhattan:** Relocated poles and the addition of pedestrian signals across Park Street at Manhattan Drive. Fall 2015.
- **Manhattan Drive:** Repair of slope failure should take place late this season or in spring of 2016.

PAVING:

- FY16 Paving bids received 5/27. Work July 1-October 16.
- In addition to the following, the alternates included in the paving contract will mostly likely be included in the selection which will include: 260ft on Hildred Drive, the entrance to Oakledge Park, and a portion of the North Beach Campground road.

	LOCATION	SEGMENT	PCI	LENGT H	AREA
1	BARLEY	ALL	43	792	23760
2	BELTLINE	MANHATTAN- VT RAIL BRIDGE	36	1573	66560
3	FOSTER*	ALL	26	1637	49110
4	GERMAIN	ALL	7	372	9672
5	LOOMIS	MANSFIELD-N. PROSPECT	8	528	15840
6	MORGAN*	ALL	32	686	20580
7	OAKLAND	ALL	10	1056	27456
8	PLATTSBURG	TURF-BELTLINE RAMPS MERGE	29	1050	33600
9	SEARS*	PINE-END	6	786	23580
10	SPRING ST	MANHATTAN- ELMWOOD	14	317	8242
11	STANIFORD	APPLETREE PT SPEED BUMP-OAKLAND	15	816	24480
12	TURF	ALL	7	686	20580
13	VAN PATTEN	VILLAGE GREEN- HOUSE #95	40	1050	31500
				11355	FEET
				2.15	MILES

Coordinated with the paving work are the following smaller projects:

- Staniford Rd narrowing west of the bike path, and new improved bike path crossing
- Spring Street – Dewey park curb repair and new crossings, relocate bus stop
- Catch basin repair on Morgan, Sears, Germain, Turf
- Water main replacement ahead of paving Oakland and Morgan

SIDEWALK RECONSTRUCTION:

- **Sidewalk Reconstruction** – Approximately 1.5 miles of sidewalk reconstruction work through the 2015 construction season (spans two fiscal years)

- **FY15**, ROW 95% done on Marble Ave and made significant progress on Chase St with new sidewalk already poured both ~800ft. The next street for repair is Harrington Terrace (135ft), followed by 700ft on Pitkin.
- **FY'16**: Approximately ¾ mile in maintenance replacement. Locations to be determined.
- **South Winooski Sidewalk** –reconstruction of sidewalk between Main St and King St with new street trees and stormwater pavers. Fall 2015

STREET & SIDEWALK MAINTENANCE:

- DPW is drafting contracts for pavement preservation (crack sealing) with anticipated advertisement in FY16. Timing for advertisement is dependent upon funding, whether the project is initiated this fall 2015 or next spring 2016.
- DPW saw cutting of concrete sidewalks as a pilot project to determine the cost efficiency, effectiveness, and quality of the finished sidewalk to address some of the vertical changes in our concrete slabs rather than full replacement. Fall 2015

PARKING GARAGES:

- Phase 1A of capital repairs underway Fall 2015 (\$800,000). Work includes rehabilitation of Marketplace Garage elevators, deck sealing and drain repairs at College Street and painting.
- Design and engineering completed for major capital upgrades in 2016.

CITY FACILITIES:

- 1) Fletcher Free Library
 - a) HVAC renovation
 - b) Skylight replacement
 - c) Glass curtain wall repair
 - d) New carpet first floor reading room
 - e) Redesign of tech services space
 - f) Masonry repointing
 - g) New energy efficient lighting through-out
- 2) Boathouse – new ADA lift
- 3) 645 Pine Street
 - a) New concrete for back entry
 - b) New energy efficient lighting through-out
- 4) Fire Station #1 – 136 S. Winooski Avenue – new roof
- 5) Burlington Police Dept. –
 - a) paving of north lot
 - b) renovate north entrance
 - c) New pavers at front entrance
 - d) New energy efficient lighting through-out
- 6) Leddy Arena
 - a) New cooling tower, repair to compressor
 - b) Soils assessment
 - c) Begin Design and Engineering for major renovation in FY 17
 - d) Electrical upgrade
- 7) Road work at Lakeview cemetery
- 8) Paving of North Beach road and Oakledge Entrance
- 9) Pine Lakeside Signalization

- 10) North Beach Overpass redesign
- 11) Perkins Pier repair
- 12) City Hall renovation – design and engineering phase – construction winter/spring
- 13) Miller Center replace pervious pavers
- 14) Fire Station #5 – new concrete ramp
- 15) Security upgrades for buildings



City of Burlington
Department of Public Works

Office of Planning
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802.863.0450 TTY

www.dpw.ci.burlington.vt.us

Chapin Spencer
DIRECTOR OF PUBLIC WORKS

Martha Q. Keenan
Capital Improvement Program Manager

Date: September 21, 2015
To: Public Works Commission
From: Chapin Spencer, Director
Martha Keenan, CPM, Capital Improvement Program Manager

Subject: FY16 and FY17 General Fund Capital Planning

SUMMARY: Objective #3 in the FY'16 Commission-adopted Workplan is to "Close capital funding gaps across asset classes. DPW staff aims to close the General Fund FY'16 capital funding gap by utilizing a portion of the projected FY'15 surplus. Addressing the larger \$24M capital funding gap in FY'17 will be much more challenging. A City Council resolution has tasked the Board of Finance with exploring options and reporting back to the Council by December. Staff recommends the Commission be actively engaged in these conversations to help determine the best way to close the gap.

FY'16 UPDATE: The FY 2016 Capital Budget was approved by the City Council in June with a number of items that were to be held until after the FY15 audit was complete to determine if funding could be found out of the potential surplus. The DPW Commission reviewed the list of unfunded projects this spring and supported the approach of adding them to the FY'16 capital budget as funding became available. A number of these projects are considered important projects for the Department of Public Works.

Postponed Projects - completed as funding available		
Cliff Street Phase #3		\$ -
Additional Streets maintenance		\$ 250,000
Bike path rehabilitation		\$ 225,000
Curbs ties to Street work		\$ 200,000
Facilities Projects		\$ 222,201
Manhattan Drive Slope Failure 2		\$ 75,000
City Hall Fountain Repair		\$ -
Building Controls		\$ 65,000
New Sidewalks (design)		\$ 100,000
Parks Improvements		\$ 25,000
Flynn Parcel Purchase		\$ 20,000
BCA reinvestment 339 Pine Street		\$ 45,000
Total Postponed Expenditures		\$ 1,227,201

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DPW staff has put together a preliminary list of projects that would be funded by the proposed additional funding for paving, sidewalks and curbs above:

Additonal Paving		
Schedule Start may/June 2016		
Street	Segment	Estimate
Flynn	Pine-Shelburne RD	\$125,000
Adams St	All	\$60,000
Westward	all	\$35,000
Intervale Ave	Manhattan-Riverside	\$30,000
		\$250,000
Additonal Sidewalk		
Schedule Start may/June 2016		
Street	Segment	Estimate
Converse	East Side	\$40,000
South Union	Bayview-Spruce West	\$57,200
Lakeview Terr	West	\$80,000
North Ave	@ 127 Ramp	\$8,000
Nash	West	\$40,000
		\$225,200
Additonal Curb		
Schedule Start may/June 2016		
Street	Segment	Estimate
Howard	South Side - stpaul west	\$18,750
Deforest Rd	west side at bottom	\$27,000
flynn	north pine-shelburne	\$67,500
birchcliff		\$33,750
VanPatten		\$52,500
		\$199,500

As FY'16 has progressed, other projects have also come to the forefront, requiring discussion and collaboration to ensure that these urgent needs are met. New needs have occurred at Memorial Auditorium, the rail crossing near ECHO, the Manhattan Landfill, the Shelburne Roundabout, the Winooski bridge repair and an increase to the cost of the signalization at the Pine & Lakeside intersection.

CAO Bob Rusten stated at the last Board of Finance meeting that preliminary findings show a healthy projected surplus for FY'15. This surplus may be sufficient to cover the \$1.2M of postponed projects, the new needs above, and set aside funds to strengthen the City's fund balance. Once the FY'15 audit is completed in the late fall/early winter, the City will have final FY'15 financials and the Board of Finance will determine the use of these funds.

With the ability to look at all of the City's needs collectively and work collaboratively with other Departments, there will likely be sufficient funding for all of these new projects and the Street and Sidewalk work above in FY'16.

LOOKING AHEAD TO FY'17 & '18: The process of looking at the capital needs for FY'17 and FY'18 has begun. The General Fund capital shortfall for FY'17 at the moment is \$24M+, the largest portion being Memorial Auditorium at \$9.5M. Of the remaining shortfall, \$4.5M relates to projected needs within the Department of Public Works – mainly for increased paving, sidewalk reconstruction, new sidewalk expansion, and curb construction. Staff is currently developing the preliminary project list for FY'17 and FY'18 and evaluating what amount of increased capital projects our existing staff can actually manage.

A City Council resolution has tasked the Board of Finance with exploring options and reporting back to the Council by December 2015. Given the large capital funding gap in FY'17 and '18 and given the Commission's workplan objective to reduce DPW's capital funding gap, staff recommends the Commission be actively engaged in the upcoming Board of Finance conversations to help determine the best way to address the department's future capital needs.

If you have any questions, please feel free to contact Martha at mkeenana@burlingtonvt.gov or 802-540-0701.

Thank you.

Resolution Relating to

RESOLUTION_____

REFERRAL OF 10 YEAR CAPITAL PLAN TO
BOARD OF FINANCE AND COMMISSIONS TO
ADDRESS FY 16 IMPLEMENTATION AND
PUBLIC OUTREACH FOR LONG TERM PLAN

Sponsors: Councilors Knodell,
Paul, Wright, Bushor

Introduced: _____

Referred to: _____

Action: _____

Date: _____

Signed by Mayor: _____

CITY OF BURLINGTON

In the year Two Thousand Fifteen

Resolved by the City Council of the City of Burlington, as follows:

That WHEREAS, the City of Burlington is looking to create an implementable 10-year capital plan covering all municipal assets; and

WHEREAS, a preliminary working document (the 10-year capital plan) has been formulated with input from all municipal employees managing capital budgets but requires further review; and

WHEREAS, the preliminary document for FY 16 contains approximately \$2,000,000 more in identified needs than currently identified revenues; and

WHEREAS, the first action is to address the FY 16 capital asset needs and ways to pay for them;

NOW, THEREFORE, BE IT RESOLVED that the Burlington City Council hereby refers the preliminary 10-year capital plan to the Board of Finance where the Board will review and advise the Administration on the FY 16 capital budget; and

BE IT FURTHER RESOLVED that the preliminary document shall also be referred to the Accessibility Committee, Airport Commission, Church St. Marketplace Commission, Electric Commission, Fire Commission, Library Commission, Parks Commission, Planning Commission, Police Commission, Public Works Commission, and Transportation, Energy, and Utilities Committee to advise the Administration as to the proposed capital plan relative to their respective areas for FY 16; and

BE IT FURTHER RESOLVED that, following approval of the budget by the City Council, the Board of Finance, along with the aforementioned boards and commissions, shall work with the Administration to develop a plan to implement the next ten years of the plan. The Board of Finance shall work with a Department Head working group led by the Chief Administrative Office to help facilitate and coordinate the work; and

BE IT FURTHER RESOLVED that the Administration shall consult with the Board of Finance, and the aforementioned commissions and boards, to develop and implement a public outreach plan to gather ideas concerning the City's capital asset needs beyond this ten-year plan and how to pay for them. This public outreach plan shall be presented to the City Council no later than its last meeting in December of 2015.

**BURLINGTON DEPARTMENT OF PUBLIC WORKS COMMISSION MEETING
DRAFT MINUTES, July 15, 2015
645 Pine Street
(DVD of meeting may be on file at DPW)**

COMMISSIONERS PRESENT: Bob Alberry, Tiki Archambeau, Jim Barr, Chris Gillmann, Tom Simon, Solveig Overby, Jeff Padgett

ITEM 1 - AGENDA

Commissioner Archambeau proposed to move Item 4.4 to 4.6.
Consent agenda reviewed. Motion to accept consent agenda.
Unanimously approved.

ITEM 2 - ELECT CHAIR, VICE CHAIR AND CLERK

Commissioner Alberry made a motion to elect Commissioner Jeff Padgett as Chair and Commissioner Tiki Archambeau as Vice Chair. Director Spencer stated that he would like to appoint Valerie Ducharme and Holly Lane as Clerks or designate.
Commissioner Barr seconded.
Unanimous approval

Commissioner Padgett welcomed new Commissioner Chris Gillman on board.

ITEM 3 - PUBLIC FORUM

Nic Anderson - 4.10 Champlain College Temporary bus stop - made a request that one of the five unrestricted parking spots be designated handicap spot as this is mid-block which will give people easier access to the courtyard and surrounding buildings.

Commissioner Overby made a motion to pull this off the consent agenda.

Commissioner Alberry seconded.

Unanimous approval.

Phil Merrick - owner of August First Bakery stated that the brown meters on Main Street should be removed as people who work downtown are all parking there during the day as it is cheaper than the garage. Blue meters need to be put in place there as this area of Main Street has more shops now than when the brown meters were installed and shoppers need better access to the businesses.

Caryn Long - The water department did an amazing job in the area as when it rained last night the green space is getting greener

and now disappearing. She feels that there has to be more enforcement on the green space. Commissioner Padgett stated that the green space is not our issue.

Chris Hadsel - Willard Street needs a flashing pedestrian light north of the rotary as people can't cross safely. This would be an interim solution until the rotary is fixed.
(See video for further information)

Laura Massel - Lives on Kingsland Terrace which is a residential only parking area. She suggested the city go to the different wards in the city and get the extent of the information from people on parking. People living in residential parking areas should not have to search for parking in the neighborhood.

ITEM 4 - CONSENT AGENDA

4.1 Champlain College Temporary bus stop moved to 4.7.
4.4 Relocation of three handicap accessible spaces on St. Paul Street for new CCTA transit center to 4.6.
4.2 - three way stop at Shore Road and Balsam Street
4.3 439 College Street shuttle stop request
4.5 Driveway encroachment/loading zone requests for North Winooski Avenue.

Commissioner Barr made motion to accept consent agenda.
Commissioner Alberry seconded.
Commissioner Archambeau stated he lives next door to requestor and donated \$100 to a Bush & Babe's Kickstarter campaign. There is no conflict of interest per the City Attorney.
Unanimous approval.

ITEM 4.6 - RELOCATION OF THREE ACCESSIBLE SPACES ON ST. PAUL STREET FOR NEW CCTA TRANSIT STATION

Damien Roy stated that three representatives from the city, state and CCTA visited the Zampieri Building which is a disabled residence which serves the south side of St. Paul Street and there are two spaces on Cherry Street. We need to bump out the first meter and two accessible spaces are proposed near the ramp adjacent to spaces for the building. On the north side of Pearl Street to Papa John's the first space is available. The commission asked staff review of PROWAG and other applicable standards before committing to a handicap space. Staff will

review as part of a normal request process. Staff recommendation - without a handicap space was approved.

(See video for further information.)

Commissioner Archambeau expressed a concern with the rear loading handicap vehicles going in the street to access the closest ramp.

Mr. Baldwin stated they would keep it as close to the ramp as possible.

Commissioner Archambeau made a motion to pass this onto the Accessibility Committee.

Commissioner Simon seconded.

Unanimous approval.

ITEM 4.7 CHAMPLAIN COLLEGE TEMPORARY BUS STOP

Commissioner Overby asked to have a handicap spot moving the bus stop and putting in four unrestricted parking spaces and one handicap space.

Nic Anderson of Champlain Collee stated that the nearest spot was a block away. There is a huge demand for parking in the courtyard and we have two more requests for them at the MIC parking lot.

(See video for more information)

Commissioner Archambeau made a motion to accept staff's recommendation.

Commissioner Barr seconded.

Unanimous approval.

ITEM 5 - RESIDENTIAL PARKING MANAGEMENT STUDY - Nicole Losch

Director Spencer stated that this is a draft plan for parking in residential areas. The review is because this has not been reviewed for several years. The concern is the guest passes, paying of tickets, issuing of tickets and several other issues.

Nicole Losch stated that we are using a universal way to best manage which we feel is using a data driven approach. We are looking at many different city needs with financial only a small part of the consideration. We have a good size advisory committee and have held two public meetings attended NPA meetings and have come to a previous Commission meeting for the introduction to this program and we will be back in September.

We have compared parking with other cities about the same size as Burlington, collected data in three areas and found parking over utilized, need more meters in downtown area. The Hill section has the most restrictions and lowest density.

There was a question of conflict of interest with Commissioner Barr voting on the residential parking as he is the Director of Transportation of parking for the University of Vermont. Gene Bergman, Assistant City Attorney, stated he reviewed the information and found nothing that should prevent Commissioner Barr from voting on this policy.

Citizens who had comments to make about Residential Parking: Please review the video of the public comments on the residential parking issue as there were numerous people there for this issue. There is also a packet of information available to review on line.

ITEM 6 - DOWNTOWN PARKING REVIEW

Kelly Devine stated that this a complex two year study and a plan that retains authority over policy and pay. This plan has to be presented to the city council. There are three goals with this plan:

- Active, engaged parking management
- A system to work together to meet goals
- Document standards of care and operation

DPW will manage the parking meters and the Burlington Business Association will manage the communications on a temporary basis.

Director Spencer stated that the Commission's approval is not needed but it will be presented to the City Council on August 10th.

ITEM 7 - VTRANS BICYCLE AND PEDESTRIAN PROGRAM GRANT CANDIDATES

The small projects are for sidewalk improvements that will increase access and/or safety of people choosing to walk or ride a bike.

Midblock crosswalk with pedestrian bump outs to cross safely from UVM Central campus to Trinity campus and UVM Medical Center. Will also allow pedestrians to access Centennial Field.

Commissioner Padgett stated he does not support mid-block crosswalks and feels there need to be a policy for this issue.

Please see the video for more information

ITEM 8 - INCREASING DRIVER AWARENESS OF YIELD CONDITION

Damien Roy stated this was referring to Shelburne Street at the Price Chopper where vehicles are exiting the shopping center to get onto Shelburne Street or I189. There is a lot of traffic congestion here especially during rush hour. Drivers are not yielding exiting the shopping center. There are a few suggestions researched. The suggestion of DPW is to maintain the yield sign.

Commissioner Simon made motion to go with staff's recommendation.

Commissioner Barr seconded.

Commissioner Padgett opposed

Other commissioner unanimous approval.

Damien Roy also handed out other paperwork showing the open request for services for traffic issues he is dealing with and also parking issue requests.

ITEM 9 - MINUTES OF JUNE 17, 2015 MEETING

Commissioner Alberry made a motion to approve

Commissioner Simon seconded

Unanimous approval

ITEM 10 - DIRECTOR'S REPORT

Director Spencer wished to thank Pat Buteau for 33 years of service as he is retiring. Commissioners also thanked Pat.

ITEM 11 - ADJOURNMENT AND NEXT MEETING DATE

Commissioner Alberry states that we have always taken the month of August off to give staff a well-deserved rest. Next meeting will be September 16, 2015.

Commissioner Barr motioned for adjournment

Commissioner Archambeau seconded

Unanimous approval

Meeting ended 10:30 p.m.



**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

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To: DPW Commissioners
Fr: Chapin Spencer, Director
Re: **Director's Report**
Date: September 9, 2015

PROCESS FOR PARKING STUDIES

I will be presenting a draft process and timeline for completing the downtown and residential parking studies at the upcoming meeting. As such, there will be no action on the parking studies sought at this meeting. We will not be looking for the Commission to vote on these plans until we complete the final draft plans and have additional public comment on those versions.

MANAGING PHOSPHOROUS & INTEGRATED PLANNING:

The EPA has published a draft regulatory document regulating phosphorous in Lake Champlain. It is referred to as Total Maximum Daily Load or TMDL for short. The draft document can be found here (<http://www.epa.gov/region1/eco/tmdl/lakechamplain.html>). The State of Vermont has produced a Phase One Implementation Plan that describes how the State is proposing to meet the EPA's TMDL. The draft document can be found here: (<http://watershedmanagement.vt.gov/erp/champlain/#tmdl1aug1415>). The draft TMDL took years to develop and requires significant action and financial investment from communities such as the City of Burlington. The report estimates Burlington's wastewater treatment plants may require \$30M of upgrades to meet the phosphorous targets. Staff has also already been working to optimize our wastewater treatment plants to see how far we can manage phosphorous reduction without costly plant upgrades. Staff has been carefully reviewing the plan and will be submitting extensive comments prior to the October 15 deadline for comments. The Mayor was quoted in the Free Press saying that the City would be carefully reviewing the document to determine if it creates "the fair, effective, and efficient water policy that I and other local leaders have been advocating in recent years."

We are also beginning an Integrated Planning process with State and EPA support. An Integrated Plan (<http://water.epa.gov/polwaste/npdes/stormwater/Integrated-Municipal-Stormwater-and-Wastewater-Plans.cfm>) combines permits for a municipality's wastewater and stormwater systems – and provides flexibility on how to meet permit requirements. We see this as a key tool for targeting our water quality investments in areas that will have the greatest return.

CAPITAL PROJECTS:

Commissioners have asked for a list of capital projects to better understand the full breadth of our work. I have attached a list of updated capital projects for the 2015 construction season to the capital projects agenda item information. To make sure the Commission is briefed on our major efforts in each fiscal year, the Chair and I are proposing to present to the Commission a draft list of planning and capital projects for the Commission's input as part of the budget development process each winter / spring.

PINE & LAKESIDE:

At the Mayor's direction, staff has been working to construct improvements to the Pine and Lakeside intersection to improve safety at this intersection for all modes. On September 9th, the City Council approved awarding a \$287,018 contract to construct the Pine Street and Lakeside Avenue Intersection Improvements project. The project entails installation of a new mast arm traffic signal system with

pedestrian signals, relocation of a commercial driveway, replacement of sidewalk, and installation of accessible sidewalk ramps. A separate, but related project, will extend the southbound Pine Street bike lane down to the Lakeside Avenue intersection. The design is coordinated with the Champlain Parkway project so that most of the improvements can remain in place when the Parkway is constructed. Project documents submitted for the recent City Council meeting can be found here:

<http://www.boarddocs.com/vt/burlingtonvt/Board.nsf/goto?open&id=A26PNT572DFD>

PARKING GARAGE CAPITAL REPAIRS:

In August the City Council approved the first phase (\$800,000) of capital repairs to our downtown parking garages. The work will begin on College Street Garage September 14th and on Marketplace Garage in October. Project documents submitted for the recent City Council meeting can be found here:

<http://www.boarddocs.com/vt/burlingtonvt/Board.nsf/goto?open&id=9Z6M6X6D0AF6>

ANNUAL COMMISSION MEETING SCHEDULE:

Chair Padgett asked me to flesh out re-occurring Commission tasks so that the Commission and staff can adequately plan for upcoming responsibilities.

- WINTER: Receive notice from staff of potential funding gaps for coming fiscal year and provide guidance on options
- FEBRUARY / MARCH: Approve paving program for the coming year
- APRIL: Review Director, City Engineer
- JUNE: Finalize annual workplan for the Commission (flexible)
- JULY: Election of Chair, Vice Chair, Clerk
- JULY: Finalize and sign annual report for the City Council
- AUGUST: Usual summer recess (no Commission meeting unless scheduled)
- AUGUST: Presentation of annual report to the City Council

Over the course of the coming month, Chair Padgett and I will be working to update this list. Commissioners are welcome to provide input on this draft schedule.

Thank you.



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CHAPIN SPENCER
DIRECTOR OF PUBLIC WORKS

NORMAN J. BALDWIN, P.E.
ASSISTANT DIRECTOR OF PUBLIC WORKS

Date: 9/15/2015

To: Public Works Commission
From: Norman J. Baldwin, P.E. *NJB*
City Engineer/Ass't Director of Public Works

C.C. Chapin Spencer, Director of Public Works
Nicole Losch, Transportation Planner

Subject: Guidelines for Pedestrian Crossing Treatments

SUMMARY: I have been tasked with determining what design policies or guidelines the City should adopt to accessibility and walkability of our community. The City has sought on many fronts to improve its walkability with the ambitious goal of achieving a gold-level Walk Friendly Community designation.

Consistent with this goal, the Commission has requested staff bring forward guidelines on two specific policy items:

1. Criteria for the establishment of mid-block crosswalks
2. Criteria for the installation of Rectangular Rapid Flashing Beacons (RRFBs)

We have reviewed the State of Vermont's recently updated Crossing Treatment Guidelines and believe the document provides good initial guideline for the City in evaluating both topics above as well as many others. As such, we are recommending the Commission adopt the State's Crossing Treatment Guidelines at its October meeting. We will be available to discuss the guidelines at the upcoming meeting in September.

BACKGROUND: With the expended employment and retail activity along the Pine Street the City sought to improve walkability and with the financial support of the State of Vermont the City installed Rectangular Rapid Flashing Beacons(RRFB's). The RRFB's have proven to be highly successful as a warning device increasing the likelihood of vehicles yielding to pedestrians seeking to cross at the various locations along the corridor. If you travel the Pine Street corridor, you are aware of a very active walking corridor, with a high volume of vehicular traffic throughout the day. Seldom can you travel the Pine Street corridor without having a RRFB being activated and have a pedestrian on one side or the other waiting to cross. The success of the Rapid Flashing Beacon in part is the prudent application and use of the RRFB's as an enhancement to an uncontrolled crosswalk location.

As a result of the Pine Street experience, there have been requests submitted to the department requesting the installation of a RRFB's in other locations within the City. At a more recent Public Works Commission a resident had asked the Commission to consider the installation of two pair of RRFB's on the north side of the Willard Street Rotary to cross Willard Street and St.Paul Street. RRFB's have only recently become available as another tool in our arsenal of influencing driver and pedestrian behavior to limit conflict, improve access and safety. As a City agency, we have had

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to grapple with developing our own policy guidelines that specify when a RRFB would be appropriate enhancement to an uncontrolled crosswalk.

In our effort determine the best practices we have researched various Federal, State and local agencies policies that speak to the design and installation of RRFB's, each agency has their own approach in determining the design and possible threshold where RRFB's should installed as an enhancement to an uncontrolled crosswalk.

Given we are not an island unto ourselves and one of the most fundamental philosophies of Traffic Engineering design is to ensure the systems we are justified, installed and built and predictably following Federal and State Standards. Manual on Uniform Traffic Control(MUTCD) has allowed for the installation of RRFB's as a warning device for crosswalks. The MUTCD speaks to how the RRFB's would be constructed and operate however has not gone so far as to provide a standard of review in which it would be appropriate and necessary to install a RRFB. Our State Agency of Transportation (VTRANS) has issued a guidance document entitled "Vermont Agency of Transportation Guidelines for Pedestrian Crossing Treatments". The VTRANS document provides a framework for decision making to determine if a crosswalk is needed, if it is needed how it would be configured, and would it require additional enhancements such as a RRFB. Given the State of Vermont is a partner on many projects providing funding for many of our initiatives, our requirements should not be in conflict with MUTCD, or VTRANS Standards.

Referencing VTRANS document on page 22, last paragraph "crosswalk enhancements are generally based on three criteria: traffic volume, posted speed and lane configurations. The tables in figures 10 and 11 indicate when marked crosswalks alone are appropriate or when use of enhancements should be considered. The tables also indicate which of the crosswalk enhancements should be considered for a given set of conditions. The tables are not meant to be proscriptive, but rather provide guidance on enhancements that could be used."

Referencing VTRANS document page 24, Figure 11 for streets with a posted speed limit 30 MPH or less which is more common in Burlington, with Annual Average Daily Traffic (AADT) of >9,000. A RRFB would be appropriate if all other requirements were met such as adequate sight distance, there is not another crosswalk within 200 feet of the location, engineering judgment, etc.

Examining the CCRPC's Traffic Counts there are a number of street segments that would fit the AADT Criteria. For your consideration I am providing you a listing of traffic counts for streets exceeding the 9,000 AADT.

CCRPC ID	Count Date	Description	AADT
<u>BURL44</u>	2005	PINE ST. BTW LOCUST & HOWARD ST.	<u>13000</u>
<u>D144</u>	1993	PEARL ST. EAST OF N.UNION ST.	<u>12930</u>
<u>D155</u>	2009	PEARL ST. JUST EAST OF SOUTH WILLIAMS ST.	<u>12300</u>
<u>BURL02</u>	2005	NORTH AVE. SOUTH OF INSTITUTE RD.	<u>12000</u>
<u>BURL75</u>	2010	COLCHESTER AVE. BTW CHASE ST. & GREENMOUNT CEMETERY	<u>12000</u>
<u>BURL80</u>	2010	PEARL ST. BTW SOUTH WILLIAMS ST. & HANDY CT.	<u>12000</u>
<u>D507</u>	2002	SOUTH WINOOSKI AVE. BTW MAIN ST & COLLEGE ST	<u>12000</u>
<u>D447</u>	2005	S.PROSPECT ST. NORTH OF MAIN ST.	<u>11800</u>
<u>D541</u>	2009	PINE ST. NORTH OF LAKESIDE AVE.	<u>11800</u>
<u>D045</u>	2009	NORTH AVE. 0.25 MI. SOUTH OF INSTITUTE RD.	<u>11700</u>
<u>D444</u>	2009	PINE ST. BTW LOCUST ST. & HOWARD ST.	<u>11700</u>
<u>D446</u>	2009	SHERMAN ST. BTW PARK ST. & NORTH ST.	<u>11600</u>
<u>D457</u>	1989	EAST AVE. NORTH OF US 2	<u>11140</u>
<u>D154</u>	2009	COLCHESTER AVE.EAST OF NASH PLACE	<u>11100</u>
<u>D456</u>	1989	COLCHESTER AVE. NORTH OF CHASE ST.	<u>10970</u>
<u>D097</u>	1996	BATTERY ST.SOUTH OF MAIN ST.	<u>10900</u>
<u>D164</u>	2002	US 7 NORTHWEST OF MARIAN ST.	<u>10900</u>
<u>D148</u>	2009	NORTH AVE.NORTH OF COTTAGE GROVE	<u>10800</u>
<u>D460</u>	2009	PEARL ST. WEST OF WINOOSKI AVE.	<u>10600</u>
<u>D169</u>	2009	MANHATTAN DR. EAST OF N.CHAMPLAIN ST.	<u>10500</u>
<u>D168</u>	1989	SOUTH PROSPECT ST. SOUTH OF COLCHESTER AVE.	<u>10310</u>
<u>BURL14</u>	1994	MANHATTAN DR. EAST OF PARK ST.	<u>9840</u>
<u>BURL01</u>	2005	PLATTSBURG AVE. SOUTH OF SUNSET DR.	<u>9600</u>

D171	2009	PINE ST.SOUTH OF MAPLE ST.	<u>9600</u>
D163	2009	ST.PAUL ST.SOUTH OF MAPLE ST.	<u>9400</u>
AOT20	2002	N. WINOOSKI AVE. (ALT US 7) BTW ARCHIBALD ST & RIVERSIDE	<u>9100</u>
BURL78	2010	EAST AVE. BTW EAST VILLAGE & BILODEAU CT.	<u>9000</u>
D138	2009	EAST AVE. SOUTH OF BILODEAU CT.	<u>9000</u>
D172	2009	EAST AVE. SOUTH OF COLCHESTER AVE.	<u>8600</u>
D157	2002	ST. PAUL ST SOUTH OF HI-RISE	<u>8400</u>
D475	2009	VT 127 (NORTHERN CONNECTOR) 0.2 MILES NORTH OF EXIT TO NORTH AVE.	<u>8100</u>

This list of streets may not be all representative of every street meeting this criteria, given a portion of this data may be aged, or segments of the roadway are missing from the counts performed by CCRPC but is representative of our roadway network volumes.

At a recent Commission meeting a resident was expressing concern that the State managed Willard Street Roundabout Project was taking too long to go to construction and that it was increasing difficult for residents and school children to cross safely at Willard Street and St.Paul Street north of the rotary. The resident was pleading with the Commission to have the City with its own resources advance the installation of RRFB's at the two crossings in advance of the State Fund Safety Improvement Project. In giving this resident the due consideration staff did use the above referenced guidelines to review the location s and determined the installation of RRFB's were warranted, in addition the States plan set for the Willard Street Roundabout Project does include the RRFB's as requested.

Staff feels strongly these two locations are strong candidates for RRFB's as a crosswalk enhancement given the volume of vehicular traffic, the distance in separation to the nearest crossing location, the need to provide a higher degree of crossing protection to a vulnerable population (School Kids).

I am recommending:

- the adoption and the application of Vermont Agency of Transportation guidelines for Pedestrian Crossing Treatments dated January 2015 is a very good first step and will allow us to review the various crosswalk and RRFB requests.
- the installation of RRFB's at the two crosswalk locations just north of the Willard Street Rotary

If you have any question please feel free to give me a call.

VERMONT AGENCY OF TRANSPORTATION

GUIDELINES FOR PEDESTRIAN CROSSING TREATMENTS

January 2015 Update

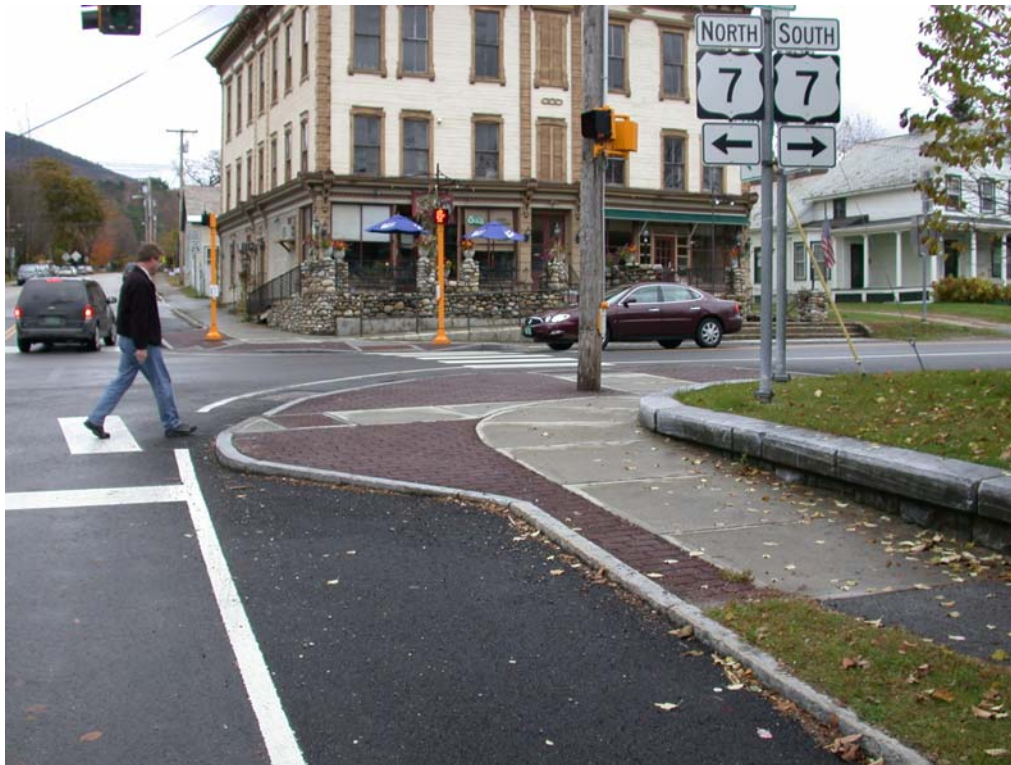


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Appendices

Appendix A – FHWA Memo on Interim Approval of RRFBs

Criteria at a Glance

For each of the items below, all of the conditions mentioned should be present.

All Crosswalks:

- Sidewalks and curb ramps with detectable warning surfaces on each end of the crossing, or paved shoulder 3-6 feet wide with no parking or other vehicular conflicts. (Wider shoulders may allow for parking activity, unless within an established no-parking zone.)

Signalized approaches:

- Pedestrian signal heads if exclusive pedestrian signal phase, or adequate visibility to vehicular signal heads if concurrent pedestrian phase
- Signal is timed to allow adequate pedestrian crossing time
- No parking for 30 feet on approach to crosswalk

Stop controlled approaches:

- Pedestrian has right of way by law if there are sidewalks on both sides, whether the crosswalk is marked or not. Crosswalk may be marked to prevent stopped vehicles from obstructing pedestrian crossing path or to remind turning vehicles to yield if engineering judgment indicates that vehicle/pedestrian conflicts are likely.

Uncontrolled approaches (intersection or mid-block):

- Speed limit 40 mph or less
- Adequate sight distance from all vehicular approaches to both ends of the crossing

Posted Speed (mph)	Required Sight Distance (feet) *
25	155
30	200
35	250
40	305

**downgrades require
longer stopping
distances*

- No other crosswalk within 200 ft
- Vehicle volume exceeds 3000 vehicles per day (both directions combined)
- Pedestrian crossing volume exceeds 20 per hour in the highest pedestrian hour of the day (Elementary school age – 12 and under and elderly pedestrians – over 60 - count as 2 each)
- No parking within 20 feet of crosswalk (unless crosswalk is located mid-block with bulbouts - see section 5.3.6)

- In densely developed areas, such as a village center, one crosswalk may be used to channelize pedestrians to the safest or most desirable crossing location. For this scenario, there is no minimum pedestrian or vehicular volume if all other criteria are met and engineering judgment indicates that providing the crosswalk may increase the safety of pedestrians (see 3.2.1 for further guidance on this topic.)

1.0 Introduction

1.1 Use of Guideline:

The purpose of this guideline is to ensure that pedestrian crossings are treated consistently throughout the state, on both state highways and local roads, by providing guidance on the location of marked and unmarked crossings, and the associated pavement markings and signs.

This guideline is intended to supplement the Manual on Uniform Traffic Control Devices (MUTCD). Conflicts between the two documents should defer to the latest edition of the MUTCD. References to sections of the MUTCD in this guideline correspond to the 2009 Edition.

This guideline is also intended to incorporate Vermont state law where applicable. Conflicts between this guideline and the latest statutes should defer to the statute. References in this guideline correspond to the 2013 Motor Vehicle Laws of Vermont.

Not all situations can be adequately addressed in this guideline; therefore engineering judgment must be used at all times.

The Vermont Pedestrian and Bicycle Facility Planning and Design Manual, published by VTrans, also contains valuable information about crosswalk design. Included in that manual are recommendations on making pedestrian facilities accessible to all users and meeting Americans with Disabilities Act (ADA) requirements.

Prior to the marking of pedestrian crosswalks on the state route system (via a Section 1111 permit from the VTrans Utilities and Permits section, or through other means,) the proposed crosswalk location must be reviewed to ensure that it conforms to this guideline, the MUTCD, and state statutes.

Crosswalk markings shall only be installed and/or maintained after receiving written approval from the appropriate governing entity: the Agency of Transportation in the case of state highways, Select Board in the case of town highways, or legislative body of a city in the case of city streets.

2.0 Marked Crosswalks at Intersections

2.1 Signalized Intersections:

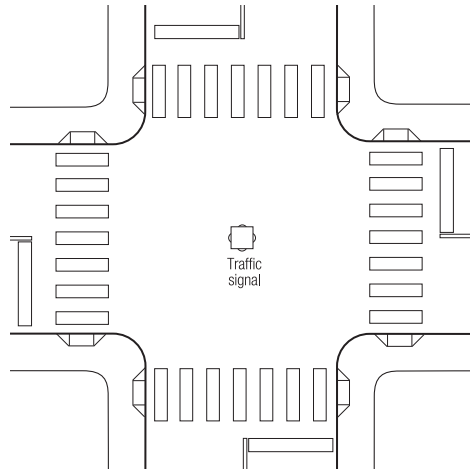


Figure 1: Traffic Signal Controlled Intersections

2.1.1 Criteria for installation:

Exclusive or Concurrent Pedestrian Phase:

Intersections with a traffic signal timed for concurrent or exclusive pedestrian movements should have crosswalks applied across the roadway approaches that have sidewalks present on either side of the intended crossing. Crosswalks should not be installed in the absence of sidewalks unless adequate shoulders exist for use by pedestrians. The determination of adequate shoulder should be based upon an assessment of traffic volumes, adjacent land use patterns and other site specific conditions.

No pedestrian timing:

Intersections with a traffic signal which is not timed to accommodate concurrent or exclusive pedestrian movements, or have traffic signal heads that cannot be seen by the pedestrian, shall not have crosswalks applied on the roadway approaches which might be used by the pedestrian.

2.1.2 No parking zone:

In accordance with state law, parking spaces shall not be marked within 20 feet of a marked crosswalk at an intersection, as measured by the gap between the parking space and the closest crosswalk marking. The MUTCD recommends a 30 feet minimum no parking zone on the approach to crosswalks marked at signalized intersections. On state highways, VTrans Standard E-193 requires a 30 feet minimum no parking zone in advance of crosswalks at signalized intersections.

2.1.3 Pedestrian Warning Signs:

In accordance with the MUTCD, there shall be no pedestrian crossing signs installed at the marked crosswalks where traffic movement is controlled, nor shall advance pedestrian warning signs be installed on the approaches to a signalized intersection.

At intersections where there is a high volume of turning vehicles and the pedestrian phase is concurrent with through movements, a regulatory R10-15 “turning vehicles yield to pedestrians” sign may be used to remind drivers to yield to pedestrians.



2.2 Unsignalized Intersections – Stop or Yield Sign Controlled Approaches:

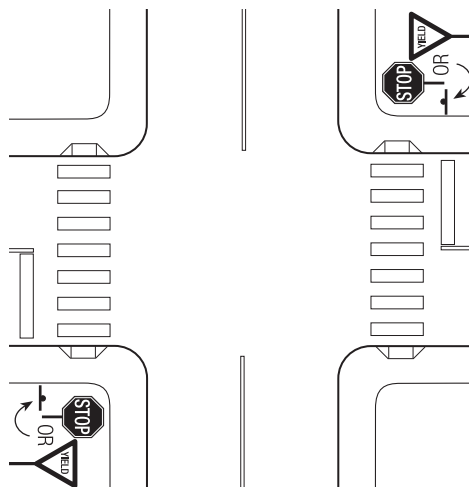


Figure 2: Stop or Yield controlled approach

2.2.1 Criteria for installation:

A crosswalk may be placed across an approach controlled by a stop or yield sign if a sidewalk exists on both sides of the roadway approach controlled by the stop or yield sign. Crosswalks should not be installed in the absence of sidewalks unless adequate shoulders exist for use by pedestrians. The determination of adequate shoulder should be based upon an assessment of traffic volumes, adjacent land use patterns and other site specific conditions. The shoulder shall be a minimum of three feet wide, and a maximum of six feet wide (in order to minimize potential conflicts with parking activities.)

In general, installation of 'parallel' crosswalks across the throat of driveways or minor side roads is not recommended unless there is a high potential for vehicle/pedestrian conflict that will be mitigated by a marked crosswalk.

2.2.2 Installation of Stop or Yield Line:

When a crosswalk is installed at a stop or yield controlled approach, a stop or yield line should also be installed. In accordance with the MUTCD, stop or yield lines should be marked a minimum of 4 feet in advance of the nearest crosswalk line, as measured by the gap between the stop bar and the closest crosswalk marking.

2.2.3 No parking zone:

In accordance with state law, parking spaces shall not be marked within 20 feet of the marked crosswalk, as measured by the gap between the parking space and the closest crosswalk marking.

2.2.4 Pedestrian Warning Signs:

There shall be no pedestrian crossing signs installed at the marked crosswalks nor shall advance pedestrian warning signs be installed on the stop or yield controlled approaches to an intersection.

2.3 Unsignalized Intersections – Roundabout:

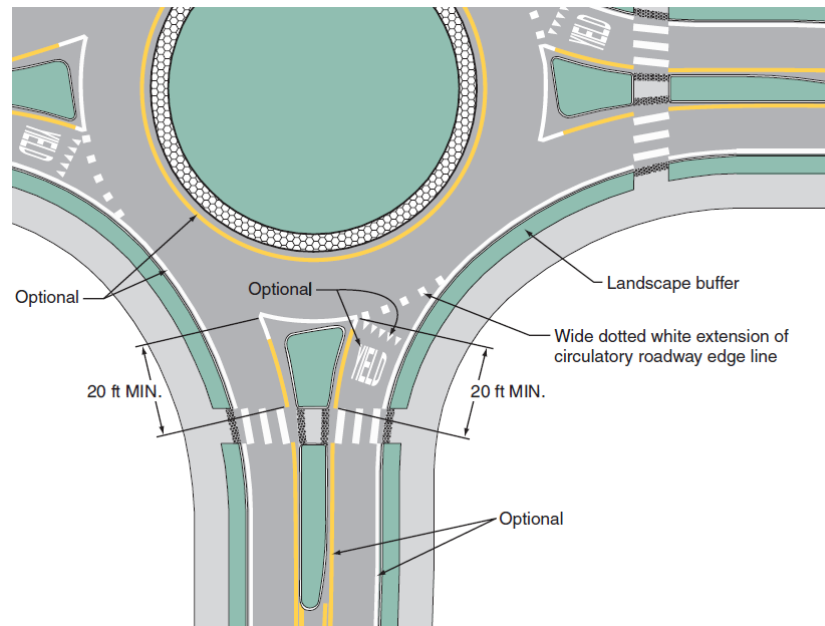


Figure 3: Roundabout approach

2.3.1 Criteria for installation:

A crosswalk may be placed across a roundabout approach if a sidewalk exists on both sides of the approach. Crosswalks should not be installed in the absence of sidewalks unless adequate shoulders exist for use by pedestrians. The determination of adequate shoulder should be based upon an assessment of traffic volumes, adjacent land use patterns and other site specific conditions. The shoulder shall be a minimum of three feet wide, and a maximum of six feet wide (in order to minimize potential conflicts with parking activities.)

In accordance with the MUTCD, where crosswalks are marked on roundabout approaches, they should be marked a minimum of 20 feet in advance of the edge of the circulating lane.

2.3.2 No parking zone:

In accordance with state law, parking spaces shall not be marked within 20 feet of the marked crosswalk, as measured by the gap between the parking space and the closest crosswalk marking.

2.3.3 Pedestrian Warning Signs:

Pedestrian warning signs (W11-2 with downward arrow plaque W16-7P) shall be installed at each end of the crosswalk location. At either end, the sign should be placed in advance of the crosswalk from the perspective of the driver in the adjacent travel lane, facing the driver.

Advance pedestrian warning signs (W11-2) with supplemental plaques with the legend “AHEAD” (W16-9P) or “XXX FEET” (W16-2P or W16-2aP) may be installed in advance of the crosswalk. Advance warning signs are not typically used in urban areas where pedestrian activity is an expected feature of the driving environment.

2.4 Unsignalized Intersections – Uncontrolled Approaches:

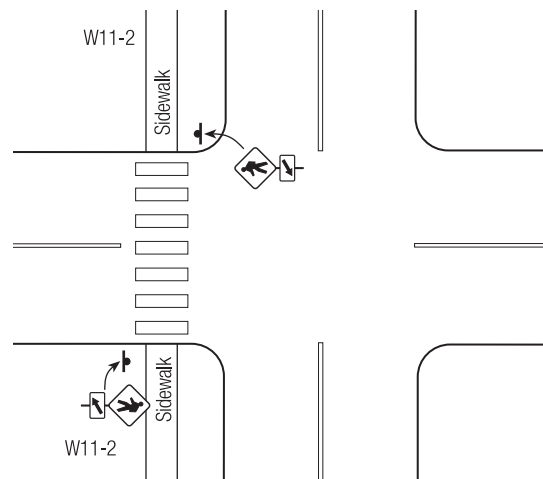


Figure 4: Uncontrolled intersection approach

2.4.1 Criteria for installation:

A crosswalk should not be installed at an intersection on a roadway approach that is not regulated by a traffic signal, a stop sign, or a yield sign unless all of the following criteria are met (unless supported by other factors using engineering judgment:)

1. The speed limit is 40 mph or less;
2. There are 20 or more pedestrians using the crossing per hour during the highest pedestrian volume hour (elementary school age and elderly pedestrians count as 2 each);
3. The AADT (annual average daily traffic) for the roadway (both directions combined) exceeds 3000 vehicles per day;
4. There is a sidewalk or adequate shoulder for use by pedestrians. The determination of adequate shoulder should be based upon an assessment of traffic volumes, adjacent land use patterns and other site specific conditions. The shoulder shall be a minimum of three feet wide, and a maximum of six feet wide (in order to minimize potential conflicts with parking activities.)
5. There is not another crosswalk across the same roadway within 200 feet of the intersection;
6. Adequate sight distance (equal to or exceeding the stopping sight distance for the posted speed) is available in both directions. At a minimum, a driver must

be able to see either the crosswalk or the pedestrian warning sign. It is recommended that sight distance be measured from the driver's perspective to the outer edges of the traveled lanes, to ensure that an approaching driver can see a pedestrian at any point on the crosswalk within the traveled way.

When a proposed crosswalk is associated with a new development, change in land use, or new pedestrian facilities, an engineering study may be used to predict whether these criteria will be met once the development or facility has been constructed.

Crosswalks at uncontrolled locations should not be marked on 3 or 4 lane roadways with AADT greater than 9,000 vehicles per day unless other crosswalk enhancements, such as pedestrian refuge islands, advanced yield lines, or rectangular rapid flashing beacons are included, and an engineering study concludes that pedestrian safety will be enhanced. See section 5.3 for more information about crosswalk enhancements.

2.4.2 No parking zone:

In accordance with state law, parking spaces shall not be marked within 20 feet of a marked crosswalk at an intersection, as measured by the gap between the parking space and the closest crosswalk marking.

2.4.3 Pedestrian Warning Signs:

Pedestrian warning signs (W11-2 with downward arrow plaque W16-7P) shall be installed at each end of the crosswalk location. At either end, the sign should be placed in advance of the crosswalk from the perspective of the driver in the adjacent travel lane, facing the driver.

Advance pedestrian warning signs (W11-2) with supplemental plaques with the legend "AHEAD" (W16-9P) or "XXX FEET" (W16-2P or W16-2aP) may be installed in advance of the crosswalk in order to give drivers additional advance notice of the crosswalk. Advance warning signs are not typically used in urban areas where pedestrian activity is an expected feature of the driving environment.

At locations along an officially established and recognized route to school, School symbol signs (S1-1) may be used in place of the Pedestrian Warning signs (W11-2).

3.0 Marked Crosswalks at Mid-Block Locations

3.1 School Crossings:

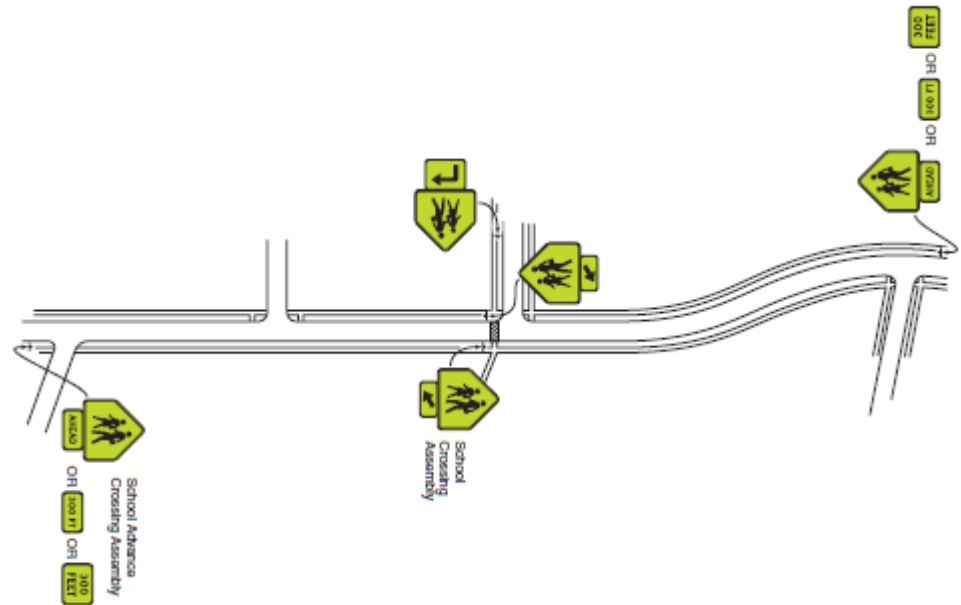


Figure 5: School Crossing

Crosswalks should be marked at crossing locations on established routes to a school (if the school has established a school route plan) where there is substantial conflict between vehicles and students, or where students would not otherwise know the proper place to cross.

3.1.1 Criteria for installation:

All of the following criteria should be met prior to installing a crosswalk (unless supported by other factors using engineering judgment:)

1. The speed limit is 40 mph or less;
2. There is a sidewalk or adequate shoulder for use by pedestrians. The determination of adequate shoulder should be based upon an assessment of traffic volumes, adjacent land use patterns and other site specific conditions.

The shoulder shall be a minimum of three feet wide, and a maximum of six feet wide (in order to minimize potential conflicts with parking activities.)

3. There is not another crosswalk across the same roadway within 200 feet;
4. Adequate sight distance (equal to or exceeding the stopping sight distance for the posted speed) is available in both directions. At a minimum, a driver must be able to see either the crosswalk or the school crossing sign. It is recommended that sight distance be measured from the driver's perspective to the outer edges of the traveled lanes, to ensure that an approaching driver can see a pedestrian at any point in the crosswalk within the traveled way.

There is no minimum pedestrian volume for a school crossing.

It is recommended that a trained crossing guard be present at the times when there is crossing activity by students.

When a proposed crosswalk is associated with a new development, a change in land use, or new pedestrian facilities, an engineering study may be used to predict whether these criteria will be met once the development or facility has been constructed.

3.1.2 No parking zone:

Parking spaces should not be marked within 20 feet of a marked crosswalk, as measured by the gap between the parking space and the closest crosswalk marking. If a bulbout (see Figure 14 in section 5.3.6) is used, the gap may be reduced to 10 feet. Parents should be discouraged from using the area adjacent to the crosswalk for pickups and dropoffs.

3.1.3 School Crossing Signs:

1. The School Advance Crossing Assembly consists of the School symbol sign (S1-1) and a supplemental plaque with the legend "AHEAD" (W16-9P) or "XXX FEET" (W16-2 or W16-2a) to provide advance notice to road users of crossing activity.
 - a. The School Advance Crossing assembly shall be installed for school crosswalks along an established school route outside of a school zone, at least 125 feet in advance of the crosswalk.
 - b. The School Advance Crossing Assembly may be omitted within a school zone that is marked with School Advance warning signs (S1-1 school symbol signs with S4-3P "School" plaques.)
2. The School Crossing Assembly consists of the School symbol sign (S1-1) with a diagonal downward ARROW (W16-7P) below it.

- a. The School Crossing Assembly shall be installed at each end of the crosswalk location. At either end, the sign should be placed in advance of the crosswalk from the perspective of the driver in the adjacent travel lane, facing the driver.
 - b. The School Crossing Assembly shall not be used at marked crosswalks other than those within school zones or those on established school routes.
 - c. The School Crossing Assembly shall not be installed at intersection approaches controlled by a stop sign or a traffic signal.
3. The MUTCD requires that all School Warning Signs and supplemental plaques shall have a fluorescent yellow-green background with a black legend and border.

3.2 Non-School Crossings:

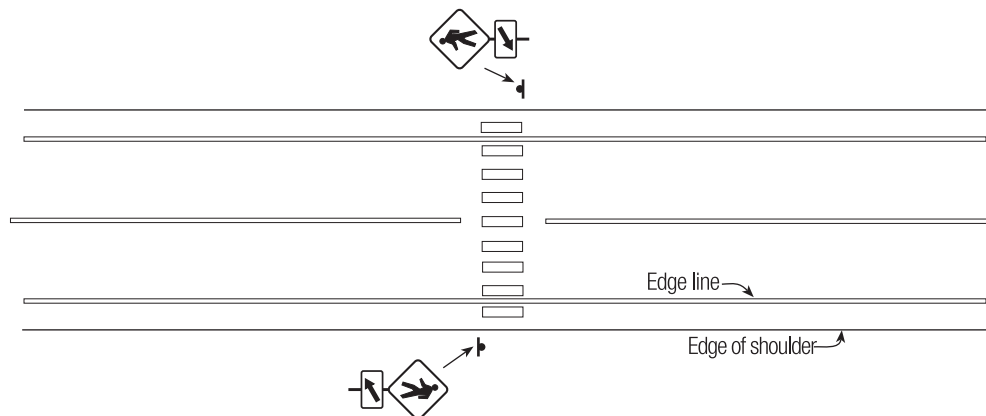


Figure 6: Mid-Block Crossing

Mid-block crossings may be used to facilitate pedestrian access and to concentrate pedestrian crossing activity in a safe location.

3.2.1 Criteria for installation:

All of the following criteria should be met prior to installing a crosswalk (unless supported by other factors using engineering judgment:)

1. The speed limit is 40 mph or less;

2. There are 20 or more pedestrians using the crossing per hour during the highest pedestrian volume hour (elementary school age and elderly pedestrians count as 2 each) ;
3. The AADT (annual average daily traffic) for the roadway (both directions combined) exceeds 3000 vehicles per day;
4. There is a sidewalk or adequate shoulder for use by pedestrians. The determination of adequate shoulder should be based upon an assessment of traffic volumes, adjacent land use patterns and other site specific conditions. The shoulder shall be a minimum of three feet wide, and a maximum of six feet wide (in order to minimize potential conflicts with parking activities.) Mid-block crossings may also be considered where there is a pedestrian destination, such as a recreation field, where a low potential for vehicle/pedestrian conflicts exists on both sides of the roadway;
5. There is not another crosswalk across the same roadway within 200 feet;
6. A determination has been made that the pedestrian shall have the right of way over the vehicular traffic;
7. There is adequate sight distance (equal to or exceeding the stopping sight distance for the posted speed) is available in both directions. At a minimum, a driver must be able to see either the crosswalk or the pedestrian warning sign. It is recommended that sight distance be measured from the driver's perspective to the outer edges of the traveled lanes, to ensure that an approaching driver can see a pedestrian at any point on the crosswalk within the traveled way.

In some situations where the traffic volume and/or pedestrian volume thresholds are not met (e.g., low-speed, two-lane roads in village centers), it may be determined that pedestrian safety would be enhanced by installing a marked crosswalk. Installing a marked crosswalk may help consolidate multiple crossing points or direct pedestrians to cross at a location that is more advantageous because of better sight distance, better lighting at night, or other factors. Engineering judgment should be used to locate the crosswalk if those conditions exist. However, in no case will an exception be made for installing a marked crosswalk on roads with a posted speed in excess of 40 MPH. Only one such crosswalk should be considered per village center.

When a proposed crosswalk is associated with a new development, change in land use, or new pedestrian facilities, an engineering study may be used to predict whether these criteria will be met once the development or facility has been constructed.

Crosswalks should not be marked on 3 or 4 lane roadways with AADT greater than 9,000 vehicles per day unless other crosswalk enhancements, such as pedestrian refuge islands, advanced yield lines, or rectangular rapid flashing beacons are included.

An engineering study should conclude that pedestrian safety will be enhanced by marking the crosswalk. See section 5.3 for more information about crosswalk enhancements.

3.2.2 No parking zone:

Parking spaces should not be marked within 20 feet of a marked crosswalk, as measured by the gap between the parking space and the closest crosswalk marking.

3.2.3 Pedestrian Warning Signs:

Pedestrian warning signs (W11-2 with downward arrow plaque W16-7P) shall be installed at each end of the crosswalk location. At either end, the sign should be placed in advance of the crosswalk from the perspective of the driver in the adjacent travel lane, facing the driver.

Advance pedestrian warning signs (W11-2) with supplemental plaques with the legend “AHEAD” (W16-9P) or “XXX FEET” (W16-2P or W16-2aP) may be installed in advance of the crosswalk in order to give drivers additional advance notice of the crosswalk. Advance warning signs are not typically used in urban areas where pedestrian activity is an expected feature of the driving environment.

3.2.4 Sign Color

All pedestrian warning signs and supplemental plaques shall have a fluorescent yellow-green background with a black legend and border.

3.3 Crosswalk Stopping Sight Distance Chart:

The following stopping sight distances for each posted speed are referenced from MUTCD Table 6C-2.

Posted Speed (mph)	Required Sight Distance (feet) *
25	155
30	200
35	250
40	305

* downgrades require longer stopping distances

Figure 7: Stopping Sight Distances

4.0 Unmarked Crossings

When the criteria for a marked crosswalk are not met, pedestrian warning signs may be installed to alert road users to locations where unexpected entries into the roadway by pedestrians might occur. There does not have to be a specific volume of pedestrians, merely crossing activity. These signs do not give the pedestrian the right of way over vehicular traffic, but serve to warn vehicle drivers that pedestrian activity may take place over a given area.

Passing zones should not be marked within 500 feet of the crossing area.

4.1 Unmarked Crossings

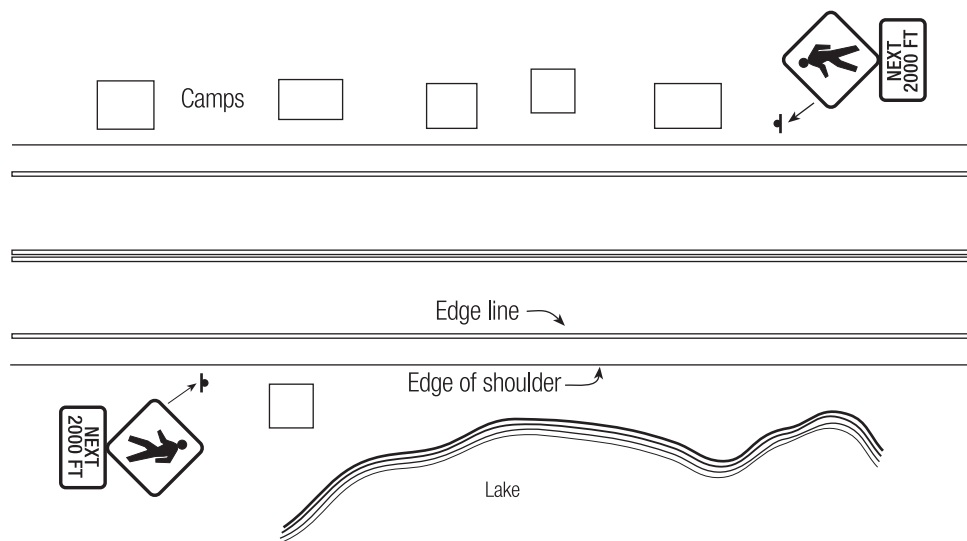


Figure 8: Unmarked Crossings

4.1.1 Pedestrian Warning Signs:

A pedestrian warning sign (W11-2) and a supplemental distance plaque “NEXT XXX FEET” (W16-4) should be installed at either end of the crossing area. The distance indicated should not exceed one mile. The minimum distance shall not be less than 100 feet.

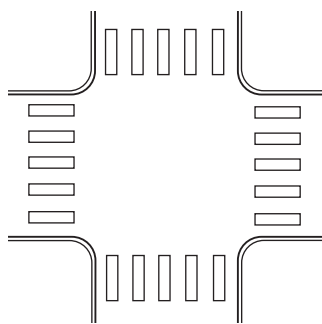
4.1.2 Other features:

Curb ramps and detectable warning surfaces may be used to facilitate pedestrian accessibility at unmarked crossings if there is a particular point where pedestrians are likely to cross and sidewalks are present.

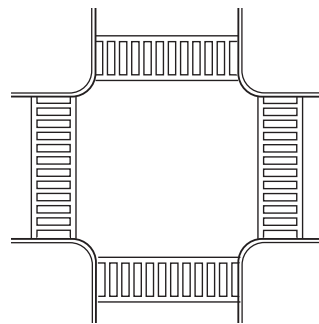
5.0 Design of Marked Crosswalks

5.1 Pavement Markings:

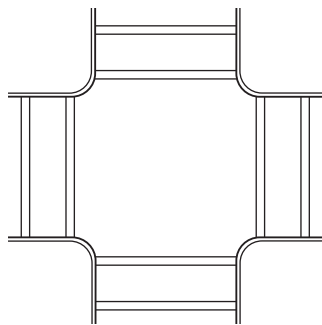
Crosswalk markings must conform to the MUTCD. It is also recommended that a municipality select just one of the marking patterns below for exclusive use within its jurisdiction. VTrans has adopted the block pattern with 2 ft wide blocks and 2 ft gaps as its standard crosswalk marking pattern due to greater visibility and reduced wear due to traffic. Crosswalks should be marked as close to perpendicular to traffic as possible.



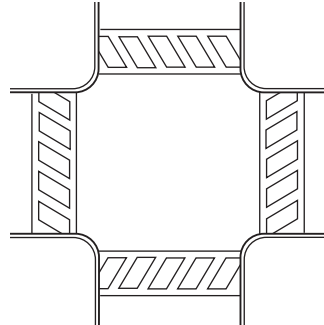
Block



Ladder (sometimes called Continental)



Standard



Diagonal

Figure 9: Allowable crosswalk marking patterns

5.2 Other Considerations:

5.2.1 ADA Compliance:

Where crosswalks provide access to sidewalks, curb ramps that meet the U.S. Access Board Public Rights of Way Accessibility Guidelines (PROWAG) must be provided at both ends of the crosswalk. Detectable warning surfaces are required at curb ramps. (See VTrans Standard Drawings C-3A and C-3B for curb ramp construction details.) If a crosswalk leads to a paved shoulder, it should meet PROWAG to the maximum extent feasible.

5.2.2 Shared-Use Paths:

Where shared-use paths cross roadways, crosswalks may be marked as for mid-block crossings and shall follow the guidance in Section 3.1 if part of a School route or 3.2 for other situations. Cyclists must dismount and cross the roadway as pedestrians to be afforded the same legal status as pedestrians.

5.2.3 Colored and Textured pavement:

In village and downtown centers, colored and textured pavement may be used to enhance the aesthetics of crosswalks. These options have not been proven to substantially improve crosswalk safety or visibility to the driver. Additionally, textured surfaces are not preferred by individuals who use wheelchairs as the surface causes uncomfortable vibrations.

The most common treatment is a terra-cotta colored, brick pattern that is stamped into newly laid asphalt. In accordance with the MUTCD, white, yellow, blue, red, purple and green shall not be used as infill colors for crosswalks since they are colors reserved for other traffic control purposes. No color used in a crosswalk may have retroreflective properties since that is a property reserved for traffic control devices.

Transverse white crosswalk markings must be used in addition to the colored or textured pavement in order to legally establish the crosswalk. Placing a colored and/or patterned area without the use of white crosswalk markings is not permitted by the MUTCD.

5.2.4 Use of Fluorescent Yellow-Green Signs:

It is VTrans practice to use fluorescent yellow-green for all pedestrian warning signs, and all school warning signs, but to use standard or fluorescent yellow for bicycle warning signs.

5.3 Enhancements to marked crosswalks at uncontrolled locations

In some cases, standard crosswalk signs and markings are not sufficient to provide an adequate level of safety at a marked crosswalk. In fact, using standard crosswalk signs and markings alone on roads with more than two lanes or with an AADT greater than 9000 may actually decrease the safety of pedestrians using the crossing location (*Zegeer, 2005, Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations*). If proposing a crosswalk with these conditions, one or more of the following crosswalk enhancements should be included. Each of the following treatments is discussed in more detail following this summary.

- In-street pedestrian sign – This is a stand-alone sign mounted on a base whose design allows the sign to bend if struck by a vehicle.
- Pedestrian refuge island – The island provides pedestrians with a facility on which they can wait, out of the flow of traffic, to cross portions of a road one at a time. They are most commonly used on multi-lane sections where there is more than one lane of traffic in a given direction.
- Advanced Yield Line – The advanced yield line is used on multi-lane sections so that vehicles must yield well in advance of a crosswalk, helping to avoid the so-called “multiple threat” scenario where a car in one lane yields, but traffic in the next lane over does not.
- Rectangular Rapid Flashing Beacon (RRFB) – The RRFB is a pedestrian activated flashing light mounted beneath the pedestrian warning sign to alert the driver of the pedestrian’s presence.
- Pedestrian Hybrid Beacon (PHB) – The PHB is a traffic control signal that remains dark until activated by a pedestrian. Traffic is then stopped while the pedestrian crosses the road.

Other enhancements that can be combined with any of the treatments above include:

- Installation of bulbouts at either mid-block or intersection crosswalks,
- Increasing sign visibility by use of reflective strips on the sign posts, using larger signs, or gateposting the signs (install back to back signs on both sides of the road.)
- Installation of street lights on the approach to crosswalks when there is nighttime use of the crosswalk

Use of crosswalk enhancements are generally based on three criteria: traffic volume, posted speed and lane configurations. The tables in Figures 10 and 11 indicate when marked crosswalks alone are appropriate or when use of enhancements should be considered. The tables also indicate which of the crosswalk enhancements should be considered for a given set of conditions. The tables are not meant to be proscriptive, but rather provide guidance on enhancements that could be used.

Figure 10: Appropriateness of Marked Crosswalks

Roadway Type	3000 ≤ AADT ≤ 9,000			AADT >9,000 and ≤ 12,000			AADT > 12,000		
	≤ 30 MPH	35 MPH	40 MPH	≤ 30 MPH	35 MPH	40 MPH	≤ 30 MPH	35 MPH	40 MPH
2 Lanes									
3 Lanes									
4 or more Lanes <u>with</u> Raised Median									
4 or more Lanes <u>without</u> Raised Median									

	Marked Crosswalk alone may be appropriate
	Additional crosswalk enhancements should be included
	Additional crosswalk enhancements must be included, a marked crosswalk alone is not appropriate

Figure 11: Crosswalk Enhancement Options to Consider

Roadway Type	3000 ≤ AADT ≤ 9,000			AADT >9,000 and ≤ 12,000			AADT > 12,000		
	≤ 30 MPH	35 MPH	40 MPH	≤ 30 MPH	35 MPH	40 MPH	≤ 30 MPH	35 MPH	40 MPH
2 Lanes	In-street sign	In-street sign	In-street sign, RRFB	In-street sign, RRFB	In-street sign, RRFB	In-street sign, RRFB	In-street sign, RRFB	In-street sign, RRFB	In-street sign, RRFB
3 Lanes	Ped Refuge	Ped Refuge	Ped Refuge, AYL, RRFB	Ped Refuge, AYL, RRFB	Ped Refuge, AYL, RRFB	Ped Refuge, AYL, RRFB	Ped Refuge, AYL, RRFB	Ped Refuge, AYL, RRFB	Ped Refuge, AYL, RRFB, PHB
4 or more Lanes <u>with</u> Raised Median*	AYL	AYL	AYL, RRFB	AYL, RRFB	AYL, RRFB	AYL, RRFB, PHB	AYL, RRFB	AYL, RRFB	AYL, RRFB, PHB
4 or more lanes <u>without</u> raised median	Ped Refuge, AYL	Ped Refuge, AYL	Ped Refuge, AYL, RRFB, PHB	Ped Refuge, AYL, RRFB	Ped Refuge, AYL, RRFB	Ped Refuge, AYL, PHB	AYL, RRFB	Ped Refuge, RRFB, AYL, PHB	Ped Refuge, AYL, PHB

*In this configuration, the Raised Median serves as the pedestrian refuge. Some modifications to a raised median, such as ramps and the provision of detectable warning surfaces and signs, may be required.

In-street sign = In-street pedestrian crossing sign

Ped Refuge = Pedestrian Refuge Island

AYL = Advanced Yield Line and required regulatory signs

RRFB = Rectangular Rapid Flashing Beacons

PHB = Pedestrian Hybrid Beacon

5.3.1 In-street Pedestrian Sign

The in-street pedestrian sign is a basic enhancement that may be added to crosswalks to enhance their visibility. MUTCD Reference – Section 2B.12
The use of in-street pedestrian signs shall be in accordance with the items listed below:

1. The in-street sign may only be used on a state maintained highway after completing and receiving a permit from the VT Agency of Transportation through a request to the Traffic Operations section.
2. The sign shall be placed in the roadway at the crosswalk location, either on the centerline, on the lane line, or on the median island if one is present. They shall not be post-mounted on either side of the roadway. The sign shall not be placed in the crosswalk itself.
3. The in-street sign shall not be used at signalized locations or at locations without a marked crosswalk.
4. The sign support shall be designed to bend over and bounce back to its normal position if struck by a vehicle.
5. Use of reflectorized cones or barrels in place of or in addition to the in-street sign is not permitted.
6. The in-street sign background sheeting color shall match the color of the crosswalk warning signs at the crosswalk where it is to be used.
7. At no time shall any object be attached to the in-street sign.

When the in-street crossing sign is not being used (i.e. either seasonally or at night, during inclement weather or when no activity occurs) it shall be removed from the roadway and stored out of view of the traveling public.

The municipality in which the sign is located is responsible for all injuries or damages received or sustained by any person, persons or property, including all costs or expenses to defend against such suits, actions or claims related to any incident involving the sign. The sign design shall be as shown below.

*In-street pedestrian crossing sign with
Fluorescent yellow-green sheeting*



R1-6

5.3.2 Pedestrian Refuge Island

Medians and center refuge islands at intersections and midblock locations provide a waiting area for pedestrians, and eliminate the need for pedestrians to cross both directions of traffic at once. They help define the pedestrian walking space and, if large enough, provide protection and refuge from motor vehicles. This is particularly important on wide, higher volume, higher-speed roadways. Pedestrians trying to cross an undivided, multilane street may experience delays many times longer than the delay incurred crossing a street with a median. Streets with raised medians, in both central business districts and suburban areas, have lower pedestrian crash rates (between 50% and 75% crash reduction) compared to streets with a painted two-way left-turn lane or undivided streets.

Medians and refuge islands are a benefit to drivers when located at midblock crossings, because they help to better identify the upcoming crossing point. They also provide a location for a pedestrian crossing sign in the middle of the street, providing another opportunity to warn drivers of the crossing.

Refuge islands are typically shorter than medians, but either can be used at intersections. Medians and center refuge islands provide the benefit of turning a two-way street into two one-way streets from the perspective of the pedestrian. The preferred design of medians and refuge islands follows the Institute of Transportation Engineer's Design and Safety of Pedestrian Facilities guidelines.

Medians and refuge islands have a preferred width of 8 to 10 feet and a minimum width of 6 feet to hold bicyclists, people with strollers, and wheelchairs propelled by attendants, outside the travel lanes. The 6 foot width is also the minimum needed to correctly install detectable warning surfaces in the median. In some cases, smaller width medians and refuge islands may be acceptable where there is a severely constrained right-of-way.

In order to obtain appropriate median width, travel lanes can be narrowed to minimum widths as outlined in the VT State Standards. This can have the added effect of slowing motor vehicle speeds at the crossing location. On the state highway system, an absolute minimum curb to curb (or other obstruction such as parked cars) distance of 14 feet must be maintained to accommodate snow removal.

An important consideration for pedestrian refuge islands is maintenance of openings for use by pedestrians in the winter. It is critical that a public agency take responsibility for removing snow from the refuge island so that it can be used year-round. If this is not addressed, pedestrians may stand/wait in unsafe areas and people with disabilities will be even more vulnerable as they seek a path outside of the refuge area.

For wider refuges, it is preferred to angle the opening that pedestrians will use. The purpose of this is to force pedestrians to face oncoming traffic as they traverse the refuge, ensuring that they assess whether there is a gap before crossing.



Photo of Pedestrian Refuge Island (note that detectable warning surface should be provided on either edge of the opening in the island).

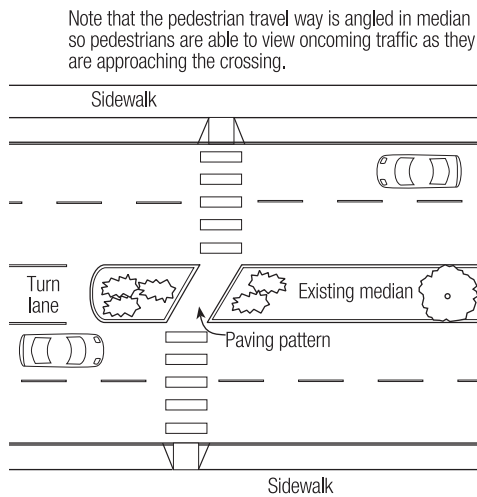


Illustration and photo of angled opening in pedestrian refuge to encourage pedestrians to view oncoming traffic.

Figure 12: Pedestrian Refuge Island

5.3.3 Advanced Yield Line

On multi-lane crossings, the predominant threat to pedestrians is what is known as the multiple-threat crash. In this crash type, a vehicle stops in the lane closest to the curb where the pedestrian is starting to cross. The pedestrian enters the crosswalk and the vehicle in the next lane over does not see the pedestrian and continues past the stopped vehicle, striking the crossing pedestrian (see illustration below.) One of the simplest design solutions to address this crash type is an advanced yield line. Advanced Yield Lines consist of signs and pavement markings and are discussed in the MUTCD (Section 2B.11 for signs, 3B.16 for markings).

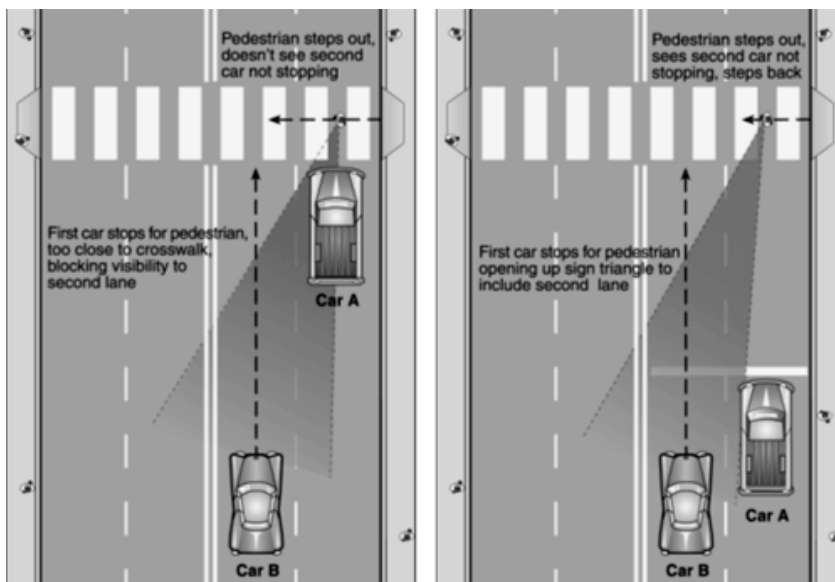


Illustration of Multiple threat scenario (note that in this example, an advanced stop bar is shown. In VT, the law is "Yield to pedestrians", so it would be an advanced Yield line – see below)

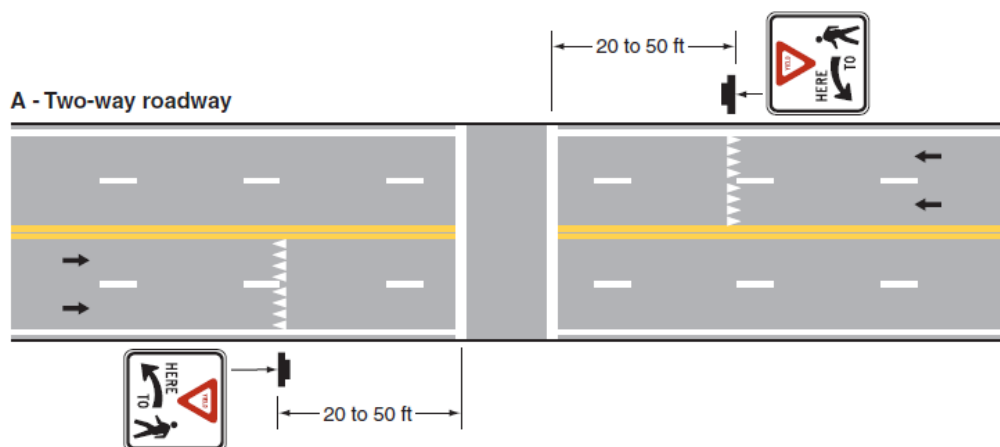


Figure 13 – Advanced Yield Line

The advanced yield line and associated signs indicate to motorists that they must yield at some distance in advance of the crosswalk. This allows for a better line of sight from motorists to crossing pedestrians and keeps cars stopping in the curb-side lane from blocking pedestrian's line of sight to other cars.

In addition to the “sharks tooth” yield line markings, an advanced yield line must include the appropriate regulatory signs. The yield line and signs shall be located 20 – 50 feet in advance of the nearest crosswalk line.



R1-5 Regulatory sign to accompany Advanced Yield Line

5.3.4 RRFBs (Rectangular Rapid Flashing Beacon)

Rectangular Rapid Flashing Beacons (RRFB) are meant to be used to provide supplemental emphasis to the W11-2 Pedestrian sign. The FHWA issued interim approval for this traffic control device in 2008. RRFBs consist of a pair of pedestrian activated flashing lights installed with a crosswalk warning sign. They should be used in situations where increased emphasis is needed to alert drivers to pedestrian crossings (see Figures 10 and 11). Additional background information on the effectiveness of RRFBs may be found in the FHWA memo found in the appendix.



Photo of RRFB installation at a marked crosswalk.

The following is a list of factors that should be addressed where RRFBs are being considered. These factors should not be interpreted as warrants for RRFBs nor pass/fail criteria for the installation of RRFBs. However, these conditions have been identified as ones to be considered using engineering judgment when proposing RRFBs at crosswalks on State Highways. The overuse of RRFBs in the roadway environment could decrease not only the effectiveness of RRFBs but those crossings without RRFBs. RRFBs should be limited to locations with the most critical safety concerns.

1. RRFBs typically work best at locations where special emphasis is required, such as crossings with a high percentage of vulnerable pedestrians (predominately young, elderly or disabled), or a history of pedestrian crashes.

See Figure 11 for volume, speed and lane configuration conditions that indicate where RRFBs should be considered.

2. Proven pedestrian safety measures such as median refuge islands and/or curb bulb-outs may be used in conjunction with the installation of RRFBs.
3. RRFBs shall only be used at uncontrolled crosswalks (i.e. not controlled by STOP, YIELD or signals).
4. RRFB's should be considered where the crosswalk has significant nighttime pedestrian activity.
5. Either automatic (passive detection) or push-button activation is allowed. If push-button activated the proper signing shall be attached next to the push-button, with the legend "PUSH BUTTON TO TURN ON WARNING LIGHTS" R10-25 sign in the 2009 MUTCD. If push-button activated, the push button shall include accessible features such as an audible locator tone and it must be accessible from the sidewalk.
6. In most cases, RRFBs will be owned and maintained by the municipality in which they are located. Either a finance and maintenance agreement or conditions within a Section 1111 permit will assign this responsibility for RRFBs installed on State highways.

Notwithstanding these factors, any RRFB installation shall follow all of the guidance outlined in the July 16, 2008 FHWA Memo regarding RRFBs (see Appendix A.)

5.3.5 Pedestrian Hybrid Beacon

The pedestrian hybrid beacon (PHB) should be used where it has been determined that it is necessary to legally stop traffic to allow pedestrians to cross. Until a PHB is activated by a pedestrian wishing to cross, it remains dark. Once activated, it goes through a series of indications that first warn, then stop, oncoming traffic to allow pedestrians to cross the road. The MUTCD has specific criteria for traffic and pedestrian volumes that must be met before a PHB should be considered and also contains detailed design guidance on the configuration and operations of a PHB (Chapter 4F.) Additionally, see Figure 11 for the conditions that must be present before a PHB should be considered. The PHB will have an impact on roadway capacity and congestion and should only be considered if all other measures to ensure safe crossing by pedestrians have been exhausted.



Typical installation of Pedestrian Hybrid Beacon

5.3.6 Bulbouts

Bulbouts may be used with any of the enhancements above, if there is adequate space in the roadway to use them. Bulbouts (also known as curb extensions, neckdowns, flares, or chokers) reduce the pedestrian crossing distance and improve the visibility of pedestrians to motorists and vice versa. Consider installing curb extensions at any intersection where on-street parking is allowed. The crossing distance savings are greatest when used on streets with diagonal parking. Where bike lanes or paved shoulders are present, bulbouts should be designed to maintain access for bicyclists.

Bulbouts work particularly well on streets where there is limited turning traffic by buses and large vehicles, or streets that accommodate one-way traffic, and on minor streets in residential areas. bulbouts typically have the effect of reducing the curb radius.

At signalized crossings, bulbouts reduce pedestrian crossing distance, which improves signal timing if the pedestrian phase controls the signal. The time saved is substantial when two corners can be treated with bulbouts.

Bulbouts at intersections or mid-block offer the following positive features:

- Reduce the distance that pedestrians must cross, lessening the time that they are exposed to traffic.
- Improve the ability of motorists and pedestrians to see one another.
- Increased ability to use paired curb ramps at intersections.
- Provide space for street furniture or utility infrastructure, if it can be located without interfering with sight lines.
- Provide a traffic calming effect along the roadway.

One consideration for bulbouts is that they do result in slightly more complex snow removal.

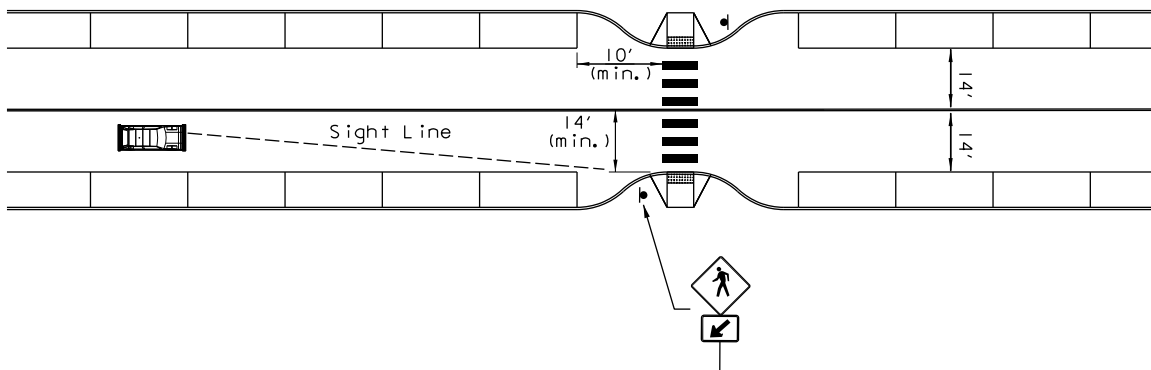


Figure 14: Mid-block Bulbout Example

6.0 Vermont Law:

The following are excerpts from the Vermont Statutes, 2013 Edition, as they refer to pedestrian crossings:

Title 23 Section 4 Definitions (7) "Crosswalks": Defines crosswalks as:

(A) That part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs, or, in the absence of curbs, from the edges of the traversable roadway.

(B) Any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on the surface;"

Title 23 Section 1025 Adopts the MUTCD as Vermont's "standards for all signs, signals and markings within the state."

Title 19 Section 905b Crosswalks states:

All crosswalk markings shall be of uniform color, dimension and location and be in conformance with the United States Department of Transportation Federal Highway Administration's Manual on Uniform Traffic Control Devices.

Title 23 Section 1051 Pedestrians' right of way in crosswalks states:

(a) If traffic-control signals are not in operation, the driver of a vehicle shall yield the right-of-way, slowing down or stopping if necessary, to a pedestrian crossing the roadway within the crosswalk.

(b) No pedestrian may suddenly leave a curb or other place of safety and walk or run into the path of a vehicle which is so close that it is impossible for a driver to yield.

(c) If any vehicle is stopped at a marked crosswalk or at any unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear may not overtake and pass the stopped vehicle.

Title 23 Section 1052 Crossing except at crosswalks states:

(a) Every pedestrian crossing a roadway at any point other than within a marked crosswalk shall yield the right-of-way to all vehicles upon the roadway.

(b) Every pedestrian crossing a roadway at a point where a pedestrian tunnel or overhead pedestrian crossing has been provided shall yield the right of way to all vehicles upon the roadway.

(c) Between adjacent intersections at which traffic-control signals are in operation pedestrians may not cross at any place except in a marked crosswalk.

(d) No pedestrian may cross a roadway intersection diagonally unless authorized by official traffic-control devices or an enforcement officer. When authorized to cross diagonally, pedestrians may cross only in accordance with the official traffic-control devices or signal of an enforcement officer.

Title 23 Section 1054 Pedestrians to use right half of crosswalks states:

Pedestrians may move, whenever practicable, upon the right half of crosswalks only.

Title 23 Section 1057 Duty toward Blind Persons sets forth the requirement for drivers to stop for persons guided by a guide dog or displaying a white or white tipped with red cane and requires that only blind persons may use those.

Title 23 Section 1058 Duties of pedestrians states:

All pedestrians shall obey the instructions of all traffic control devices which are applicable to them, and all instructions of enforcement officers relating to control of traffic.

Title 23 Section 1104(a)(2)(C) Stopping Prohibited states:

Except when necessary to avoid conflict with other traffic, or in compliance with law or the directions of an enforcement officer or official traffic-control device, no person may stand or park a vehicle, whether occupied or not, except momentarily to pick up or discharge a passenger, within 20 feet of a crosswalk at an intersection.

7.0 MUTCD Support and Guidance:

MUTCD Section 3B.18 states in part:

“Crosswalk markings provide guidance for pedestrians who are crossing roadways by defining and delineating paths on approaches to and within signalized intersections, and on approaches to other intersections where traffic stops.

In conjunction with signs and other measures, crosswalk markings help to alert road users of a designated pedestrian crossing point across roadways at locations that are not controlled by traffic control signals or STOP or YIELD signs.

At non-intersection locations, crosswalk markings legally establish the crosswalk.

At locations controlled by traffic control signals or on approaches controlled by STOP or YIELD signs, crosswalk lines should be installed where engineering judgment indicates they are needed to direct pedestrians to the proper crossing path(s).

Crosswalk lines should not be used indiscriminately. An engineering study should be performed before they are installed at locations away from a traffic signal or an approach controlled by a STOP or YIELD sign. The engineering study should consider the number of lanes, the presence of a median, the distance from adjacent signalized intersections, the pedestrian volumes and delays, the average daily traffic (ADT), the posted or statutory speed limit or 85th-percentile speed, the geometry of the location, the possible consolidation of multiple crossing points, the availability of street lighting, and other appropriate factors.

Because non-intersection pedestrian crossings are generally unexpected by the road user, warning signs ... should be installed for all marked crosswalks at non-intersection locations and adequate visibility should be provided by parking prohibitions.

Detectable warning surfaces mark boundaries between pedestrian and vehicular ways where there is no raised curb. Detectable warning surfaces are required by 49 CFR, Part 37 and by the Americans with Disabilities Act (ADA) where curb ramps are constructed at the junction of sidewalks and the roadway, for marked and unmarked crosswalks. Detectable warning surfaces contrast visually with adjacent walking surfaces, either light-on-dark, or dark-on-light. The “Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)” contains specifications for design and placement of detectable warning surfaces.

MUTCD Section 3A.02 contains the standard for pavement marking retroreflectivity:

“Markings that must be visible at night shall be retroreflective unless ambient illumination assures that the markings are adequately visible.”

MUTCD Section 3B.18 provides standards and guidance for the design of crosswalks. Those portions specifying the design of the pavement markings are excerpted as follows:

Standard:

When crosswalk lines are used, they shall consist of solid white lines that mark the crosswalk. They shall be not less than 6 inches nor greater than 24 inches in width.

Guidance:

If transverse lines are used to mark a crosswalk, the gap between the lines should not be less than 6 feet. If diagonal or longitudinal lines are used without transverse lines to mark a crosswalk, the crosswalk should be not less than 6 feet wide. *[Note: VTrans Standard practice is to mark crosswalks a minimum width of 8 feet.]*

Crosswalk lines, if used ... should extend across the full width of pavement or to the edge of the intersecting crosswalk to discourage diagonal walking between crosswalks.

Option:

For added visibility, the area of the crosswalk may be marked with diagonal lines at a 45-degree angle to the line of the crosswalk or with white longitudinal lines parallel to traffic flow.

When diagonal or longitudinal lines are used to mark a crosswalk, the transverse crosswalk lines may be omitted. This type of marking may be used at locations where substantial numbers of pedestrians cross without any other traffic control device, at locations where physical conditions are such that added visibility of the crosswalk is desired, or at places where a pedestrian crosswalk might not be expected.

Guidance:

If used, the diagonal or longitudinal lines should be 12 to 24 inches wide and separated by gaps of 12 to 60 inches. The design of the lines and

gaps should avoid the wheel paths if possible, and the gap between the lines should not exceed 2.5 times the width of the diagonal or longitudinal lines.

Crosswalk markings should be located so that the curb ramps are within the extension of the crosswalk markings.

MUTCD Section 3B.16 provides standards and guidance for the placement of Stop and Yield lines. The guidance as it applies to crosswalks is as follows:

Guidance:

If used, stop and yield lines should be placed a minimum of 4 feet in advance of the nearest crosswalk line at controlled intersections, except for yield lines at roundabout intersections as provided for in section 3C.04 and at midblock crosswalks.

If yield or stop lines are used at a crosswalk that crosses an uncontrolled multi-lane approach, the yield lines or stop lines should be placed 20 to 50 feet in advance of the nearest crosswalk line, and parking should be prohibited in the area between the yield or stop line and the crosswalk.

MUTCD Section 3C.05 provides guidance for the placement of crosswalk markings at roundabouts:

Standard:

Pedestrian crosswalks shall not be marked to or from the central island of roundabouts.

Guidance:

If pedestrian facilities are provided, crosswalks should be marked across roundabout entrances and exits to indicate where pedestrians are intended to cross.

Crosswalks should be a minimum of 20 feet from the edge of the circulatory roadway.

MUTCD Sections 2C.49 and 50 provide standard and guidance for crossing signs and allow fluorescent yellow-green to be used for pedestrian and bicycle related warning signs and associated plaques.

MUTCD Section 7B.07 requires that all school related warning signs and associated plaques be fluorescent yellow-green.

MUTCD Section 2B.12 provides standards and guidance for the use of in-street pedestrian crossing signs.

Option:

The In-Street Pedestrian Crossing (R1-6 or R1-6a) sign...may be used to remind road users of laws regarding right of way at an unsignalized pedestrian crosswalk. The legend STATE LAW may be shown at the top of the sign if applicable. *[Note: Vermont State Law specifies that drivers must YIELD TO pedestrians in crosswalks.]*

Guidance:

If an island is available, the In-Street Pedestrian Crossing Sign, if used, should be placed on the island.

Standard:

The In-Street Pedestrian Crossing sign shall not be used at signalized intersections.

The STOP FOR legend shall only be used in States where the state law specifically requires that a driver must stop for a pedestrian in a crosswalk.

If used, the In-Street Pedestrian Crossing sign shall have a black legend (except for the red STOP or YIELD sign symbols) and border on a white background, surrounded by an outer yellow or fluorescent yellow-green background area. *[Note: It is VTrans practice to require that the background color of the In-Street Pedestrian Crossing sign match the color of the associated pedestrian crossing signs, which may be yellow, fluorescent yellow, or fluorescent yellow-green.]*

Unless the In-Street Pedestrian Crossing sign is placed on a physical island, the sign support shall be designed to bend over and then bounce back to its normal vertical position when struck by a vehicle.

Option:

The In-Street Pedestrian Crossing sign may be used seasonally to prevent damage in winter because of plowing operations, and may be removed at night if the pedestrian activity at night is minimal." *[Note: It is VTrans practice to require the removal of these signs during snow events and at night by the permit holder.]*

8.0 Resources and References

Manual on Uniform Traffic Control Devices (MUTCD)

Federal Highway Administration

<http://mutcd.fhwa.dot.gov/index.htm>

Motor Vehicle Laws of Vermont (Title 23)

<http://www.leg.state.vt.us/statutesMain.cfm>

Vermont Pedestrian and Bicycle Facility Planning and Design Manual

Vermont Agency of Transportation, 2002

<http://vtransengineering.vermont.gov/bureaus/mab/local-projects/bike-ped>

Public Rights of Way Accessibility Guidelines (PROWAG)

US Access Board

<http://www.access-board.gov/guidelines-and-standards/streets-sidewalks>

Safety Effects of Marked Vs. Unmarked Crosswalks at Uncontrolled Intersections, FHWA, September 2005

<http://www.fhwa.dot.gov/publications/research/safety/04100/>

Informational Report on Lighting Design for Midblock Crosswalks

FHWA, April 2008

<http://www.fhwa.dot.gov/publications/research/safety/08053/>

Appendix A – July 2008 FHWA Interim Approval of RRFBs



Memorandum

Sent via Electronic Mail

Subject: **INFORMATION:** MUTCD – Interim Approval for
Optional Use of Rectangular Rapid Flashing Beacons (IA-11)

Date: July 16, 2008

From: Anthony T. Furst /s/ **Anthony T. Furst**
Acting Associate Administrator
for Operations

Reply to
Attn. of: HOTO-1

To: Associate Administrators
Chief Counsel
Acting Chief Financial Officer
Directors of Field Services
Federal Lands Highway Division Engineers
Resource Center Director
Division Administrators

Purpose: The purpose of this memorandum is to issue an Interim Approval for the optional use of Rectangular Rapid Flashing Beacons (RRFB) as warning beacons under certain limited conditions. Interim Approval allows interim use, pending official rulemaking, of a new traffic control device, a revision to the application or manner of use of an existing traffic control device, or a provision not specifically described in the Manual on Uniform Traffic Control Devices (MUTCD).

Background: The Florida Department of Transportation, in conjunction with the city of St. Petersburg, has requested that the Federal Highway Administration (FHWA) issue an Interim Approval to allow the use of RRFBs as warning beacons to supplement standard pedestrian crossing and school crossing warning signs at crossings across uncontrolled approaches. The RRFB does not meet the current standards for flashing warning beacons as contained in the 2003 edition of the MUTCD, Chapter 4K which requires a warning beacon to be round in shape and either 8 or 12 inches in diameter, to flash at a rate of approximately once per second, and to be located no less than 12 inches outside the nearest edge of the warning sign it supplements. The RRFB uses rectangular-shaped high-intensity LED-based indications, flashes rapidly in a wig-wag "flickering" flash pattern, and is mounted immediately between the crossing sign and the sign's supplemental arrow plaque.

**MOVING THE
AMERICAN
ECONOMY**



Research on the RRFB: The city of St. Petersburg has completed experimentation with the RRFB at 18 pedestrian crosswalks across uncontrolled approaches and has submitted their final report. In addition to "before" data, the city collected "after" data at intervals for 1 year at all sites and for 2 years at the first 2 implemented sites. For the first 2 sites, the city collected data for overhead and ground-mounted pedestrian crossing signs supplemented with standard round yellow flashing beacons, for comparison purposes, before the RRFBs were installed. The data show very high rates of motorist "yield to pedestrians" compliance, mostly in the high 80s to close to 100 percent, in comparison to far lower rates (in the 15 to 20 percent range) for standard beacons. The very high yielding rates are sustained even after 2 years in operation, and no identifiable negative effects have been found. The RRFB's very high compliance rates are previously unheard of for any device other than a full traffic signal and a "HAWK" hybrid signal, both of which stop traffic with steady red signal indications. The St. Petersburg data also shows that drivers exhibit yielding behavior much further in advance of the crosswalk with RRFB than with standard round yellow flashing beacons. These data clearly document very successful and impressive positive experience with the RRFBs at crosswalks in that city.

In addition to the St. Petersburg locations, experimentation is underway at 3 sites in Miami-Dade County, FL, 4 sites in Largo, FL, and 2 sites in Las Cruces, NM, and RRFBs are being installed at 3 sites in northern Illinois. Additionally, the District of Columbia has installed RRFBs at one crosswalk and plans to request experimentation with RRFB at several sites. Data from locations other than St. Petersburg is limited but does show results very similar to those found in St. Petersburg. A study of 2 RRFB locations in Miami-Dade County, FL, reported in a TRB paper, found that evasive conflicts between drivers and pedestrians and the percentage of pedestrians trapped in the center of an undivided road because of a non-yielding driver in the second half of the roadway were both significantly reduced to negligible levels. Data so far from the one RRFB site in DC shows driver yielding compliance rates increased from 26 percent to 74 percent after 30 days in operation and advance yielding distances also increased comparable to the St. Petersburg results.

FHWA Evaluation of Results: The Office of Transportation Operations has reviewed the available data and considers the RRFB to be highly successful for the applications tested (uncontrolled crosswalks). The RRFB offers significant potential safety and cost benefits, because it achieves very high rates of compliance at a very low relative cost in comparison to other more restrictive devices that provide comparable results, such as full midblock signalization. The components of RRFB are not proprietary and can be assembled by any jurisdiction with off-the-shelf hardware. The FHWA believes that the RRFB has a low risk of safety or operational concerns. However, because proliferation of RRFBs in the roadway environment to the point that they become ubiquitous could decrease their effectiveness, use of RRFBs should be limited to locations with the most critical safety concerns, such as pedestrian and school crosswalks across uncontrolled approaches, as tested in the experimentation.

At a recent meeting of the National Committee on Uniform Traffic Control Devices, the Signals Technical Committee voted to endorse the future inclusion of the RRFB for uncontrolled crosswalks into the MUTCD and recommended that FHWA issue an Interim Approval for RRFB. The FHWA believes this indicates a consensus in the practitioner community in support of optional use of RRFB. This Interim Approval does not create a new mandate compelling installation of RRFB but will allow agencies to install this type of flashing beacon, pending official MUTCD rulemaking, to provide a degree of enhanced pedestrian safety at uncontrolled crosswalks that has been previously unattainable without costly and delay-producing full traffic signalization.

Conditions of Interim Approval: The FHWA will grant Interim Approval for the optional use of the RRFB as a warning beacon to supplement standard pedestrian crossing or school crossing signs at crosswalks across uncontrolled approaches to any jurisdiction that submits a written request to the Office of Transportation Operations. A State may request Interim Approval for all jurisdictions in that State. Jurisdictions using RRFB under this Interim Approval must agree to comply with the technical conditions detailed below, to maintain an inventory list of all locations where the devices are placed, and to comply with Item F at the bottom of Page 1A-6 of the 2003 MUTCD, Section 1A.10 which requires:

"An agreement to restore the site(s) of the Interim Approval to a condition that complies with the provisions in this Manual within 3 months following the issuance of a Final Rule on this traffic control device. This agreement must also provide that the agency sponsoring the Interim Approval will terminate use of the device or application installed under the Interim Approval at any time that it determines significant safety concerns are directly or indirectly attributable to the device or application. The FHWA's Office of Transportation Operations has the right to terminate the interim approval at any time if there is an indication of safety concerns."

1. **General Conditions:**

- a. An RRFB shall consist of two rapidly and alternately flashed rectangular yellow indications having LED-array based pulsing light sources, and shall be designed, located, and operated in accordance with the detailed requirements specified below.
- b. The use of RRFBs is optional. However, if an agency opts to use an RRFB under this Interim Approval, the following design and operational requirements shall apply, and shall take precedence over any conflicting provisions of the MUTCD for the approach on which RRFBs are used:

2. Allowable Uses:

- a. An RRFB shall only be installed to function as a Warning Beacon (see 2003 MUTCD Section 4K.03).
- b. An RRFB shall only be used to supplement a W11-2 (Pedestrian) or S1-1 (School) crossing warning sign with a diagonal downward arrow (W16-7p) plaque, located at or immediately adjacent to a marked crosswalk.
- c. An RRFB shall not be used for crosswalks across approaches controlled by YIELD signs, STOP signs, or traffic control signals. This prohibition is not applicable to a crosswalk across the approach to and/or egress from a roundabout.
- d. In the event sight distance approaching the crosswalk at which RRFBs are used is less than deemed necessary by the engineer, an additional RRFB may be installed on that approach in advance of the crosswalk, as a Warning Beacon to supplement a W11-2 (Pedestrian) or S1-1 (School) crossing warning sign with an AHEAD: (W16-9p) plaque. This additional RRFB shall be supplemental to and not a replacement for RRFBs at the crosswalk itself.

3. Sign/Beacon Assembly Locations:

- a. For any approach on which RRFBs are used, two W11-2 or S1-1 crossing warning signs (each with RRFB and W16-7p plaque) shall be installed at the crosswalk, one on the right-hand side of the roadway and one on the left-hand side of the roadway. On a divided highway, the left-hand side assembly should be installed on the median, if practical, rather than on the far left side of the highway.
- b. An RRFB shall not be installed independent of the crossing signs for the approach the RRFB faces. The RRFB shall be installed on the same support as the associated W11-2 (Pedestrian) or S1-1 (School) crossing warning sign and plaque.

4. Beacon Dimensions and Placement in Sign Assembly:

- a. Each RRFB shall consist of two rectangular-shaped yellow indications, each with an LED-array based light source. Each RRFB indication shall be a minimum of approximately 5 inches wide by approximately 2 inches high.
- b. The two RRFB indications shall be aligned horizontally, with the longer dimension horizontal and with a minimum space between the two indications of approximately seven inches (7 in), measured from inside edge of one indication to inside edge of the other indication.

c. The outside edges of the RRFB indications, including any housings, shall not project beyond the outside edges of the W11-2 or S1-1 sign.

d. As a specific exception to 2003 MUTCD Section 4K.01 guidance, the RRFB shall be located between the bottom of the crossing warning sign and the top of the supplemental downward diagonal arrow plaque (or, in the case of a supplemental advance sign, the AHEAD plaque), rather than 12 inches above or below the sign assembly. (See attached example photo.)

5. Beacon Flashing Requirements:

a. When activated, the two yellow indications in each RRFB shall flash in a rapidly alternating "wig-wag" flashing sequence (left light on, then right light on).

b. As a specific exception to 2003 MUTCD Section 4K.01 requirements for the flash rate of beacons, RRFBs shall use a much faster flash rate. Each of the two yellow indications of an RRFB shall have 70 to 80 periods of flashing per minute and shall have alternating but approximately equal periods of rapid pulsing light emissions and dark operation. During each of its 70 to 80 flashing periods per minute, one of the yellow indications shall emit two rapid pulses of light and the other yellow indication shall emit three rapid pulses of light.

c. The flash rate of each individual yellow indication, as applied over the full on-off sequence of a flashing period of the indication, shall not be between 5 and 30 flashes per second, to avoid frequencies that might cause seizures.

d. The light intensity of the yellow indications shall meet the minimum specifications of Society of Automotive Engineers (SAE) standard J595 (Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles) dated January 2005.

6. Beacon Operation:

a. The RRFB shall be normally dark, shall initiate operation only upon pedestrian actuation, and shall cease operation at a predetermined time after the pedestrian actuation or, with passive detection, after the pedestrian clears the crosswalk.

b. All RRFBs associated with a given crosswalk (including those with an advance crossing sign, if used) shall, when activated, simultaneously commence operation of their alternating rapid flashing indications and shall cease operation simultaneously.

c. If pedestrian pushbuttons (rather than passive detection) are used to actuate the RRFBs, a pedestrian instruction sign with the legend PUSH BUTTON TO TURN ON WARNING LIGHTS should be mounted adjacent to or integral with each pedestrian pushbutton.

- d. The duration of a predetermined period of operation of the RRFBs following each actuation should be based on the MUTCD procedures for timing of pedestrian clearance times for pedestrian signals.
 - e. A small light directed at and visible to pedestrians in the crosswalk may be installed integral to the RRFB or push button to give confirmation that the RRFB is in operation.
7. Other:
- a. Except as otherwise provided above, all other provisions of the MUTCD applicable to Warning Beacons shall apply to RRFBs.

Any questions concerning this Interim Approval should be directed to Mr. Scott Wainwright at scott.wainwright@dot.gov or by telephone at 202-366-0857.



Example of RRFB with W11-2 sign and W16-7p plaque at crosswalk across uncontrolled approach. [Photo courtesy of City of St. Petersburg, Florida]

FHWA:HOTO-1:SWainwright:ds:60857:7-2-08

cc: HOTO-1 HOTO-1(HKalla/SWainwright/BFriedman)

Mr. Roger Wentz, ATSSA Mr. Jim Baron, ATSSA

SafetyField

E84-401 Chron E84-401 Reader

DF(IA-11 Rectangular Rapid Flashing Beacon)

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IA-11 - RRFB Interim Approval Policy Memo.doc

BURLINGTON DEPARTMENT OF PUBLIC WORKS COMMISSION MEETING
DRAFT MINUTES, July 15, 2015
~~645 Pine Street~~585 Pine Street
(DVD of meeting may be on file at DPW)

COMMISSIONERS PRESENT: Bob Alberry, Tiki Archambeau, Jim Barr, Chris Gillmann, Tom Simon, Solveig Overby, Jeff Padgett

ITEM 1 - AGENDA

Commissioner Archambeau proposed to move Item 4.4 to 4.6.
Consent agenda reviewed. Motion to accept consent agenda.
Unanimously approved.

ITEM 2 - ELECT CHAIR, VICE ~~CHAIR~~ CHAIR AND CLERK

Commissioner Alberry made a motion to elect Commissioner Jeff Padgett as Chair and Commissioner Tiki Archambeau as Vice Chair.
Director Spencer ~~stated that he would like to~~suggested the Commission appoint Valerie Ducharme and Holly Lane as Clerks or designate.
Commissioner Barr seconded.
Unanimous approval

Commissioner Padgett welcomed new Commissioner Chris Gillman on board.

ITEM 3 - PUBLIC FORUM

Nic Anderson - 4.10 Champlain College Temporary bus stop - made a request that one of the five unrestricted parking spots be designated handicap spot as this is mid-block which will give people easier access to the courtyard and surrounding buildings.

Commissioner Overby made a motion to pull this off the consent agenda.
Commissioner Alberry seconded.
Unanimous approval.

Phil Merrick - owner of August First Bakery stated that the brown meters on Main Street should be removed as people who work downtown are all parking there during the day as it is cheaper than the garage. Blue meters need to be put in place there as this area of Main Street has more shops now than when the brown meters were installed and shoppers need better access to the businesses.

Caryn Long - The water department did an amazing job in the area as when it rained last night the green space is getting greener and now disappearing. She feels that there has to be more enforcement on the green space.

Commissioner Padgett stated that the green space is not our issue.

Chris Hadsel - Willard Street needs a flashing pedestrian light north of the rotary as people can't cross safely. This would be an interim solution until the rotary is fixed.
(See video for further information)

Laura Massel - Lives on Kingsland Terrace which is a residential only parking area. She suggested the city go to the different wards in the city and get the extent of the information from people on parking. People living in residential parking areas should not have to search for parking in the neighborhood.

ITEM 4 - CONSENT AGENDA

4.1 Champlain College Temporary bus stop moved to 4.7.

~~4.4 Relocation of three handicap accessible spaces on St. Paul Street for new CCTA transit center to 4.6.~~

4.2 - three way stop at Shore Road and Balsam Street

4.3 439 College Street shuttle stop request

4.4 Relocation of three handicap accessible spaces on St. Paul Street for new CCTA transit center moved to 4.6.

4.5 Driveway encroachment/loading zone requests for North Winooski Avenue.

Commissioner Barr made motion to accept consent agenda.

Commissioner Alberry seconded.

Commissioner Archambeau stated he lives next door to requestor and donated \$100 to a Bush & Babe's Kickstarter campaign. There is no conflict of interest per the City Attorney.

Unanimous approval.

ITEM 4.6 - RELOCATION OF THREE ACCESSIBLE SPACES ON ST. PAUL STREET FOR NEW CCTA TRANSIT STATION

Damien Roy stated that three representatives from the city, state and CCTA visited the Zampieri Building which is a disabled residence which serves the south side of St. Paul Street and there are two spaces on Cherry Street. We need to bump out the first meter and two accessible spaces are proposed near the ramp adjacent to spaces for the building. On the north side of Pearl

Street to Papa John's the first space is available. The commission asked staff review of PROWAG and other applicable standards before committing to a handicap space. Staff will review as part of a normal request process. Staff recommendation - without a handicap space was approved.

(See video for further information.)

Commissioner Archambeau expressed a concern with the rear loading handicap vehicles going in the street to access the closest ramp.

Mr. Baldwin stated they would keep it as close to the ramp as possible.

Commissioner Archambeau made a motion to pass this onto the Accessibility Committee.

Commissioner Simon seconded.

Unanimous approval.

ITEM 4.7 CHAMPLAIN COLLEGE TEMPORARY BUS STOP

Commissioner Overby asked to have a handicap spot moving the bus stop and putting in four unrestricted parking spaces and one handicap space.

Nic Anderson of Champlain Collee stated that the nearest spot was a block away. There is a huge demand for parking in the courtyard and we have two more requests for them at the MIC parking lot.

(See video for more information)

Commissioner Archambeau made a motion to accept staff's recommendation.

Commissioner Barr seconded.

Unanimous approval.

ITEM 5 - RESIDENTIAL PARKING MANAGEMENT STUDY - Nicole Losch

Director Spencer stated that this is a draft plan for parking in residential areas. The review is because this has not been reviewed for several years. The public has expressed concern ~~is with~~ the guest passes, paying of tickets, issuing of tickets and several other issues.

Nicole Losch stated that we are using a universal way to best manage which we feel is using a data driven approach. We are looking at many different city needs with financial only a small

part of the consideration. We have a good size advisory committee and have held two public meetings, attended NPA meetings and have come to a previous Commission meeting for the introduction to this program and we will be back in September. We have compared parking with other cities about the same size as Burlington, collected data in three areas and found parking over utilized, need more meters in downtown area. The Hill section has the most restrictions and lowest density.

There was a question of conflict of interest with Commissioner Barr voting on the residential parking as he is the Director of Transportation of parking for the University of Vermont. Gene Bergman, Assistant City Attorney, stated he reviewed the information and found nothing that should prevent Commissioner Barr from voting on this ~~policy study~~.

~~Many Citizens who had comments to make about on the draft Residential Parking study. The sign in sheet is attached.~~
g:

Please review the video of the public comments on the residential parking issue as there were numerous people there for this issue. There is also a packet of information available to review on--line.

ITEM 6 - DOWNTOWN PARKING REVIEW

Kelly Devine stated that this a complex two year study and a plan that retains authority over policy and pay. This plan has to be presented to the city council. There are three goals with this plan:

~~AActive, engaged parking managementmanagement~~ Vibrant
~~Downtown~~

~~Great Customer Service~~

~~A Sustainable System~~

~~A system to work together to meet goals~~

~~Document standards of care and operation~~

DPW will continue to manage the parking meters and and garages.
The Burlington Business Association will manage the communications and other functions during the pilot period. on a temporary basis.

Director Spencer stated that the Commission's approval is not needed--addressed by the Council's November 2013 resolution but

it will be presented to the City Council on August 10th and brought back to the council for a vote later this year.

ITEM 7 - VTRANS BICYCLE AND PEDESTRIAN PROGRAM GRANT CANDIDATES

~~The small projects are for sidewalk improvements that will increase access and/or safety of people choosing to walk or ride a bike.~~

~~Midblock crosswalk with pedestrian bump outs to cross safely from UVM Central campus to Trinity campus and UVM Medical Center. Will also allow pedestrians to access Centennial Field.~~ Staff summarized the projects that they are advancing for the upcoming Vermont Bicycle & Pedestrian Program grant round. They include a scoping study of possible improvements for the Howard/St. Paul and Winooski intersection and pedestrian improvements along Colchester Avenue.

The application requires a public forum before submitting the application. The agenda items serves as that public forum.

Commissioner Padgett stated he does not support mid-block crosswalks and feels there need to be a policy for this issue.

Please see the video for more information

ITEM 8 - INCREASING DRIVER AWARENESS OF YIELD CONDITION

Damien Roy stated this was referring to Shelburne Street at the Price Chopper where vehicles are exiting the shopping center to get onto Shelburne Street or I189. There is a lot of traffic congestion here especially during rush hour. Drivers are not yielding exiting the shopping center. There are a few suggestions researched. The suggestion of DPW is to maintain the yield sign.

Commissioner Simon made motion to go with staff's recommendation.

Commissioner Barr seconded.

Commissioner Padgett opposed

Other commissioner unanimous approval.

Damien Roy also handed out other paperwork showing the open request for services for traffic issues he is dealing with and also parking issue requests.

ITEM 9 - MINUTES OF JUNE 17, 2015 MEETING

Commissioner Alberry made a motion to approve
Commissioner Simon seconded
Unanimous approval

ITEM 10 - DIRECTOR'S REPORT

Director Spencer wished to thank Pat Buteau for 33 years of service as he is retiring. Commissioners also thanked Pat.

ITEM 11 - ADJOURNMENT AND NEXT MEETING DATE

Commissioner Alberry states that we have always taken the month of August off to give staff a well-deserved rest. Next meeting will be September 16, 2015.

Commissioner Barr motioned for adjournment
Commissioner Archambeau seconded
Unanimous approval
Meeting ended 10:30 p.m.

COMMISSION MEETING SIGN IN SHEET

Date: 7.15.15

PLEASE PRINT NAME

LIST ISSUE YOU ARE HERE FOR

NIC ANDERSON

CHAMPLAIN BUS STOP

Phil Merrick

Burlington Parking

Caryn Long

water/purity

Chris Hassel

rotary - crosswalks

Laura Marshall

Kingsland - Res P

Lisa Brighenti

23 Kingsland Terrace

Judy Bach

105 Robison apt

David Marshall

Kingsland Terr.

Michael Long

Henry Street

Richard Hilliard

C. Simpson

Summit Ridge

David Tenenbaum

Kingsland Terrace

Nathan Wildfire

**BURLINGTON DEPARTMENT OF PUBLIC WORKS COMMISSION MEETING
DRAFT MINUTES, SEPTEMBER 16, 2015
645 Pine Street
(DVD of meeting may be on file at DPW)**

COMMISSIONERS PRESENT: Bob Alberry, Jim Barr, Tiki Archambeau, Solveig Overby, Chris Gillman, Tom Simon (arrived 7:30 p.m., Jeff Padgett.

ITEM 1 - CALL TO ORDER - Commissioner Padgett called the meeting to order at 6:30 p.m. He explained the new agenda and how the minutes were to be set up. There are three departmental goals - operational excellence, exemplary customer service and culture of innovation.

Public Forum is for people to talk on any subject. The sign-up sheet has been updated. There is a standard set up for each item and it is indicated whether if action is requested.

ITEM 1 - AGENDA

Commissioner Alberry requested that Item 4.E to be taken off consent agenda and added to the deliberative agenda as 4.1.

ITEM 2 - PUBLIC FORUM

Maryann Lesik of 300 South Union Street stated she feels a flashing light for pedestrians is needed at the rotary - Shelburne Street and Locust Street, North Willard and St. Paul on the north side of the street. She is encouraging support of these lights.

Mr. Bren Shippe came and supported the idea of flashing lights near the rotary. He stated there was a van parked there with blocks sightlines for vehicle operators

Claire Gestner stated she sent in an application for a handicap parking sign in front of 79 Archibald Street and would like to see action soon as parking in this area is terrible. She has a hard time walking any distance from her car due to health issues. Commissioner Barr asked if there could be a temporary sign and was informed by Mr. Baldwin that it would not be enforceable right away as there is a required notice period before the ordinance change goes into effect.

Sharon Bushor, City Councilor, came and stated she was in support of Item 6. She hopes for support on the consolidated parking proposal.

Joan Shannon, City Councilor, came to talk about the parking on Sears Lane. She stated from the railroad to Sears Lane there is a bend and there are no sightlines and parking at the bottom of

the street is unrealistic. There are no sidewalk son the street and people walk in the road. Speed has increased since the road was repaved.

She is glad we are taking up the issue of the rotary and the possibility of flashing lights as there are many near misses of accidents and a lot of kids cross ear here fore schools.

Bruce McDonald on Sears Lane - he sees kids and people going p and down the street all day when weather is nice as his shop's garage door is open. Parking on Sears Lane would narrow the traffic lane and jeopardize the people walking on the street especially the kids walking to and from school. People are driving faster on the street.

Karen Paul seconds Sharon Bushor's comments on Item #6. She stated that Martha Keenan had a good presentation on the Capital Plan. Also rapid flashing lights at the rotary would be a great addition it would also warn motorists of pedestrians in crosswalks.

ITEM 4 CONSENT AGENDA

- A. New Accessible Space at 7 Canfield Street
- B. New Accessible Space at 79 Archibald Street
- C. Accessible Space removal at 194 So. Champlain St.
- D. Accessible Space removal at 70 Rose Street
- E. State of RFS Backlog

Commissioner Alberry made a motion to accept.

Commissioner Barr seconded.

Unanimous Approval.

ITEM 4.1 RELOCATION OF THREE ACCESSIBLE SPACES FOR NEW CCTA TRANSIT CENTER

Commissioner Alberry stated that the handicap parking space was gone next to the sporting goods store and doesn't recall the Commission acting on this change. Mr. Baldwin stated he would look into this and get back to the Commission.

Commissioner Archambeau made a motion to accept.

Commissioner Alberry seconded.

Unanimous approval.

ITEM 5 - UNRESTRICTED PARKING ON SEARS LANE

Martin Corsell requested unrestricted parking on the north side. Businesses were contacted and most do not want parking on the

street. There is an eight foot parking lane open for pedestrians on the north side. Mr. Baldwin explained that based on further review staff review there was no current parking prohibition on the street. (See video)

Commissioner Alberry made a motion to take no action on request. Commissioner Overby seconded. Unanimous approval.

Commissioner Alberry moved to remove parking on both sides of street until the department can construct a continuous pedestrian facility along the street.

Commissioner Simon seconded.

Commissioner Archambeau stated it is a safety issue and is accepting the motion. (See video for more discussion.)

Commissioner Padgett stated he likes the design the east/west issue is creating confusion there is a motion to prohibit parking - like to see a sidewalk all the way and parking on the north side.

Commissioner Barr suggested traffic calming devices be added.

Commissioner Archambeau stated this was a friendly amendment. Commissioner Alberry seconded.

Director Spencer asked for clarification that the motion would prohibit parking on both sides and direct staff to advance efforts to construct a sidewalk and/or install traffic calming features contingent on securing funding.

Chair Padgett concurred.

Commissioner Padgett asked for a vote on the amended motion.

Commissioners Alberry, Barr, Padgett, Gillman and Simon voted affirmatively.

Commissioners Archambeau and Overby opposed.

ITEM 6 - PROCESS FOR CONCLUDING DOWNTOWN AND RESIDENTIAL PARKING STUDIES - Chapin Spencer

Chapin Spencer reviewed the proposed process for the four studies underway - a Downtown Parking Study, a Residential Parking Study, a TDM Action Plan and a report on parking requirements for downtown development. City Council passed a resolution at their last meeting calling for presentation of the residential parking study. Responding to public input requesting to know how all the studies interrelate, and to the Council resolution, staff has put together the draft timeline to make clear how these studies will be brought to conclusion. (Please see attached timeline.)

Commissioner Simon stated that he feels there should be a Commission meeting for public input on the draft plan and the

Commissioner's discussion. He also stated that he would like to see the history of what the Commission has done to date on the residential parking study.

Commissioner Padgett has stated that the Commission has heard from the public case by case.

Commissioner Overby expressed a desire to see the full draft. Director Spencer said that the timeline showed that the full draft plans would be provided for public comment in mid-October.

The Commission also discussed having more time for public comment. Two weeks is short.

Jason from Local Motion stated at walking and biking should be amplified in these plans. He stated at Open Streets event there were a couple of bike protected lanes tested out on North Winooski Avenue and people seemed to like that idea of biking without worrying about getting hit by a car.

ITEM 7 - FY 16 AND FY 17 CAPITAL PLANNING

Martha Keenan reported that the remaining \$1.3M GF capital funding gap will likely be closed with carry forward funding from a positive FY'15 (once the audit for FY'15 is completed). Additional capital needs have come up including repairs to the brick pavers in front the ECHO Center, repairs to Winooski Bridge and flashing beacons.

The FY 17&18 capital plan shows has a projected shortfall of \$24 million dollars. DPW's shortfall in FY'17 is projected at \$4.5M. Director Spencer stated the Council has charged the Board of Finance with recommending ways to close the FY'17 funding gap by December 2015 and he encouraged Commission members to be active in this process moving forward.

ITEM 8 - PDESTRIAN CROSSWALK DESIGN GUIDELINES - Norm Baldwin

Mr. Baldwin gave an overview of staff's work to develop policies for mid-block crossings and enhanced treatments such as rectangular rapid flashing beacons (RRFBs). The commission discussed the staff's recommendation to adopt the state's guidelines at next month's meeting. (See video for more details.)

One of the biggest intersections for pedestrian crossing is by the rotary - St. Paul Street and So. Willard Street. This is also a high motor vehicle accident location. The Commission was supportive of staff advancing the RRFB installation at the

rotary if staff put in writing how it is consistent with the state's guidelines.

Commissioner Alberberry stated we need to educate people and children by going into the schools educating children of the importance of looking both ways before crossing a street and to cross at the crosswalk areas.

ITEM 9 - MINUTES

Commissioner Padgett stated that the tape is officially part of the minutes.

Commissioner Overby stated that 4.7 was not clear - confusing about the handicap spot. We stated it was okay for one handicap spot.

Director Spencer handed out amended copies of the draft minutes from the Commission's July meeting.

Commissioner Archambeau clarified the motion under item #8 was to accept staff's recommendation with exception that the Commission selected the double weave sign to be installed by Price Chopper exit onto Route 7.

ITEM 10 - DIRECTOR'S REPORT - Chapin Spencer

We recently had our Employee Appreciation Party which was held at Oakledge Beach and all went well. He congratulated Norm Baldwin on his 25 years of service to the city and thanked Commission Chair Padgett for attending.

Director Spencer updated the Commission on projects including the - Cliff Street sidewalk, Flynn Avenue sidewalk, pedestrian wayfinding signs in downtown, garage capital improvements. He also drew attention to his printed report on the expanded regulation of phosphorous in Lake Champlain with the new TMDL document. We have until October 15th for comments and the City will be submitting comments.

Assistant Director Baldwin provided an update on the Pine and Lakeside intersection improvements. This project is due to start on October 15 with a completion date of January 15.

11. COMMISSIONER COMMUNICATION

Commissioner Archambeau wanted to congratulate Megan Moir for her Integrated Planning presentation. Also asked about the dirt pile at Leddy Park. Staff replied it was a result of the

waterfront bike path project and Parks, their consultants and VT DEC are working on it.

Commissioner Overby is reading a book called Tactica Urbanism and suggested that others read it as well as there are some great ideas for trying various things.

Commissioner Simon stated he would like to see a work session meeting added in October for residential parking study. Chair Padgett said he would send out a Doodle poll to Commissioners to see if they could make this happen.

12. MOTION TO ADJOURN

Meeting ended at 9:46 p.m.



DRAFT Timeline for Parking and Transportation Studies

Version 9/16/15

Date	Downtown Parking & Transportation Study	Residential Parking Study	TDM Action Plan	Report on Parking Requirements for Downtown Development
7/15/15	DPW Commission: Presentation on downtown and residential studies			
8/10/15	City Council: Presentation on draft study			
9/8/15		City Council: Resolution calling for presentation and public forum on the Residential Study passed		
9/16/15	DPW Commission: Presentation and feedback on proposed process			
9/21/15	City Council: Presentation and feedback on proposed process			
10/1/15	Distribute final process and timeline information to public			
10/6/15	Parks Commission: Presentation on downtown and residential studies			
Mid-Oct		4th Advisory Cmte Mtg	Make draft available to HR/Institutions Cmte for their feedback	
Mid-Oct	Full draft report is online for public review	Full draft report is online for public review	Full draft report is online for public review	
Mid-Oct	Public forum on draft plan			
10/21/15	DPW Commission: Overview of how all studies interrelate and update on residential study			
10/26/15	City Council: Presentation on Residential Study and how other studies interrelate, public forum			
10/27/15	Planning Commission: Presentation on downtown, residential and TDM studies			
11/1/15	End of public comment period			
11/10/15	Parking Advisory Cmte sends final draft to City Council			
11/16/15	City Council: Votes to accept plan			
11/18/15		DPW Commission: Votes to accept plan	Final study posted online	
Late Nov				Planning Commission: Presentation on downtown parking zoning report recommendations
12/7/15				City Council: Presentation on downtown parking zoning report recommendations

BURLINGTON DEPARTMENT OF PUBLIC WORKS COMMISSION MEETING
DRAFT MINUTES, SEPTEMBER 16, 2015
645 Pine Street
(DVD of meeting may be on file at DPW)

COMMISSIONERS PRESENT: Bob Alberry, Jim Barr, Tiki Archambeau, Solveig Overby, Chris Gillman, Tom Simon (arrived 7:30 p.m., Jeff Padgett.

ITEM 1 - CALL TO ORDER/WELCOME/CHAIR COMMENTS - Commissioner Chair Padgett called the meeting to order at 6:30 p.m. He explained the new agenda and how the minutes were to be set up. There are three goals of the Commission - operational excellence, exemplary customer service and innovation. Public Forum is for people to talk on any subject. The sign-up sheet now has you writing in what Ward you live in. There is a standard set up for each item as well as if action is requested. We are looking for clear communication so please comment clearly.

ITEM 1 - AGENDA

Commissioner Alberry requested that Item 4.E to be taken off consent agenda and added to 4.1.

ITEM 2 - PUBLIC FORUM

Maryann Lesik of 300 South Union Street stated she feels a flashing light for pedestrians is needed at the rotary - Shelburne Street and Locust Street, North Willard Street and St. Paul Street on the north side of the street. She is encouraging support of these lights.

Mr. Bren Shippe supported the idea of flashing lights near the rotary. He stated there was a van parked there which blocks sightlines for vehicle operators

Claire Gestner stated she sent in an application for a handicap parking sign in front of 79 Archibald Street and would like to see action soon as parking in this area is terrible. She has a hard time walking any distance from her car due to health issues. Commissioner Barr asked if there could be a temporary sign and was informed by Mr. Baldwin that it would not be enforceable as there was no ordinance for this sign.

Sharon Bushor, City Councilor, came and stated she was in support of Item 6. She hopes for support on the consolidated parking proposal.

Joan Shannon, City Councilor, came to talk about the parking on Sears Lane. She stated from the railroad to Sears Lane there is

a bend and there are no sightlines and parking at the bottom of the street is unrealistic. There are no sidewalks on the street and people walk in the road. Speed has increased since the road was repaved.

She is glad we are taking up the issue of the rotary and the possibility of flashing lights as there are many near misses of accidents and a lot of kids cross near here for school.

Bruce McDonald on Sears Lane -sees the kids and people going up and down the street all day when weather is nice as his shop's garage door is open. Parking on Sears Lane would narrow the traffic lane and jeopardize the people walking on the street especially the kids walking to and from school. People are driving faster on the street.

Karen Paul seconds Sharon Bushor's comments on Item #6. She stated that Martha Keenan, Capital Program Manager had a good presentation on the Capital Plan. Also rapid flashing lights at the rotary would be a great addition as it would also warn motorists of pedestrians in crosswalks.

ITEM 4 CONSENT AGENDA

- A. New Accessible Space at 7 Canfield Street
- B. New Accessible Space at 79 Archibald Street
- C. Accessible Space removal at 194 So. Champlain Street
- D. Accessible Space removal at 70 Rose Street
- E. State of RFS Backlog

Commissioner Alberry made a motion to accept
Commissioner Barr seconded
Unanimous Approval

ITEM 4.1 RELOCATION OF THREE ACCESSIBLE SPACES FOR NEW CCTA TRANSIT CENTER

Commissioner Alberry stated that the handicap parking space was gone next to the sporting goods store. Mr. Baldwin, City Engineer, stated he would check the ordinance to when this changed.

Commissioner Archambeau made a motion to accept.
Commissioner Alberry seconded
Unanimous approval

ITEM 5 - UNRESTRICTED PARKING ON SEARS LANE

Damien Roy, Engineer Technician, stated that Martin Corsell wants unrestricted parking on the north side. Businesses were contacted and most do not want parking on the street. There is

an eight foot parking lane open for pedestrians on the north side. Mr. Baldwin stated there was no prohibition of parking on the street. (See video)
Commissioner Alberry made a motion to take no action on request.
Commissioner Overby seconded
Unanimous approval.

Commissioner Alberry stated to remove parking on both sides of Sears Lane until we can come up with a safe issue for pedestrians and vehicles. Until we can get some sidewalks in there, whatever is needed to make it safe for people to use that street.

Commissioner Simon seconded.

Commissioner Archambeau stated it is a safety issue and is accepting the motion. (See video for more discussion.)

Commissioner Padgett stated he likes the design but the issue is creating confusion. There is a motion to prohibit parking - like to see a sidewalk all the way and parking on the north side.

Commissioner Barr stated to add traffic calming devices.

Commissioner Padgett stated there is a suggested amendment to prohibit parking on Sears Lane and provide traffic calming and pedestrian safety amenities with finances in it.

Commissioner Archambeau stated this was a friendly amendment.
Commissioner Alberry seconded.

Director Spencer asked for clarification to prohibit parking on both sides, traffic calming east end of street. Work is contingent on finances.

Commissioners Alberry, Barr, Gillmann, Simon and Padgett were in favor.

Commissioners Archambeau and Overby opposed.

ITEM 6 - PROCESS FOR CONCLUDING DOWNTOWN AND RESIDENTIAL PARKING STUDIES - Chapin Spencer

TDM action plan to report whether there will be any zoning changes made for downtown parking. City Council has asked for a presentation of the residential parking. (Please see attached timeline.)

Commissioner Simon stated that he feels there should be a meeting for input on the final plan and discussion. He also stated that he would like to see the history of what the Commission has done when the public has come forward for residential parking.

Commissioner Padgett has stated that the Commission has heard from the public case by case.

Commissioner Overby stated there were four elements to be dealt with, transportation for Burlington employees and the commission does not have the information needed for understanding zoning changes for downtown parking and the loss of parking when development happens and their concerns.

Nate Wildfire, Assistant Director of CEDO Economics suggested looking at the first three as there is concern about zoning changes.

Commissioner Simon wants a work session in addition to the October meeting which is open to the public. Nate stated to do a work session without public comment.

Jason from Local Motion stated there was no discussion concerning walking and biking in these plans. He stated at open streets there were a couple of bike protected lanes tested out on North Winooski Avenue and people seemed to like that idea of biking without worrying about getting hit by a car.

ITEM 7 - FY 16 AND FY 17 CAPITAL PLANNING

Martha Keenan, Capital Program Manager stated the FY 16 Budget found 1.3 million but the audit is not concluded. The repairs to the pavers at the Echo Center by the railroad tracks failed, repairs to Winooski Bridge failed and the flashing beacons. The surplus is much better than expected.

FY 17&18 has a projected shortfall of 24 million dollars. DPW's shortfalls is projected at four and a half million. Director Spencer stated they have to go in front of Board of Finance and is encouraging Commission members to attend the meeting for input.

ITEM 8 - PEDESTRIAN CROSSWALK DESIGN GUIDELINES - Norm Baldwin

Mr. Baldwin, City Engineer stated they have contacted five to six communities in the US for sidewalk policies and the federal and state standards. (See video for more details.) One of the biggest intersections for pedestrian crossing is by the rotary - St. Paul Street and So. Willard Street - this is also a high motor vehicle accident location.

Commissioner Alberry stated we need to educate children by going into the schools educating them of the importance of looking both ways before crossing a street and to cross at the crosswalk

areas. The public also needs to be educated to look both ways before crossing a street.

ITEM 9 - MINUTES

Commissioner Padgett stated that the tape is officially part of the minutes.

Commissioner Overby stated that 4.7 was not clear - confusing about the handicap spot provided proposed revision. It was stated the handicap spot would be requested another time.

Director Spencer handed out amended copies of the minutes.

Commissioner Archambeau stated #8 accept staff's recommendation with exception of double weave sign by Price Chopper exit onto Route 7.

(This is where tape ended and not sure who made the motion and seconded.)

ITEM 10 - DIRECTOR'S REPORT - Chapin Spencer

We recently had our Employee Appreciation Party which was held at Oakledge Beach and all went well. He congratulated Norm Baldwin on his 25 years of service to the city.

Projected completed or working on - Cliff Street sidewalk, Flynn Avenue sidewalk, and pedestrian wayfinding signs in downtown.

Regulation of phosphorous in Lake Champlain with the new regulations out and we have until October 15th for comments.

Norman Baldwin, City Engineer stated that Feldman's is not in line with Lakeside Avenue and Feldman's driveway will have signalization for pedestrians especially north and south. The cost of the project is \$400,000.00 for the changes which will be viable when the parkway comes through. This project is due to start on October 15 with a completion date of January 15.

Director Spencer stated that construction has started in the parking garages this week.

11. COMMISSIONER COMMUNICATION

Commissioner Archambeau wanted to congratulate Megan Moir for her presentation on storm water. Also asked about the dirt controversy from the Moran Plant. He was informed that the dirt from our project is not at Leddy Park and we are taking care of it.

Commissioner Overby is reading a book called Judicial Urbanism and suggested that others read it as well as there are some great ideas for trying various things.

Commissioner Simon stated he would like to see a work session meeting added in October for residential parking plan.

12. MOTION TO ADJOURN

Meeting ended at 9:46 p.m.