

Chapin Spencer
Director of Public Works

Patrick Buteau
*Assistant Director DPW
Parking & Fleet Services*



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MEMORANDUM

To: Public Works Commission
From: Chapin Spencer, Director
Patrick Buteau, Assistant Director
Date: July 09, 2014
Subject: Parking System Improvements & Proposed Rate Changes

This memo proposes parking system improvements and rate changes for approval by the Commission at its July 16 meeting. The Downtown Parking Improvement Initiative - a public / private partnership between the Burlington Business Association, the Community & Economic Development Office and the Department of Public Works established by City Council resolution in November 2013 - was charged with the following mission: "To listen, learn, and experiment so that stakeholders can identify and propose new and improved ways to manage, operate and maintain Burlington's public and private parking assets in the city's core." The initiative has two main goals:

- Improve the customer parking experience
- Ensure a sustainable parking system, including safe City parking structures

We are pleased to bring forward the first major set of action items out of the Downtown Parking Improvement Initiative for your consideration. This packet of phase one proposals includes:

- Detail of proposed phase one rate changes
- Map of proposed downtown core designation
- Letter of support from Desman Associates regarding phase one proposals
- Executive summary and cost estimates from the draft garage assessment

WHY NOW?

There are three main reasons that we are bringing forward the phase one proposals below for the DPW Commission's consideration at this time:

1. There is a real cost associated with parking and the Traffic Fund must secure additional revenue to balance the FY15 budget, invest in new technology, and begin making the urgently needed capital investments called for in the soon-to-be-completed garage assessment (draft summary and costs attached).
2. We want to begin to roll out customer service improvements and parking policy reforms that our parking study consultant has identified as straightforward

adjustments that will improve the downtown parking experience (please see the attached letter from Desman Associates).

3. We seek to follow the Council resolution's guidance to "learn and experiment" with pilot projects and new technology that will provide data to inform the Downtown Parking & Travel Plan and future efforts.

ANTICIPATED BENEFITS OF PHASE ONE SYSTEM IMPROVEMENTS:

- The installation of up to 300 smart meters in the downtown core that accept credit-cards and are compatible with future pay-by-phone service will improve convenience for customers (The Board of Finance has approved the funding for this purchase and the Council will vote on this at their July 14th meeting)
- The initial immediate consultant-identified repairs on the parking garages will be undertaken so that we can maximize the lifespan of these facilities
- Enhanced security and janitorial services at garages will improve customer experience by creating more welcoming structures
- A new automated lane at Marketplace garage will offer quicker and more convenient exiting
- New technology will allow for pilots and data collection so we can assess effectiveness of changes and customer utilization
- Price differentiation and policy changes will increase parking availability in high demand on-street locations – even while removing time limits
- Installation of a comprehensive downtown wayfinding system for improved navigation to parking resources
- A 90-day pilot installation of 5 multi-space meters (kiosks) downtown will offer the opportunity to compare new single-space and multi-space meters side by side

SUMMARY OF ASSOCIATED RATE CHANGES:

To achieve the benefits above, we are proposing the following rate increases for the Commission's approval:

- Increase rates at the new smart meters in the core to \$1.50/hour with no time limit (except for existing 15 minute meters which will remain)
- Extend enforcement times at the new smart meters to 10pm to ensure turnover and availability of prime spaces (Note: Daytime rates will remain the same outside the downtown core and parking after 6pm will still be free outside the downtown core – see map)
- Increase hourly rate at Marketplace garage by \$2/hour up to a new maximum of \$10/day
- Increase the hourly rate at Lakeview and College garages by \$1/hour while maintaining the current \$8/day limit
- Increase monthly lease rates by \$5-6/month
- Increase meter hood fees to \$15 for 12-hour bags and \$30/day for 24-hour bags
- Add ~35 on-street meters in the few downtown areas that still do not have meters (approval for this to be sought at the August Commission meeting)

These rate adjustments are further detailed on the following pages. Note that the last rate changes for downtown parking occurred in 2008 and 2009. In total, the proposed rate changes are estimated to generate an additional \$493,000 in FY'15 and will:

- Close the current \$250,000 FY'15 budget deficit in the Traffic Fund
- Make approximately \$100,000 of immediate capital repairs on the garages (the first phase of the necessary re-investment into these facilities)
- Enable the Traffic Fund to invest in new technology including the smart meters and the Marketplace garage automated lane
- Enhance operational investments in security and janitorial services
- Begin to restore a positive fund balance to the Traffic Fund for future investments and unforeseen emergencies

We are requesting Commission approval of these attached rate changes which will also include the updating of any necessary ordinances affected by these changes. Our intent is for these increases and changes to become effective October 1, 2014.

The Downtown Parking Initiative is part of a larger review of the City's parking and transportation infrastructure, which includes four parking-related studies currently underway (with lead consultants and target completion dates):

- **Downtown Parking & Travel Plan** (Desman Associates, early 2015)
- **Parking Garage Assessment** (Hoyle Tanner & Associates, July 2014)
- **Transportation Demand Management Action Plan** (RSG, early 2015)
- **Parking Study in Residential Areas** (RSG, early 2015)

The Downtown Parking Initiative has hosted meetings with downtown stakeholder groups such as faith-based communities, arts and culture organizations, bike/pedestrian advocates, etc. In addition, we have presented updates to the following bodies:

- Church Street Marketplace Commission
- The City Council Transportation Energy & Utilities Committee
- The Public Works Commission

PHASE 2 PARKING SYSTEM IMPROVEMENTS (Summer 2015)

After the completion of the various parking-related studies in early 2015, we expect a second round of recommended technology upgrades, policy changes and rate adjustments to come forward. Recommendations may include implementation of pay-by-cell technology, modification to the 2 Hour Free program in municipal garages, enforcement of on-street meters on Sundays, etc.

Commissioners and members of the public are encouraged to stay engaged over the coming months. More parking information can be found on the BBA website [here](#) and the DPW website [here](#).

Please contact either of us with any questions or concerns: Pat Buteau (863-0460, pbuteau@burlingtonvt.gov) or Chapin Spencer (865-5818, cspencer@burlingtonvt.gov). Thank you.

Revenue Enhancements for Parking System

A. Increase Monthly Parking Leases		From	To
5 day monthly lease Mon-Fri		\$75.00	\$80.00
6 day monthly lease Mon-Sat		\$90.00	\$96.00
Elmwood Ave Lot		\$50.00	\$55.00
B. Increase Meter Bag Fees		From	To
12 hour bags		\$10.00	\$15.00
24 hour bags		\$20.00	\$30.00
C. Increase Meter Rates Downtown Core		From	To
New Smart Meters	Price/hour	\$1.00	\$1.50
	Price/day	\$10.00	\$15.00
Number of minutes per coin	\$0.05	3	2
	\$0.10	6	4
	\$0.25	15	10
	\$1.00	60	40
	\$1.50	90	60
D. Downtown Core Only			
Extend Meter Enforcement from 6pm to 10pm			
Eliminate meter time limits except for current 15 minute meters			
E. Increase Marketplace Garage (only) Rates		From	To
Hourly Charges	0.5	\$0.00	\$0.00
Max \$10.00/Day	1.0	\$0.00	\$0.00
	1.5	\$0.00	\$0.00
2 hour free	2.0	\$0.00	\$0.00
	2.5	\$1.00	\$3.00
	3.0	\$2.00	\$4.00
	3.5	\$3.00	\$5.00
	4.0	\$4.00	\$6.00
	5.0	\$5.00	\$7.00
	6.0	\$6.00	\$8.00
	7.0	\$7.00	\$9.00
	8.0	\$8.00	\$10.00
	9.0	\$8.00	\$10.00
	10.0	\$8.00	\$10.00

Revenue Enhancements for Parking System

F. Lakeview/College St. Garages		From	To
Hourly Charges	0.5	\$0.00	\$0.00
Max Remains \$8.00/Day	1.0	\$0.00	\$0.00
	1.5	\$0.00	\$0.00
<u>2 hour free</u>	2.0	\$0.00	\$0.00
	2.5	\$1.00	\$2.00
	3.0	\$2.00	\$3.00
	3.5	\$3.00	\$4.00
	4.0	\$4.00	\$5.00
	5.0	\$5.00	\$6.00
	6.0	\$6.00	\$7.00
	7.0	\$7.00	\$8.00
	8.0	\$8.00	\$8.00
	9.0	\$8.00	\$8.00
	10.0	\$8.00	\$8.00

G. Additional actions not requiring Commission approvals

- 1 Automated lane at Marketplace Garage to allow for 24/6 operations with enhanced security and credit card payment only after hours.
- 2 Pilot program with 5 multispace meters in Main St surface lot and St. Paul St. block between Main and College Streets.
- 3 Elimination of Early Bird Program replaced with monthly leases.

N



ELMWOOD AVENUE LOT
77 LEASED SPACES

PEARL STREET LOT
15 TEN HOUR METERS
15 THREE HOUR METERS

SOUTH UNION STREET LOT
21 THREE HOUR METERS

COLLEGE STREET LOT
22 TEN HOUR METERS
25 THREE HOUR METERS

MAIN STREET LOT (NEW)
13 TEN HOUR METERS
6 THREE HOUR METERS
7 LEASED SPACES

MAIN STREET LOT (OLD)
24 THREE HOUR METERS

KING STREET LOT
40 TEN HOUR METERS



3 HOUR BLUE METER - 920

10 HOUR BROWN METER - 246

30 MINUTE YELLOW METER - 39

15 MINUTE YELLOW METER - 22

TOTAL NUMBER OF METERED PARKING SPACES - 1212

1030 - METERS ON THE STREET

188 - METERS IN THE LOTS

DATE: 11/15/2011 11:58 AM

Chapin Spencer
Director
Department of Public Works
645 Pine Street
Burlington, VT 05401

Thursday, July 03, 2014

RE: *Review of Proposed FY2015 Traffic Fund Enhancements
Burlington Parking & Transportation Plan
Project # 20-14121.00-3*

Dear Mr. Spencer:

The Burlington Traffic Fund is a \$4.7 million per year special revenue fund intended to cover parking facility operations and maintenance, provision of school crossing guards, and repair and replacement of traffic signs and signals. The fund is intended to be self-sustaining, without subsidy from the City to meet its annual obligations.

As has been projected for over a year, policy changes will be needed in FY15 to keep the fund solvent and to make necessary investment in the City's three parking garages. In preparation, the Administration has been pursuing a unique collaboration among the Community and Economic Development Office (CEDO), the Department of Public Works (DPW), and the Burlington Business Association (BBA). The DPW is currently awaiting the results of an engineering investigation into the garages that is expected to show a need for substantial reinvestment, and consultant recommendations regarding a range of possible revenue enhancements and operational changes focused on making the Traffic Fund solvent and improving the parking experience in Burlington. Early in FY15, the Administration expects to approach the Public Works Commission regarding fee changes and to return to the Council for a budget adjustment once the studies are complete.

As part of our engagement to provide the City with a Parking and Travel Management Plan, DESMAN Associates ('DESMAN') was asked to review a program of twelve (12) proposed program changes intended to augment current revenues feeding into the Traffic Fund. DESMAN reviewed the proposed enhancements from four critical perspectives:

1. Will the proposed enhancement improve the customer experience?
2. Are the projected benefits of the proposed enhancement fiscally reasonable and achievable?
3. Are the proposed enhancements aligned with municipal parking management best practices?
4. Will the proposed enhancement support Burlington's stated objectives for the Parking and Transportation Plan study?

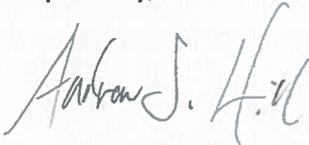
DESMAN is satisfied that the twelve initiatives meet these one of more of these criteria. For example, introducing credit card acceptance at meters and instituting pay-by-cell are both service enhancements to the general public. Raising rates and/or eliminating subsidies (i.e. free parking) will not only strengthen the fund, allowing the DPW to reinvest in facilities thereby improving condition and service,

but it will also provide incentive for the public to consider transportation alternatives in keeping with the "Transportation Demand Management" portion of the study. Similarly, adding meters, introducing automated pay stations, and/or extending enforcement hours have the effect of incenting consideration of alternative travel modes, providing higher standards of service to non-scofflaws and generating additional review for system improvements. Finally, in reviewing these proposed initiatives, DESMAN could not identify any action which would run counter to what we anticipate will be our final recommendations for action to the City at the conclusion of our engagement.

In addition, in our opinion the proposed initiatives meet the standards of being "Fair, Factual and Forward" as outlined in the Mayor's Budget Memorandum to City Council, maintaining "restraint and prudence", and addressing challenges to the Traffic Fund.

DESMAN endorses and supports the enhancements as presented. Should you have any questions or require expansion on this matter, please contact the undersigned at either ahill@desman.com or (857) 753 – 1418.

Respectfully,



Andrew S. Hill, Senior Consultant/Associate
DESMAN Associates

CC: Patrick Buteau, Assistant Director – Burlington Department of Public Works

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1 EXECUTIVE SUMMARY

The team of Hoyle, Tanner & Associates, Inc. (Hoyle, Tanner), Freeman, French, Freeman (FFF), and Kirick Engineering has been retained by the City of Burlington to perform a detailed conditions assessment with repair recommendations and budgetary considerations at the Market Place Parking Garage in Burlington, VT. These recommendations include immediate, short term, mid term, and long term needs as well as long term maintenance. This report summarizes our field observations, engineering opinions, and estimated costs.

The Marketplace Garage is a "modified" double helix comprised of post tensioned cast-in-place concrete slabs and beams supported by cast-in-place concrete columns. Post Tensioning (PT) systems are typically used to reduce the structural depth of the slabs and beams to minimize the overall weight of the garage and to provide a more economical design. Each helix is 114' wide by 141' long, reference Appendix B for garage floor layout plans. This 5 level structure was opened in 1976 and serves as an important public parking facility for the Church Street Marketplace as well as other downtown destinations. There are two vehicular entrances on the first level of the garage; a south entrance from Bank Street and North entrance from Cherry Street. There is one exit from the Garage on the second level that outlets onto South Winooski Avenue. Three detached stair towers provide pedestrian access into and out of the garage. These are indicated on the original garage plans alphanumerically and labeled in the garage based on street access. They are as follows; Stair Tower A (Church Street), Stair Tower B (Cherry Street) and Stair Tower C (Bank Street). Stair Tower A houses two elevators in a single shaft in addition to stairs.

In preparation of this report the following assumptions were made:

- No record drawings are available for this garage. Therefore, the exact layout including size of the post tensioning tendons is unknown. The Design Drawings provided indicated the PT system for the slab was performance specified for the Contractor to design.
- The interior of the elevator shaft was inspected for structural and architectural considerations. The elevator and associated equipment are routinely inspected and maintained under a separate contract.

There are many issues in the Marketplace parking garage that require repair or replacement. Understanding the level of capital investment required for this garage, this report has attempted to categorize repairs that allows for spending to be budgeted and spread over multiple years. All of the recommendations are important to the long term integrity of this garage, if they can be coordinated and completed sooner we recommend doing so. We have also included recommendations for general housekeeping and preventive maintenance schedules. Deferred capital spending will lead to more costly, more structure-critical repairs.

During our inspection we identified the following issues that should be addressed as soon as possible:

1. Remove loose overhead grout patch from the underside of the construction joint at Level 1 D-E Ramp at Beam Line 4 (JS-3: this nomenclature is used with the

- report to key identified issues and is further explained in the Conditions Assessment Section of the report)
2. Patch concrete spalls with exposed reinforcing steel until more permanent floor surface repairs can be completed (CS-3)
 3. Cover electrical junction boxes and patch spall locations until more permanent floor surface repairs can be completed (CS-4)

The most pressing issues at this garage stem from poor quality control during the original construction of the garage. Some structural elements, including the concrete slab and columns were constructed with inadequate concrete cover over reinforcing bars and PT strands which accelerates the rate of reinforcing corrosion and concrete deterioration.

Though there are many repairs and improvements necessary for this garage, much of the structure is still in serviceable condition. If repairs are completed within the recommended timeframe, future issues are quickly addressed, and a strong maintenance plan is adhered to this structure can be serviceable for another 15 to 20 years.

When considering alternatives at this garage location, recent average construction costs are at approximately \$25,000 per parking space for new parking garage facilities. So to reconstruct a new garage at this location, matching the existing 400 parking spaces would cost approximately \$10,000,000 (including engineering fees and demolitions costs).

1 EXECUTIVE SUMMARY

The team of Hoyle, Tanner & Associates, Inc. (Hoyle, Tanner), Freeman, French, Freeman (FFF), and Kirick Engineering has been retained by the City of Burlington to perform detailed conditions assessment with repair recommendations and budgetary considerations at the College Street Parking Garage in Burlington, VT. These recommendations include immediate, short term, mid term, and long term needs as well as long term maintenance. This report summarizes our field observations, engineering opinions, and estimated costs.

The College Street (formerly Burlington Square) parking garage is a precast prestressed concrete structure constructed with a Bay Side By Side layout using three rows of "double-tee" beams for the deck that is approximately 174' long by 252' wide. Reference Appendix B for garage floor layout plans. This 4 level structure plus partial roof was opened in 1985 and now serves as the main parking for the Hilton Hotel guests as well as many downtown businesses including Peoples United Bank and Fletcher Allen Health Care. The garage is centrally located within the downtown district midway between Church Street and the Waterfront. There are three vehicular entrances to the garage; the first floor entrance under the Hilton Hotel from Battery Street, the second floor entrance from College Street, and the fourth floor entrance from the Lakeview Parking Garage.

In preparation of this report the following assumptions were made:

- The garage was inspected within the limits of its footprint (generally 252' x 174'). The skywalk to the hotel, walls and ceiling of the tunnel (on Level 1) below the hotel are not owned by the City and are not included in this report.
- The interior of the elevator shaft was inspected for structural and architectural considerations. The elevator and associated equipment are routinely inspected and maintained under a separate contract.

There are many issues in the College Street parking garage that require repair or replacement. Understanding the level of capital investment required for this garage, this report has attempted to categorize repairs that allows for spending to be budgeted and spread over multiple years. All of the recommendations are important to the long term integrity of this garage, if they can be coordinated and completed sooner we recommend doing so. We have also included recommendations for general housekeeping and preventive maintenance schedules. Deferred capital spending will lead to more costly, more structure-critical repairs.

During our inspection we identified the following issues that should be addressed as soon as possible:

1. Remove loose overhead concrete from spalled areas on double tee beams and inverted tee beams. Particularly prevalent on the underside of Level 2 framing this presents a hazard to pedestrians and vehicles below. (DT-8: this nomenclature is used with the report to key identified issues and is further explained in the Conditions Assessment Section of the report)
2. Repair beam bearing condition on Level 2 framing at Grid B/2. (DT-9)

3. Cover and protect exposed wiring connections (ED-1)
4. Repair surface spalls on stair treads. These present a dangerous tripping hazard. (ST-1)
5. Replace concrete pedestrian ramp on Level 4 by the Northeast stair tower. Accelerated concrete failure and voids present pedestrian hazard. (RA-1)

Almost all of the issues in this garage stem from poor drainage pitch and poor drain placement. Sealants, membranes, and concrete integrity break down faster due to ponding, deicing salts carried by vehicular traffic, and freeze/thaw cycles. Because of this it should be anticipated that garage maintenance will be more frequent and will be more costly than for a standard garage of this size and age.

Though there are many repairs and improvements necessary for this garage, much of the structure is still in serviceable condition. If repairs are completed with the recommended timeframe, future issues are quickly addressed, and a strong maintenance plan is adhered to this structure can be serviceable for another 20 to 30 years.

When considering alternatives at this garage location, recent average construction costs are at approximately \$25,000 per parking space for new parking garage facilities. So to reconstruct a new garage at this location, matching the existing 460 parking spaces would cost approximately \$11,500,000 (including engineering fees and demolitions costs).

1 EXECUTIVE SUMMARY

The team of Hoyle, Tanner & Associates, Inc. (Hoyle, Tanner), Freeman, French, Freeman (FFF), and Kirick Engineering has been retained by the City of Burlington to perform detailed conditions assessment with repair recommendations and budgetary considerations at the Lakeview Parking Garage (including the Westlake Garage public parking level) in Burlington, VT. These recommendations include short term and mid term needs as well as long term maintenance. This report summarizes our field observations, engineering opinions, and estimated costs.

The **Lakeview Parking Garage** is a steel framed structure constructed with a "Modified" Bay Side By Side layout using three rows of prestressed precast "double-tee" concrete beams for the deck that is approximately 172' long by 252' wide. (Reference Appendix B for garage floor layout plans.) The original structure, opened in 1998, consisted of 3 levels and was later expanded to 5 levels in 2006, supporting a combined total of 678 parking spaces. The garage now serves as the main parking for the Hotel Vermont guests as well as many downtown businesses including Macy's department store and Burlington Town Center. The garage is centrally located within the downtown district midway between Church Street and the Waterfront. The main entrance/exit to the garage is from Cherry Street on the second level. A driveway on the first level connects to the fourth level of the College Street garage.

The Lakeview garage is connected to the second level of the **Westlake Garage** via a driveway at the bottom of the western ramp from the first level. Access to the Westlake Garage is also provided from the Courtyard Marriott Hotel entrance on Cherry Street. Constructed in 2005, this public parking level (garage level 2) holds 59 spaces and is mainly used for Hotel staff and guests. The structure consists of elevated cast-in-place concrete slabs supported on concrete columns. The roof of this parking level supports the paved drive entrance for the Hotel as well as a landscaped garden and hotel terrace area.

In preparation of this report the following assumptions were made:

- The Lakeview garage was inspected within the limits of its footprint (generally 252' x 172'). The skywalk to the Macy's department store is not owned by the City and is not included in this report however it was noted that work is needed in this location.
- The interior of the elevator shaft was inspected for structural and architectural considerations. The elevator and associated equipment are routinely inspected and maintained under a separate contract.
- Only the public parking level of the Westlake Garage was inspected. The first level of this garage holds private parking and was not accessible during our inspection.

There are various issues in the Lakeview parking garage that require repair or replacement. The repair recommendations within this report prioritize the timeframe for the repairs to be completed as either short term or mid term to assist with preparing a plan and budget. We have also included recommendations for general housekeeping and preventive maintenance schedules.

**Assessment of City Parking Garage Structures
Lakeview Garage
Burlington, VT**

Most of the issues in the Lakeview Garage are a result of typical wear and tear and are repairs that are required as part of routine maintenance. The repairs identified in the Westlake Garage are typically associated with the roof use above.

In general both the Lakeview and Westlake garages are in good condition; most of the repairs and improvements necessary are minor and the structures are currently in serviceable condition. If repairs are completed within the recommended timeframe and a routine maintenance plan is adhered to these structures can be serviceable for another 30 to 40 years.

Though the Westlake Garage is currently in fair condition, and has many years of serviceable life remaining, we recommend the City release ownership of this portion of the structure. With the first level being private ownership, and the Hotel's roof garden and access drive use above, the mixed systems and responsibilities will become increasingly complicated. This garage can easily be separated from the Lakeview Garage, and an entrance can be maintained from the Westlake garage to maintain overflow support. For example the majority of issues noted for this garage in this report are directly related to the Hotel roof garden and paved driveway above. Responsibility and timeframe for the completion of these repairs is not fully in the City's control.

DRAFT

City of Burlington
 Parking Garage Conditions Assessment
 Budgetary Cost Estimate Summary - DRAFT

Garage	Budgetary Cost Estimates					Annual Maintenance
	IMMEDIATE	Short Term	Mid Term	Long Term		
Marketplace Garage	\$16,000	\$2,736,300	\$1,337,700	\$85,000		\$105,000
College Street Garage	\$79,400	\$3,036,200	\$529,500	\$697,700		\$145,000
Lakeview Garage (Including Westlake)	\$0	\$318,500	\$335,500	\$0		\$155,000
Total Cost Per Phase	\$95,400	\$6,091,000	\$2,202,700	\$782,700		\$405,000

Note: The above information has been provided to assist the City with 2014 Garage Repair Planning. The Garage Reports have not yet been finalized and budgetary numbers may change. Budgetary Estimates are based on our field observations, engineering experience, and anticipated scope of work. Further development of design repairs and fluctuations in construction industry costs could impact overall project costs in either direction.