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 City Engineer

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 TO: Kevin J. Murphy, City Manager  
 VIA: Jim Troup, Acting DPW Commissioner  
 FROM: Nicolás H. Bosonetto, P.E., City Engineer

**INFORMATIONAL: Street Acceptance Schedule and Ch 90 Implications**

The Commonwealth typically authorizes \$200 Million per year for roadway infrastructure funding to be dispersed amongst the 351 municipalities in the state. These funds are distributed to each municipality based on the following formula and approximated values.

| <u>Formula</u>                                     | <u>City of Lowell<br/>(% of State)</u> | <u>City of Cambridge<br/>(% of State)</u> |
|--|--|---|
| 58.33% Accepted Road Miles<br>(State total 29,986) | 188.29<br>(0.63%)                      | 120.4<br>(0.40%)                          |
| 20.83% Population<br>(State total 6,812,000)       | 106,519<br>(1.56%)                     | 105,162<br>(1.54%)                        |
| 20.83% Number of Jobs<br>(State Total 3,534,000)   | 36,843<br>(1.04%)                      | 122,130<br>(3.46%)                        |
| Allocation   | \$1,860,170                            | \$2,609,091                               |

As it can be seen from the above comparison, the City of Cambridge receives 40% more funds than the City of Lowell even though they have 36% less road mileage and a smaller population. This is because the City of Cambridge has almost four times as many jobs.

The City of Lowell has 188 miles of accepted streets and 50 miles of unaccepted streets. Assuming all 50 miles of unaccepted streets were to be accepted, the City of Lowell would receive approximately \$208,000 per year increase in Chapter 90 funds, which equates to about \$4,160/mile/year. However it would take approximately 50 years for staff to perform all the work needed to accept all of these streets at current staffing levels.

It should be noted that the City currently allocates \$1.2 Million in capital funds to supplement the Chapter 90 funds. Chapter 90 funds cannot be used to repair or pave unaccepted streets.

Street Acceptance Procedure and Progress

Engineering staff have been working for some years to reduce the number of unaccepted streets in the City. The City Engineer’s office currently does not have a surveyor on staff. If such a person was to be hired, we could accept approximately 15 streets a year. We estimate that without a surveyor on staff, we will only be able to accept four or five streets per year, focusing on the streets that are more easily accepted. For some of the older unaccepted streets in the City a lengthier process is required including extensive research and field surveys.

Below is a list that the City Engineer’s office is working to accept in the next 5 years.

| STREET NAME      | From               | To               | Length (miles) |
|------------------|--------------------|------------------|----------------|
| Bayberry Drive   | Sprague Avenue     | cul-de-sac       | 0.16           |
| Briarwood Drive  | Bayberry Drive     | cul-de-sac       | 0.08           |
| Oak Knoll Road   | Bayberry Drive     | cul-de-sac       | 0.13           |
| Photine Drive    | Totman Road        | end              | 0.22           |
| Pine Tree Lane   | Varnum Avenue      | cul-de-sac       | 0.10           |
| Sandy Lane       | Varnum Avenue      | Pine Tree Lane   | 0.08           |
| Klianthi Drive   | Varnum Avenue      | Hunnewell Circle | 0.07           |
| Hunnewell Circle | Klianthi Drive     | to end           | 0.04           |
| Laurie Lane      | Varnum Avenue      | Coburn Drive     | 0.32           |
| Johnson Street   | Varnum Avenue      | cul-de-sac       | 0.13           |
| Bowl Road        | Chelmsford T/L     | cul-de-sac       | 0.07           |
| Devonshire Cross | Waverly Avenue     | end              | 0.05           |
| Emmett Way       | Bowl Road          | cul-de-sac       | 0.05           |
| Katherine Drive  | Fowler Road        | cul-de-sac       | 0.21           |
| Veritas Avenue   | Totman Road        | end              | 0.07           |
| Walker Place     | Middlesex Street   | end              | 0.03           |
| Stanley Avenue   | West Street        | Stanley Street   | 0.04           |
| Terry Avenue     | Christian Street   | cul-de-sac       | 0.61           |
| Kino Road        | Acropolis Road     | Penny Street     | 0.06           |
| Dane Avenue      | Dane Street        | end              | 0.02           |
| Lisa Lane        | Laurie Lane        | Dead End         | 0.17           |
| Melrose Avenue   | Malden Avenue      | Pawtucket Blvd.  | 0.17           |
| Aegan Lane       | Coburn Drive       | cul-de-sac       | 0.82           |
| Evergreen Road   | Fairmount Street   | cul-de-sac       | 0.08           |
| Gage Street      | Salem Street       | Dane Street      | 0.06           |
| Pollard Avenue   | Fulton Street      | Stanley Street   | 0.05           |
| Ronald Lane      | Newbridge Road     | cul-de-sac       | 0.05           |
| Westview Drive   | Westview Road      | cul-de-sac       | 0.02           |
| Grandview Street | Mt Pleasant Street | Dracut Town Line | 0.37           |
|                  |                    | 5 year total =   | 3.04           |

The following is the City of Lowell's standard procedure for the laying out of and acceptance of a street:

- A preliminary study of all pertinent data of the street is undertaken. Tasks include; a review of the deeds of all the property abutting the street, the grade and line of intersecting streets is checked, a field examination is performed to determine the location of all bounds and bench marks, the analysis of all known angles from historical plans, and the correlation of the data. This will involve research of the records at the Registry of Deeds and City Engineer's Office.
- An instrument survey of the street is performed – locating and measuring the existing roadway, all buildings, walks, walls, fences and survey monuments (iron rods, pipes and bounds). Depending on the length of the street and information available this will take two Engineers a minimum of three days for a small street.
- A plan is prepared on which the layout and applicable information is shown. The layout of the street will include the dimensions of the length and width defining the limits of the street. Any property that may need to be taken is also identified. A minimum of two 6"x 6"x4" stone bounds are to be set for each street. A record plan and legal description of the street are prepared.
- The resolution is written and sent to Council for approval, defining the new lines and grade. After which the plan and legal description are recorded at the Registry of Deeds.

List of Streets Accepted in the last 5 years

Adie Way  
Alyssa Drive  
Asbury Way  
Canal Street  
Dabby Way  
Decatur Ave  
Dowling Drive

Ecklund Drive  
Elliot Drive  
Green Street Ext  
Melrose Avenue  
Nob Way  
Shirley Avenue  
South Ridge Circle

Suffolk Street  
Technology Drive  
West Forest Street