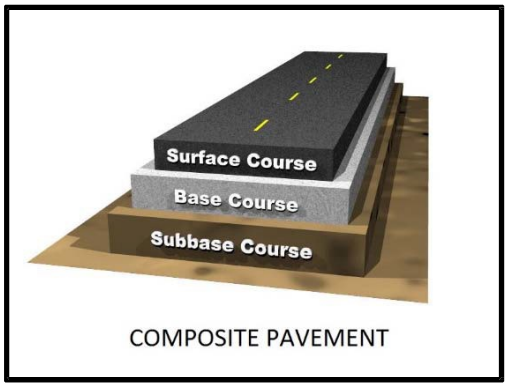
Pavement Evaluation

The City of Highland Park inventories and evaluates the pavement condition every three (3) years for all City streets and most alleys. The most recent evaluation was completed in September 2014 through cooperative efforts with Infrastructure Management Systems (IMS), a consulting firm specializing in pavement testing and evaluation. Using a customized testing vehicle, IMS measured the pavement surface and its base and sub-base conditions. The evaluations generate data that determines several ratings for each road. All ratings are based on a scale from 10-100, with 100 as the top score, representative of a new, perfectly constructed street.

Pavement Types

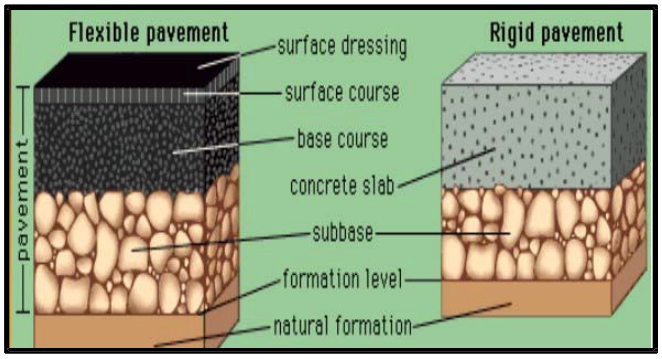
Before we present rating information it is important to note the "pavement" types typically found in Highland Park. This is important as it has a significant impact on interpreting pavement ratings and allows for an "apples-to-apples" comparison when reviewing different streets. For example it may not be appropriate to use similar repair/rehabilitation strategies for composition pavements and full depth concrete pavements.



COMPOSITE PAVEMENT

There are four pavement types found in Highland Park, which are listed below.

1. Composite Pavements: These pavements have an asphalt surface course. Under the asphalt surface course there is a base course that may be concrete or gravel.
2. Flexible Pavements: These pavements are full depth asphalt (no concrete) typically constructed over a stone base.
3. Rigid Pavements: These pavements are full depth Portland Cement Concrete (PCC), typically constructed over a stone base.



4. Gravel Pavements: These are full depth gravel (no asphalt or concrete). Gravel pavements are not tested and evaluated.

Pavement Rating Report

The pavement testing and evaluation completed by IMS are summarized Pavement Rating Reports. One Report addresses Non-Full Depth PCC pavements. The other presents only Full Depth PCC Pavements.

The results of the 2014 pavement testing can be found by clicking on one of the links below:

* 2014 Pavement Test Data – Non-Full Depth PCC Pavements
* 2014 Pavement Test Data –Full Depth PCC Pavements

City of Highland Park
Pavement Index Rating
Test Year - 2014
List DOES NOT Include
Full Depth Concrete Streets
Testing Completed by IMS

STREET	FROM	TO	SURFACE CONDITION AVERAGE	DEFLECTION CONDITION AVERAGE	DYNAMIC CONDITION AVERAGE	PAVEMENT CONDITION AVERAGE	SURFACE TYPE
(CENTRAL) ALLEY	LAKE AV	WEST END	84	100	84	82	AC
ACORN LN	SOUTH END	LAWRENCE LN	59	100	85	73	AC
ALLEY 10	LAUREL AV	CENTRAL AV	79	100	85	81	AC
ALLEY 2	CHICAGO AV	MICHIGAN AV	82	77	96	81	AC
ALLEY 3	PARK AV	ELM PLACE	92	100	68	79	AC
ALLEY 4	LINDEN AV	SHERIDAN RD	60	85	95	76	AC
ALLEY 6	DEERFIELD RD	PAVEMENT CHANGE	51	60	12	38	AC
ALLEY 7	WALNUT AV	PAVEMENT CHANGE	76	80	13	53	AC
ALLEY 8	WALNUT AV	PAVEMENT CHANGE	80	94	12	58	AC
ALVIN PL	BURTON AV	PLEASANT AV	86	100	87	90	AC
ANDEAN PL	WEST END	BEVERLY PL	83	61	33	59	AC
APPLETREE LN	UNIVERSITY AV	DATO AV	75	100	98	90	AC

The report provides the following information.

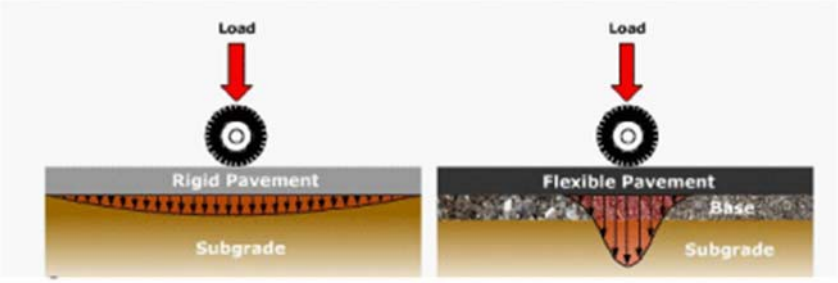
1. Street Name
2. Limits (From and To)
3. Surface Condition Average
4. Deflection Condition Average
5. Dynamic Condition Average
6. Pavement Condition Average
7. *Surface Type
    a. AC = Asphalt
    b. PC = Portland Cement
    c. BR = Bridge Deck

    ** Gravel Surfaces/pavements and Bridge Decks are not tested and are not provided in the Report.*
8. **Pavement Type
    a. Rigid = Concrete
    b. Flexible = Asphalt over compacted base
    c. Stabilized-G = Pavement constructed over native granular soils

    ***If the Surface Type is PC and the Pavement Type is Rigid, the pavement is a full depth concrete pavement (no asphalt).*

The Surface Condition Average is the score of the surface of the street segment tested. This number consists of compiled measurements of rutting, cracking, roughness and environmental conditions such as drainage, pavement slope, edge treatments (shoulders or concrete curb and gutter).

The Deflection Condition Average is used to gauge remaining life of the pavement. This number is the score of the tested maximum deflection.



The Dynamic Condition Average is the score of the tests performed on the base of the pavement structure (pavement layers under the riding surface). This number correlates to the condition of the pavement structure that is found under the riding surface.

The Pavement Condition Average is an overall rating figure composed of the Dynamic Condition Average, Deflection Condition Average, Surface Condition Average, traffic, and other factors, weighted according to their effect on overall life. Also considered in this figure are environmental factors such as drainage conditions that may affect pavement life and shoulders conditions next to pavements. Poor shoulder conditions may accelerate edge deterioration.

Pavement Repair Selection

Several factors help City Staff determine which street segments are selected and what type of rehabilitation should be performed on a particular street to develop the 5-yr Capital Improvement Program list.

Resurfacing

For example, a street with a low surface rating, but high deflection and/or dynamic rating may be a good candidate for "grind and resurface," which is the removal and replacement of the asphalt wearing surface, along with spot curb & gutter repairs, even though the Pavement Condition Average is high.

Reconstruction

Another example may be a street with a high Surface Condition Average, but low scores in other categories. This particular street may be a good candidate for a total reconstruction, which means the roadway is excavated to a depth of 14", a 4" stone base is compacted and 10" of asphalt is installed. Due to the impacts and costs of reconstruction the City typically tries to tie this type of rehabilitation to an infrastructure improvement project such as water main replacement.

Full Depth Concrete Streets

Concrete streets without an asphalt surface present a slight challenge for rehabilitation, as the biggest issues are joints where the large concrete panels abut one another. The Street Section performs interim repairs by cleaning out the joints and rolling hot-mix asphalt into them to prevent freeze-thaw cycles from further deteriorating the concrete until true concrete repairs can be completed.

Five (5) Year List

A preliminary 5-year list of streets is generated based on the above determination and funding allocation. The list of streets is updated annually during the budget process and can be revised due to weather, funding, Council authorization, and other factors.