

**AD HOC UNIMPROVED STREETS COMMITTEE
FINAL REPORT**



COMMITTEE MEMBERS

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Executive Summary

There are ninety (90) miles of existing roadway in the City of Birmingham. Approximately 30% (26 miles) of them are classified as “unimproved” streets. An unimproved road is a gravel road, with or without curbs, that has been maintained with chip or cape seal to provide a relatively smooth and dust-free driving surface. These unimproved streets exist due to the majority of neighborhoods in the City being subdivided and open for development prior to 1930. During this time local streets were built with gravel roads with no provision for storm drainage. Residents with unimproved roads often experience issues with flooding and deteriorating road surfaces as a more common occurrence than their neighbors with improved roads. Today, unimproved streets may be converted with engineered pavement and drainage only when a majority of residents on a residential block submit a petition the City for such an improvement. In order, to convert a road from unimproved to improved, residents must pay a percentage of the total cost via special assessment.

The City Commission heard an increasing number of complaints from residents over the past several years concerning issues with drainage and the condition of the road surface on unimproved streets. In response, the Commission passed a resolution creating an Ad Hoc Unimproved Street Study Committee (AHUSC). The charge of the committee is to conduct a City-Wide study of unimproved streets and provide a recommendation outlining a long-term plan for these streets.

The AHUSC held its first meeting in June 2018 and for several months received a series of education sessions and engages in dialogue regarding unimproved streets policy:

June 2018	– History /Evolution of City Road System
July 2018	– Special Assessment Districts (Petition Initiation and Billing Process) – Local Street Surface Types (Pavement Methods and Policies) – Cape Seal/Chip Seal Program Overview
August 2018	– Peer Review: Street Upgrade Policies in Neighboring Communities – Road Improvement Funding Options
September 2018	– Comparative Analysis: Differences between Improved and Unimproved Streets – Document Review of Related City Policies – Establishing Priority Roads – Infrastructure Ranking Considerations
October 2018	– Special Assessment District Process Evaluation and Refinement Discussion
April 2019	– Financial Model Presentation: Funding Unimproved Road Conversions
May 2019	– Consultant to Conduct Trade-Off Analysis of Road Design Options
August 2019	– Trade-Off Analysis Completed: Road Design Options and Cost Presentation – Initial Draft Recommendations : Committee and Public Feedback
January 2020	– First Draft of Policy Document Presented

The substance of this document will provide additional detail regarding each of these items as presented in the preceding timeline of committee activities and followed by an actionable recommendation to adapt the City’s existing policy and procedures associated with converting a road from unimproved to improved. The Committee unanimously acknowledges that there are three key areas that should be the focus of the recommendation to either change or reaffirm. These include the 1) initiation of the petition process, 2) selection of the road surface and design alternatives, and 3) identification of funding sources that may allow the City to accelerate the conversion of unimproved roads.

1) Initiation of the Petition Process

The current process for initiating a petition has historically begun when residents become dissatisfied relative to the condition of their street pavement often know little about why their street is in the condition it is. Frequent problems can include rough riding surface or drainage problems. A telephone call to City Hall will be directed to the Engineering Dept., where an explanation of the City's policies begins. Staff explains that a special assessment district must be created in order to raise the funds to pay for such a project. The City Commission has not been inclined to create such a district unless it has clear indication that the majority of property owners agree with the idea. In order to start the process, a petition needs to be created that demonstrates that a majority of the property owners are in favor. Staff offers to email a blank petition form prepared for the specific street being discussed, and also tries to provide the resident with the basic information needed in order to start conversations with neighbors about the idea. It is the responsibility of the neighbors to obtain a majority of signatures from homeowners in favor of improving the road before any official action can be considered by the City Commission.

The committee has discussed the difficulties associated with having homeowner's initiate a petition process to have their road improved. It has caused disputes and frustration and as a result, homeowners are less likely to initiate the process. The Committee has asked staff to explore the possibility of a City initiated process.

The AHUSC recommends changing the initiation process so that project initiation begins with the City and not the homeowners.

2) Selection of Road Surface and Design Alternatives

The practice of the City has been to engineer new roads with concrete. There has been feedback received from residents at the committee meetings that there should be another alternative to concrete. The Road Design Options report presented in August 2019 provides a recommendation for committee consideration to allow asphalt as a possible option when doing a road conversion. The committee ultimately concluded that concrete be utilized for new improved streets, however, the cost differential between the two alternatives over time should be considered in the selection of a street surface. Knowing that the City must fund all maintenance of the new street into the future, and knowing that financially a concrete street will prove to be less of a burden to the street fund over time, the City Engineer will make the determination on the appropriate pavement material for a respective road improvement project with concrete being the default selection.

The Committee recommends using concrete for new improved streets and allowing for the consideration of asphalt as an alternative road surface material at the determination of the City Engineer when reviewing such factors as long term costs, maintenance requirements, limited use areas such as courts and dead end streets that experience considerably less traffic counts.

3) Identification of Funding Sources

There are generally four sources of funding for roads: Act 51 distributions from the Michigan Department of Transportation, property taxes by way of transfers from the City's General Fund, special assessments from property owners directly benefiting from a road improvement, and road bonds. Currently, the City receives from funding from all of the sources except for road bonds. The source of funding used to support conversion of unimproved roads currently comes from a combination of special assessments and the general fund. Eighty-five percent (85%) is funded through special assessment, while fifteen percent (15%) is paid by the general fund.

Special assessments are used as a funding source to offset a portion of the cost of a road where it is being upgraded to an improved road or when the road is being cape sealed. For these projects, the City will pay for the improvement in advance and bill the property owners. The payback from the property owners differs depending on the type of road improvement being done. When a road is being improved, the special assessment is generally set for 10 years. When a road is being cape sealed, the special assessment is generally billed only once. City ordinance does not allow for special assessments greater than 10 years. Typically, the City collects approximately half of the total special assessment in the first year of a ten year assessment period and then smaller amounts the following years.

Capital improvements are projected out for six years to assist in long-range financial planning. When a neighborhood determines that they want an improved road, that project is then added to the long-range planning process to determine which budget year the City can afford to do the project. The City then must consider both funding for the road as well as funding for water and sewer improvements if those utilities need to be updated as part of the same project, which is often the case.

Depending on what other projects are planned, the combination of road, water and sewer costs to upgrade an unimproved road can create financial strain and lead to decreases in reserves in the General Fund. Bonding for the water and sewer improvement components of the road improvement would help reduce some of that financial strain.

The AHUSC engaged in an on-going dialogue regarding opportunities to adjust the percentage share for residents or pursuing additional sources of funding to accelerate the program and more quickly convert unimproved roads. A review and discussion of the financial model is included in this report.

The committee is recommending the following process:

Pay-as-you-go

- Road improvements are scheduled as part of the City's long-term capital improvement planning process and are initially financed from existing levels of transfers from the general fund to the local street fund. Property owners will be special assessed for the road and will reimburse the local street fund.
- Water and/or sewer improvements would be financed through current water/sewer rates. Optionally, enhanced water/sewer rates which would include additionally funding for improvements could be approved. A \$1 increase in either rate would generate approximately \$828,000 in additional revenues per year.
- A road millage is not available since the City is a 20-mill charter city. A Headlee override to the City's existing operating millage would be the only way to create additional property tax revenues. This would require a vote of the citizens to approve.

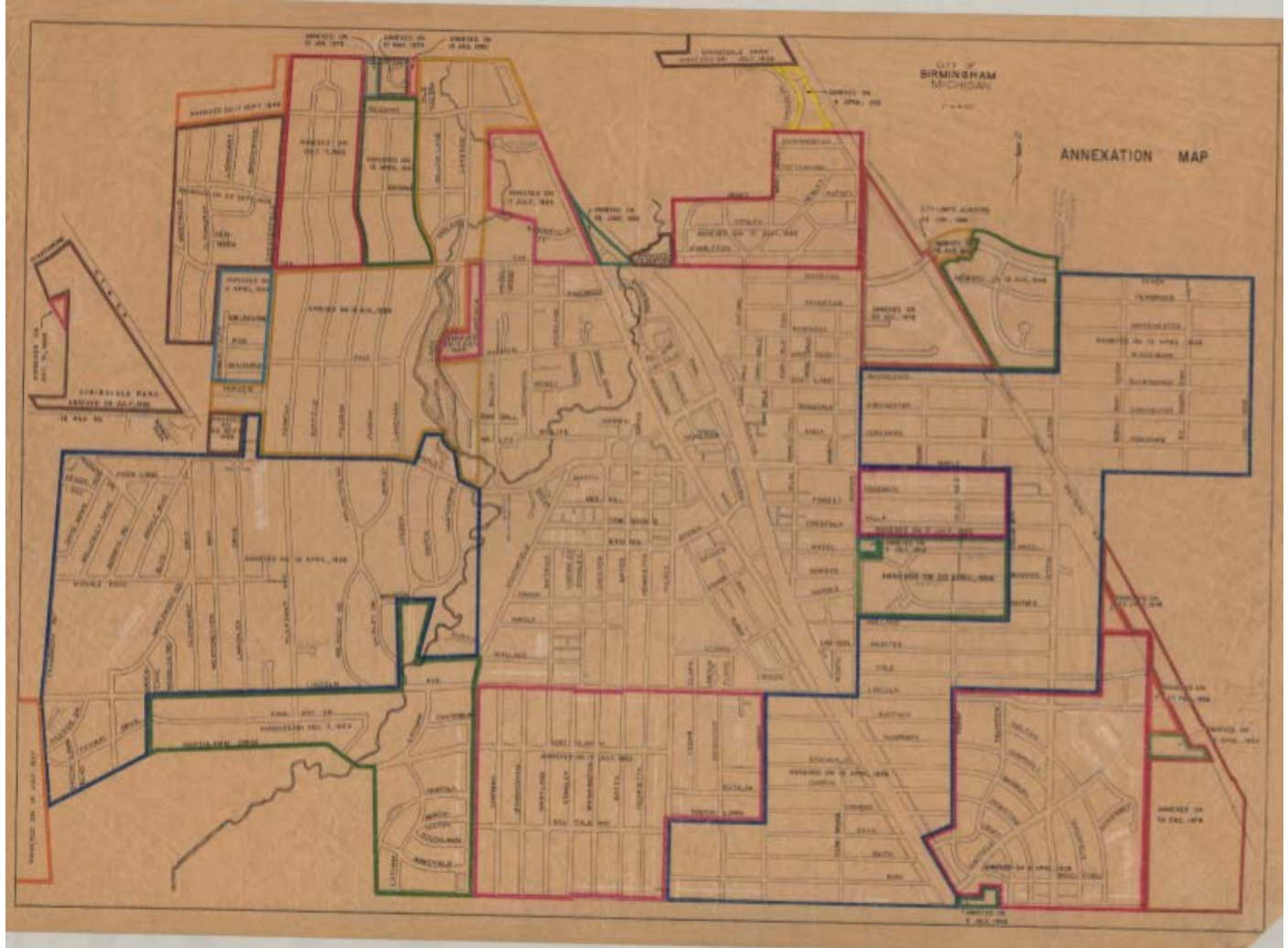
The Committee recommends using General Fund transfers to fund just the road component of the improvement with bonds providing the funding for the water and sewer improvements.

UNIMPROVED STREETS: HISTORY/EVOLUTION

MUNICIPALITIES AND VILLAGES

Birmingham was first incorporated as a village in 1864. **Figure 1** provides an illustration that documents the original square mile that constituted the Village of Birmingham, as well as the multiple annexations that occurred between 1925 and 1978. Birmingham became a municipality in 1933, following the multiple annexations that occurred in the latter 1920's.

Figure 1: Annexation History



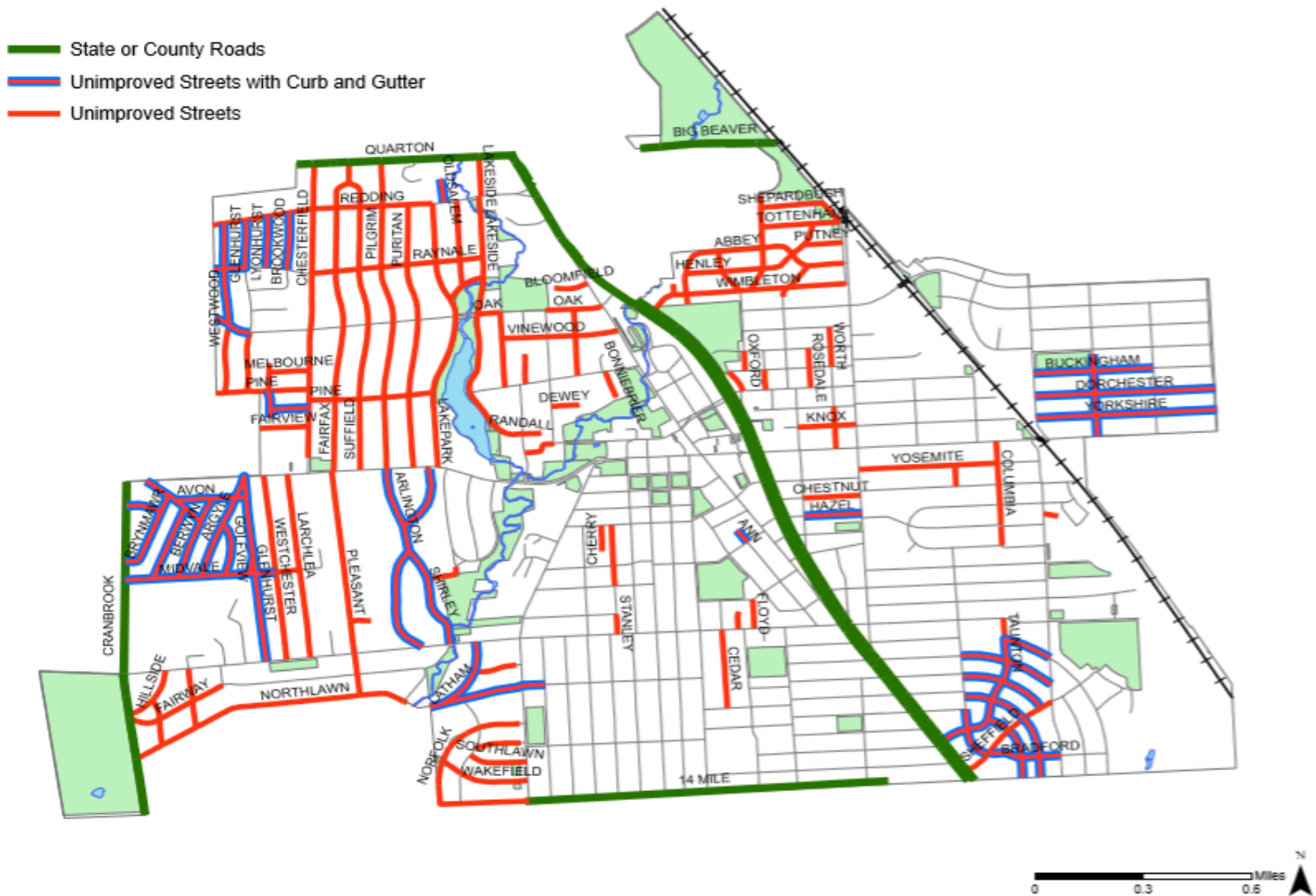
Statewide milestones in road building include the creation of the State Highway Dept. in 1905, which focused on the construction of main trunklines in the state, including what is now known as M-1 (Woodward Ave.), and the McNitt Act of 1933, which organized the system of county road commissions in the state. The latter act took the responsibility of road building away from townships, which were having a difficult time raising funds, and placed it at the county level. Cities and villages retained the responsibility of road building within their jurisdictions. The state legislation known as Act 51, passed in 1951, is still in use today. This act helped establish how gas tax funds raised each year from the sale of gasoline would be distributed through the three-tiered system known as state highways, county road commissions, and local municipalities/villages. Like all other cities and road commissions, the cost of initial construction of a road is generally sourced by two means:

- a) By the developer of a property, as when a plot of land is subdivided into smaller lots for sale (in which case the price of the individual lots reflects the value of the newly constructed road).
- b) By the creation of a special assessment district, wherein the value of the construction can be distributed by a local formula as established by the local jurisdiction.

IMPROVED VS. UNIMPROVED

In Birmingham, prior to World War II, when a road was constructed for the first time, be it by the local jurisdiction or by a land developer, the expectation was that it would have a gravel surface. Most local roads were given rudimentary engineering, without much provision for drainage. Most of the early special assessment districts (in the 1920's) were actually for sanitary sewer improvements. Given that the construction of combined sewers was the norm, it appears that the first priority was the construction of sanitary sewers, so that individual septic systems could be abandoned. By sizing sewers larger, they could then take on the duty of storm water drainage as well.

Figure 2: Improved, Unimproved with Curb and Gutter, and Unimproved in Birmingham



Referring to **Figure 2**, local streets can be categorized into three main categories:

1. Unimproved – These streets represent streets that were originally constructed as a gravel surface. Starting in the late 1940's, a City program to oil and then later chip seal these streets eliminated gravel street conditions in Birmingham.

2. Improved – Streets that have been constructed with a permanent, engineered pavement, controlling drainage with the use of a curb and gutter system.
3. Unimproved Streets with Curb & Gutter – In many cases, the Village constructed a curb and gutter drainage system on local streets, while leaving the road surface gravel.

As can be observed by the map in Figure 2, the majority of remaining unimproved streets in the City are west of the Rouge River. While there may be various reasons for this, the one reason that seems apparent is the differing soil characteristics. East of the river, clay soils dominate. Drainage is poor, and storm water that is left standing along the side of the road can take a long time to absorb into the ground.

Unimproved roads in these conditions tend to be more difficult to maintain and would age faster. West of the river, sandier soils dominate. Storm water sitting along the edge of the streets absorbs relatively quickly, allowing these streets to drain faster and last longer. Since the decision to install a permanent pavement (as detailed below) tends to be most influenced by the majority of the property owners, drainage conditions along the edge of the road tend to be the most significant factor in determining whether a street will be paved or not.

HISTORY OF STREET IMPROVEMENTS - POST WORLD WAR II

Approximately 90% of residentially zoned areas within the City of Birmingham were subdivided prior to 1930. Since demand for new construction dropped to very little in the period between 1929 and 1945, many neighborhoods had a relatively small number of developed lots at the end of the war. It is assumed that most streets were relatively simple gravel construction, with little provision for drainage.

As demand for new housing jumped after the war, development in Birmingham picked up quickly. As streets became more populated, interest in addressing the problems inherent in gravel streets rose. According to Bob Kenning, former Dept. of Public Services Director and City Manager, groups of residents would pool their funds together and pay for the street to be oiled. An oiled street helped stabilize the gravel, and reduce dust during dry summer days.

Starting in 1948, the first special assessments were created by the City for “dustproofing,” a term likely applied to a form of oil treatment on the gravel surface in order to reduce airborne dust problems coming from gravel surfaces. About 1951, the City purchased equipment to allow the City to take a more active role in maintaining and improving its gravel streets, using City staff. Graders were purchased to scarify the compacted oiled surface, and regrade it again, to improve drainage and rideability. Bitumen (the black sticky material still used today in asphalt pavements) could be applied by a City owned truck, to also stabilize and dustproof the street. Such treatments would be done under a special assessment.

By 1960, the oil and bitumen surfaces had become so hard and compressed that the graders could no longer break it up to fix grade issues. The City purchased a pulverizer to break up road surfaces. Streets could then be regraded and treated again.

By the late 1970’s, the Dept. of Public Services ceased its efforts to seal and grade unimproved streets with its own staff. Since then, maintenance has consisted of pothole patching. Improved technology has led to better pavement treatments, including the current process known as cape sealing.

Interestingly, from what we can determine, other cities in the area that were developed in the same era such as Clawson, Royal Oak, Berkley, and Huntington Woods, took advantage of the pro-public works environment of the 1950’s, and routinely scheduled road paving special assessment districts, with the goal that the large majority, if not all, of its streets should be improved with a permanent, long lasting, well-draining pavement.

Such assessment districts were scheduled whether a majority of the owners were in favor or not. Mr. Kenning also recalled in the early 1950's that the Birmingham City Commission took an interest in getting its streets paved, as the ongoing maintenance challenges and poor ride quality in now fully developed subdivisions were considered a detriment to the neighborhoods. Then, like now, requests for new pavements coming from residents were received, but only in small numbers, leaving a large number of streets still unimproved. The Commission began to schedule some assessment districts on its own initiative, however, within a short time this was discontinued, in response to strong negative feedback from impacted property owners. Since that time, except in rare circumstances, it appears that street pavement projects have been initiated by residents asking for such a project.

No streets were paved between 2008 and 2014. Three streets have been constructed recently under a special assessment.

Because the policy for funding the conversion of unimproved streets to improved streets has been done through special assessment dating back to the 1940's, a change in the policy to eliminate special assessment and share costs among all residents now would charge many properties twice; once for the improvement on their own street when it was completed and again for improvements to other streets now. As a result, the committee did not support eliminating the special assessment process.

The Committee acknowledges that the current policy may prevent homeowners from initiating the process, which might explain why so few streets have been improved in recent years.

**SPECIAL ASSESSMENTS DISTRICTS/ CURRENT PETITION
PROCESS**

SPECIAL ASSESSMENT DISTRICTS

The City has the right to create a special assessment district for a variety of improvements. Recent assessment districts have included charges for:

- Engineered, permanent street pavement
- Cape Seal treatment (maintenance on unimproved roads)
- Water or sewer lateral replacement
- Improved sidewalk streetscape (within a commercial district)
- Public street lighting (within a commercial district)
- Public sidewalk (where none existed previously)

The City has 26 miles of unimproved streets. Constructing a permanent pavement on these streets is a substantial investment. The City has the opportunity to create a special assessment district to help defray the cost of the improvement. The creation of an assessment district requires that all parties within the potential district be notified by mail in advance of a public hearing before the City Commission. Rarely does staff initiate a project that would require a special assessment without positive input from a majority of the involved property owners. Exceptions generally involve streets where a majority or all of the properties involved are commercial in nature.

The following is a detailed description of the petitioning process for a typical, generally residentially zoned street.

INITIAL RESIDENT CONTACT

Residents become dissatisfied relative to the condition of their street pavement and often know little about why their street is in the condition it is. Frequent problems can include rough riding surface or drainage problems. A call to City Hall will be directed to the Engineering Dept., where an explanation of the City's policy begins. Staff explains that a special assessment district must be created in order to raise the funds to pay for such a project. The City Commission is not inclined to create such a district unless it has clear indication that the majority of property owners agree with the idea. In order to start the process, a petition needs to be created that demonstrates that a majority of the property owners are in favor. Staff offers to email a blank petition form prepared for the specific street being discussed, and also tries to provide the resident with the basic information needed in order to start conversations with neighbors about the idea.

PETITION PROCESS (INITIATION: PHASE I)

The petition format was originally developed with assistance from the City Attorney, and modified as needed over the years. The following describes the various parts of the petition form:

- a. The beginning language makes it clear to the signer that this is a citizen-initiated request for a public improvement, directed to the City Commission, the body that has the authority to declare a special assessment district.
- b. Most streets are constructed as described on this sample, that being a 26 ft. wide concrete pavement, measured from the face of the curbs, with parking allowed on both sides. Items of note include:
 - 1) The City's policy of building local streets at 26 ft. wide with parking on both sides has been in place since 1997.
 - 2) The City has required concrete streets for its new special assessment districts since 2011.

- 3) The new street width and grade will almost always be different than the current street, therefore, the project automatically includes the cost of new driveway aprons being installed between the sidewalk and the new edge of the street.
- c. The actual street being petitioned is typed in by the Engineering Dept., as well as the limits of the project.

The first paragraph preceding the signatures notifies the signers that a new pavement invokes a more detailed review of the current underground utilities, such as the water and sewer system. Often, the existing water and sewer systems are deemed past their prime and are slated for replacement as a part of the project.

Improvements to the public water or sewer systems are generally included in the construction contract, and are charged to the respective Water and Sewer Funds. That is, replacements within the public water and sewer system have no impact on the special assessment. The ongoing maintenance of the water and sewer laterals, that is, the individual pipes that connect each house to the public mains, however, is considered a private property owner expense. Until 2005, City streets were constructed with no active maintenance of these private lines. However, as the pipelines age, and as house replacements became more frequent, the need to cut open a new pavement to make repairs to these lines necessitated an evolution to the policy:

- 1) In 2005, the City implemented a voluntary process wherein property owners could agree to participate in the cost of the replacement of their sewer lateral, set at the cost the contractor was charging the City for the replacement (per foot). The cost was typically about 25% of what an owner would pay to have the sewer replaced if done on their own, and represented a great value. While some owners participated, the City determined that it would be in the best long term interest of the street pavement if all sewer laterals older than 50 years were replaced with new PVC pipe, as a separate special assessment district. The new forced assessment policy was instituted in 2007. Due to the low cost of this work (typically between \$1,000 and \$2,000 at the time), there has been very little protest against this policy.
 - 2) While water laterals tend to have a much longer service life, a related but different problem also caused additional cuts in the pavement. Most older homes currently are served by a ¾ inch diameter pipeline for fresh water supply. However, as part of a building permit, new homes must be serviced by a minimum 1 inch pipe. As a result, even though sewer laterals were being replaced, too many cuts in the pavement were still resulting as new homes get built. Therefore, starting in 2017, all water services less than 1 inch diameter must be removed and replaced with paving projects. All lead pipe, no matter what size, must also be replaced (a much less frequent issue). The cost of the water lateral replacement, generally set at the rate charged by the contractor to the City, is then passed along to the homeowner in the form of an assessment. The cost of the water lateral is typically 50% - 75% of the cost of the sewer lateral replacement. In 2017, only a small number of homes were charged with the water lateral replacement assessment to date.
- d. The petition carrier must then get at least one signature from each property within the district to count as a “yes” vote. Once the petition carrier is finished and turns the document over to the City, each signature is compared to the owner records at City Hall. Owners’ names that do not match a record of what is on file are rejected and not counted as “yes” votes. The petition carrier has the opportunity to review the signatures that were rejected, and if it is determined that a unique circumstance has occurred, such as new ownership, or a recent name change, written proof that can validate the signatures can change the status of a signature. Tenant signatures are never counted in favor of the project.
 - e. On the last page, the petition carrier must have their own signature notarized, verifying that they witnessed the signatures, and attest that the document is a true representation of what is being stated.

After the signatures are checked for accuracy, if a simple majority in favor still exists, the petition moves to the next phase of the process.

PETITION PROCESS (INFORMATIONAL BOOKLET: PHASE II)

Over the course of the next several weeks, the Engineering Dept. will prepare a booklet specific to the suggested project at hand. The most recent project that went through the process and had a petition prepared was Villa Ave., from Adams Rd. to Columbia Ave. (2 blocks). The booklet that was prepared is attached for your reference in **Appendix A**. Similar to the petition form itself, a detailed description of the various parts of the booklet can help the reader understand the level of involvement required by the petitioner to move the project through the necessary approval process:

- a. The booklet is mailed with an introductory cover letter, inviting residents to a neighborhood meeting. The meeting is typically held on a weeknight evening at City Hall. There is no formal agenda. Rather, the meeting is intended to give people an opportunity to find out more information, ask questions, and talk about the project with their neighbors. Often, less than 50% of the owners are represented.
- b. The introduction helps explain why the booklet was prepared and mailed out, which is important for those that were not contacted by the petition carrier.
- c. A thorough description of the intended project is spelled out.
- d. The multiple step approval process is outlined. By statute, the City Commission must hold a public hearing before making a decision about whether to proceed with the project or not.
- e. The construction section helps residents understand the various phases of the project, and how much access they will have during this period, should the project be approved.
- f. A chart helps explain how the typical property will be charged, and how the project costs can be financed over 10 years. Owners are charged for a paving improvement as follows:
 1. The City takes 15% of the total cost of the project to help reduce the charge to residents, and to show support for the process. The contribution can be justified given the reduced cost in maintenance that a new street pavement provides.
 2. The cost of the drive approaches is taken out of the base cost calculation. The remaining costs are divided by the total front footage of the project, considering both sides of the street. This provides a base price per foot, which is now estimated at \$190 per foot for a new concrete street.
 3. The cost of the drive approaches is based on actual measurements for each property, times the actual cost being charged by the contractor to the City.
 4. On corner properties, the City charges only 33% of the long side of the property (if that is the side being constructed). The other 67% is charged to the Local Street Fund.
 5. If there are City-owned properties along the street frontage, they are charged to the City as any other property would be so as to not change the cost per foot in a detrimental way to the property owners.
- g. Once the street is paved, residents will have the opportunity to rake their leaves into the new curb and gutter section. Bagging of leaves will no longer be required. The report also clarifies that once this assessment is paid, the City will not proceed with other assessments for pavement improvements in the future.

PETITION PROCESS (FINAL APPROVAL: PHASE III)

The tone of the neighborhood can often be gauged at the neighborhood meeting. If someone is working against the project, and people that signed want to change their mind, they must submit an email or letter

to the Engineering Dept. to confirm their position, at which point they will be taken off the petition. Likewise, if there are owners that did not sign that wish to do so after the meeting, they may submit an email or letter to the Engineering Dept., and they will then be included in the final calculation.

A few weeks are allowed to pass intentionally to give people a final chance to decide their position. If a majority of owners (50%+) still remain on the petition, the issue will be moved forward to the City Commission. At the time the issue is presented to the Commission, a calculation based on front footage is also provided, with the expectation that that will also show support in excess of 50%. (The front footage calculation becomes important if there are varying sized properties. If a small number of larger properties are all voting in one direction, that can throw the percentage above or below 50%. Therefore, it is important for the Commissioners to know which owners are in favor and which ones are not. The topic will be introduced to the Commission, and a request will be made by staff to set a public hearing of necessity.

At least three weeks must pass to provide sufficient notice to the public. Postcards are mailed to all owners notifying them of the hearing date. The Commissioners hold the hearing at a regular meeting, and then decide whether to proceed or not. If they pass a motion approving the project, a second public hearing is then scheduled for the next meeting, to confirm the assessment roll. Owners have the opportunity to verify their estimated assessment with staff prior to the second hearing. If the roll is approved at the hearing, the assessment lien is then placed on all properties within the district.

The project design then begins, with construction generally scheduled for the next construction season. Invoices for the first annual payment are not sent out until the project is generally finished, giving the City an opportunity to determine final costs and billing accordingly.

PROJECT LIMITS

When first initiating a project, the question of the limits of the project can be an issue. The petition carrier often understands that they are starting a potentially difficult process, and in an effort to make it simpler, may be inclined to just want to seek signatures on their particular block. However, if the particular block would not make a logical project limit, then City staff will encourage them to look at the bigger picture.

Here are three situations that can come up that should be considered in a final policy:

1. If the subject street that is unimproved is two blocks long, and the middle intersection is a "T" intersection, stopping the paving at the "T" can be awkward. Stopping the project at its logical starting and ending is better for the long term viability of the street, and allows the entire length to have its long term paving needs addressed in one project.
2. In areas where long sections of street are unimproved, a street paving project could potentially extend as long as one mile. Contacting that many homeowners can seem like a daunting task. A potential solution would be to require projects of this sort to extend at least one-half mile. For example, if Pilgrim Ave. is being considered for paving, a viable project would be to build the section from Quarton Rd. to Oak St., or Oak St. to Maple Rd. Another example would be if Larchlea Dr. was being paved, the entire half mile would be appropriate, from Maple Rd. to Lincoln Ave., even though there is a logical stopping point in the middle.
3. If an adjacent side street will be potentially left unfinished, it should be included when a petition is received. For example, if a petition is received for Yosemite Blvd., the City should require that Yankee Ave. be paved as a part of the same project, so that it is not left unfinished well into the future.

When crafting a final policy recommendation, staff recommends that the Committee consider language that speaks to the need to create logical boundaries that are in the best long-term interests of both the City and the neighborhood at-large.

COMMITTEE RECOMMENDATION:

The Committee recommends revisions to the initiation process that will simplify that start of the process, increase awareness, and address the concerns with creating logical boundaries.

BILLING PROCEDURE

As described above, homeowners in a paving assessment district will be charged based on two factors:

1. The front footage of their property times the set rate per foot, which is calculated based on actual costs, minus 15%.
2. The square footage of their drive approach(es) times the actual cost per square foot that the contractor charges for a new concrete drive approach.

If the homeowner owns a house that is served by non-compliant water and sewer service laterals, then a separate assessment to cover those costs will also apply.

The following outlines unique circumstances, and how they are handled:

A. Corner Properties

Almost every corner lot has a long side and a short side. If the short side is the side being paved, the homeowner is charged the full length of that side, and is typically charged about the same as the other homeowners in the area. If the long side is being paved, the homeowner is charged 33% of the long side's length. The City pays the remaining 67%. This ratio typically works well in that the corner houses pay about the same as the other houses on the block that may actually face the street.

In the rare case that both streets are being paved as a part of the same assessment district, then the owner would be responsible for both sides at the same time, or about double what the typical charge is.

In determining the short or long side, the way that the house is facing, or the street that is used for the address are not determining factors. Only the measurements where one side is longer than the other is used.

The reduction factor is only applied to residential zoned properties. Commercial properties are billed at 100% of their frontage, even when located on a corner.

B. City-Owned Properties

If a project includes an intersection where a public right-of-way is being crossed, the width of the public right-of-way is not included in the footage charged for the project. The cost of that area is blended into the overall rate that is charged to all properties.

If a project has frontage on other City properties, such as park land, City buildings, etc., the City will pay the full 100% cost of that frontage. During the petitioning phase, the footage is taken out of the

calculation so that it does not impact a determination relative to whether the majority of the owners are in favor or not.

C. Federal or Public School District Owned Properties

There is no expectation that the City will receive any funding from federal institutions, such as the U.S. Post Office, or Birmingham Public School District, when a special assessment is applied to their properties. As a result, the City typically pays the cost of these frontages. Since this is the case, for petitioning purposes, they are treated as neutral properties, similar to properties actually owned by the City, as described above in paragraph B.

D. Condominiums

Certain residential streets may be primarily single-family residential, but have one multi-family residential property on its frontage that is owned by many parties. For billing purposes, each owner gets an equal share of the cost, regardless of where they are situated on the property. For example, if the street being paved has a 200 ft. frontage adjacent to the condominium, and there are 10 owners, each owner will be charged for 20 ft., as well as 1/10 of the cost of the driveway approach. While some owners may have a unit located directly adjacent to the street being built, and others are relatively far away, that does not factor into the billing.

A condominium can sometimes have a high percentage of the owners on a residential block, but not necessarily that much frontage. As noted above, percentages in favor are calculated both by percentage of owners and percentage of front footage, to help understand that a true majority is reflected both ways.

E. Unimproved Streets with Shared Jurisdiction

On certain unimproved residential streets, properties on one side of the road may be City of Birmingham residents, while those on the other side are residents of other municipalities. In general, the City would expect the residents of the other municipality on these streets to share in the cost of the benefit of the improved street that they use and reside on.

For potential projects on streets with shared jurisdictions, additional pre-planning effort would be required to gain the cooperation of the other municipality to facilitate the special assessment. The City does not have the authority to directly assess the residents outside the City, and would, in effect, have to charge the neighboring municipality their portion of the costs, who in turn, could then special assess the individual property owners that are receiving the benefit of the improved street.

On these unimproved streets with shared jurisdiction, there is a risk that the neighboring municipality may not be cooperative in participating in the project. For most of the streets in this category, the City maintains jurisdiction over the entire right-of-way, and it would be possible to complete any needed sewer and water system improvements, as well as road improvements without their cooperation. If that were to occur, the City could consider the properties outside of the City to be neutral properties and pay the cost so as not to overburden the City residents along the particular street.

The exception to this is Saxon Drive, between Southfield Road and Norfolk Drive, and Pine Street, between the City Limit east of N. Glenhurst Drive and the City Limit west of Westwood Drive. On these two streets, the road right-of-way is split with the neighboring municipality. The south side of Saxon Drive is in the Village of Beverly Hills, and the south side of Pine Street is in Bloomfield Township, whose roads are under the jurisdiction of the Road Commission for Oakland County. The City must gain the permission of these neighboring municipalities or agencies to construct any work in the part of the right-of-way under their

jurisdiction. An intergovernmental agreement would have to be entered for projects on these streets, which would define how costs for road improvements would be shared.

This summarizes the petitioning and billing process established by the City for special assessment districts.

COMMITTEE RECOMMENDATION:

The Committee agrees that the billing process should remain unchanged.

PAVEMENT/ROAD SURFACE TYPE

PAVEMENT AND ROAD SURFACE TYPES

Like most road agencies, Birmingham has a variety of different types of pavements that have been installed over the years. The following is broken into two main categories. The first section attempts to explain the various permanent road surface types used in Birmingham. The second section attempts to explain the maintenance policies and how they differ from each other.

PAVEMENT SURFACE TYPES

Streets can be broken into the categories of improved/engineered pavements, and unimproved pavements. There is no clear indication in the Engineering files as to how a pavement surface type was selected. The following information is provided from general observations:

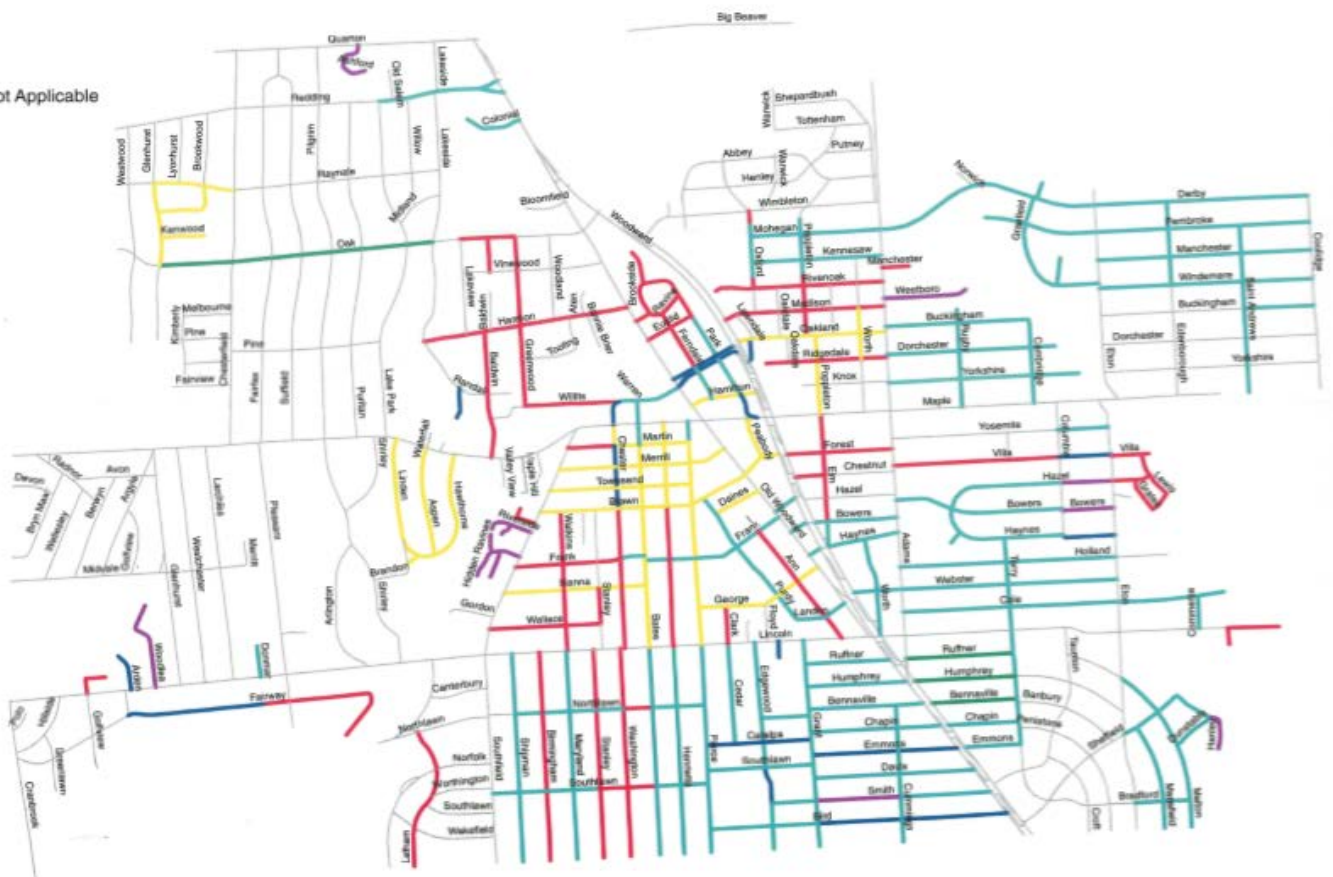
Figure 3, provides an illustration of the first permanent pavement installation date throughout the City, the map has been broken down into subcategories that help the reader understand the various phases of development within the City. For example, the 1915-1929 category (yellow) tends to be centered on streets located within the original square mile of the village of Birmingham. Even in this early era, a mixture of concrete and asphalt streets were installed. Some remnants of these oldest pavements still remain, although most have been completely rebuilt.

Figure 3: Pavement by Installation Dates

Local Streets - First Permanent Pavement Installation Date

Legend

- Unimproved/Not Applicable
- 1915 - 1929
- 1930 - 1940
- 1945 - 1960
- 1961 - 1970
- 1971 - 1989
- 1990 - 2018



Only a small number of streets were paved between 1930-1940 (green) during which time asphalt was the pavement type of choice. These streets have all been reconstructed within the last 20 years.

After World War II, the City experienced a significant building boom, with many local streets being paved in the period of 1945-1960 (teal). In the earlier years of this period, or if a developer was involved, it appears that asphalt was the more common type used. Streets that were designed and built through the Engineering Dept. were generally concrete, likely paid for by special assessment. As most of the City was developed by 1960, not many streets were paved during the following three decades 1961-1989 (blue and purple). This time period also saw a tendency toward concrete, as most streets being paved would have been designed and built through the Engineering Dept.

In the late 1980's, the Engineering Dept. moved to construct streets with a deeper asphalt section. As demand for special assessment projects increased from 1990 through 2007, all streets were constructed of asphalt.

Figure 4: Asphalt vs. Concrete

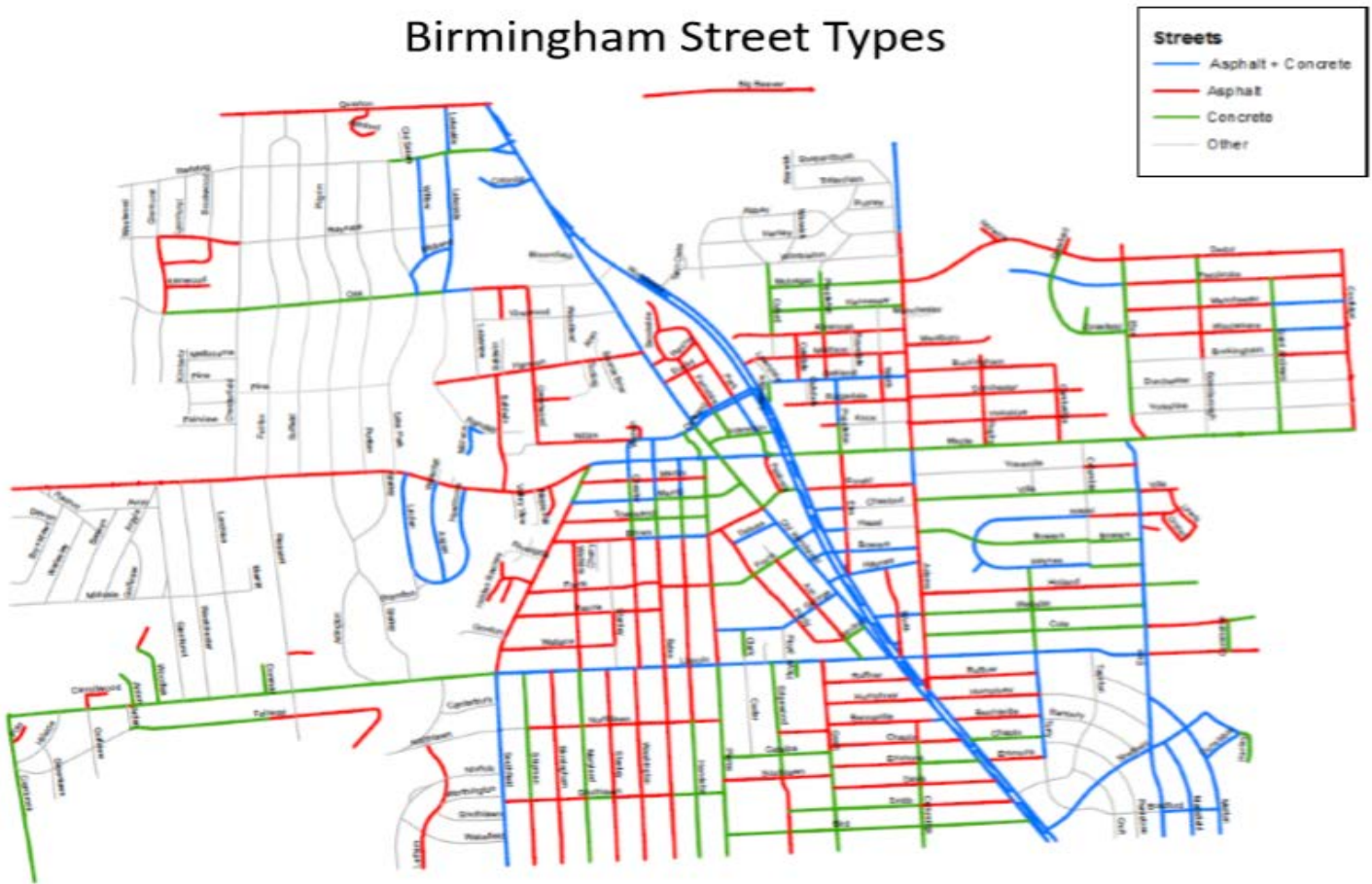


Figure 4, provides information pertaining to whether a permanent pavement was built with concrete (green) or asphalt (red). In certain situations, it can be beneficial to overlay a deteriorated concrete pavement with a thin asphalt pavement in order to extend the life of the overall pavement further (blue). The following general observations can be made relative to both pavement types:

CONCRETE VS. ASPHALT

1. Initial construction costs for concrete streets are typically higher when compared to asphalt. The cost to those in the assessment district has averaged about 25% more when concrete is installed. However, the service life of concrete is typically significantly longer, making the overall lifecycle cost potentially less, particularly since the City is fully responsible for long term maintenance.
2. Concrete streets are more difficult to construct, especially on occupied streets. An asphalt street would require a period of closing access to all driveways of less than 10 days. With concrete streets, it is about three to four weeks.
3. The installation of a concrete street can be considered a significant change in the look of the neighborhood that was used to a dark cape sealed surface historically. The number of residents that raise this issue are relatively few. Concrete can be colored to reduce the bright white look. The City has resisted these ideas, as it tends to fade back to its original white color with time, and it is impossible to match in the future as sections are removed and replaced.
4. Typical residential concrete streets in our area consist of 6 to 7 inches of concrete, while typical residential asphalt streets consist of 3 to 4 inches of asphalt. The thicker “rigid” concrete is generally more durable and able to carry significantly more traffic loads than the thinner “flexible” asphalt. This directly contributes to the overall longevity expected from concrete streets.
5. The Engineering Dept. preferred installing concrete streets from the 1950’s to 1980’s. For reasons that are not clear, deep strength asphalt was used starting in the late 1980’s. The City Commission in the 1990’s indicated an informal preference to asphalt for aesthetic reasons. As the aging process on newer asphalt streets became more apparent, the Engineering Dept. began reconstructing local streets (those not being assessed) with concrete in 2009. All recent special assessment districts have been paved with concrete as well, given its preferred maintenance characteristics.

IMPROVED STREET MAINTENANCE

Asphalt road maintenance in Birmingham currently takes the following steps:

1. When an asphalt road surface is first placed, the City hires a separate contractor that installs an “asphalt rejuvenator.” This chemical compound is placed on the top of the new surface within weeks of finishing. It reactivates the asphalt materials to bond with each other again, creating a deep waterproofing sealer. We have found that it is a worthwhile expenditure in adding years to the service life.
2. Between years 5 and 10, the street is checked for its condition. If it is aging normally, it will be crack sealed and another coating of asphalt rejuvenator is applied.
3. Between years 10 and 20, if possible, the deteriorating spots should be removed and patched with asphalt. A thin layer less than 1 inch deep is milled at the concrete gutter pan, and cracks are sealed. A micro-layer of asphalt (less than 1 inch deep) is placed to cover the original top surface, and extend the life of the pavement.

The steps taken above are allowing streets to have their life extended. However, these processes take time and money and were not always implemented. On asphalt streets where they were not implemented, a more significant resurfacing project is needed between years 15 and 25, wherein 1.5 to 2.5 inches of asphalt are removed. Bad spots are patched full depth, cracks are sealed, and a new layer of 1.5 to 2.5 inches of asphalt are replaced.

The resurfacing process can continue again into the future, depending on how the street is aging. Some asphalt streets have been successful in having their life extended up to 70 years, although by doing so, the surface will have been rather poor for a considerable amount of time.

Concrete road maintenance in Birmingham currently takes the following steps:

1. As a part of the initial construction, the new pavement is sawcut and joints are sealed. No additional measures are taken unless a section cracks prematurely, which is addressed as warranty work.
2. Between years 10 and 15 – the joints are monitored and sealed if needed. Miscellaneous deteriorating concrete sections (usually few) are replaced as needed.
3. Between years 40 and 60 – Depending on the nature of the deterioration, the concrete can be:
 - a. Milled and overlaid with a thin asphalt layer, 1.5 to 2 inches thick. This is generally only done now on low traffic streets. It is then treated as an asphalt road for future maintenance cycles, but can be successful in extending the life of the concrete street another 25 years or more.
 - b. Concrete is spot patched as needed to extend the life of the street indefinitely.

The amount of effort and funds needed to extend the life of the pavement is more with respect to asphalt. There was a period in the late 1990's where concrete failed prematurely, but those mix design issues have been addressed and no longer seem to be prevalent.

The committee ultimately concluded that concrete be utilized for new improved streets, however, the cost differential between the two alternatives over time should be considered in the selection of a street surface. Knowing that the City must fund all maintenance of the new street into the future, and knowing that financially a concrete street will prove to be less of a burden to the street fund over time, the City Engineer will make the determination on the appropriate pavement material for a respective road improvement project with concrete being the default selection.

COMMITTEE RECOMMENDATION:

The committee conducted a thorough review of surface type and road design options that will be discussed in the Trade-Off analysis section of this report. They agreed that providing a choice between concrete and asphalt that was cost neutral and based on the determination of the Engineering Department.

UNIMPROVED STREET CAPE SEAL / CHIP SEAL PROGRAM

In the meantime, what does the City do to maintain unimproved roads?

Cape seal surface treatment is the primary maintenance method used by the Department of Public Services to maintain Birmingham's unimproved streets.

Cape seal is a *chip seal* street surface treatment that is followed by an application of a slurry or micro-surface. It can be applied to existing pavements in order to extend service life, or be applied to gravel roads in order to reduce dust and improve drivability.

The following report summarizes how treatment projects are administered and explains the cape seal process.

Project Administration

Cape seal projects, although performed by a contractor, require significant staff resources to plan and administer. Tasks include condition review, planning, budgeting, contract bidding, and communications, among other functions. The following provides a brief summary.

Condition Review

Cape seal projects begin with an informal review of existing street surface conditions on unimproved streets. The Department of Public Services examines street surface age, overall condition, and driveability in determining which streets to include in any potential maintenance project.

Planning and Budgeting

The scope of any cape seal project is necessarily limited to available resources – both in terms of staff and dollars. Although the majority of project costs are assessed to property owners, initial outlays are made from the major/local street funds, and the city is responsible for roughly 15% of costs. Once it has been determined that a cape seal project is warranted, rough costs are estimated and included as part of the regular budgeting process.

Contract Bidding

A request for proposals to perform chip seal maintenance is posted in advance of each project and seeks per-square-yard prices for double-chip seal, slurry seal, and optional surface pulverization. It also requests prices for optional spray patch surface preparation (per ton) and manhole adjustments (each).

Submitted bids are reviewed, and an award recommendation is presented to the City Commission.

Special Assessment District

Each property adjacent to a proposed cape seal project is identified in drafting a preliminary special assessment district parcel roll. This involves a parcel-by-parcel review of the project area, and the determination of each property's assessable footage.

Using property records, field measurements, and bid prices, improved cost and assessment estimates are produced for use in subsequent public hearings.

Public Hearing of Necessity & Confirmation of the Assessment Roll

The Public Hearing of Necessity is the first of two public hearings required for the establishment of a special assessment district. Typically held at a regular meeting of the city commission, the hearing involves a presentation of the proposed project, a demonstration of its necessity, and preliminary cost estimates. Property owners have the opportunity to address the City Commission and express support or opposition to the project before it votes to determine necessity.

If the determination of necessity is affirmed, the listing of properties to be assessed is presented to Commission for confirmation at a subsequent meeting. Public input during this Confirmation of the Assessment roll is limited to matters related to the assessment roll.

Both hearings are subject to advance notification requirements including public announcements in locally-circulated newspapers, public postings, and notices mailed to each affected property owner.

Other Communications

In addition to the required hearing notifications, the Department of Public Services sends an informational mailing to affected properties well in advance of any project. The letter introduces the tentative project, answers many frequently asked questions, and provides guidance to owners interested in exploring the option of a full improvement.

The most recent cape seal project also featured a community meeting hosted by DPS and the Engineering Department. It shared project details, addressed questions and concerns, and again provided guidance to owners interested in a full improvement alternative.

Throughout the course of the project, schedule updates are provided on a designated web page – bhamgov.org/capeseal.

Assessment Methodology

Project costs are assessed to property owners based on the following method:

- 85% of front-foot costs for all property fronting the improvement;
- 25% of side-foot costs for all residential property siding the improvement;
- 85% of side-foot costs for all improved business property siding the improvement and;
- 25% of side-foot costs for all unimproved business property siding the improvement.

Cape seal assessments are required to be paid in one installment, and are otherwise subject to interest charges for unpaid balances.

Costs

Prices for double chip application and slurry seal have increased annually an average of 6% and 3% respectively between 2014 and 2017, as indicated by DPS bid award records.

Using the current project as an example, an average 80' lot fronting a street that will be pulverized and resealed will see an assessment of approximately \$850 - \$1000.

Work Processes

Cape seal field work typically spans the course of 3-4 weeks, depending on the size and scope of a project. Work is spread among three phases: preparation, chip, and slurry. Each phase requires approximately one day of work on each street segment.

Street-side parking restrictions are required during most work days, and are communicated via street signage and the city's other communication platforms.

Surface Preparation

Existing street surfaces are prepared through one of two methods: spot patching or surface pulverization. On streets with a relatively flat profile, hot- or cold-mix patch product is used to repair potholes and areas of significant deterioration. On streets with pronounced crowning, surface pulverization is the preferred preparation method. Crowning results from multiple chip seal applications over a number of maintenance cycles. Pulverization grinds the existing stone chip surface and redeposits it in place. The material is then graded to achieve a slight grade from the road center, and then roll-compacted. See figure 1.

Pulverization often results in the road gaining 1-2" of width, as the excess crown material is spread across the surface during grading. Although the process results in a flatter, more consistent surface, it can present challenges as well. Changing the existing profile of a street may remedy some water ponding issues, but has the potential to also create new ones.

The resulting surface is an untreated gravel street.

Chip Application

After surface preparation, heated asphalt-based binder is sprayed onto the gravel surface, followed immediately by a layer of evenly-distributed stone chips. A dump truck loaded with stone chips provides a supply of material to the spreader and roller follows closely, embedding the stones into the surface. See figure 2.

Typically, Birmingham cape seal projects specify a second application of chips, known as 'double-chip.' The second layer provides an additional seal, and helps to better blend irregularities in the road surface. Because contractor equipment is already on site, a second application is possible at a reduced cost.

Post application, the road is swept periodically to remove loose chips, and traffic is allowed to help set stones into the surface over the course of 1-2 weeks. The resulting surface represents a traditional 'chip seal.'

Slurry Application

After 1-2 weeks, a slurry coat is applied to the chip sealed surfaces. Slurry is a mix of water, crushed stones, asphalt emulsion, binders, and water. It has the consistency of pancake batter, and is applied using specialized sprayers. The application of slurry to a chip seal surface is what differentiates a chip seal from a cape seal.

Slurry provides an additional moisture seal, a skid resistant surface, and significantly reduces dust. Upon application, the material is brown in color, gradually turning gray or black over the following weeks and months. To the untrained eye, the surface can resemble an asphalt overlay.

Slurry application requires partial street closures, as the product requires 4-5 hours to cure. To achieve minimal traffic impact, streets are treated in block segments, ½ of the roadway (lengthwise) at a time. Residents affected by the partial closures are notified through informational door hangers, and street signage. Typically, streets are reopened for traffic the same day.

ADA Ramps

Prior to the 2015 project, chip/cape seal projects were exempt from an Americans with Disabilities Act requirement that sidewalk crossing ramps be upgraded to new construction standards as part of street improvements. Subsequently, the Federal Government determined chip/cape seals to be a significant 'improvement' and clarified the requirement to include ramp improvements, where not already compliant, as part of any such project.

The construction of ramps is administered as part of the Engineering Department's annual sidewalk replacement program. These costs are included in each property's special assessment, adding approximately \$2-3 per foot to assessments.

Ramp are not necessarily constructed in conjunction with the cape seal work, and may be completed prior to or after the project, depending on the scheduling.

Cape Seal Benefits and Challenges

Short of a full improvement, cape seal maintenance remains the best option for unimproved streets. The alternative is to leave these streets as untreated gravel – a condition unlikely to be welcomed by residents. For the relatively low cost, cape seal provides the benefit of a cleaner road that has improved drivability over bare gravel roads. Its longevity is typically 7-10 years, but can vary depending on a number of factors including traffic and weather.

From an administrative perspective, cape seal presents a number of challenges. Among the greatest is managing residents' outcome expectations. Long-term residents who have been through several chip seal projects understand what to reasonably expect in terms of finished product. Newer residents, however, often describe the work in terms of 'rebuilding the road' which carries with it the expectation of precision work, and levels of improvement not typically possible (or expected) with cape seal maintenance.

The Committee recognizes an opportunity to revise the initiation process so that the City initiates projects based on a ranking system and eliminate the need for homeowners to initiate a project and gather a majority of signatures from their neighbors. The petition option will remain available for homeowners interested in pursuing a project prior to the City's initiation.

COMMITTEE RECOMMENDATION:

To recommend that all street improvements shall be charged to residents in the same percentages as the City currently uses. Streets that require a substantially increased cross-section or pavement width shall be reviewed by both the Engineering and Finance Departments of the City to determine the excess costs resulting from those changes, and that excess amount shall not be included in the sum used to determine the resident's payment for the special assessment.

**WHAT DO OUR NEIGHBORING COMMUNITIES DO WITH
THEIR UNIMPROVED ROADS?
PEER REVIEW/ANALYSIS**

PEER REVIEW OF NEIGHBORING COMMUNITITES

As the committee examined Birmingham’s street improvement policies and explored potential changes, they reviewed the policies of neighboring communities. The following summarizes policy differences between Farmington Hills, Rochester Hills, Royal Oak, Troy, and the Oakland County Road Commission.

The information was compiled primarily through conversation with relevant staff at these agencies. A standardized questionnaire was sent as well, with limited response. At the beginning of this process staff sought insights from the smaller southeast Oakland County communities that are most similar to Birmingham, such as Clawson, Berkley, Huntington Woods, and Pleasant Ridge. These communities have long had a fully-improved local road system that appears to date back to the 1950s, and current staff at these communities had few historical insights to share.

The policy examination revealed several key areas in which policies differ between communities. They include resident support thresholds for the instigation of a cost/viability study and final project approval, assessment cost sharing, and payment terms. It also considered current unimproved street mileage and maintenance practices. The following chart summarizes the information:

	Miles of Unimproved Roads	Use of Chip Seal For Maintenance?	Cost Study/Informational Meeting Threshold	Project Approval Threshold	Based on	Front Footage Assessment Cost Share % (City/Owner)	Payment Term (Years)
Farmington Hills	22	No	25%	51%	Parcels	20/80	10
Rochester Hills	20	No	60%	61%	Parcels	40/60	15
Royal Oak	3.6	No	n/a	50%	Footage	50/50	15
Troy	10	Yes	50%	50%	Footage	50/50	10
Birmingham	26	Yes	50%	50%	Footage	15/85	10

The following sections highlight noteworthy differences among several of the studied communities.

Farmington Hills

Among the cities examined, Farmington Hills is most similar to Birmingham in terms of unimproved street surface quantity. It maintains 22 miles of unimproved gravel roads through frequent grading and the application of dust control measures. Unlike Birmingham, Farmington Hills’ unimproved streets are not chip sealed. An important difference from Birmingham is that even after a road is paved, it is not rehabilitated unless another assessment district is created.

The process to upgrade to a fully-improved street is petition-driven, although it only requires 25% interest from affected property owners to trigger a city-performed preliminary cost and viability study. The lower threshold makes it easier for interested petitioners to obtain preliminary cost estimates, but risks spending staff time and resources on projects that have a greater potential for rejection. Reducing this threshold can also give the appearance of staff ‘taking sides’ by encouraging discussion when there is not a majority in favor of exploring an improvement.

Farmington Hills also has a ‘directed’ road improvement policy and procedure. The 2015 policy notes:

“...in instances where road conditions have become seriously degraded and become an issue of safety and overall community appearance, it may become necessary for City Council to initiate a road reconstruction project without a petition. The objective of this policy is to establish a process for DPS staff to evaluate and recommend a directed road reconstruction special assessment district to the City Manager and City Council.”

The policy considers regularly-updated road pavement condition assessments in determining eligibility and project prioritization. Note: the excerpt above uses the term reconstruction, implying that it only applies to the reconstruction of existing improved surfaces. Within the context of the full policy, however, it is clear that it also applies to unimproved streets. The full policy and other background information for each of the communities discussed here is included as **Appendix B**.

Rochester Hills

Rochester Hills publicizes an annual ‘call for projects’ during the months of September and October to gauge public interest in special assessment projects, including gravel street improvements. During the 60-day time frame, property owners desiring an improvement may submit an informal petition indicating at least 60% homeowner interest. Subsequent steps follow a defined schedule and process similar to Birmingham, including public meetings, circulation of official petitions, etc.

By limiting submissions to the defined time frame, the city can better plan for and schedule potential projects. Staff efforts on such initiatives can be more focused and the various tasks related to administering special assessment district related projects can be accomplished more efficiently.

Additionally, by publicizing the request regularly, the city is continually educating the public on their available options, which can have the effect of starting conversations among neighbors. One drawback is that if there is momentum and interest in pursuing an improvement outside of the designated time frame, it may wane if forced to wait a number of months before being able to proceed through the process. It could also potentially strain staff if multiple requests are received simultaneously.

Another noteworthy feature of Rochester Hills’ street improvement policy is that it provides homeowners an inflation-indexed assessment cap.

Royal Oak

Royal Oak maintains relatively few unimproved roads – only 3.6 miles out of an approximate 200 miles. Within the past few years, Royal Oak has taken a more aggressive stance to encourage residents to submit petitions, hoping to eventually remove the remaining unimproved roads from their system.

In order to encourage resident support for street improvements, Royal Oak has extended a considerable discount to residents during the term of a local road millage. Typically assessed the full cost for an improvement, the incentive offers a 50% discount for property fronting an improvement, and 75% discount for side lots. Staff indicated that the incentive has largely been successful, having upgraded 7 of unimproved streets since the 2015 millage.

Road Commission for Oakland County

Although not included in the table above, staff also spoke with the local roads manager for the Road Commission. In townships, maintenance of all public streets is the duty of the Road Commission. Unlike cities, the Road Commission has no legal authority to force a special assessment district. Roads that are paved are not invested in further, other than for patching holes and keeping them safe. Property owners must petition the Road Commission to get a rehabilitation project started, and owners must pay 100% of the assessment cost. Gravel roads must also be petitioned and paid for by assessment in order to be paved.

At times, roads get in such poor condition that the County has explored the idea of removing the old asphalt and making it a gravel road again. That too would involve a cost for which there is no source of funds. It also would be a setback for the road system, so to date, that has not yet occurred.

COMMITTEE RECOMMENDATION:

The City Engineering Department will prioritize projects based on an infrastructure ranking system outlined in this report. The City will begin initiating road conversion projects based on this ranking system and incorporate them into the five-year capital plan. Homeowners will retain their ability to petition the City to advance a project more quickly, where possible.

**FIVE-YEAR CAPITAL IMPROVEMENT PLAN
DEVELOPMENT**

FIVE-YEAR CAPITAL IMPROVEMENT PLAN

How do road projects get planned and when?

As a part of the annual budget cycle, the Engineering Dept. updates its five-year capital improvement plan. This work is done in December of each year. Since this committee was considering a policy shift that would impact future budgets, staff expedited this process in 2019 to provide the committee with a better understanding of the ongoing fiscal responsibilities currently placed on the City's capital improvement budgets.

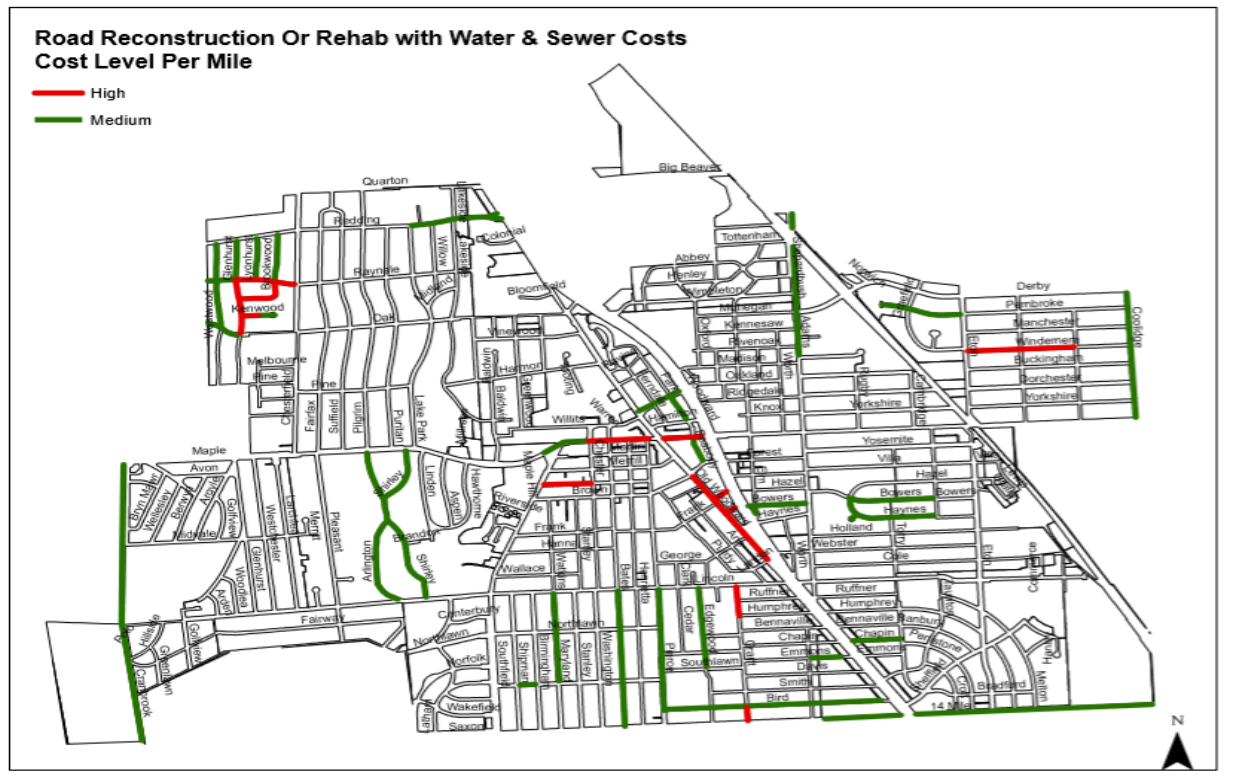
Since its inception, Birmingham has offered to maintain its improved streets at no cost to the adjacent property owners, provided an initial special assessment was paid by the property owner to cover the original cost of construction. As the street system ages, this policy results in the need to prioritize and invest in the street system each year in order to achieve an acceptable level of maintenance.

Capital improvement expenditures can be loosely categorized into two spending levels. For the purposes of this discussion, major projects are labeled as Road Reconstruction or Rehabilitation (with Water and Sewer Costs). Lower cost projects that tend to be geared toward maintenance are labeled as Maintenance Treatments. These two categories are explained in more detail below.

Road Reconstruction or Rehabilitation (with Water & Sewer Costs)

Birmingham has several improved streets with pavements that are nearing the end of their service lives. There are also several miles of sewers and water mains that are in need of repair and/or replacement. For the past several years, staff has been able to leverage spending more efficiently by prioritizing those streets that need work in all three areas. Many of the streets that were identified, as such, in the past have already been addressed. While the number of streets that need major work in all three categories is reducing, there are still many streets that need significant investment. As shown in Figure 5 on the following page, projects are broken into the subcategories of either a high or medium level cost per mile.

Figure 5: Medium or High Improvement Cost per Mile



1. High Cost per Mile

Due to efforts made in the past, the number of street miles that can be classified as needing a high level of cost per mile is relatively small. These are streets that typically have:

- a. Improved pavement that is at the end of its service life, needing full replacement.
- b. Water main that is in need of replacement, usually due to age and small diameter (compared to current standards).
- c. Sewers that are in poor or fair condition, and often in need of increased capacity.

Examples of projects placed in this category include:

Maple Rd. (Chester St. to Woodward Ave.) = \$10,000,000 per mile

Townsend St. (Southfield Rd. to Chester St.) = \$2,300,000 per mile

Both streets include complete removal of the existing pavement, and replacement with a new concrete street with curb and gutter. On a downtown street such as Maple Rd., extra costs include traffic management, traffic signal replacement, fiber optic system, and accelerated construction. Costs such as sidewalks, electrical system, landscaping, and street lighting come from sources other than the street fund.

The Maple Rd. example is not the norm. The one block project planned on Townsend St. is a more common project. The cost per mile includes complete pavement removal and replacement with new concrete and curb and gutter, replacement of drive approaches and adjacent lawn areas, and minor traffic management. Streets selected for complete replacement were generally constructed in the 1920's to 1940's.

2. Medium Cost per Mile

Street rehabilitation at a medium level of cost per mile can fall into several subcategories.

- a. *Major Street Resurfacing* – There are currently several major street segments planned for resurfacing. Minimal underground improvements are planned, but the asphalt surface is in need of replacement. Asphalt work will tend to be at least 2 inches of asphalt removal and replacement. Traffic management on these streets require additional effort. Several of the currently planned projects will be completed with funding from outside sources, such as federal, county, or adjoining jurisdiction. The cost per mile shown reflects the entire expenditure.
- b. *Local Street Rehabilitation* - Many pavements built in the 1950's and 1960's are in need of water main replacements, and in some cases, sewer work. The curb and gutter systems are in relatively good condition, but the driving surface is poor to marginal. Since utility work is needed, the pavement can be removed, while the curb and gutter system is saved. This then saves the cost of drive approach and lawn replacements, and simplifies construction. Since the curb and gutter system is not being replaced, a lower cost asphalt pavement is justified. With its shorter service life, the entire street will age at a more consistent level.
- c. *Unimproved Street Utility Improvements* – As noted before, utility improvements on unimproved streets have not been prioritized, given the difficult task of attempting to completely rebuild a gravel street that has no drainage system. Unimproved streets that have curbs do not have this issue. Water and sewer improvements can be completed with the curbs left intact, and a new cape seal surface can be installed at a lower cost. Two neighborhoods are identified with such work in the near future, including the northwest corner of the city, where water mains and storm sewer work is planned on streets such as Westwood Dr. and N. Glenhurst Dr., as well as water main replacement on Arlington Rd. and Shirley Dr.

Sample estimated costs per mile:

- | | | |
|------|---|-----------------------------------|
| 2.a. | Cranbrook Rd. (Maple Rd. to 14 Mile Rd.) = | \$1,600,000 per mile ¹ |
| 2.b. | Bowers St. (Hazel St. to Columbia Ave.) = | \$1,830,000 per mile |
| 2.c. | Arlington Rd. (Maple Rd. to Lincoln Ave.) = | \$ 140,000 per mile ² |

Maintenance Treatments

An asphalt maintenance contract is typically conducted once per year, in an effort to provide relatively low cost treatments to asphalt streets needing attention. As can be seen on the map, there are several streets recommended for work at this time. In the six-year forecast, the total cost estimate for this work is \$990,000. In order to achieve this work, it is recommended that it be broken into three contracts paid for over three fiscal years, which will be reflected in upcoming capital improvement plans.

Subcategories are defined below:

1. High Cost per Mile

Streets designated for a higher level of repairs will have the following work accomplished:

¹ In this example, the City will be responsible for \$290,000. Other agencies contributing to the cost include the Road Commission for Oakland Co., Bloomfield Twp., and Oakland Co. general government.

² The “cost per mile” shown below is low as the majority of the work will be charged to the Sewer and Water Funds. Pavement restoration cost includes restoring and grading gravel surface, applying cape seal, and installing handicap ramps.

Subcategory 1 (Resurfacing)

- a. Milling top two inches of asphalt.
- b. Miscellaneous full depth asphalt patches where needed.
- c. Crack sealing.
- d. New 2 inch top layer of asphalt.
- e. Asphalt rejuvenator waterproofing treatment.

Subcategory 2 (Ultra-Thin Asphalt Overlay)

- a. Milling outer edges at curbs.
- b. Miscellaneous full depth asphalt patches where needed.
- c. Crack sealing.
- d. New ¾ inch overlay of asphalt.
- e. Asphalt rejuvenator waterproofing treatment.

Examples of streets in these categories are:

Latham Rd. (Northlawn Dr. to Saxon Rd.) = \$200,000 per mile (resurfacing)

Oakland Ave. (Woodward Ave. to Worth St.) = \$175,000 per mile (thin overlay)

2. Medium Cost per Mile

Subcategory 1 (Asphalt)

Asphalt streets designated for a medium level of repairs will have the following work accomplished:

- a. Localized patching or joint repairs.
- b. Crack sealing.
- c. Asphalt rejuvenator waterproofing treatment.

Subcategory 2 (Concrete)

Concrete street repairs involve joint or slab replacement as needed.

Examples of streets in this category are:

Harmon St. (Lakeside Dr. to N. Old Woodward Ave.) = \$100,000 per mile

Woodlea Ct. (North End to W. Lincoln Ave.) = \$80,000 per mile

3. Low Cost per Mile

Streets designated for a lower level of repairs will have the following work accomplished:

- a. Crack sealing.
- b. Asphalt rejuvenator waterproofing treatment.

An example of streets in this category include:

W. Brown St. (Chester St. to Pierce St.) = \$52,000 per mile

Five Year Capital Plan: Summary of Costs

The work summarized in the sample streets detailed above represent over \$5,000,000 of work each year over the next five years just in Street Funds.

FUNDING OVERVIEW

Overview of Road Funding

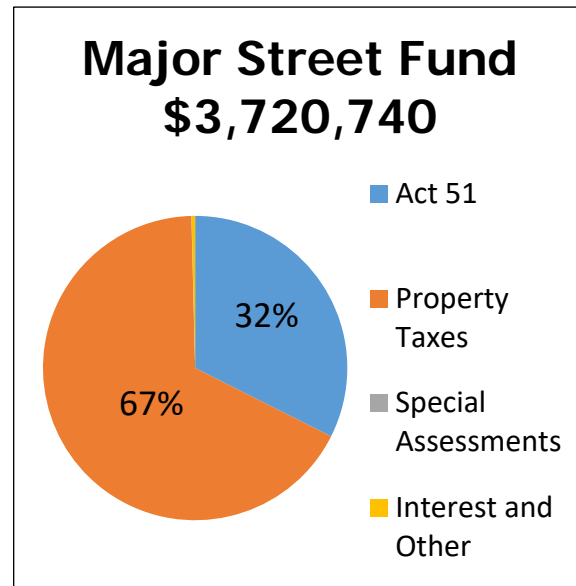
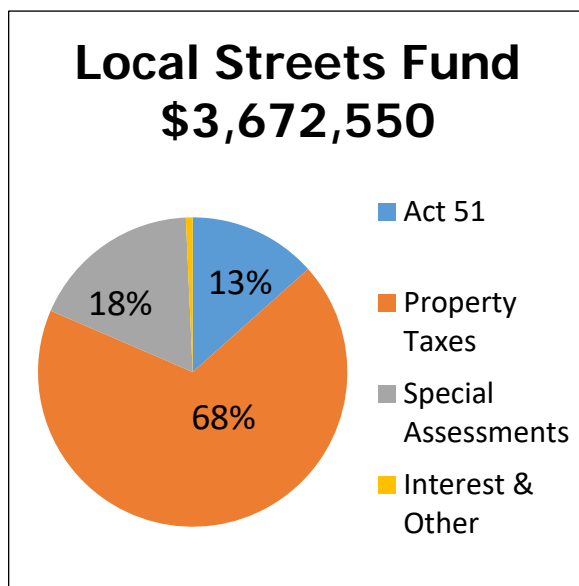
How does the City fund the projects identified in the Five-Year Capital plan?

There are generally four sources of funding for roads:

- Act 51 distributions from the Michigan Department of Transportation,
- Property taxes by way of transfers from the City's General Fund,
- Special assessments from property owners directly benefiting from a road improvement, and
- Road bonds.

Currently, the City receives from funding for roads from all of the sources except for road bonds.

For streets designated as major streets, almost all of the funding comes from property taxes and Act 51. This is because these streets are predominately improved streets. For streets designated as local streets, most of the funding comes from property taxes, with smaller contributions from Act 51 and special assessment revenue. The special assessment revenue is dependent on the number of roads either in the process of being improved or being cape sealed. Below is a comparison of the revenue budgets for fiscal year 2018-2019 for the major street fund and local street fund.



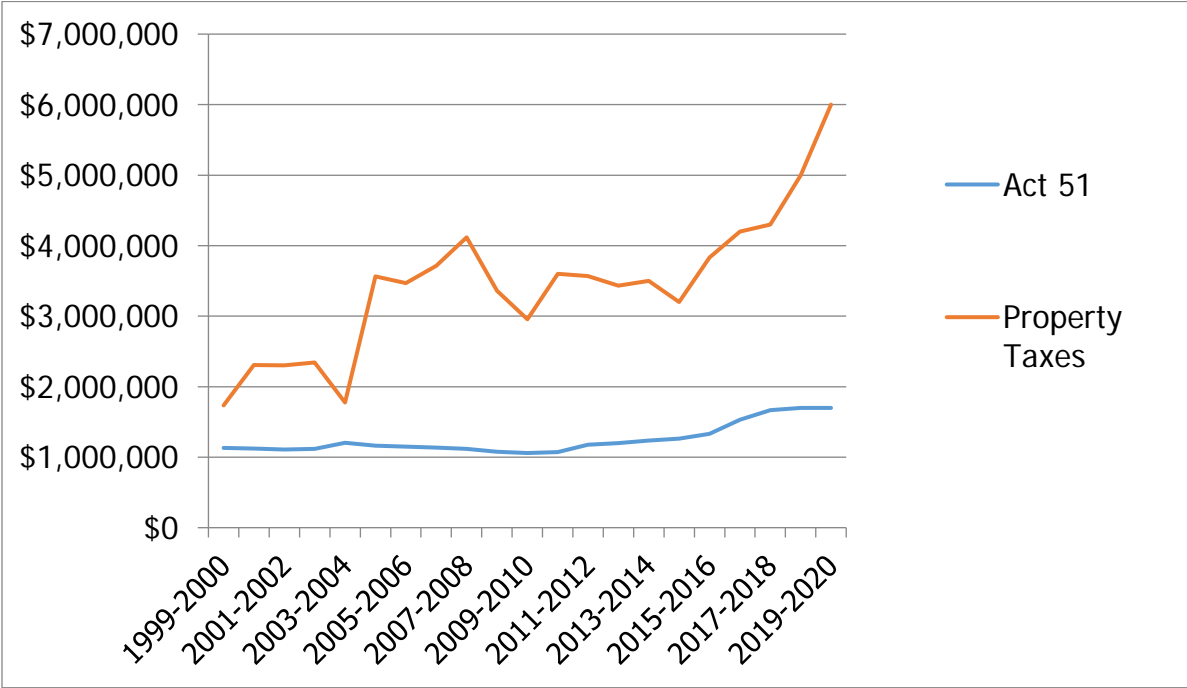
Act 51 Funding

Act 51 funding comes from the Michigan Department of Transportation. This funding is generated at the state level from receipts from fuel taxes, vehicle registrations, and contributions from the state's General Fund. 21.8% of the funds collected from these revenue sources are distributed to cities and villages. Of this amount, 75% is allocated to major streets and 25% is allocated to local streets. The amount distributed to each community is based 60% on population and 40% on the number of road miles.

Property Taxes

Act 51 funding is insufficient to fund street maintenance and improvements on a year-to-year basis. Therefore, funding from the City's general operating millage has to be used to supplement other funding. Historically, the City has used 15%-20% of the property taxes collected in the General Fund to provide road maintenance and improvements. Over the years, property taxes have become a greater contributor to road funding than from Act 51 funding as shown below:

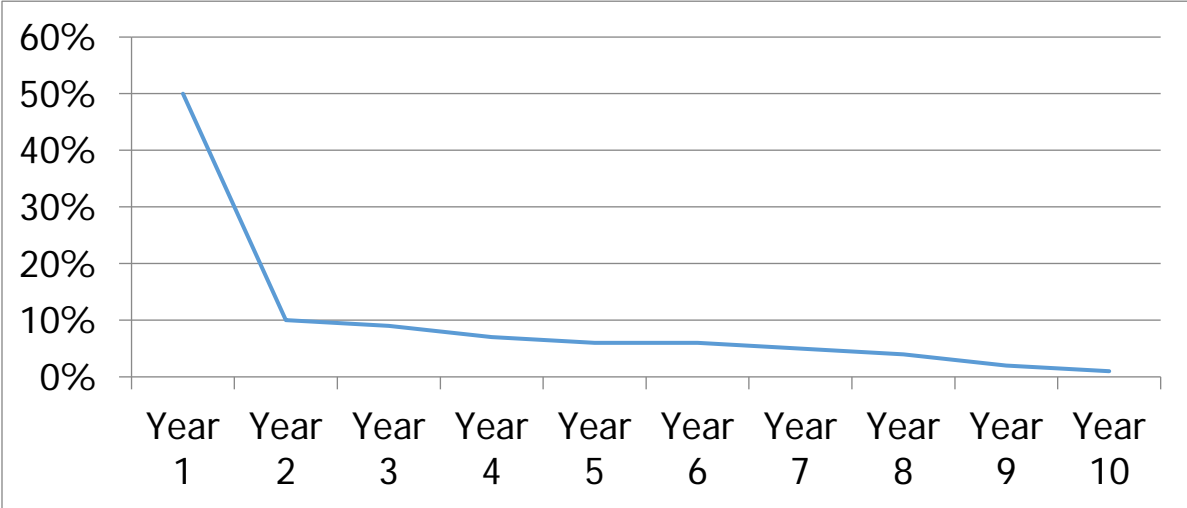
Act 51 and Property Tax Road Contributions 1999-2020



Special Assessments

Special assessments are used as a funding source to offset a portion of the cost of a road where it is being upgraded to an improved road or when the road is being cape sealed. For these projects, the City will pay for the improvement in advance and bill the property owners. The payback from the property owners differs depending on the type of road improvement being done. When a road is being improved, the special assessment is generally set for 10 years. When a road is being cape sealed, the special assessment is generally billed only once. City ordinance does not allow for special assessments greater than 10 years. Typically, the City collects approximately half of the total special assessment in the first year of a ten-year assessment period and then smaller amounts the following years as shown below:

Special Assessment Billing – 10 Year Period



Grants

Grants with the Michigan Department of Transportation (MDOT) are available but are generally restricted to roads that receive heavy use and therefore are not a likely source of revenue for unimproved streets. Examples of roads the City has received MDOT funding for include W. Maple Road and N. Old Woodward.

MDOT created the Transportation Alternatives Program (TAP) grants, which are used for activities that enhance the intermodal transportation system and provide safe alternative transportation options. The City has used these funds for traffic-calming and multi-modal enhancements. Again, it is unlikely that these funds would be available for unimproved streets because they wouldn't meet the eligibility requirements. Both of these grants require a local match and are awarded on a competitive basis, which means that the City's projects are compared to other projects from other municipalities and a governing board determines which projects will receive funding.

Additionally, there are Oakland County Tri-Party funds available. These funds may be used for road or traffic control system upgrades on county roads. The City is required to fund one third of the project with the other two thirds coming from Oakland County and the Oakland County Road Commission. A municipality may save up to 3 years of funding for a project. These funds are generally for small improvements and would not be enough to fund a complete street. Because of the restriction to county roads, this source of funding would not be applicable to the City's residential streets.

Bonding

The City could issue bonds for road improvements, although, looking through the City's records, it doesn't appear that this method has ever been used before. The debt service for the bonds would be paid from Act 51 funds, a special assessment, property taxes, or a combination of all three. It is unknown whether this funding source would be successful for unimproved streets as there may be some reluctance to use the City's debt capacity for this type of project or to bond for something specific to a neighborhood like a road unless the debt service was paid by special assessment only.

Road Expenditures

Road funding is used to pay for traffic controls & engineering; street and bridge maintenance; street tree maintenance; street cleaning; ice and snow control; and capital improvements. Currently, Act 51 funding is not sufficient to pay for the non-capital improvement expenditures.

Capital improvements are projected out for 5 years to assist in long-range financial planning. When a neighborhood determines that they want an improved road, that project has to be then added to the long-range planning process to determine which budget year the City can afford to do the project considering both funding for the road and funding for water and sewer improvements if those utilities need to be updated.

At the April 4, 2019 meeting of the committee, staff provided a refresher presentation that covered all of the subject matter regarding funding for road projects, pavement types, distinctions between improved and unimproved roads, and a paving and maintenance history in the City regarding projects such as these.

The purpose of the refresher was to prepare for further exploration regarding possible funding alternatives that would allow pursuit of a potentially more aggressive program for converting the remaining twenty-six miles of unimproved streets throughout the City to improved streets.

Property Taxes and Headlee Impacts

State law governs how much a city may tax for operating purposes. Under state law, the maximum Birmingham can levy is 20 mills (\$20/\$1,000 of taxable value). In 1978, the voters of Michigan approved Proposal E (the Headlee Constitutional Amendment). Under the Headlee Amendment, the City cannot collect operating millage on the increase in taxable value derived from existing property which exceeds the Headlee inflation factor. This is accomplished by reducing the maximum authorized tax rate by the proportion by which the percentage increase in to the total value of existing property in any year exceeds the rate of inflation during the prior year. As a result, the maximum millage that the City may levy has fallen from 20 mills back in 1978 to 11.4364 mills currently. For fiscal year 2020-2021, the City is actually levying 11.0433 mills, leaving .3931 mills or approximately \$1,000,000 in funding capacity. Having millage capacity is a sound financial practice because it allows for flexibility for emergencies or a downturn in the economy.

FINANCIAL MODEL DEVELOPMENT

To begin preparing inputs for the model, staff worked to update the five-year financial forecast and develop a draft budget for the City to cover the next three years. This prep work assisted in developing the most accurate framework for discussion that reflects the known financial obligations of the City. The challenge inherent in creating a sufficient financial tool for decision-making is that it has unavoidable limitations in the sense that there are a plethora of unknowns. The information from the model must be supplemented along with the history, experience, and knowledge of the Committee and staff to evaluate and consider the implications of any decision making holistically.

The baseline model was established with the known factors that exist today, staff then layered in the projected costs of the unimproved streets project into the model to determine the impact to the general fund and provide an idea with respect to the sensitivity of the general fund as it relates to this program. The outcomes presented were intended for discussion purposes only to help illustrate financial impacts for changes to the current funding approach used to support road conversions from unimproved to improved.

The following are the assumptions that support the model:

General Fund Projection Assumptions:

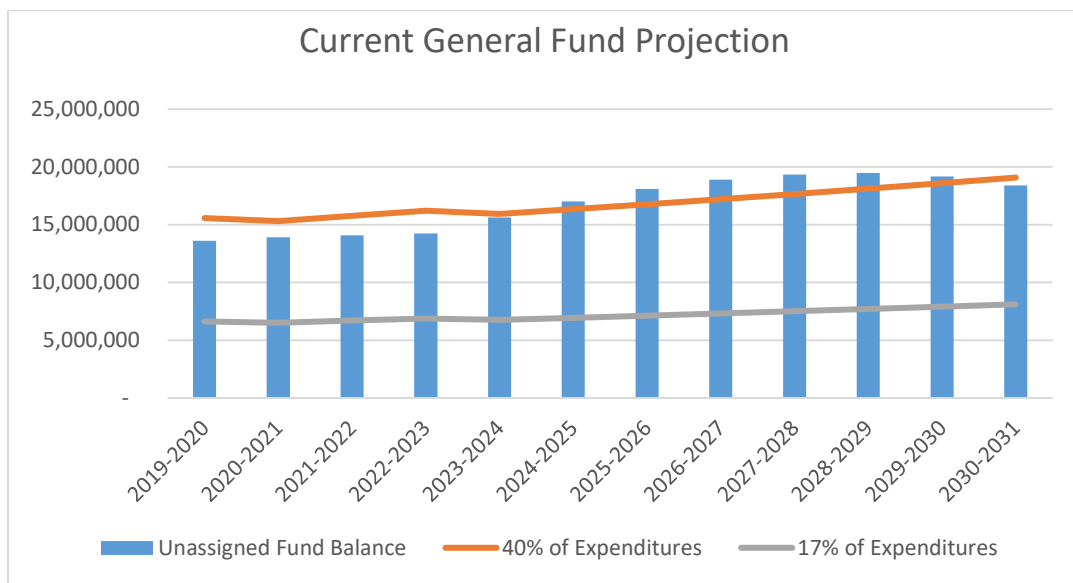
- FY 2020-2021, 2021-2022, 2022-2023 amounts were taken from the approved budget document
- 3% in 2023-2024 and 4% per year increase in taxable value starting in 2024-2025
- Headlee maximum millage rate rollback factor of .982 per year starting in 2023-2024
- Operating millage used for years 2021-2022 through 2029-2030 maintains a .3 mills gap between operating millage and Headlee maximum
- 3% per year increase in personnel costs
- 1.5%-2% per year for other costs
- 2.5% per year increase in transfers to Major and Local Street Funds

These assumptions regarding the general fund are consistent with the City’s policies. The limitation of the model is that there are no major projects, currently envisioned, that are contemplated in the model. Therefore, all things would have to remain fairly equal for the model to behave as forecasted today.

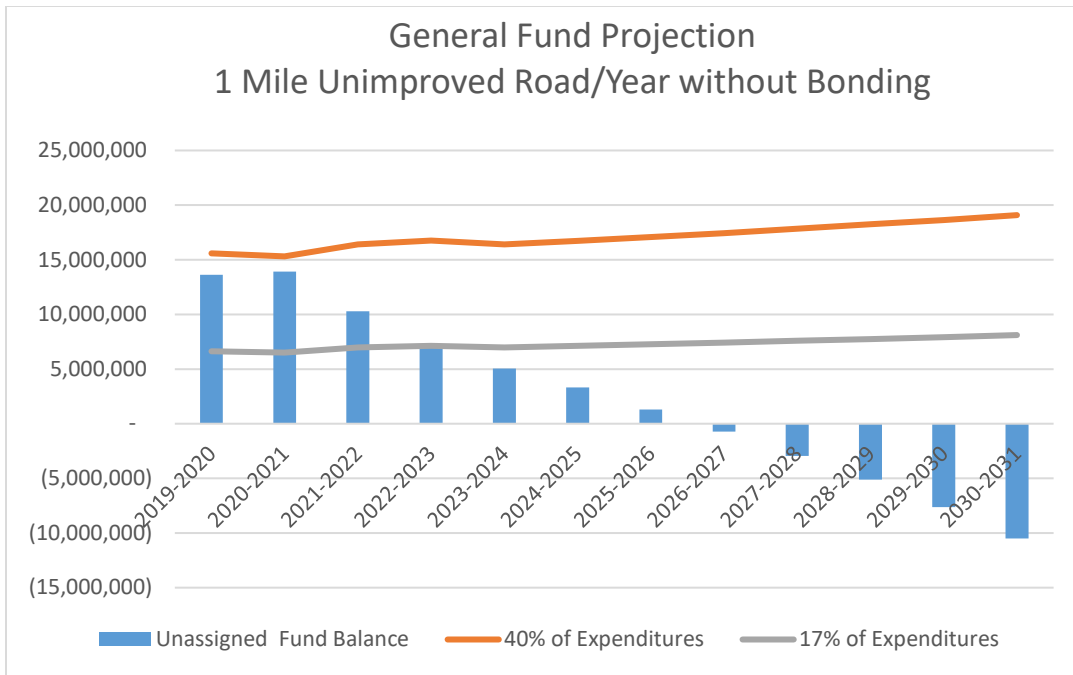
Infrastructure Assumptions:

- 1 mile of roads improved per year
- \$2.3 M cost for road reconstruction per year
- \$1.1 M cost for water main improvements per year
- \$1.15 M cost for sewer improvements per year
- Costs were adjusted 2.5% per year for inflation
- Roads are improved with concrete, curb, and gutter.

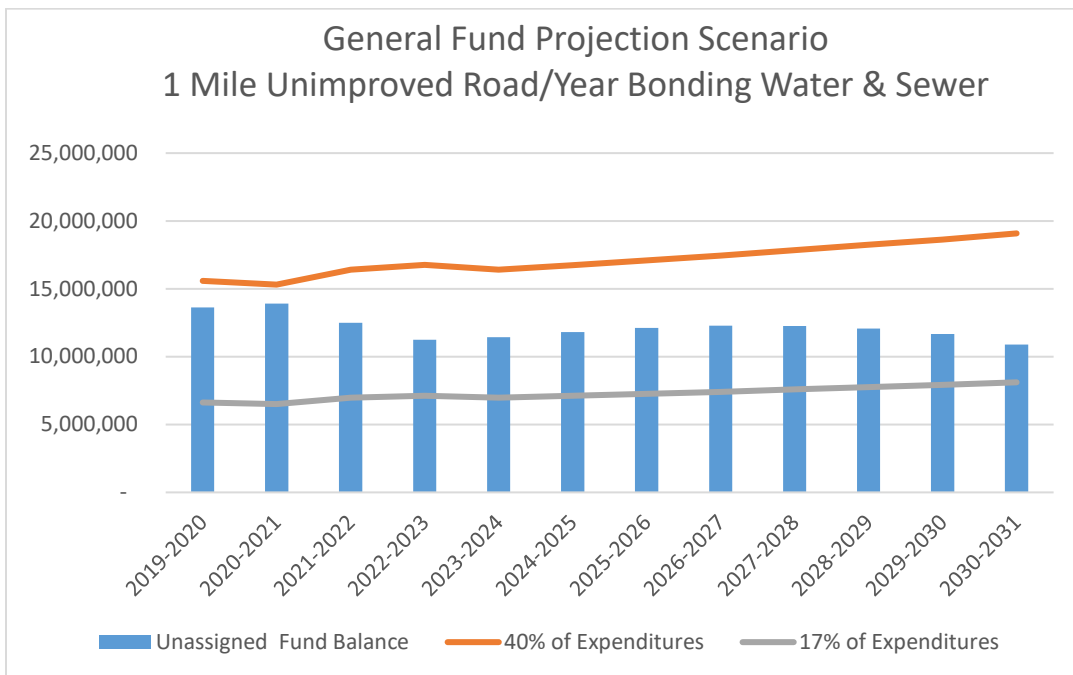
The model assumes the worst case scenario for all 26 miles of roadway. It is anticipated that the need for sewer and water main improvements will not be needed for all projects.



The baseline projections for the general fund are stable and meet the City’s requirement with respect to fund balance policy. The policy states that the unassigned fund balance (funds not obligated for other projects or are restricted for other purposes) should remain in a range between 17% and 40% of the total.



The impact to the general fund based on the assumptions outlined above for the infrastructure improvements at \$4.5 million per year to improve one mile of roadway without bonding would have a significant negative impact to the general fund because the funding for the unimproved street improvements including water and sewer improvements would have to come from property tax revenue currently used for operations and other capital improvements.



The chart above demonstrates the effects on the General Fund balance if the funding for water and sewer improvements were bonded rather than paid from existing property tax revenues. The General Fund would still see a decrease in reserves initially as a result of the additional transfer to the Local Streets Fund, but as special assessments are paid off, they reduce the amount of transfers necessary in future years resulting in a stabilized General Fund balance for most of the projection period.

Since the City’s current resources cannot fund the level of improvement outlined in the assumptions above, the City is left with two fundamental funding options: 1) pay-as-you-go; or 2) bond financing.

Funding Options:

Pay-as-you-go

- Road improvements are scheduled as part of the City’s long-term capital improvement planning process and are initially financed from existing levels of transfers from the general fund to the local street fund. Property owners will be special assessed for the road and will reimburse the local street fund.
- Water and/or sewer improvements would be financed through current water/sewer rates. Optionally, enhanced water/sewer rates which would include additionally funding for improvements could be approved. A \$1 increase in either rate would generate approximately \$828,000 in additional revenues per year.
- A road millage is not available since the City is a 20-mill charter city. A Headlee override to the City’s existing operating millage would be the only way to create additional property tax revenues. This would require a vote of the citizens to approve.

Other than the Headlee override, these options do not require a vote of the citizens (City Commission makes funding available through the budget process) and does not add to City’s total debt. However, the pay-as-you-go option would result in a slower improvement process (subject to availability of funds).

Bond financing

- Special Assessment Bonds (roads): Debt paid from special assessments to effected property owners.
- Water and/or Sewer Improvement Bonds: Debt paid from either property taxes or water-sewer rates.
- Capital Improvement Bonds (combination of the two above): Debt paid from multiple sources, such as special assessments and water and sewer rates.

Bond financing options allow for more improvements more quickly. However, the bonding alternative adds to City’s total debt, are more expensive (interest costs plus bonding costs), and typically require a vote by the citizens.

FUNDING CONSIDERATIONS

	ADVANTAGES	DISADVANTAGES
SPECIAL ASSESSMENTS	Cost is allocated to those who benefit specifically from the improvement. Does not need vote of the citizens.	Results in a high cost per property owner thereby making it difficult to getting road improved.
CITY MILLAGE	Operating Millage: Does not need vote of the citizens (unless Headlee override). Can be approved by the city commission.	Operating Millage: City is already near its millage cap which is shrinking every year due to Headlee. Does not give city room to fund other projects or needs that may arise. May effect bond rating as the rating agencies look at

		millage capacity as a factor of a city's financial health.
BUDGET AMENDMENTS	Road projects are projected five years in advance. This provides clarity in the city's long-term financial planning process and enables the city to manage its millage rates.	There are usually no extra funds available for new projects which are not in the five-year projection. In order to move forward, other road projects would need to be rescheduled or the new project would need to wait five years.
GRANTS	Usually only require a small local share (20-25%) resulting in significant savings to the city.	Grants are not likely to be available for local road improvements. Grants are competitive and are difficult to obtain.
TAX INCREMENT FINANCING	Leverages property value growth to fund improvements.	No TIF legislation exists that the city may employ to pay for local road improvements.

RANKING SYSTEM FACTORS

Similar to the improved street ranking system, it is recommended that each street segment be provided a score based on several factors. The segments with the highest total score would be the ones most likely to be considered for reconstruction primarily funded by a special assessment district. A list of factors and suggested scales follows.

**CITY OF BIRMINGHAM
UNIMPROVED STREETS RANKING SYSTEM**

1. Water System Score

The City has a ranking of every street segment within the City for its water system. The total score of 100 is based on the following system:

- a. **Age (0-20)** – Water Mains are given a score based on their age, with 0 for a main up to 1 year old, up to 20 for a main that is 75 years or older (with 75 being considered the expected service life for the pipe).
- b. **Size (0-20)** – In the past, many local water mains were sized at 4" or 6" in diameter. By current standards, no water mains should be less than 8" dia. Water mains at 4" or less were given a score of 20. Water mains sized at 6" were given a score of 10.
- c. **Reinforcement (0-20)** – Birmingham's system has been modeled with a computer. The model finds areas where water pressures are lower than recommended, considering current measurements, as well as in areas where zoning would predict that larger, taller buildings will be built in certain areas in the future. Points are assigned based on double the change in size recommended in the model. For example, if the model calculates that a 12" main is needed where a 6" main is currently in service, that street segment would receive 12 points under this factor.

- d. **Frequency of Breaks (0-40)** – The City has good records for water main breaks going back 55 years. Each break is given a score of 4 points, with up to a maximum of 40 points that can be earned on a block. Breaks receive a high priority due to the disruption, cost, and damage that they cause.

2. Sewer System Score

The City has a ranking of every street segment within the City for its sewer system, for those sewers located on improved streets. Unimproved street segments were not included for the purposes of the ranking system previously set up since it was not generally considered advisable to conduct major excavations on unimproved streets if those streets were going to remain in their unimproved state. With funding from a state grant, the City is currently cleaning and inspecting all sewers within its system that are over 20 years old. The effort is valued at about \$1.6 million, and will not be completed until near the end of 2019. At that time, a current ranking system for all streets within the City can then be completed that may be used to help develop and finalize this ranking system.

The ranking system used for the previous ranking system had a score of 100, and is based on the following system:

- a. **Structural Condition (0-30)** – Sewer segments with fractured pipe, cracks, voids, etc. are scored higher.
- b. **Operation and Maintenance Condition (0-20)** – Sewer segments that are known to require frequent cleanings due to slow flows, roots, etc., are scored higher.
- c. **Capacity Deficiency (0-40)** – Sewer segments that calculate as being too small for their service area are scored higher.
- d. **Relief Sewer (0-10)** – On those streets where a sewer is recommended to help drain not only the immediate area, but other areas upstream, such segments are scored with an additional 10 points.

3. Pavement Deterioration Score

Pavement deterioration is a factor in the longevity of the cape sealed street surface, which in turn causes ongoing maintenance and safety issues. Unimproved streets in certain areas of the City drain better than others due to factors such as underlying soils, slope, and grade relative to other features such as sidewalks and drive approaches. It is recommended that a scale be developed to rank each street segment between 1 and 10. All streets should be surveyed after a significant (0.5 inch or more) rainfall that would create standing water conditions. Factors and weighting are suggested below:

- a. **Poor Drainage, Street (0-25)** – Drainage of the street surface, as well as the street edge, will be scored for each block. Standing water shortens the life of the cape sealed surface, as well as degrades the use of the road, adjacent parking areas, drive approaches, and adjacent yards.
- b. **Poor Drainage, Sidewalk (0-25)** – While not directly related to the long term durability of the cape sealed surface, poor drainage on the sidewalk creates problems for pedestrians and homeowners charged with maintenance of the sidewalk.
- c. **Existing Grade (0-25)** – Certain cape sealed streets have excessive centerline crowns, meaning that the slope from the center of the road to the edge or gutter pan is excessive. Such slopes can lead to safety issues, drainage issues, and difficulty entering and exiting driveways.
- d. **Existing Cape Sealed Surface (0-25)** – The surface of the existing street will vary typically as a function of how long it has been since it was last resealed. Other factors such as daily traffic counts, base conditions, and drainage can also cause the street to deteriorate.

4. Average Daily Traffic (ADT)

The Police Dept. is in the process of collecting average daily traffic (ADT) counts on all streets in Birmingham. ADT will factor into the ranking system as suggested below:

- a. **High Traffic Counts** - A small number of unimproved streets carry much more than just traffic created by the adjacent properties. Such streets would be considered local collector streets that benefit the entire neighborhood, and sometimes others as well. If a street has an Average Daily Traffic (ADT) count of over 1,000, an additional score of 100 points should be added to its score. The two streets that would most easily qualify for this scoring would be Chesterfield Ave. and the unimproved segments of Oak St. Both of these streets are direct routes to Quarton Elementary School, and carry larger amounts of vehicles than most unimproved streets. The City would be able to improve the level of service to the entire area if these streets were improved.
- b. **Medium Traffic Counts** – Most streets in the system will be labeled as being in the medium category. The most common street segment condition is one that connects to other streets at both ends, generally serves the immediate properties, and has a small to medium amount of other traffic that is passing through. On these streets, traffic volume is not a factor, therefore, no score is added on these segments.
- c. **Low Traffic Counts** – Most Birmingham neighborhoods were designed on a grid system, wherein each block connects to other streets at its end, providing motorists (and others) the option of taking more than one street to get to their destination. The grid system helps spread the load of traffic that is passing through. Dead end and cul-de-sac streets in Birmingham are rare, but where they do exist, they will have lower than average ADT counts. Since a project on a dead end street or cul-de-sac only benefits the properties located directly on it, they could be considered a lower priority. The scoring on a dead end segment should lower its ranking. A score of -50 is recommended for any dead end or cul-de-sac.

5. Curb and Gutter System

The status of the curb and gutter system is suggested to impact the ranking as follows:

- a. **6" High Concrete Curb & Gutter** - Many streets in Birmingham were constructed with a strong 6" high concrete curb and gutter system that provides good drainage and a stable edge. Such streets not only would score low on the deterioration scale, they also tend to operate much more closely to improved streets. Homeowners may not be aware for several years (until their street is cape sealed) that their street is considered unimproved. The City may be in a more difficult position attempting to force a special assessment to reconstruct a street that is working so well. A score of -100 is recommended for any street that has a high, generally stable 6" concrete curb and gutter system.
- b. **Low Mountable Curb & Gutter** - Conversely, streets with a low, mountable curb and gutter system may have relatively good drainage, but do not provide a stable edge, and are subject to being driven on or over for parking needs. An example of this condition exists in the large neighborhood west of S. Eton Rd., and north of 14 Mile Rd. These streets are unique in that they have a relatively low level of service, more closely aligned to other unimproved streets that have no curbs. A score of 0 is recommended for any of these streets, to denote that the mountable curb no longer brings much, if any, benefits to the street segment. If the curb is also in poor condition, it will receive points toward its total under the deterioration scale.
- c. **No Curb & Gutter** – The majority of unimproved streets have no curbs. A score of 0 is recommended on these segments.

6. Streets with Side Frontages

Streets that partially or entirely service side frontages tend to be a lower priority to the adjoining property owners. While having the street paved may still be a benefit to the general neighborhood that uses the street, it may be considered a lower priority to the adjoining property owners that would be assessed. This pattern has been seen in neighborhoods where the side streets still remain unpaved, or were the last to be paved. If one side of the street segment has single-family side frontages, a score of -15 is suggested. If both sides of the street have single-family side frontages, a score of -30 is suggested.

7. Non-contiguous Unimproved Streets

Certain street segments remain unimproved while all other streets in its immediate area are improved. Such segments leave an otherwise improved area unfinished. This can be a problem aesthetically. It can also drive up costs for maintenance. Unimproved streets tend to require higher maintenance for patching, cape sealing, etc. Maintaining an unimproved street that is discontinuous to others like it drives up maintenance costs. If one street segment is by itself with no other unimproved street segments, a score of 40 points is recommended. If two street segments are linked together but have no others like it in the immediate area, then each street segment would receive a score of 15 points.

COMMITTEE RECOMMENDATION:

The Committee recommends the pay as you go option to continue and that is consistent with existing practice. After much discussion, it was agreed that pursuing a city-wide funding mechanism would not receive the necessary support given that the benefits of road conversion would primarily benefit the homeowners on the road that receives the improvement. The City may pursue bonding or other measures to cover water and sewer elements. Additionally, it was agreed to adopt the ranking system model to support the City's initiation process.

POLICY CONSIDERATIONS

POLICY CONSIDERATIONS

After reviewing the history, mechanics, and funding associated with road conversion projects, the Committee began review of all the key issues associated with existing policies involving unimproved streets. As the policy discussion continued to evolve, road paving options, project initiation process, and funding were the three key issues that the committee agreed to place their emphasis. The following discussion and related tables provide a summary of these topics outlining general advantages and disadvantages to consider as the committee began to develop a strategy for developing a recommendation.

Review of Existing Plans

Multi-Modal Master Transportation Plan

In 2013, the City Commission approved the final draft of the Multi-Modal Transportation Plan. The plan was created by a consulting firm known as the Greenway Collaborative. The plan is posted on our website under the Planning Department's section known as "Master Planning Documents." The URL is: http://www.bhamgov.org/government/departments/planning/master_plan_and_guidelines/index.php.

The City has a Multi-Modal Transportation Board (MMTB) that meets regularly. One of the Board's ongoing tasks is to review all upcoming street projects as they relate to the Master Plan. While the plan gives general guidance, the Board reviews each street plan in detail to ensure that all relevant multi-modal improvements that should be included are implemented if possible.

The master plan distilled recommended projects down into four suggested phases. Most of the projects focus on major streets. Where an unimproved street is noted for a project location, they are typically part of a neighborhood connector bicycle route. These routes consist of signs and pavement markings denoting a suggested bike route through the City. The routes do not typically require any changes to a pavement as a part of their implementation. Parts of a neighborhood connector route have already been implemented on parts of unimproved streets as needed in order to make the route complete.

City Code & Charter

Provided as **Appendix C** is Chapter 94 of the Birmingham City Code. The code spells out the procedure for the creation of a Special Assessment District.

Also provided as **Appendix D** is Chapter 10 of the Birmingham City Charter, written at the time the City was formed. It gives the City Commission the right to create special assessment districts.

Petition Information Book

In the late 1990's, the special assessment procedure was modified to help put more facts in the hands of the property owners before a final decision is made. Now, whenever a valid petition is received with over 50% of the owners showing favor toward the project, an informational booklet is prepared and mailed to all owners within the suggested district. The owners are also invited to a neighborhood meeting where staff offers the chance to discuss the issue more. Once the meeting has been held, a few weeks is intentionally provided to give owners the opportunity to change their mind about the project, either for or against. If the petition remains above 50%, the City Commission is advised about the potential project.

All owners are then invited to a public hearing to consider if the project should move forward. If the petition has dropped below 50%, then the project is not moved forward to the Commission.

The most recent petition was distributed to the residents on an unimproved block of N. Glenhurst Dr. The neighborhood meeting was held. The petition started at 56% of the owners in favor. During the waiting period, four residents have asked to have their name removed, and one new resident asked to have their name added. The petition currently stands at 43%. The additional signatures required were not collected and this project did not move forward.

Special Assessment Roll

The last official roll that was prepared was for paving two blocks of Villa Ave., between Adams Rd. and Columbia Ave. The project was completed in 2016.

The petition for this project was received in August, 2015. An informational booklet was distributed, and a neighborhood meeting was held in September, 2015. The unit rate for the new pavement was set adjusted up to \$174.00 per foot based on the bids received in April, 2016. Construction started in June, and was completed in October, 2016.

The project went smoothly and efficiently, and the final cost of the paving assessment district was calculated at \$165.86, which allowed almost all homeowners to receive a bill reduced from what had been expected. A separate assessment roll was created for the replacement of sewer laterals in the right-of-way. The originally estimated price of \$55 was adjusted upward to \$77.07 per foot, based on the contractor’s actual charge. Most homeowners received a bill higher than what was expected.

There was no water lateral replacement cost on this contract, as the City did not have the policy in place at that time that required the replacement of all undersized water services.

Life Cycle Cost Analysis

A comparison of costs being expended to maintain our concrete vs. asphalt permanent pavements is provided below. The costs and the suggested maintenance steps are meant to be averages. Some streets age faster than others, but as a general rule, more frequent and substantial projects need to be initiated

Figure 6: Life Cycle Cost Analysis (2018 Dollars)

YEARS AFTER CONSTRUCTION	ASPHALT	COST PER MILE
0	Original Construction	\$2,000,000
7	Crack Sealing & Rejuvenation	\$17,000
20	Thin Overlay or Resurfacing	\$320,000
40	Resurfacing	\$430,000
60	Resurfacing	\$430,000
80	End of Service Life	
TOTAL		\$3,197,000
COST PER YEAR PER MILE		\$40,000

YEARS AFTER CONSTRUCTION	CONCRETE	COST PER MILE
0	Original Construction	\$2,400,000
30	Joint Sealing	\$6,000
60	Major Patching or Resurfacing	\$430,000
80	Resurfacing	\$430,000
100	End of Service Life	
TOTAL		\$3,266,000
COST PER YEAR PER MILE		\$32,700

COST SAVINGS OF CONCRETE OVER 80 YEAR LIFE SPAN = \$584,000 PER MILE

on the asphalt streets in order to keep them in adequate condition. The overall cost difference, as shown, over the life of the pavement, is estimated at \$584,000 per mile over the 80 service life of an asphalt pavement.

ROAD PAVING OPTIONS

The existing local street system is currently comprised of the following pavement options. Information is provided relative to perceived advantages and disadvantages, and the policy and cost factors if such a street is built today:

PAVEMENT TYPE	PROJECT INITIATION	ADVANTAGES	DISADVANTAGES	Cost per foot for Special Assessment
Cape Seal (No Curbs)	Cape Seal streets are no longer accepted by City. New cape seal application is initiated by City staff.	Low construction cost. Rural appearance. Owners can add parking areas if desired.	Poor durability. Poor drainage. Rough riding surface. Regular maintenance cycles and assessments. Leaves must be bagged. Owners must be charged again for each assessment when cape sealed again.	\$11 - \$15 per foot.
Asphalt with Curbs	Not allowed by current City policy.	Lower construction cost. Drainage can be guaranteed. Leaf pickup provided. Owner not responsible for ongoing assessments.	Durability less than concrete. City general funds responsible for costs.	\$160 per foot.
Concrete with Curbs	Submittal of petition by +50% of owners.	Long term durability, low maintenance. Drainage can be guaranteed. Leaf pickup provided. Owner not responsible for ongoing assessments.	Higher initial construction cost.	\$195 per foot.

PROJECT INITIATION PROCESS CONSIDERATIONS

	ADVANTAGES	DISADVANTAGES
PETITION PROCESS: Owners representing over 50% submit request for paving assessment district.	City Commission can declare district with knowledge that over half of owners are in favor of project. City does not appear as though it is forcing costs on owners that are not supportive of action.	Residents wishing to improve street risk alienating themselves from other residents that do not support project. City rarely initiates projects, even when long term benefits of project outweigh overall costs.
COST ALLOCATION: All street paving costs, including design and inspection, are added together and charged to assessment district. City subsidizes by paying 15% of base cost.	Local street paving benefits immediate owners. General fund dollars from entire City are not directed to benefit a small number of owners.	Cost of assessment is greater than perceived benefit to many owners, reducing owner support.
SECONDARY ASSESSMENTS: Driveway approach(es) measured and charged separately.	Size and cost of driveway approaches can vary greatly. Cost is kept directly proportional to actual benefit.	None.
SECONDARY ASSESSMENTS: Water and sewer lateral replacements are charged by the foot to adjacent owners.	Needed pipe replacements can vary greatly. Cost is kept directly proportional to actual benefit.	Older homes are often owned by long time residents less inclined to support project. Water and sewer costs are more likely added to old homes, while newer homes are not billed.
CORNER LOT ASSESSMENTS: Long side of corner lot is billed at 33% of actual length; City pays for remaining balance.	Owners having side street paved are charged about the same amount as neighbors that are being billed on frontage.	Owners on corners have potential of having to pay two assessments concurrently.
PAYBACK PERIOD: City pays cost of project up front, and allows up to ten years to pay back, with interest at 1% above prime.	Assessment district cost appears more manageable if paid over 10 years.	City must advance pay cost of project, requiring Local Street Fund to carry costs long before revenues are received.

FUNDING CONSIDERATIONS

	ADVANTAGES	DISADVANTAGES
SPECIAL ASSESSMENTS	Cost is allocated to those who benefit specifically from the improvement. Does not need vote of the citizens.	Results in a high cost per property owner thereby making it difficult to getting road improved.
CITY MILLAGE	Road Millage: Cost of road improvement is spread over many individuals resulting in lower cost to property owners who receive the benefit of the improvement.	Road Millage: May be difficult to get road millage passed when some may not get benefit of improvements and/or others have previously

	Operating Millage: Does not need vote of the citizens (unless Headlee override). Can be approved by the city commission.	been special assessed for their road. Operating Millage: City is already near its millage cap which is shrinking every year due to Headlee. Does not give city room to fund other projects or needs that may arise. May effect bond rating as the rating agencies look at millage capacity as a factor of a city's financial health.
BUDGET AMENDMENTS	Road projects are projected five years in advance. This provides clarity in the city's long-term financial planning process and enables the city to manage its millage rates.	There are usually no extra funds available for new projects which are not in the five-year projection. In order to move forward, other road projects would need to be rescheduled or the new project would need to wait five years.
GRANTS	Usually only require a small local share (20-25%) resulting in significant savings to the city.	Grants are not likely to be available for local road improvements. Grants are competitive and are difficult to obtain.
TAX INCREMENT FINANCING	Leverages property value growth to fund improvements.	No TIF legislation exists that the city may employ to pay for local road improvements.

CODE, CHARTER, CURRENT POLICY COMPARISON

The following table compares all elements of the existing City Charter, City Code, and Current Policy as they relate to establishment of a Special Assessment District.

CITY CHARTER	CITY CODE	CURRENT POLICY
Commission has power to declare an SAD. Resolution shall state estimated cost, proportion that is to be charged to general fund, and specific properties involved.	Consistent with City Charter.	Consistent with City Charter.
Commission shall prescribe by ordinance complete	Chapter 94 of City Code was written to comply with Charter, with details.	Not applicable.

CITY CHARTER	CITY CODE	CURRENT POLICY
special assessment procedures.		
Once roll is confirmed, full amount of assessment is a lien on property until paid.	Consistent with City Charter.	Consistent with City Charter.
No action may be instituted to contest the SAD unless within 30 days after confirmation, written notice is provided to the Commission.	Consistent with City Charter.	Not an issue stated in policy.
If a part or all of an SAD is declared invalid or defective, the Commission has the right to correct the problem and start a new SAD.	Consistent with City Charter.	Not an issue stated in policy.
	Commission may request a petition.	Not an issue stated in policy.
	Commission may consider a petition, but is not bound by it. Petition is advisory only.	Consistent with City Code.
	Petitions shall be made on form distributed by Engineer.	Consistent with City Code.
	Petition shall be verified by circulator by signed affidavit.	Consistent with City Code.
	Petition shall be filed with Engineer.	Consistent with City Code.
	Engineer shall provide petition to Manager. Manager shall confirm validity of signatures.	Consistent with City Code.
	Engineer shall prepare a report to Commission to describe nature of project, cost estimate, size of district, and any other pertinent info.	Consistent with City Code.
	If condemnation of property is required as a part of project, the cost may be included in the SAD.	Consistent with City Code.
	Commission shall hold a public hearing. All owners in district shall be notified that they must submit objection at hearing if they wish to later protest to Michigan Tax Tribunal.	Consistent with City Code.

CITY CHARTER	CITY CODE	CURRENT POLICY
	Commission may determine whether to proceed or modify the district. If modified, a new hearing shall be scheduled.	Consistent with City Code.
	If SAD is established, resolution shall include: <ol style="list-style-type: none"> 1. Approving plans and cost estimate. 2. Determining percentage to be paid by general fund. 3. Establishing boundaries of district. 4. Determining method or formula to calculate the cost. 5. Directing preparation of the roll. 	Consistent with City Code.
	Commission may make modifications to district later, but must hold a new hearing if cost or scope has increased.	Consistent with City Code.
	No expenditures shall be made toward project other than preparing plans and cost estimate, prior to confirming the roll.	Consistent with City Code.
	Manager shall prepare assessment roll based on cost estimate of Engineer.	Consistent with City Code.
	Roll shall be filed with Clerk and Commission shall review it.	Consistent with City Code.
	Commission shall confirm assessment roll at a public hearing.	Consistent with City Code.
	Commission shall consider all objections, may correct roll, or direct for new roll to be prepared.	Consistent with City Code.
	If roll is approved, Commission shall direct Manager to spread the roll, and order roll to be on file at Clerk's office.	Consistent with City Code.
	Commission shall direct Treasurer to bill within 60 days,	Resolution has not been stating that billing shall be

CITY CHARTER	CITY CODE	CURRENT POLICY
	unless it is determined that collection shall be postponed until the construction of the improvement, wherein it shall be included in the resolution.	postponed until after construction. However, this has been standard practice.
	Commission shall direct Treasurer to give notice to all owners by mail that roll has been confirmed. Notice shall state if assessment will be due in installments or all at one time.	Notice by mail has not been issued in recent years, but will be followed in future.
	Once roll is confirmed, it is final unless adjusted to reflect actual cost of construction.	Consistent with City Code.
	SAD proceedings are uncontestable unless an appeal to the Michigan Tax Tribunal is instituted within 30 days after confirmation.	Consistent with City Code.
	Failure of City to mail notice, or failure of owner to not receive notice, shall not invalidate roll.	Consistent with City Code.
	Hearings of necessity and confirmation of roll may be combined if all public notice requirements are met.	Consistent with City Code. Note: An attempt to combine hearings has not been made to our knowledge.
	Assessments shall be payable in annual installments, with interest on remaining balance, and penalties shall apply for nonpayment.	Consistent with City Code.
	If property is subdivided after assessment has been levied, but not collected in full, Manager shall proportionally split remaining balance onto the split properties accordingly.	In accordance with State law, assessments shall be paid before the land is sold to new owner.
	Funds collected for SAD shall be held in special account and used to pay expenses of project. If surplus remains after payments, owners shall get reimbursed.	Consistent with City Code.

CITY CHARTER	CITY CODE	CURRENT POLICY
	Assessments shall be a lien against each property until fully paid.	Consistent with City Code.
	Treasurer shall certify on May 1 any delinquent assessments to the Commission, and it shall then be transferred with 15% penalty to City tax roll, collected in the same manner as taxes.	Consistent with City Code.
	If SAD surplus is in excess of expenses, but less than 5%, said excess shall be placed in the general fund.	Consistent with City Code.
	If SAD surplus is in excess of expenses greater than 5%, owners shall be issued a refund. Refunds may be applied to future installment payments, and shall not be made if there is any other evidence of debt outstanding by the assessment.	Consistent with City Code.
	If actual expenses of the SAD are more than 25% in excess of estimate, Commission shall hold a new hearing and confirm additional assessment, noticed in same manner as original assessment.	Consistent with City Code.
	If assessment is declared invalid, payments made shall be applied to reassessment, or refunds shall be made if overpayment exists.	Consistent with City Code.
	If assessment is declared invalid, lien shall remain if equitably charged or by regular billing if proceeding as described can be done so lawfully.	Consistent with City Code.
	If a SAD may apply to a district impacting only one property, said district shall be created by the Commission under the same terms as a regular SAD.	Consistent with City Code.
	Deferral of payments is allowed by reason of hardship, as	Consistent with City Code.

CITY CHARTER	CITY CODE	CURRENT POLICY
	<p>applied for by the Treasurer. Specific information is required in application. Criteria to allow approval of deferment is listed under specific terms. Deferment of payment can extend until death of owner or sale of property.</p>	<p>Note: No owners have officially applied for deferment in past ten years. If application is received, it will be processed in accordance with the Code.</p>
		<p>Petitions are generally advanced to the City Commission only after over 50% of owners are indicated in favor of SAD on a valid petition, and after receipt of informational booklet, and invitation to a neighborhood meeting. When determining majority, calculations are made both by owner and by front foot charged. City, school, or federal owned properties are not included in calculation.</p>
		<p>Standard offering for a new street is 26 ft. wide concrete with curbs. Variations are discouraged.</p>
		<p>Water and sewer system upgrades and assessments for service lateral replacements apply.</p>
		<p>Starting and ending points of project should be limited to appropriate points that are in best interest of City and neighborhood in general.</p>
		<p>Corner properties receive 67% discount for long side frontages.</p>

CURRENT SPECIAL ASSESSMENT DISTRICT POLICY

The following is the written policy based on staff practice in order for a City unimproved street to be nominated for reconstruction into an improved street, with the creation of a special assessment district.

1. Petition Initiation

- a. An interested property owner contacts the Engineering Dept. to inquire about the process. After being advised verbally about the process, if the owner wishes to proceed, a petition form is prepared specifically for the block(s) that were discussed for a potential project. The petition form is emailed to the owner. The owner is encouraged to call back and ask questions as they arise. Important elements to discuss at the beginning conversation include:
 1. Procedure.
 2. Estimated cost per foot charged to residents.
 3. Requirement that water and sewer laterals are also replaced, at additional cost.
 4. Limits of project as envisioned.
 5. If corner discounted properties are within proposed district, how they are charged.
- b. If petition is not resubmitted to the City, the project goes no further.
- c. If petition is resubmitted to the City, Engineering Dept. reviews signatures to verify validity. Owners' names as signed must match City ownership records. If they do not, the petition carrier is notified in order to determine unique circumstances such as recent ownership change, recent name change, etc. Valid signatures must be presented that demonstrate that the ownership signed is over 50% both in total number of affected owners, as well as by front footage.³

2. Information Distribution

- a. The petition carrier cannot be relied upon to contact 100% of the owners. Also, they cannot be relied upon to give the same consistent or correct information to each of the owners that they are in contact with. Therefore, the Engineering Dept. creates an informational booklet specific to the suggested project, and mails it to each owner within the district. The informational booklet shall contain the following information:
 1. Existing conditions analysis, both above ground and underground.
 2. Proposed improvements, including pavement, water, and sewer work.
 3. Project approval process, including public hearings.
 4. Construction process.
 5. Costs, and how interest will be charged if the owner takes advantage of the payback period. If unique circumstances exist, such as corner or condominium properties, those need to be explained so all understand.
 6. Benefits that will arise from newly completed street.
- b. At the same time, all owners are invited to a neighborhood meeting typically located at the Municipal Building on a weeknight evening. The meeting is strictly optional, and no decisions are made. The meeting is offered as an opportunity for neighbors to discuss the pros and cons of the project idea, and to help get all questions answered.
- c. If owners have changed their mind, they need to do so in writing. Owners wishing to have their name removed need to send a letter or an email confirming this. Owners wishing to add their name to the petition need to do likewise. Approximately two weeks are allowed to pass before any further movement is made on the matter. If there are still over 50% of the owners in favor of

³ See Section 4E for special cost and measurement allocations.

the project at that time, per the petition and any written correspondences received, staff will introduce the project proposal to the City Commission, and ask that a public hearing date be set.

3. Project Approval – Determining Necessity and Confirming the Roll

- a. Once a public hearing has been set, all owners are notified by postcard for both the Hearing of Necessity, and the Confirmation of the Roll (if needed). The date must be at least three weeks after the initial introduction to the City Commission, to allow time for an ad to be placed in the local newspaper.
- b. The City Engineer presents the details about the project at the Hearing of Necessity. After taking comments from the public, both written and in person, the City Commission decides whether to approve the project. Once the hearing has been held, the Commission is not bound in their decision based on what percentage of owners are currently in favor, either above or below 50%.
- c. If the Commission approves the project, a second public hearing is held, typically at the next meeting, to confirm the roll. During this time, owners may contact the Treasurer's office and verify what the estimated cost of the assessment will be for their individual property(ies). The City Treasurer presents the details at the Confirmation of the Roll. If approved, a lien is placed on each property at that time, requiring payoff of the assessment prior to the sale of the property. No invoices are mailed to property owners until after the project has been completed, and actual costs have been calculated. At that time, an invoice for each owner is mailed by the Treasurer, indicating that 1/10 of the total assessment is due at that time. Approximately one year later, a second invoice will be mailed, requesting another 1/10 of the total assessment, plus interest on the remaining balance. The interest rate is set at 1% above the prime rate as it exists at the time of the confirmation of the roll.
- d. The Engineering Dept. begins the task of designing the project, so that bids can be solicited at the appropriate time based on when the funding for the project will be available. Historically, special assessment districts are made a priority, such that if the petition process results in a successfully approved project no later than October of any given year, then the project can be designed, bid, and constructed to be completed by the end of the next construction season. The timing is subject to adjustment based on available funding in the budget, other pending projects already underway within the Engineering Dept., and any other important matters that may impact the appropriate timing of the project, as determined by the City.

4. Other Considerations –

- a. Type of Pavement: The standard pavement cross-section offered by the City of Birmingham is a 26 ft. wide concrete street with integral curb and gutter. Owners that wish to challenge this offering with variations are discouraged from doing so. The reasons for encouraging this particular cross-section are listed below. It can be difficult to get over 50% of the owners to agree on a project even when just one option is offered. If owners begin thinking that they can make several modifications, then it will become even more difficult to get a majority of owners to agree. Benefits to the standard cross-section include:
 1. A concrete pavement with curb and gutter provides a durable pavement that will last several decades with little maintenance. Since the City promises to maintain the street at no further cost to the adjacent owners into the future, it is important that the City's preferred cross-section is as cost efficient as possible. The curb and gutter also provides a stable, long lasting edge that helps collect water from adjacent yards, sidewalks, and driveways, and direct it to storm sewers.

2. Residents sometimes ask for design variations, such as improved drainage without curbs, curbs using colored concrete, curbs with differing shapes, etc. All such requests are discouraged unless the owners can demonstrate a unified desire for the variation, at which time they are reviewed on an individual basis. Certain variations, such as improved drainage without curbs, will clearly reduce the expected lifespan of the pavement. Such a variation should not be offered unless owners are willing to accept that the street would still be considered unimproved, and would be subject to future assessments for street maintenance into the future.
- b. Pavement Width
1. The 26 ft. wide standard width was recently affirmed by the City Commission by the approval of the City's Residential Street Width Policy. The 26 ft. width has been the City's standard for new improved pavements since 1997. The width allows for a parked car on both sides of the street, with just enough space left for one vehicle to pass through. The relatively narrow cross-section helps keep speeds down on residential streets, while leaving enough space for street trees between the sidewalk and the curb, on fifty foot or wider rights-of-way.
 2. Relatively few City streets measure less than 50 ft. wide. If they do, the City offers a 20 ft. wide pavement option, which requires parking to be banned on one side of the street.
- c. Length of Project (Logical Project Boundaries): Previous City Commissions have encouraged staff to provide petitions that have a logical beginning and ending point. A variety of considerations go into the logical starting and stopping point for a project.
1. If the entire street segment being paved is relatively short, such as less than 0.5 mile, the City should encourage completion of the entire length.
 2. The project ends should be at 4-way intersections if at all possible. Ending at a 3-way intersection is fine if the street being paved is the one ending at the intersection.
 3. Water and sewer system needs should be reviewed to ensure that completion of the project at the proposed limits does not result in much, if any, work beyond the proposed limits of the project.
 4. Grading, safety, and site distance issues that can be resolved depending on the limits of the project need to be considered.
 5. A project should not be arbitrarily ended at a location such as those noted above so as to meet the 50%+ threshold required on a petition.
 6. Petition limits should be extended if necessary in order to avoid leaving a small remnant block unimproved when every other street in the immediate area will now be improved.
 7. Other special circumstances not listed above should also be reviewed and considered before the limits of the project are finalized.
- d. Special Cost Allocations: Streets that have unique circumstances are considered as described below:
1. Corner Properties – If the longer of a corner property's two sides is the one being paved, the total length is divided by 3. The owner will be charged for 1/3 of the length, and the City will pay the remaining 2/3. This policy generally works so that corner properties are typically charged about the same as other properties on the block. If the short side is being paved, the owner is charged 100%. The discount only applies to single-family houses.

2. If a condominium frontage is being assessed, the number of owners in the entire condominium is divided by the total front footage for the condominium property, and all owners are charged an equal share. Distinctions for location of the owner's unit within the property, or the relative size of the units, is not considered. For purposes of determining if a majority exists, each owner has a "vote" on the ownership count, but only impacts the footage measurement proportionally to their frontage.
3. City-owned properties are not counted in the ownership count when determining whether a majority of owners are in favor of the project. If the project is approved, the City will pay 100% of its property frontage.
4. Public school and federally-owned properties are treated the same as City-owned properties. Their frontages are not included in the count, and if the district is approved, the City will have to pay for their frontage.
5. Non-taxable privately owned properties such as religious institutions are counted in the determination of whether a majority of owners are in favor. These properties are responsible for the cost of the special assessment, at 100% of their frontage.

COMMITTEE RECOMMENDATION:

The Committee received advice from the City Attorney and understand that the City Code and Charter provide sufficient capacity to adapt the policy document and allow for the City to initiate road improvement projects. There is no need to recommend amendments in this area.

TRADE OFF ANALYSIS: STUDY FINDINGS AND PRELIMINARY RECOMMENDATIONS

TRADE-OFF ANALYSIS: CONCRETE VS. ASPHALT

As staff began working internally to establish revised assumptions to adjust the financial model, it was suggested that a more in-depth peer review of our neighboring communities and their experiences with improving streets would provide better data to support any adjustments to the model. Staff recommended that engaging an outside engineering firm to provide a broader perspective regarding the range of possible road design alternatives would enhance the quality of future recommendations.

The decision of the committee regarding road design provides critically important input to support any further iterations of financial model output. Staff requested that the committee consider a recommendation to authorize an engineering firm to conduct the necessary research and information gathering and present a findings summary to the committee.

The work concluded with a findings summary conducted by the firm OHM that equipped the committee with the necessary background and understanding of the associated trade-offs with evaluating road design alternatives to assist in determining the best path forward, primarily with respect to funding options.

The Committee recognizes and discusses the importance of thorough evaluation of all elements of road design alternatives. The Committee seeks to understand the pros and cons of different road design options as they work to develop the most credible and feasible recommendation on how to proceed with the long term improvement program.

The complete findings summary is provided here as **Appendix E**. The report findings, also referred to as the OHM report, are summarized here. The practice of the City has been to engineer new roads with concrete. The OHM report supports this approach as a best practice. However, OHM understood that concrete is often the most expensive alternative to pursue initially and the savings are found in lower maintenance costs over the years.

The Committee asked OHM to explore if there were other paving options that could potentially provide other viable options to homeowners that the City might consider.

The recommended policy, ideally, would begin with the best practice of building the road with concrete material. With the exception of connector streets and streets that carry higher volumes of traffic (threshold to be defined with further input), additional paving alternatives, such as asphalt with concrete curbs, could be allowed for the residents to consider. Page 6 of the findings report illustrates several road paving options and their associated costs to build and maintain.

The following options are intended to support the committee if they desired to allow some flexibility in the paving options, which will likely reduce the costs and may increase interest in residents comfort level in moving forward with the road improvement project. The following table, taken from the OHM report summarizes the design life, initial construction cost, and anticipated maintenance cost for several local road paving options:

Type	Design Life	Initial Cost ¹	Avg. Maint ²
6" Concrete w/curb	30-40 years	\$380/foot	\$2.25/ft/year
7" Concrete w/curb	30-40 years	\$400/foot	\$2.25/ft/year
* 7" Concrete w/curb & 8" drainage layer	40+ years	\$450/foot	\$1.75/ft/year
3" Asphalt on 8" aggregate w/concrete curb	15-20 years	\$325/foot	\$5.00/ft/year
* 4" Asphalt on 8" aggregate w/concrete curb	15-20 years	\$340/foot	\$4.50/ft/year

¹Initial construction cost including administration, sidewalk, driveways, utilities, etc.

²Anticipated total maintenance costs over the life divided by life to determine average.

Of the options listed in the table above, the OHM report indicated that typically 4" asphalt or 7" concrete pavement sections are utilized for local road paving throughout the region. They recommended that the asphalt section include at least 8" of aggregate base, concrete curb and gutter, and underdrains. The following are three potential alternatives that are consistent with committee discussions, to date.

- A) The City could consider the two options that are asterisked in the table above with concrete being the preferred option and an alternate lower cost asphalt option to improve the remaining unimproved streets throughout the City. The cost share would remain the same with the City paying 15% of the total.
- B) The second possible alternative would allow for the different pavement types, but to encourage, greater adoption of the concrete alternative, the City would increase the funding participation greater than 15% recognizing the costs for average maintenance would be lower over time. This alternative, depending on the funding mechanism recommended by the committee could impact the total length of roadway that may be completed within a certain timeframe.
- C) Finally, knowing that the City must fund all maintenance of the new street into the future, and knowing that financially a concrete street will prove to be less of a burden to the street fund over time, the City Engineer will make the determination on the appropriate pavement material for a road improvement project. .

COMMITTEE RECOMMENDATIONS:

The committee recommends that all unimproved streets being reconstructed be constructed in concrete, with the understanding that the final decision for material to be used for road improvements should be made by the Engineering Department.

PROPOSED UNIMPROVED STREETS POLICY

SPECIAL ASSESSMENT DISTRICT

Petition Initiation

The City will conduct a system wide infrastructure ranking of all unimproved streets within the City of Birmingham to prioritize the initiation of projects. The ranking will occur every XX years to ensure the viability and relevance of the ranking does not become stagnant.

The City Engineer will identify and initiate plans to begin the highest priority projects. Selected projects will be presented in the five-year capital improvement plan for adoption through the annual budgeting process.

Homeowners that wish to advance their street paving project more quickly will have the option to start a petition with their neighbors that will be heard by the City. Advanced petitions will be incorporated into the capital improvement plan, where feasible.

ROAD DESIGN OPTIONS

The City Engineer will make all recommendations regarding appropriate pavement type for all paving projects, where an option other than concrete may be feasible.

Type of Pavement:

The City will continue to recommend the use of concrete material to convert unimproved roads as a preferred option due to its durability and low maintenance requirements. With the exception of connector streets and streets that carry higher volumes of traffic (threshold to be defined), additional paving alternatives, such as asphalt with concrete curbs, may be available.

Of the options listed in the table below, the report indicated that typically 4" asphalt or 7" concrete pavement sections are utilized for local road paving throughout the region. OHM recommended that the asphalt section include at least 8" of aggregate base, concrete curb and gutter, and underdrains.

The City must fund all maintenance of the new street into the future, and knowing that financially a concrete street will prove to be less of a burden to the street fund over time.

Type	Design Life	Initial Cost ¹	Avg. Maint ²
6" Concrete w/curb	30-40 years	\$380/foot	\$2.25/ft/year
7" Concrete w/curb	30-40 years	\$400/foot	\$2.25/ft/year
* 7" Concrete w/curb & 8" drainage layer	40+ years	\$450/foot	\$1.75/ft/year
3" Asphalt on 8" aggregate w/concrete curb	15-20 years	\$325/foot	\$5.00/ft/year
* 4" Asphalt on 8" aggregate w/concrete curb	15-20 years	\$340/foot	\$4.50/ft/year

¹Initial construction cost including administration, sidewalk, driveways, utilities, etc.

²Anticipated total maintenance costs over the life divided by life to determine average.

Preferred Standard Concrete Cross Section:

The standard pavement cross-section offered by the City of Birmingham is a 26 ft. wide concrete street with integral curb and gutter.

The City will continue to promote the benefits to the standard concrete cross-section, described as a concrete pavement with curb and gutter that provides a durable pavement that will last several decades with little maintenance. Since the City promises to maintain the street at no further cost to the adjacent owners into the future, it is important that the City's preferred cross-section is as cost efficient as possible.

The curb and gutter also provides a stable, long lasting edge that helps collect water from adjacent yards, sidewalks, and driveways, and direct it to storm sewers.

Pavement Width

The 26 ft. wide standard width was recently affirmed by the City Commission by the approval of the City's Residential Street Width Policy. The 26 ft. width has been the City's standard for new improved pavements since 1997. The width allows for a parked car on both sides of the street, with just enough space left for one vehicle to pass through. The relatively narrow cross-section helps keep speeds down on residential streets, while leaving enough space for street trees between the sidewalk and the curb, on fifty foot or wider rights-of-way. Relatively few City streets measure less than 20 ft. wide. If they do, the City offers a 20 ft. wide pavement option, which requires parking to be banned on one side of the street.

Logical Project Boundaries

Previous City Commissions have encouraged staff to provide petitions that have a logical beginning and ending point. A variety of considerations go into the logical starting and stopping point for a project. Given that the initiation process will define project boundaries based on ranking factors, the likelihood of having illogical boundaries is virtually eliminated. However, in circumstances where there is a question of appropriate boundaries, the following guidance should be followed:

If the entire street segment being paved is relatively short, such as less than 0.5 mile, the City should encourage completion of the entire length.

The project ends should be at 4-way intersections if at all possible. Ending at a 3-way intersection is fine if the street being paved is the one ending at the intersection.

Water and sewer system needs should be reviewed to ensure that completion of the project at the proposed limits does not result in much, if any, work beyond the proposed limits of the project.

Grading, safety, and site distance issues that can be resolved depending on the limits of the project need to be considered.

A project should not be arbitrarily ended at a location such as those noted above so as to meet the 50%+ threshold required on a petition.

Petition limits should be extended if necessary in order to avoid leaving a small remnant block unimproved when every other street in the immediate area will now be improved.

Other special circumstances not listed above should also be reviewed and considered before the limits of the project are finalized.

Project Funding

The source of funding used to support conversion of unimproved roads currently comes from a combination of special assessments and the general fund. Eighty-five percent (85%) is funded through special assessment, while fifteen percent (15%) is paid by the general fund.

Special assessments are used as a funding source to offset a portion of the cost of a road where it is being upgraded to an improved road or when the road is being cape sealed. For these projects, the City will pay for the improvement in advance and bill the property owners. The payback from the property owners differs depending on the type of road improvement being done. When a road is being improved, the special assessment is generally set for 10 years.

If the City Engineer agrees that an alternative pavement material may be used for an improvement project there will be an attempt to achieve cost neutrality for the improvement. To achieve this the following outline will be used as a

- Independent Cost Estimate: Engage an industry professional that does not actively bid projects to provide general estimates of the work and establish a baseline estimate to use as a measure for evaluating actual cost proposals based on a standard street cross section as outlined in Appendix F.
- Any extra costs resulting from modifications to the standard cross section specifications shall be assumed by the property owners on the respective street if they are not related to the need to adjust the standard cross section due to usage and traffic volume on the street.
- If the project is to proceed with the standard cross section in Appendix F, no extra costs would be assessed.

Special Cost Allocations

Streets that have unique circumstances are considered as described below:

Corner Properties – If the longer of a corner property's two sides is the one being paved, the total length is divided by 3. The owner will be charged for 1/3 of the length, and the City will pay the remaining 2/3. This policy generally works so that corner properties are typically charged about the same as other properties on the block. If the short side is being paved, the owner is charged 100%. The discount only applies to single-family houses.

If a condominium frontage is being assessed, the number of owners in the entire condominium is divided by the total front footage for the condominium property, and all owners are charged an equal share. Distinctions for location of the owner's unit within the property, or the relative size of the units, is not considered. For purposes of

determining if a majority exists, each owner has a “vote” on the ownership count, but only impacts the footage measurement proportionally to their frontage.

City-owned properties are not counted in the ownership count when determining whether a majority of owners are in favor of the project. If the project is approved, the City will pay 100% of its property frontage.

Public school and federally-owned properties are treated the same as City-owned properties. Their frontages are not included in the count, and if the district is approved, the City will have to pay for their frontage.

Non-taxable privately owned properties such as religious institutions are counted in the determination of whether a majority of owners are in favor. These properties are responsible for the cost of the special assessment, at 100% of their frontage.

APPENDIX A

SAMPLE PETITION BOOKLET



VILLA AVENUE PAVING

August 31, 2015

Dear Property Owner,

The City of Birmingham has received a petition signed by a significant number of the property owners on the above street requesting that the road be improved with a permanent pavement and curbs. Having the road paved under a special assessment is a significant decision, which can raise questions.

The attached report has been prepared to help answer questions about the project, and assist you in confirming your final position. In order to address any issues this report does not explain, or if you have any individual issues, we have scheduled an informational meeting for all property owners to attend. It is intended to be a forum to encourage all involved to learn details of the project, and to allow for City staff to answer any questions you may have before the petition process moves to the City Commission for consideration. Attendance is not mandatory, regardless of your position on this issue. However, we encourage you to attend. At your discretion, it may be constructive to share this information with tenants if appropriate.

The final decision to proceed with the project rests with the City Commission. It has typically been the Commission's preference to listen to what the wishes of the neighborhood are. Should your name remain on the petition, it will be considered as supporting the project. Should your name not be on the petition, it will be considered not in support of the project. If you have signed the petition, but you no longer support the project, you may remove your name by submitting a letter or email to the Engineering Department. If you wish to add your name in support, a letter or email may also be sent. Those that wish to make their position known and present their reasons, would best respond by letter, however, you are also invited to present your thoughts at the time of the public hearing. Should an official "public hearing of necessity" be scheduled, you will be sent notification at a later date.

The informational meeting will be held on **Thursday, September 10, at 6:30 P.M.**, in the second floor conference room #205 located above the Police Department at the Municipal Building, 151 Martin St. It is best to enter the side door off of Pierce St., and proceed upstairs.

If you have any questions relative to the meeting, or the project in general, please contact Austin Fletcher at 248-530-1839, anytime between 8 A.M. and 5 P.M. weekdays.

Sincerely,

Paul T. O'Meara, P.E.
City Engineer
pomeara@bhamgov.org

Austin W. Fletcher, P.E.
Assistant City Engineer
afletcher@bhamgov.org

PROPOSED PROJECT REPORT

VILLA AVENUE PAVING

Adams Rd. to Columbia Ave.



**City of Birmingham
Engineering Department**

August 31, 2015

**PROPOSED PROJECT REPORT:
VILLA AVENUE PAVING**

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I. INTRODUCTION

Recently, the residents on Villa Avenue between Adams Road and Columbia Avenue signed and submitted a petition requesting that the City install a new paved surface on their street. The following report has been prepared to allow property owners in the affected area to understand the full impact of the idea.

With the submission of this petition, verified signatures representing fifty-eight percent (58%) of the properties on this street indicated that they would be in favor of a paving project. Anyone who signed the petition, who, for whatever reason, is no longer in favor of the project, will need to indicate so in writing to our office to have his or her name removed. Likewise, anyone that wishes to add his or her name in favor of the project will need to submit a note in writing to our office indicating this. Mailed letters or emails are accepted for this correspondence.

The following report has been prepared to allow property owners in the affected area to understand the full impact of the idea.

II. EXISTING CONDITIONS

HISTORY

Villa Avenue (between Adam Avenue and Columbia Avenue) was originally platted in 1914 as part of Birmingham Villas with a fifty (50) foot road right-of-way. The road was originally constructed as a gravel road, but had a chipseal surface placed on it beginning in approximately the 1940's.

In 1916, the nine and a half (9.5) foot public alley (behind the lots on the south side of Villa Avenue) was vacated and added to the road right-of-way, widening it to fifty-nine and a half (59.5) feet by order of the Circuit Court.

In 2014, a new water main was installed on this street. The old four (4) inch water main that originally served the homes on this street was abandoned, and a new eight (8) inch diameter water main was placed in service. At the time of the water main replacement, the lead services that were encountered were replaced with new pipe up to the stop box (right behind the sidewalk).

ROADWAY CONDITIONS

Villa Road was originally constructed as gravel, with little provision for drainage. In the late 1940's, a chip seal surface was added to provide stability and reduce dust. The existing road surface on Villa Road was repaired and resealed in 2014 to restore the road after the water main project. The existing road surface is approximately twenty (20) feet, but there are areas where it is wider to allow for on-street parking in front of some homes. The roadway is generally centered in the fifty-nine and a half (59.5) foot wide City Right of Way.

The existing sidewalks on Villa Road are generally five (5) feet wide. The sidewalk ramps at the intersections have been updated to current standards with more recent projects.

III. PROPOSED IMPROVEMENTS

ROAD IMPROVEMENTS

The City's standard road width in a residential area is twenty-six (26) feet, measured between the face of the curbs. A recent example of how this width appears can be found on St. Andrews Rd. (north off of Maple Rd. between N. Eton St. and Coolidge Hwy.).

Villa Road has a fifty-nine and a half (59.5) foot wide right-of-way. After the installation of the road as described above, there will be approximately ten (10) feet of grass between the sidewalk and the curb. Typically, tree roots grow in the direction of available water. In the case of street trees, the roots tend to grow towards the adjacent front yards, and away from the street. The impervious nature of the hard gravel road, and later the sealed paved surface, discourages the growth of roots in the area of the road. Nevertheless, we cannot guarantee what impact this project will have on each tree until the project is underway, as each tree is different.

The sidewalks will generally remain as they are today, with repairs installed where they are damaged to install the sewer leads.

Since all existing trees were installed relatively close to the City sidewalks, no trees are slated for removal as a result of this project. It should be noted that the City has constructed several new streets with similar situations, and typically very few trees are lost due to construction. However, since the risk of damage is present, homeowners need to be aware that some tree loss may occur, either during construction, or subsequent to it.

A cursory review of the existing sewers indicates the possible need for improvements. However, additional research and/or a study will be required in order to determine the extent and type of improvements, if any. This will be conducted by the City once the project is authorized and before the design begins to ensure all necessary pipe replacement and/or repairs are done to ensure that the pipe is stable for many years to come. It should be noted that if improvements are deemed required to the City sewer, it will not affect (increase) the cost of the special assessment.

SEWER LATERAL REPLACEMENT

Beginning in 2007, whenever the City is constructing a new pavement such as envisioned in this project, each home's sewer lateral must be considered relative to its remaining service life. Each homeowner is responsible for the maintenance of their sewer lateral from the home to the City sewer connection. The portion from the right-of-way line to the City sewer can be quite costly to repair if done on an emergency basis because it has collapsed. Experience has shown when older sewer laterals are replaced in conjunction with a street renewal project, the cost of the work is generally substantially reduced. Replacing older sewer laterals also significantly reduces the possibility of the new pavement having to be cut and patched afterward due to the continuing decline of sewer laterals. With that in mind, should the City Commission authorize the installation of a new pavement, all homes with sewer laterals older than fifty (50) years (the expected service life of an underground pipe from that era), will be included in a second special assessment district requiring removal and replacement of the sewer lateral in the right-of-way at homeowner expense.

WATER SERVICE REPLACEMENT

In addition, residents wishing to have their water service lateral upgraded from the property line to the City main will be given the opportunity to separately contract with the contractor for this work. Past experience has shown that the cost of this work is usually reduced significantly from the normal open market price. Water service lateral upgrades are appropriate for those homes that may be expanded or replaced in the future. Involvement in this upgrade is strictly voluntary on the part of each homeowner.

IV. PROJECT APPROVAL PROCESS

PUBLIC HEARING TO AUTHORIZE PROJECT

Installing a new permanent improved pavement on Villa Avenue will require that the City Commission authorize the creation of a special assessment district (SAD). The open informational meeting described on the cover letter of this booklet is meant to provide a forum to ensure that you fully understand what is being proposed prior to scheduling the Public Hearing. After the open informational meeting described on the cover letter is held, if it can be demonstrated that a majority (over 50%) are still in favor of the road paving plans, City staff will forward the petition to the City Commission, and recommend that a Public Hearing of Necessity of this project be scheduled. The Public Hearing date will likely be set approximately four (4) weeks later. City staff will invite all property owners by individual notice (and advertise in the local press) to a Public Hearing for the purpose of taking comments in regard to the proposed project.

The Public Hearing will provide a forum for those impacted by the project to discuss the matter with the City Commission prior to any decision on the project being made. Any interested party may provide comment either by appearing and speaking at the meeting, or filing a letter with the City Clerk, preferably one (1) week prior to the scheduled hearing date.

After the Public Hearing is closed, the City Commission will determine if the proposed project is necessary and advisable. If they vote in favor of the project, the City Assessor will be directed to prepare a special assessment roll identifying all properties to be assessed, and the estimated amounts to be assessed against each property (described below). A second Public Hearing will be scheduled to confirm the roll of assessments.

PUBLIC HEARING TO CONFIRM ASSESSMENTS

The City Commission will then schedule another Public Hearing for the confirmation of the roll. The City will again invite all property owners to this hearing. Property owners will be able to determine their particular assessment at the City Clerk's office for a period of ten (10) days prior to the hearing. The City Commission may confirm, correct, revise, or annul the special assessment roll.

A property owner or party-in-interest may file a written appeal of the special assessment with the Michigan Tax Tribunal within thirty (30) days of the confirmation if the property owner or party-in-interest, or their agent, appears and protests the assessment at the Public Hearing held for the purpose of confirming the roll. Appearance and protest may be made in person at the hearing, or may be made by filing a letter with the City Clerk prior to the hearing. If a protest is not made at the Public Hearing, an appeal may not be filed with the Michigan Tax Tribunal.

If the Commission confirms the roll, the Engineering Department will begin design of the project. After construction takes place, and final costs are available, the roll is subject to adjustment after the actual cost of construction is determined.

V. CONSTRUCTION

ANTICIPATED CONSTRUCTION SEQUENCE

Construction will likely take the following course:

1. The existing road surface will be removed or pulverized.
2. City sewer will be replaced and/or repaired (if determined necessary).
3. Sewer and water services will be replaced on an as-needed basis.
4. The existing storm drains will be abandoned, and new catch basins will be installed to accommodate the new road design. Short sections of storm sewer will be installed to drain these new basins.
5. The new grade of the road will be roughed out; generally about twelve (12) inches lower than the existing road, to ensure that all front yards drain properly to the street.
6. A gravel road base will be prepared.
7. New concrete pavement with integral curb will be installed. The new pavement will take at least seven (7) days to cure to gain strength before it can be re-opened to traffic.
8. New concrete driveway approaches will be installed. The drive approaches will match the width as needed for each existing driveway, and will be replaced complete from the sidewalk to the new curb.
9. The existing sidewalks will be repaired (where needed) to provide a consistent walking surface and new sidewalk ramps will be installed that meet current ADA regulations.
10. All yard areas within the right-of-way will be graded off, and topsoil will be placed. Front yards will generally be sodded. Seed and mulch will be used in small areas where sod is impractical, in areas where sod would not be watered, and adjacent large trees. Seed will also be installed upon written request.
11. The Contractor will return for a short period of time (normally two weeks) to ensure that the grass is growing sufficiently in all disturbed areas. Homeowners are encouraged to water and maintain new lawn areas after the Contractor's work has been completed.

The above phases may be interchanged somewhat based upon Contractor's preference, and weather conditions.

Access to each property's driveway will be maintained during the majority of the work. Access may be limited during the following operations:

1. City sewer or sewer service installation directly in front of the driveway approach.
2. Installation of new catch basins and connections to City sewers.
3. Installation of the concrete pavement.
4. Installation of the concrete drive approach (or sidewalk).

Of the above, only items 3 and 4 should involve overnight periods. Once the new concrete is placed, it is important that all traffic stay off a minimum of seven (7) days. Note that the time between the beginning of road base construction until the drive approach is ready to be driven on can be as much as three (3) weeks. Sewer work will impede access during the day, but traffic will be permitted to return at night.

All residents will be notified ahead of time if access is to be restricted, so that vehicles may be pulled out if needed.

It is anticipated that if this project is approved by the City Commission in the fall of 2015 that the construction on this project should be included in a larger contract during the 2016 construction season.

INSPECTION

During construction, a City Inspector will be assigned to the project. The City Inspector and the Contractor's Foreman will be on site every day that work is occurring, and will be available to discuss any concerns or problems that you have as a result of the project. The Engineering Department will also be available between 8:00 A.M. and 5:00 P.M. weekdays to respond to any concerns that cannot be resolved at the work site (248-530-1840).

SPECIAL TREATMENTS

Note that any special landscaping treatments in the right-of-way, such as underground sprinklers, brick pavers, wood ties, or shrubbery will be impacted by the project. These special items will be removed if they will be inappropriate relative to the new street. Items such as underground sprinklers will likely be damaged or destroyed. Any repairs or replacement to sprinkler systems or other special landscaping treatments (within the right-of-way) will need to be accomplished by the property owner, prior to project completion, at their own expense. Replacement of such items will be subject to the provisions of a Special Treatment License.

VI. COSTS & FINANCING

ASSESSABLE COSTS

Assessable costs include grading, street surfaces, driveway approaches, sidewalks, curb and gutter, drainage structures, and final restoration. The City of Birmingham pays for 15% of the cost of the project. The adjacent property owners share the remaining 85%. The estimated assessment for this project is approximately \$135.00 per front foot. The estimated cost includes engineering design, inspection, and project administration. Should bids come in significantly different than anticipated, City staff will review the costs and make an appropriate recommendation to the City Commission.

FINANCING INFORMATION

Once the assessment has been confirmed (at the estimated rate), and funding has been authorized, billings for the first installment shall be due and payable within sixty (60) days after billing. Normally this occurs near the starting date of the project. Bills not paid when due will be subject to additional interest and penalties. If you desire to pay the cost of the assessment over a ten-year period, you will pay interest at the rate fixed by the Commission at the time of the confirmation hearing. The interest rate selected reflects current market conditions, but will

not exceed 12%. You may pay off the assessment, including interest accrued to date; or you may pay the total amount at the first payment date and not accrue any interest. If you elect to pay in ten (10) installments, interest will then be charged to the second and subsequent bills, based upon the unpaid balance. Subsequent bills will arrive approximately every twelve (12) months thereafter, until the assessment is paid.

The following chart provides an example of the assessment period over ten (10) years using the rates specified above. An interest rate of 5% has been selected for this example, only.

For this example, a 50 foot lot width will be used, and a 130 square foot driveway approach. In addition, the sewer lateral replacement is estimated at \$55.00 per linear foot for 30 feet in the road right of way. The assessment for this parcel would be calculated as follows:

Paving Assessment:	50 LF @ \$ 135.00 / LF =	\$ 6,750.00
Drive Approach:	130 SF @ \$ 5.75 / SF =	\$ 750.00
Sewer Lateral Replacement:	30 LF @ \$ 55.00 / LF =	\$ 1,650.00
	TOTAL:	\$ 9,150.00

Total Cost = \$ 9,150.00
 Assumed Interest Rate = 5%
 Loan payable over 10-year period.
 Principal payments = \$ 9,150.00 divided by 10 = \$ 915.00

No interest on first payment.
 Interest due on unpaid balance.

YEARS	PRINCIPAL	UNPAID BALANCE	INTEREST CHARGE	YEARLY PAYMENT
1st Year	\$ 915.00	\$ 8,235.00	\$ -	\$ 915.00
2nd Year	\$ 915.00	\$ 7,320.00	\$ 411.75	\$ 1,326.75
3rd Year	\$ 915.00	\$ 6,405.00	\$ 366.00	\$ 1,281.00
4th Year	\$ 915.00	\$ 5,490.00	\$ 320.25	\$ 1,235.25
5th Year	\$ 915.00	\$ 4,575.00	\$ 274.50	\$ 1,189.50
6th Year	\$ 915.00	\$ 3,660.00	\$ 228.75	\$ 1,143.75
7th Year	\$ 915.00	\$ 2,745.00	\$ 183.00	\$ 1,098.00
8th Year	\$ 915.00	\$ 1,830.00	\$ 137.25	\$ 1,052.25
9th Year	\$ 915.00	\$ 915.00	\$ 91.50	\$ 1,006.50
10th Year	\$ 915.00	\$ -	\$ 45.75	\$ 960.75
TOTALS	\$ 9,150.00		\$ 2,058.75	\$ 11,208.75

Average payment per year = \$ 1,120.88

Note that the billing cycle may begin before the project is completed. There will be no refunds on interest paid by any property owner if this occurs.

VII. POST-CONSTRUCTION

BENEFITS

If the project is constructed, once completed, there are several benefits to be derived. As with other curbed streets, street-side leaf pickup during the months of October and November will be provided. Leaves need to be deposited at the curb, and the Department of Public Services will make two (2) pick-ups on each street, per year, at no additional cost. Once the road is paved, the City will be fully responsible for its continued maintenance. This will include patching, crack sealing, and eventually, resurfacing or complete reconstruction.

VIII. DISCLAIMER

The information provided in this report was based upon facts at the time written to the best of the Engineering Department's knowledge. The City of Birmingham reserves the right to change the policies and procedures noted herein without notice based upon changing conditions that may be appropriate in the future. If you have knowledge that any of the information contained in this report is incorrect, please contact the City of Birmingham Engineering Department as soon as possible to notify them of any inaccuracies.

APPENDIX B

PEER REVIEW



MEMORANDUM

Department of Public Services

DATE: July 23, 2018

TO: Ad-hoc Unimproved Street Study Committee

FROM: Aaron J. Filipski, Public Services Manager
Paul T. O'Meara, City Engineer

SUBJECT: Neighboring Communities - Street Upgrade Policies

As this committee examines Birmingham's street improvement policies and explores potential changes, it may be useful to reference the policies of neighboring communities. The following report summarizes policy differences between Farmington Hills, Rochester Hills, Royal Oak, Troy, and the Oakland County Road Commission.

The information was compiled mostly through conversation with relevant staff at these agencies. A standardized questionnaire was sent as well, with limited response. At the beginning of this process we sought insights from the smaller southeast Oakland County communities that are most similar to Birmingham, such as Clawson, Berkley, Huntington Woods, and Pleasant Ridge. These communities have long had a fully-improved local road system that appears to date back to the 1950s, and current staff at these communities had few historical insights to share.

The policy examination revealed several key areas in which policies differ between communities. They include resident support thresholds for the instigation of a cost/viability study and final project approval, assessment cost sharing, and payment terms. It also considered current unimproved street mileage and maintenance practices. The following chart summarizes the information:

	Miles of Unimproved Roads	Use of Chip Seal For Maintenance?	Cost Study/Informational Meeting Threshold	Project Approval Threshold	Based on	Front Footage Assessment Cost Share % (City/Owner)	Payment Term (Years)
Farmington Hills	22	No	25%	51%	Parcels	20/80	10
Rochester Hills	20	No	60%	61%	Parcels	40/60	15
Royal Oak	3.6	No	n/a	50%	Footage	50/50	15
Troy	10	Yes	50%	50%	Footage	50/50	10
Birmingham	26	Yes	50%	50%	Footage	15/85	10

The following sections highlight noteworthy differences among several of the studied communities.

Farmington Hills

Among the cities examined, Farmington Hills is most similar to Birmingham in terms of unimproved street surface quantity. It maintains 22 miles of unimproved gravel roads through frequent grading and the application of dust control measures. Unlike Birmingham, Farmington Hills' unimproved streets are not chip sealed. An important difference from Birmingham is that even after a road is paved, it is not rehabilitated unless another assessment district is created.

The process to upgrade to a fully-improved street is petition-driven, although it only requires 25% interest from affected property owners to trigger a city-performed preliminary cost and viability study. The lower threshold makes it easier for interested petitioners to obtain preliminary cost estimates, but risks spending staff time and resources on projects that have a greater potential for rejection. Reducing this threshold can also give the appearance of staff 'taking sides' by encouraging discussion when there is not a majority in favor of exploring an improvement.

Farmington Hills also has a 'directed' road improvement policy and procedure. The 2015 policy notes:

"...in instances where road conditions have become seriously degraded and become an issue of safety and overall community appearance, it may become necessary for City Council to initiate a road reconstruction project without a petition. The objective of this policy is to establish a process for DPS staff to evaluate and recommend a directed road reconstruction special assessment district to the City Manager and City Council."

The policy considers regularly-updated road pavement condition assessments in determining eligibility and project prioritization. Note: the excerpt above uses the term *reconstruction*, implying that it only applies to the reconstruction of existing improved surfaces. Within the context of the full policy, however, it is clear that it also applies to unimproved streets. The full policy and other background information is included in attachment A.

Rochester Hills

Rochester Hills publicizes an annual 'call for projects' during the months of September and October to gauge public interest in special assessment projects, including gravel street improvements. During the 60-day time frame, property owners desiring an improvement may submit an informal petition indicating at least 60% homeowner interest. Subsequent steps follow a defined schedule and process similar to Birmingham, including public meetings, circulation of official petitions, etc.

By limiting submissions to the defined time frame, the city can better plan for and schedule potential projects. Staff efforts on such initiatives can be more focused and the various tasks related to administering SAD projects can be accomplished more efficiently. Additionally, by publicizing the request regularly, the city is continually educating the public on their available options, which can have the effect of starting conversations among neighbors. One drawback is that if there is momentum and interest in pursuing an improvement outside of the designated time frame, it may wane if forced to wait a number of months before being able to proceed

through the process. It could also potentially strain staff if multiple request are received simultaneously.

Another noteworthy feature of Rochester Hills' street improvement policy is that it provides homeowners an inflation-indexed assessment cap. Details of the procedures and policies described here are included in attachment B.

Royal Oak

Royal Oak maintains relatively few unimproved roads – only 3.6 miles out of an approximate 200 miles. Within the past few years, Royal Oak has taken a more aggressive stance to encourage residents to submit petitions, hoping to eventually remove the remaining unimproved roads from their system.

In order to encourage resident support for street improvements, Royal Oak has extended a considerable discount to residents during the term of a local road millage. Typically assessed the full cost for an improvement, the incentive offers a 50% discount for property fronting an improvement, and 75% discount for side lots. Staff indicated that the incentive has largely been successful, having upgraded 7 of unimproved streets since the 2015 millage. Additional detail is provided in attachment C.

Road Commission for Oakland County

Although not included in the table above, staff also spoke with the local roads manager for the Road Commission. In townships, maintenance of all public streets is the duty of the Road Commission. Unlike cities, the Road Commission has no legal authority to force a special assessment district. Roads that are paved are not invested in further, other than for patching holes and keeping them safe. Property owners must petition the Road Commission to get a rehabilitation project started, and owners must pay 100% of the assessment cost. Gravel roads must also be petitioned and paid for by assessment in order to be paved.

At times, roads get in such poor condition that the County has explored the idea of removing the old asphalt and making it a gravel road again. That too would involve a cost for which there is no source of funds. It also would be a setback for the road system, so to date, that has not yet occurred.

Attachment A

Supplemental Information

City of Farmington Hills

Policy Number: 24.4 Pavement Management System Self-Assessment Practices Manual	Subject: Directed Special Assessments for Road Improvements
Revised: N/A Issued: 4/27/15	Page: 1 of 2
Intent: Establish a policy and procedure for submitting a directed road improvement special assessment district project to City Council.	
Applies to: All divisions of the Public Services Department (DPS) Employees.	

I. Objective

Current City Charter, Ordinances and Policies prescribe a special assessment district (SAD) process for improvements/reconstruction of neighborhood streets. In the past, SADs have been brought to City Council based on a neighborhood petitioning process. However, in instances where road conditions have become seriously degraded and become an issue of safety and overall community appearance, it may become necessary for City Council to initiate a road reconstruction project without a petition. The objective of this policy is to establish a process for DPS staff to evaluate and recommend a directed road reconstruction SAD to the City Manager and City Council

II. Procedures Relating to Directed Road Improvement SAD's for Local and Non-Residential

1. The DPS shall update the City's road pavement condition assessment on at least a bi-annual basis (every other year).
 2. Based on the pavement condition assessment, roads with an average PASER rating (or equivalent) of a 2.75 or less, within a district to be defined by the DPS Director, are considered to be beyond their useful lives, in very poor condition, a public health and safety deficiency, a detriment to the community at large, and in need of reconstruction. The boundary of the district shall be determined by considering recognized neighborhoods in terms of commonality in the age of the existing roads, economics of the improvement project, and the reasonableness of providing the improvement.
 3. The DPS shall develop cost estimates for the reconstruction of the local and non-residential roads in such defined districts, as well as the estimated cost for each property within the districts.
 4. The DPS will then review and prioritize these districts, placing them into a 5 year local road capital improvement plan (CIP).
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5. The City Manager shall direct staff to proceed with submitting the road improvement special assessment district projects to City Council based on the prioritization and projects listed in the local road CIP, such that Council can then consider proceeding with initiation of the project and special assessment in the manner provided under the City Charter and Code of Ordinances.
 6. Owners within these project areas will be notified, in writing, about their road conditions and provided with information on the City's special assessment process, public hearings, and how payments can be spread over several years as determined.
 7. Deferments, special considerations and/or financing may be available under State laws or the City Charter for those that meet income eligibility requirements.
 8. The plans and specifications prepared by the DPS for Directed Road Improvement SADs shall provide for the road to be constructed with the most cost effective and durable cross-section, as determined by the Director of DPS, to achieve a minimum 20 year design life.
 9. When a district reaches a PASER rating of 4 or less, the property owners in the district will be notified in writing by City staff. This policy does not preclude residents from utilizing the process of submitting petitions to City Council for an SAD for reconstruction of their roads other capital pavement preservation practice, as appropriate for the pavement condition and as approved by the Director of Public Services in their neighborhood.
 10. The determination of the units of benefit, no less than 1 and no more than 1.3, shall be calculated by the City Assessor utilizing the Assessment Formula Policy for Residential and Non-Residential Road Improvements, as adopted by City Council on April 27, 2015.
 11. Special assessment deferments shall be determined on a case by case basis, after application to the State of Michigan has been made. The City's Finance Director, according to the City of Farmington Hills Application for Special Assessment Deferment, would then make a recommendation to City Council for consideration.
 12. City Council shall determine, based on city staff recommendation, the length of repayment term for the special assessment.

**CITY OF FARMINGTON HILLS
ASSESSMENT FORMULA POLICY FOR
RESIDENTIAL AND NON-RESIDENTIAL ROAD
IMPROVEMENTS**

A determination is made as to the number of homesites in a given special assessment district. The average homesite size in the district is determined by dividing the total abutting roadway footage by the total number of homesites in the district. The units of benefit are derived for each homesite by utilizing the Declining Rate Formula. The rationale behind the Declining Rate Formula is that as the frontage of a homesite increases beyond a certain point, the amount of benefit received increases, but at a lesser rate.

The methodology we are using was developed by the Oakland County Road Commission and is used consistently on Road Commission assessment Projects for all local roads within the County. It has been upheld in the courts in the past as an equitable way of assessment. Each homesite will receive somewhere between 1.00 units and 1.30 units of benefit, with the majority receiving 1.00 unit of benefit.

There are three (3) special conditions for homesites which abut a roadway or roadways on more than one property line.

1. Condition – A homesite which abuts two local roadways, both of which are to be improved.

Procedure – The homesite is assessed by applying the total abutting footage to the improvement, to the Declining Rate Formula. **The maximum unit benefit to the property for both roadways is 1.30.**

2. A homesite which abuts two local roadways, one of which is to be improved and the other to remain in its existing condition.

Procedure – The homesite is assessed by applying the total footage abutting both roads to the Declining Rate Formula and then proportioning that unit of benefit to the two roadways. That portion of benefit received by the proposed road improvement is included in the assessment district, with the portion of benefit for the unpaved road assessed when the road is improved through a later assessment district. **The maximum unit benefit to the property for both roadways is 1.30.**

- 2a. A homesite which abuts two roadways (one local road and one major road), where the local road is to be improved and the major road remains in its existing condition.

Procedure – The homesite is assessed by applying the total footage abutting only the local road to the Declining Rate Formula. That portion of benefit received by the proposed road improvement is included in the assessment district. **The unit of benefit to the property for the local road will be between 1.00 and 1.30. The portion of benefit for the major road, if and when the major road is improved**

through a later assessment district shall be no greater than the difference of 1.30 and the unit of benefit applied to the local road, i.e., between 0.00 and 0.30. The maximum unit benefit to the property for both roadways is 1.30.

3. A homesite which abuts two local roadways, one of which has previously been improved and the other is proposed to be improved.

Procedure – The homesite is assessed by applying the Declining Rate Formula to the total footage abutting both roads. Subtract the unit of benefit paid previously from the unit of benefit received from the entire frontage. This will result in the unit of benefit for this assessment district. (Normally this benefit will be between 0.01 and 0.30 units). **The maximum unit benefit to the property for both roadways is 1.30.**

Note: Major and Local Roads are those City Roads certified by the Michigan Department of Transportation, respectively.

Attachment B

Supplemental Information

City of Rochester Hills

City of Rochester Hills

Special Assessment District Information for Paving Local Gravel Roads

April 17, 2017
(Final Approved Version)



CITY OF ROCHESTER HILLS

SPECIAL ASSESSMENT DISTRICT PAVING PROGRAM FOR LOCAL GRAVEL STREETS

INTRODUCTION

Some neighborhoods in the City of Rochester Hills were developed before the availability of municipal utilities and prior to the adoption of standards that are in place today for construction of new subdivisions. Consequently, these neighborhoods have gravel streets that residents find to be a nuisance and generally undesirable. Residents of these neighborhoods have long desired to have their streets paved. With the subsequent construction of municipal utilities in many of these neighborhoods, streets now contain the improvements needed to permit paving.

An SAD is a special financing district set up to fund the capital costs of a public improvement that provides special benefits to property owners in a subdivision or a defined neighborhood. The legal theory behind SAD's is that the owners' share of the cost assessed against their property will be offset by a reasonably proportionate increase in the value of the property resulting from the improvement.

By law, municipalities have authority to establish SAD's. The City's role is to establish the SAD, provide the financing for the improvement (sometimes through the sale of bonds), contract for design and construction of the improvement, collect the SAD payments from the benefiting property owners and pay off the debt (if used).

Since the greatest benefits of local street improvement accrue to the owners of property along those streets, the costs of these improvements are borne by the benefiting property owners in many municipalities. The City of Rochester Hills, like many other municipalities, has very limited resources for local street improvement and does not receive an adequate level of funding through general property taxes, existing voted millage or the gas and weight taxes to bear the sole cost of paving the local gravel streets. For this reason, the City has adopted the special assessment district (SAD) approach to finance paving of local gravel streets.

Rochester Hills has recognized a benefit in reduced operation and maintenance costs and health and quality of life benefits of a paved road versus an equivalent length of gravel road. Thus, to encourage and assist residents fronting gravel roads to pave their streets, a policy of cost sharing intent at 40% City, 60% Property Owner. A not-to-exceed cap of \$12,000.00 property owner charge indexed annually to inflation (including food and fuel) per each potentially buildable lot is proposed.

The \$12,000 per-buildable-lot cap applies to 2017 SAD projects and this cap is subject to revision based on being indexed to inflation utilizing the Bureau of Labor Statistics, Consumers Price Index – food and energy table for Detroit Metropolitan Area for each subsequent year.

If the property owner cap is met, a combined assessment per buildable lot will equal \$20,000.00 for the property owner and City share. If any SAD project with a buildable lot assessment in excess of \$20,000.00 per buildable lot average occurs, this condition will require that the Department of Public Services to seek economies of scale by bundling an SAD project with other similar proximate City project(s). Since the SAD projects involve asphalt pavement, the SAD project would likely be bundled with the annual local road asphalt repair program or possibly the asphalt pathway rehabilitation project.

This recommendation was endorsed for incorporation by a resolution by the Public Safety and Infrastructure Technical Review Committee at their March 2, 2017 meeting.

SPECIAL ASSESSMENT DISTRICT PROGRAM PROCESS

Call for Projects

The SAD process will start with an annual Call for Projects that will occur during the months of September and October. Residents that desire to request the process to start an SAD process for paving their gravel road will be expected to provide written documentation to the City with at least 60% of street residents showing support to request a public information meeting to learn more about the SAD program. This initial informal petition should be submitted to the Department of Public Services within the 2-month Call for Project timeframe. The intent of the SAD program is for a project request to include a complete roadway paving project. The expected limits would be bookended between a starting and terminus of either two paved cross-roads or from the beginning of a road segment to a terminus (cul-de-sac or dead end point) of the same road.

First Public Information Meeting

When the City receives one or more qualifying requests to initiate an SAD request, a public information meeting will be arranged. Residents will be notified by mail of the date, time and location of the meeting. Typically, these meetings are held on a Wednesday or Thursday at the Rochester Hills City Hall Auditorium and start at 6:00 p.m. City Engineering and Treasury Department staff will be in attendance to answer questions and provide an overview of the SAD policy. City elected officials or staff members from the City Fiscal and Clerks Department may also attend the meeting.

At the meeting, it will be explained that petitions to establish an SAD may be obtained from the City Clerk's office by property owners who wish to volunteer to circulate petitions. The Treasury Department will create the SAD petition template for the Clerk's office. The name, address and phone number of each volunteer will be taken at the meeting. These people will be notified by the City Clerk's office when the petitions are available. The petitions may then be picked up by the volunteers and circulated throughout the neighborhood to obtain signatures of property owners who support the establishment of an SAD.

Receipt of Signed Petitions by the City

Circulators of the petitions will have the months of November, December and January to obtain at least a 60% + 1 household support of property owner signatures on their respective local street. If this requirement is accomplished, they may turn in the signed petitions to the City Clerk's office. Upon receipt of the signed petitions by the City Clerk, the Assessing Department will be asked to verify that the persons signing the petitions are the property owners according to City land records. In the event that a street does not achieve the minimum petition support by January 31st or City Council does not accept the petitions, new signatures will be required for each subsequent year until the signatures are accepted by City Council.

A City Council agenda summary will be prepared for street petitions verified to have a minimum 60% + 1 household support at a regularly scheduled meeting in February. City Council will be asked to accept each local street petition request, or streets if making a combined submission, for a potential SAD project and pass a resolution of support. Property owners within the proposed SAD will receive notice of the meeting.

Petitions received by the City are advisory and do not compel the City Council to establish an SAD. The City Council will establish an SAD only when it is clear there is majority support for the project from the affected property owners. If it is clear there is not a significant level of support (60% + 1 household or greater) for the project, the City Council shall decline to accept the petitions and the process will stop.

Capital Improvement Plan Project Submission

The Department of Public Services shall prepare an individual Capital Improvement Plan (CIP) entree for each SAD Project request that City Council has accepted petition signatures of support by resolution. CIP project submissions will be prepared by the end of February so that they can be incorporated into the final version of adopted by Planning Commission in April. The CIP process evaluates all capital projects based on predefined ranking criteria. The ranked capital projects include budget estimates and a proposed fiscal year for implementation.

City Budget Incorporation of Qualifying SAD Project Candidates

The Department of Public Services and the City Council will annually review the proposed SAD projects that are included in the latest adopted Capital Improvement Plan for inclusion with the next budget approval. Like all capital projects, a SAD project may be moved to a different fiscal year to take advantage of collaborative purchases or availability of specific funding sources. City Council will determine the actual number of SAD project candidates, if any, that can be included in the next approved City Budget fiscal year.

Approval to Proceed with Preliminary Engineering Design Phase

Once a proposed SAD Project has been included in an adopted budget, the Department of Public Services will solicit a proposal from one or more of the quality based selection design consultants to perform the preliminary engineering services. The proposal will be submitted to City Council for approval at a meeting in January. It is also expected that the City Council will direct the Department of Public Services to commence with the preparation of the City Engineer's report for each SAD project being granted preliminary engineering approval. The Engineer's report will outline a preliminary engineering design for the project, a scope of work, a cost estimate for the project, an estimate of the number of properties within the proposed SAD, an estimate of the City's share of the cost and an estimate of the average pro rata share of the cost for property owners.

Second Public Information Meeting

The City will notify property owners and hold a second information meeting. The purpose of the second information meeting is to provide property owners with more detailed information about the project, including detailed design plans and current engineer's cost estimates. This meeting will allow property owners to obtain the most current and complete information in advance of the public hearing on necessity. Also, property owners will have an opportunity to ask general questions about the project or specific questions about their properties in an atmosphere that is less formal than the public hearing on necessity. The meeting will be conducted by City staff who have been involved with development of the project. The second public information meeting will be planned for the month of May.

Receipt of City Engineer's Report and Tentative Determination to Proceed

The City Engineer's Report will be completed subsequent to the second public information meeting for each SAD project candidate and submitted to City Council for a regularly scheduled meeting in June. At this same meeting, the City Council will be asked to pass a resolution to tentatively determine to proceed with an SAD project. The City Council may, by resolution, determine tentatively to proceed to establish an SAD for the project, setting forth the nature of the project and requiring the City Engineer's report to be filed with the City Clerk so it is available for review by the public. In the same resolution, the City Council will set forth the time and place for a public hearing on the advisability of proceeding to establish the SAD.

Public Hearing on Necessity

The public hearing will be held at least ten (10) days after notice has been published in the City's official newspaper and sent by first class mail to all property owners in the proposed SAD as shown on the City's current assessment roll. The public hearing will be held at a regular or special meeting of the City Council. At the public hearing, all persons interested shall have an opportunity to be heard by the City Council. Public Hearings on necessity will be planned for the month of July.

Determination to Continue S.A.D. Process

Following the public hearing, the City Council may determine whether to end the process or to proceed. If it determines to proceed, a decision on a final determination is deferred for twenty-eight (28) days to give property owners who may be opposed to the SAD an opportunity to circulate petitions of objection. If the City Council decides to end the SAD process for a project subsequent to the public hearing, a resolution will be passed at the same July Public Hearing on Necessity meeting.

Objections to Improvements

After the public hearing has been held by the City Council, if there is a desire by the property owners within the limits of the proposed SAD to terminate the project, written petitions objecting to the proposed improvements may be obtained from the City Clerk on the fourteenth (14th) day after the public hearing and circulated, signed and returned to the Clerk by noon on the twenty-eighth (28) day, or the next business day if the City offices are closed on the twenty-eighth (28th) day, immediately following the public hearing. The Treasury Department will create the Petitions of Objection and provide them to the City Clerk's office prior to the 14th day.

The improvement shall not be made if properly filed petitions objecting to the proposed improvement are signed by 50% + 1 household of the owners of:

- A. the total land area,
- B. front footage, or
- C. number of parcels or units to be assessed, as determined by the City Council in a resolution adopted following the public hearing,

Final Determination

If the City Council determines to proceed, it shall pass a resolution determining that the improvement is necessary, approving the plans, specifications and detailed cost estimates, prescribing what part of the costs are to be paid by the SAD, delineating the limits of the SAD, determining the method to be used to make the assessment, and directing the City Assessor to prepare the draft special assessment roll in accordance with the City Council's determination. This meeting will be planned for the month of August. At this same meeting, the City Council may need to decide whether the construction and construction engineering phases will be included in the next fiscal year budget prior to their typical adoption of the budget in late September.

Draft Special Assessment Roll

The City Assessor will make a draft special assessment roll of all lots and parcels of land within the designated district benefited by the proposed improvement and specially assess each lot or parcel of land. The roll will list each property in the SAD and its special assessment. The amount spread in each case shall be based upon the detailed estimate of the City Engineer as approved by the City Council.

When completed, the City Assessor shall file the draft special assessment roll with the City Clerk for presentation to the City Council for review and confirmation. Upon receipt of the roll, the City Council, by resolution, shall accept the roll and order it filed with the City Clerk for review by the public.

The City Council shall determine the time and place for a public hearing and hold the public hearing, in the same manner as previously outlined, to consider objections to the roll, corrections to the roll, or annulment of the roll. The submission of the draft special assessment roll to City Council will be targeted for September.

Public Hearing on the Draft Special Assessment Roll

The public hearing for the draft special assessment roll will be held by the City Council at an October meeting.

After the public hearing, if the City Council believes assessments are proper, it shall pass a resolution confirming the roll. The Council will also authorize the City Treasurer to bill and collect the SAD roll at the same meeting or a time closer to construction.

Proceed to Construct Improvement

Once the proposed SAD project receives the City Council approval for the assessment roll, the DPS shall work with the Fiscal Department Purchasing Division to advertise the project and receive bids. City Council will be asked to award the construction contract and the construction engineering (CE) contract at a meeting in January or February. Construction of the SAD gravel to pavement project would then be planned to commence in April or May and complete the improvements that same construction year.

GENERAL INFORMATION ABOUT SPECIAL ASSESSMENT DISTRICTS

Determination of Proration of Cost to Each Property

As previously indicated, the legal foundation of SAD's is that the cost assessed to each property will result in a reasonably proportionate increase in property value. There are a number of formulas used to distribute costs among properties in an SAD that have been developed over many years of experience. The cost assessed to an individual property based on these formulas is called a unit benefit.

For street improvement SAD's, the City uses the "Declining Rate Benefit Ratio" method to determine unit benefits. That method establishes the unit benefit by calculating the average width of each property where it is adjacent to the street. Properties having a width equal to or less than the average will be assessed on (1.00) unit benefit. Properties with widths greater than the average will be assigned a unit benefit greater than one (1.00) based upon the declining rate curve, and up to a maximum of one and three tenths (1.30) unit benefit costs. Note: it is possible that a single parcel of land under one ownership may be assigned multiple (i.e. 2, 3, 4, etc.) unit benefits. This usually involves larger parcels of land, which could be divided into two or more building sites. In these cases each potential building site is assessed a unit benefit.

Term of Special Assessment Installment Payments and Interest Rate

While a special assessment can be paid in full at the onset, most property owners choose to make installment payments. The term of special assessment installment payments will be based on a 15-year amortization schedule with the current SAD interest rate applied. Installment payments shall be paid annually and are due on April 1. City Council shall set the rate of interest on the unpaid balance.

Typically, the interest rate set by Council is one (1) percent over the average rate of the bonds if sold to finance the project or related to other measures such as Prime. The additional one (1) percent is added to provide sufficient cash flow for administration, and if issued, bond principal and interest payments.

Special Assessment is a Lien Until Paid

The special assessment shall become a lien upon the property until it is paid in full. The lien will be of the same character and effect as is created by the City Charter for City taxes. To protect the taxpayers of the City, the City will not subordinate the lien in the case of a sale of the property, refinancing, second mortgage, home equity loan, etc. In these cases, the special assessment will have to be paid in full to discharge the lien.

Adjustments and Corrections to Assessments

Over Assessment:

If a special assessment exceeds the actual cost of the improvement and incidental expenses by five (5) percent or less of the amount assessed, that excess may be placed in the General Fund of the City. If the assessment proves larger than is necessary by more than five (5) percent, the entire excess shall be refunded, or credited if a balance is still outstanding, on a pro rata basis to the owners of properties in the SAD provided, however, that no refunds of less than Five Dollars (\$5.00) will be made.

Attachment A
LOCAL ROAD POLICY AND FUNDING CRITERIA
FOR PAVING GRAVEL ROADS

- ◆ In general, roads shall consist of a 22-foot wide asphalt road, grass shoulders and an open ditch drainage system in accordance with the latest City of Rochester Hills engineering standards and specifications for paving.
- ◆ The cost to the property owner shall be capped at \$12,000 cost to the property owner for a 2017 SAD project per buildable lot (existing and/or potential) for paving to current minimum standards. As stated in the SAD Policy language, this capped amount will be subjected to annual adjustment for inflation for subsequent years. Additional betterment improvements or work deemed aesthetic in nature by the property owner will be assessed for 100% of the cost to the property owners and shall be applied in addition to the assessment cap.
- ◆ If recommended by the Department of Public Services and determined to be in the best interests of the residents and City, the City Council may require the installation of water, sanitary and/or storm sewer utilities prior to or in conjunction with the SAD paving project.
- ◆ The City Council encourages citizens' initiative pursuant to the Special Assessment District Ordinance, Chapter 90 of the Rochester Hill codified code of ordinances, to improve and upgrade their local roads.
- ◆ Special assessment projects that have plans already designed will be considered for first priority. If there are no existing plans for a project, special assessment projects generally will be taken in order of the filing date of valid and sufficient petitions.
- ◆ The service life will be designed to a 15-year performance standard
- ◆ Driveway approaches will match existing drive in material type (concrete or asphalt) and width, from edge of road to property line. Existing gravel driveway approaches will be constructed as asphalt.
- ◆ Mailbox posts will replaced per the US Postal Service approved version
- ◆ Private property items such as fencing, lamps, irrigation systems, ornamental or monument mailboxes, landscaping, etc., is in right-of-way, then the City will give notice to homeowner to remove the private property. If not removed by the owner, then City will remove the private property and not replace it.

Under Assessment:

Additional pro rata assessments may be made when any special assessment roll is insufficient to pay for the improvement for which it is levied, provided that the aggregate of the additional pro rata assessments shall not exceed twenty-five (25) percent of the total assessment as originally confirmed unless a meeting of the City Council is held to review such additional assessment and interested citizens have had an opportunity to provide input.

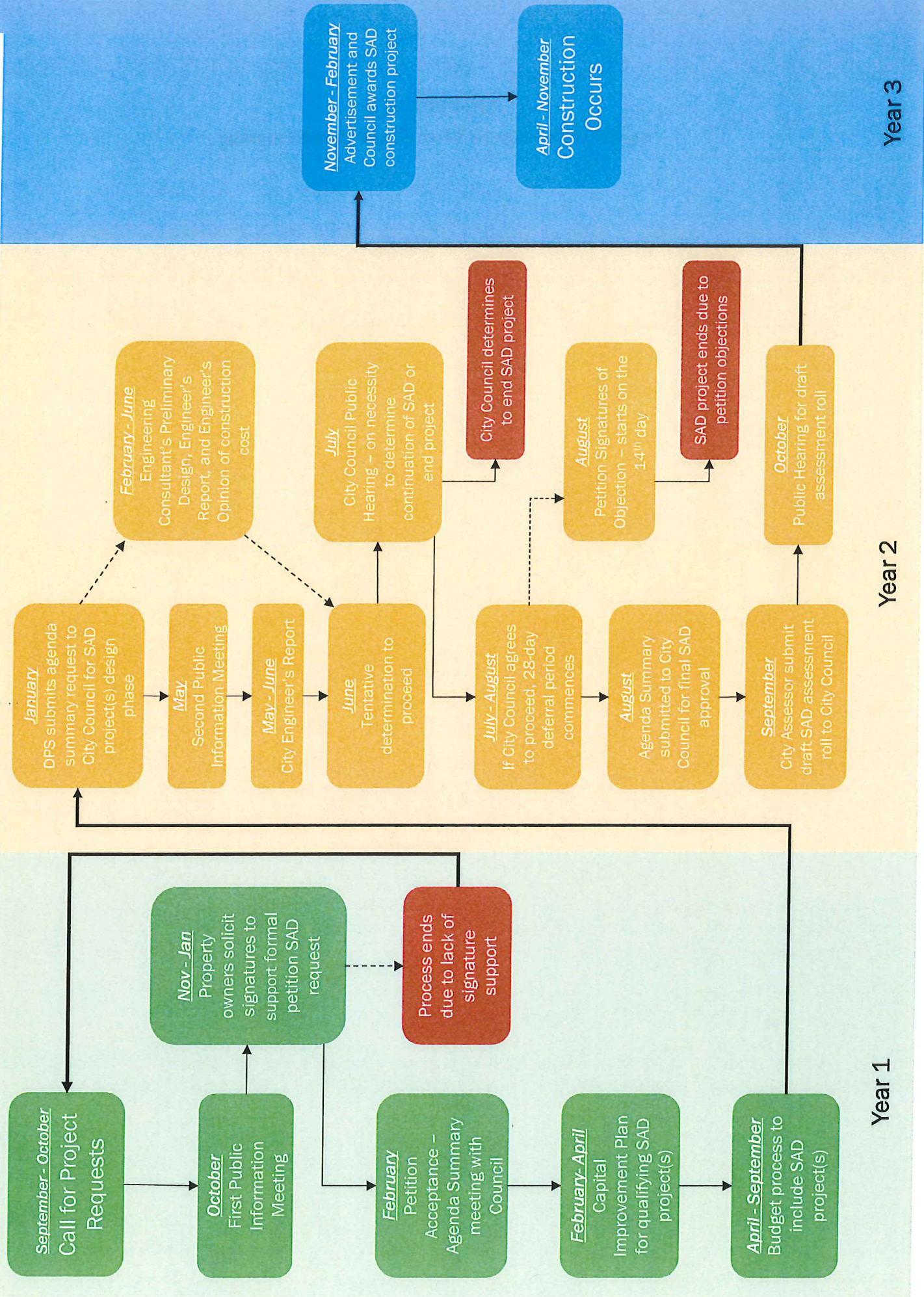
ADDITIONAL COMMENTS

The information contained in this overview is a summary of the process and provisions of Chapter 90 Special Assessments of the Code of Ordinances of the City of Rochester Hills. It is intended only as a reference and should not be construed as a complete description of all provisions and requirements of the ordinance. There are additional provisions and requirements outlined in the ordinance that may be applicable to certain property owners or situations. If there are specific concerns or questions concerning the special assessment process or requirements, they should be referred to the Director of the Department of Public Services at 248.656.4640.

This policy shall be reviewed in three years (year 2020) for applicability and economics.

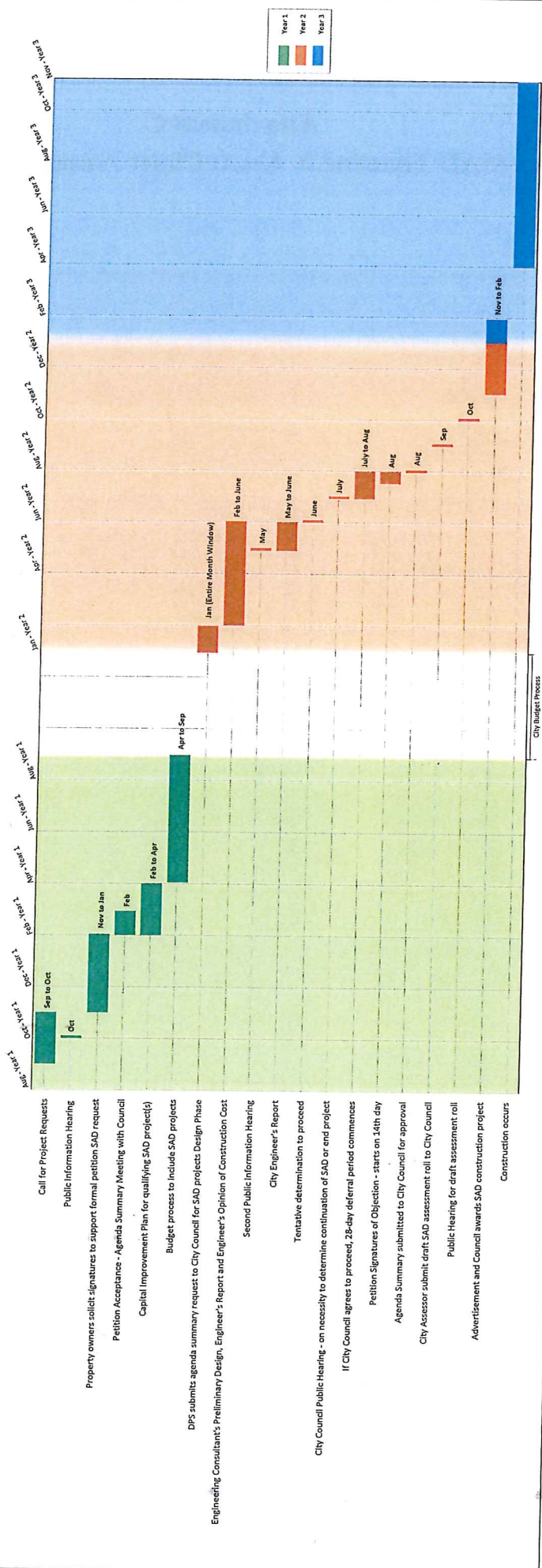
Attachment B
(SAD Timeline in Flowchart Presentation)

Proposed Schedule for Special Assessment District Gravel to Pavement Projects



Attachment C
(SAD Timeline in Gantt Chart Presentation)

Proposed Schedule for Special Assessment District (SAD) Gravel to Pavement Projects



Attachment D

SPECIAL ASSESSMENT CHECKLIST

PROJECT: _____ SEC. NO. _____

LOCATION: _____

PROCESS INITIATED:

_____ Call for Projects Occurs – September thru October

_____ City is provided with written documentation stating that at least 60% of street requests that a public information meeting is scheduled

_____ Letter sent to property owners regarding meeting, including information on process, policies and project. [DPS] sends letter with copy to all departments involved in SAD process

FIRST PUBLIC INFORMATION MEETING:

_____ Public information meeting held to review the SAD Policy and determine resident volunteers that will obtain petition signatures

PETITIONS:

_____ Petition template created by Treasury and provided to Clerks Department

_____ Clerks Department provides petition template to resident volunteers

_____ Petitions returned to Clerk by circulators - November thru January

_____ Petitions verified and report prepared by Assessing

_____ Mailing to property owners advising when petitions will be on City Council agenda [**Assessing** prepares mailing labels and **Clerk** sends mailing]

_____ Council resolution to accept petitions (**RES A**)

CAPITAL IMPROVEMENT PROJECT:

_____ The DPS will prepare a CIP project entry for inclusion with the next version.

BUDGET INCORPORATION OF QUALIFYING PROJECTS:

_____ City Council determines which SAD projects will be included for engineering design in the next fiscal year.

APPROVAL TO PROCEED WITH THE PRELIMINARY ENGINEERING PHASE:

- _____ Recommendation is made on selection of PE consultant for project [DPS]
- _____ City Council awards PE services contract to consultant
- _____ City Council directs DPS to commence preparation of the City Engineer’s Report

SECOND PUBLIC INFORMATION MEETING:

- _____ Second public information meeting is held in May

COUNCIL RECEIVES THE CITY ENGINEER’S REPORT AND DETERMINES TO TENTATIVELY PROCEED:

- _____ Council receives Engineer’s report with detailed cost estimate and plans
 - Total project estimate: \$
 - Portion of project estimate to be assessed: \$
 - Number of parcels in the SAD:
 - Estimated base unit benefit: \$
- _____ **Engineer’s** report and plans filed with **Clerk**
- _____ Council resolution to determine tentatively to proceed and to set public hearing on necessity (**RES B**) [**Clerk’s Office** prepares and **Clerk** certifies with copy provided to all departments involved in SAD process]

PUBLIC HEARING ON NECESSITY:

- _____ Public Hearing notice prepared [**Treasurer**]. Attach CDBG letter from Fiscal Team
- _____ Public Hearing notice mailed to property owners [**Clerk**]
- _____ Public Hearing notice published in official newspaper [**Clerk**]
- _____ Public Hearing held by City Council in July
- _____ Council resolution to continue process with further action deferred 28 days (**RES C**) [**Clerk’s Office**]

PETITIONS OF OBJECTION:

- _____ Letter sent to all property owners regarding Petitions of Objection [**Clerk**]
- _____ Petitions prepared by Assessing and available to requestors from Clerk on the 14th day after public hearing
- _____ Petitions returned by circulators to **Clerk** by noon on the 28th day after public hearing

AFTER 28-DAY DEFERRAL:

- _____ Petitions of Objection received: YES ___ NO ___
- _____ Verification Report prepared by Assessing
- _____ Signed by 50% + 1 or more: YES ___ NO ___
- _____ Returned to Council – accept Petitions of Objection (**RES D-P**) [**Clerk's Office**]
- _____ Council resolution to proceed with improvement, to establish a SAD and to authorize preparation of SAD roll (**RES D**); planned for an August Council meeting

- _____ Council agrees to budget the construction and construction engineering phases for the next fiscal year budget; planned for an August or September Council meeting

DRAFT SAD ROLL:

- _____ Draft SAD Roll prepared by Director of Assessing
- _____ Draft SAD Roll filed with City Clerk
- _____ Draft SAD Roll submitted to City Council at a September meeting
- _____ Council resolution to accept roll, to order roll filed with Clerk for public examination, and to set a public hearing (**RES E**) [**Clerk's Office**]
- _____ **RES E** is certified and filed with City Clerk

PUBLIC HEARING ON SAD ROLL:

- _____ Public Hearing notice prepared [**Treasurer**]. Mail CDBG application from Fiscal Team
- _____ Public Hearing notice and CDBG information mailed to property owners [**Clerk**]
- _____ Public Hearing notice published in official newspaper [**Clerk**]
- _____ Public Hearing held by City Council; planned for an October meeting
- _____ Council resolution to confirm SAD roll and to command that special assessments be spread (**RES F**) [**Clerk's Office**]

CERTIFICATION OF SAD ROLL:

- _____ Final roll prepared and certified by Director of **Assessing**
- _____ Assessor proofs parcels and forwards apportionment to Treasury
- _____ Treasury inputs changes, prints roll and sends to Assessing

BILL AND COLLECT:

- _____ Council resolution to bill and collect, setting of interest rate and setting of date interest begins (**RES G**) [**Clerk's Office**] prepares with **Treasurer** providing recommendation on interest rate and date interest is to begin]
- _____ Mail bill and collect notification and amortization schedules to property owners [**Treasurer**]
- _____ Mail notice of confirmation to property owners [**Treasurer**]
- _____ Provide copy of amortization loan to Accounting [**Treasurer**]

PROCEED TO CONSTRUCT IMPROVEMENT:

_____ DPS and Fiscal coordinate to advertise and bid the SAD project
_____ City Council awards bid for construction
_____ City Council awards contract for CE services to consultant
_____ File liens with county [**Treasurer**]

CONSTRUCTION:

_____ Construction started
_____ Construction completed

FINAL ACCOUNTING FOR SAD:

_____ Report on final accounting and allocation of costs [DPS]
_____ Adjustments to assessments [Treasurer]

Attachment C

Supplemental Information

City of Royal Oak



**SPECIAL ASSESSMENT STREET PAVING
INFORMATIONAL HANDOUT**

GENERAL

Property owners may petition to have a street paved by special assessment. Petitions are available in the City Engineer's Office. The City Commission may order a street paved as an assessment project with or without a petition. However, when a petition is submitted, it has generally been the requirement that property owners representing 50% or more of the assessable frontage must sign the petition. Up to two public hearings are held by the City Commission and all property owners of record are notified. The first public hearing is the "Hearing of Necessity" to determine if a street is to be paved or repaved; the second hearing is the "Special Assessment Hearing" to set the special assessment rate for affected property. A public "Hearing of Necessity" can be waived if 100% of the assessed frontage is represented in the petition.

PROCEDURE

1. Secure a petition form from the City Engineer's Office.
2. Contact the City Engineer's Office for a rough cost estimate for the project before the petition is circulated.
3. Secure signatures on the petition from owners of the adjacent property. The name of the owner of record can be secured from the City Engineer's office if necessary.
4. Return the petition to the City Clerk's Office.
5. The City Engineer will calculate the percentage of assessable frontage signing in favor of the project. This will be reported to the City Commission. The City Commission will decide whether to adopt the "First Resolution" which would direct the preparation of detailed cost estimates and a special assessment roll showing estimated cost for each property.
6. As part of special assessment street paving, driveway approaches will be replaced in concrete.
7. The remaining steps of the assessment procedure are shown in Attachment A.

ASSESSMENT POLICY

The policy for determining the portion of the total project cost to be charged to adjacent property owners is shown in Attachment B.

The time allowed for special assessments to be repaid is 15 years. The standard interest rate of special assessments is 6% beginning with the second consecutive payment upon the unpaid assessed balance.

Note: The City may sell bonds to finance the cost of special assessment projects. The interest rate paid by the homeowner is 1% above the interest rate paid by the City on any bond issue. This rate is determined at the time the bonds are sold.



PROPOSED SPECIAL ASSESSMENT PROCEDURE

City Commission is presented with a recommendation or petition to consider a public improvement.

Resolution No. 1

Commission orders preliminary plans and estimate of cost prepared by City Engineer, and directs City Assessor to prepare a Special Assessment District. City Assessor refers topic back to City Commission when Special Assessment District is prepared - usually 2 to 3 weeks are required.

Resolution No. 2

Commission establishes a Special Assessment District, setting forth the estimated cost to the City and to the Assessment District, and setting a public hearing date on necessity.

City Clerk advises Commission on date - usually 3 to 4 weeks are required. Notice of said public hearing must be published in a newspaper and also sent to the individual property owners.

Resolution No. 3

Public Hearing is held on scheduled date and any objections are registered. If the proposed improvement is deemed a necessity, then the Commission declares that a necessity exists, directs the City Assessor to prepare a Special Assessment Roll, and sets a public hearing date for review of the assessments proposed to be levied.

City Clerk advises Commission on date - usually 2 to 3 weeks are required. Notice of this public hearing must also be published and the individual property owners notified.

Resolution No. 4

Public Hearing is held on scheduled date and any objections are registered. If it is still the desire of the Commission to proceed, then the improvement is "Advanced and Tabled" to await the receipt of bids. City Engineer refers topic back to Commission after receipt of bids - usually 2 to 4 weeks are required.

Resolution No. 5

Following the receipt of bids and awarding of a contract, the Commission confirms the Special Assessment Roll which sets forth the number of years over which the Special Assessments will be spread and the dates when these payments fall due.

ABOVE PROCEDURE ADOPTED BY THE CITY COMMISSION 7/23/79.

The Oakland Press (<http://www.theoaklandpress.com>)

Royal Oak offering big discounts to pave dirt roads in neighborhoods on 47 streets

Royal Oak has 47 unpaved streets

By Mike McConnell, mike.mcconnell@dailytribune.com, [@mmccconnello1](https://twitter.com/mmccconnello1) on Twitter

Wednesday, April 15, 2015

Though Royal Oak is mostly known to outsiders for its urban downtown stores, restaurants and clubs that make it an entertainment mecca, there is another side to the city where dozens of neighborhoods have unpaved dirt streets.

There are a total of 47 unpaved streets in the city, left that way by housing developers who made no provision to include paved streets when the homes were built years ago.

This week the City Commission voted to give homeowners on those streets an additional discount on the assessed cost of constructing concrete streets if a majority of residents in a neighborhood petition to create a special assessment district.

Royal Oak this month started a 10-year, \$50 million project to improve roads throughout the city. Some officials see the project, supported by a voter-approved millage, as a chance to help homeowners on unpaved side streets get paved roads.

For the next five years, neighborhoods that request a special assessment can get a 50-percent discount on the cost of a new street. Now, those who have corner houses with side lots can get a 75-percent discount on the cost of putting up to 150 feet of paved streets along their side lots.

Officials “wanted to provide an incentive for residents for whom it has been cost prohibitive” to pave streets, said City Commissioner Kyle DuBuc, adding that the road discount “is a real incentive.”

The city has no obligation to pave neighborhood streets and under the City Charter can force neighborhoods to pay a special assessment to construct a paved road. Many of the neighborhoods with unpaved roads were built during the 1930s, 40s and 50s. Developers that included streets passed the cost onto the new homeowners at the time.

The measure the City Commission passed Monday is similar to the road paving discounts offered to neighborhoods back in 1985, the last time Royal Oak did large-scale road improvements supported by a voter-approved millage.

The full rate for building a concrete street is \$270 per foot for a 27-foot-wide road, according to City Engineer Matt Callahan.

Royal Oak has a total of five miles of unpaved neighborhood streets. If every such neighborhood elected to create a special district for road improvements it could cost the city up to \$3.9 million to make the upgrades, with the homeowners paying \$2.1 million, Callahan said.

The number of neighborhoods requesting special assessments to pave the dirt roads on their streets has jumped more than 25 percent over the past year.

Some City Commissioners were concerned that allowing discounts on road paving was unfair to all those in the past who have had to pay the full price.

City Commissioner David Poulton was not in favor of carving out special exceptions with discounts and voted against the incentive program.

Others, such as City Commissioner Jeremy Mahrle, said the discount incentive program is way for Royal Oak to have as “many walk-able and bike-able streets as possible.”

“I really don’t see many downsides,” he said.

URL: <http://www.theoaklandpress.com/general-news/20150415/royal-oak-offering-big-discounts-to-pave-dirt-roads-in-neighborhoods-on-47-streets>

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Unimproved Streets

There are some streets in Royal Oak that are considered unimproved (i.e. gravel, chip seal, seal coat, etc.), as shown on the adjacent map. The initial paving of unimproved streets is performed by special assessment to the adjacent property owners per city commission policy adopted in 1958.

Property owners may petition to have a street paved by special assessment by sending a written request to the Engineering Division. The City Commission may order a street paved as an assessment project with or without a petition. However, when a petition is submitted, it has generally been the requirement that property owners representing 50% or more of the assessable frontage must sign the petition.

Local Road Millage

Unimproved streets are not scheduled for paving as part of the road millage, except by special assessment to the adjacent property owners. The City Commission has adopted a policy to pay for 50% of the full frontage rate of special assessment paving approved during the millage period. In addition, the city will also cover 75% of the full frontage rate for the first 150 feet of side-lot frontage on an unimproved street.

Procedure to Pave a Street by Special Assessment:

1. Send a letter or e-mail to the Engineering Division to request a petition. The petition will include a rough cost estimate for the project, including the estimated cost per property.
2. Secure signatures on the petition from owners of the adjacent property. Typically 50% or more of the assessable frontage must sign the petition in order for it to be approved by the City Commission.
3. Return the petition to the Engineering Division. Note that the final page of the petition must be signed by the circulator and notarized.

Unimproved Roads (Click to enlarge)



4. The petition will be presented to the City Commission, and the following steps must take place. The following items typically require three to four months before the project can be designed and bid:

- **Standard Resolution 1:** The percentage of assessable frontage signing in favor of the project will be reported to the City Commission. The City Commission will decide whether to adopt the "First Resolution" which orders preliminary plans and estimate of cost prepared by city engineer, and directs city assessor to prepare a special assessment district. City assessor refers topic back to City Commission when special assessment district is prepared.
- **Standard Resolution 2:** The City Commission establishes a Special Assessment District, setting forth the estimated cost to the city and to the assessment district, and sets a date for the Public Hearing of Necessity. A notice regarding the public hearing is sent to the affected property owners and published in a newspaper by the City Clerk.
- **Standard Resolutions 3 & 4 and Public Hearing of Necessity:** The Public Hearing of Necessity is held on the scheduled date and any objections are registered. If the proposed improvement is deemed a necessity, then the City Commission declares that a necessity exists, directs the city assessor to prepare a special assessment roll, and sets a date for the Public Hearing of Assessment to review the assessments proposed to be levied. A notice regarding the public hearing is sent to the affected property owners and published in a newspaper by the City Clerk.
- **Public Hearing of Assessment:** The hearing is held on the scheduled date and any objections are registered. If it is still the desire of the City Commission to proceed, then the improvement is "Advanced and Tabled" to await the receipt of bids.

5. The project will move forward for construction unless the lowest bid for the project is greater than 5% above the original estimate provided to residents. If the lowest bid is 5% over the estimated cost, another public hearing will be held.

6. **Standard Resolution 5:** After the construction is completed, the City Commission confirms the Special Assessment Roll which sets forth the number of years over which the Special Assessments will be spread and the dates when these payments are due. The time allowed for special assessments to be repaid is typically determined by the City Commission to be 15 years. The standard interest rate of special assessments is 6% beginning with the second consecutive payment upon the unpaid assessed balance.

At a regular meeting of the Commission of the City of Royal Oak, Michigan, held at the City Hall in said City, on the tenth day of February, 1958, at 7:30 o'clock p.m., Eastern Standard Time:

PRESENT: Commissioners Fries, Hayward, Horn, Maudlin,
and Osgood

Mayor Kelley

ABSENT: Commissioner Crosby

The following action was taken:

"RESOLVED, that all street improvements made to the roadways of streets by means of paving, graveling or otherwise, be assessed against the abutting parcels of land according to the front foot rule.

FURTHER RESOLVED, that the following policy is hereby established for computing assessments for street improvements against corner parcels of land abutting upon two streets:

1. Corner parcels zoned for single family use, either vacant or developed for single family use -- In all cases where such corner parcels have side frontage of not more than 150 feet, the assessment for side street improvements shall be for one-half the actual side street frontage. In all cases where such corner parcels have side frontage in excess of 150 feet, the excess of such side frontage over 150 feet shall be assessed in the usual manner, by the front foot rule.
2. All other corner parcels -- The assessments for side street improvements shall be for the full side frontage.
3. In the case of lots of irregular shape or size, the above rules shall apply after adjustment by the Somer's Rule. In the case of other unusual conditions, special adjustments consistent with justice and equity may be made.

FURTHER RESOLVED, that in all cases where extra width pavement is installed at street intersections in order to facilitate traffic movement, the assessment for any extra width at the intersection shall be absorbed by the City-at-large, and shall not be assessed against the abutting properties.

FURTHER RESOLVED, that in all cases where the City has an easement over private property for the purpose of installing a public sidewalk, the property on which said easement is located and any property between said easement and the curb shall be regarded as being public property in the computation of special assessments for street improvements.

ATTACHMENT B
B-1

FURTHER RESOLVED, that in all cases the cost of street paving up to a width of 31 feet shall be assessed against abutting properties; that in all cases where pavement of a width of more than 31 feet is installed in order to facilitate traffic movement, the cost of said pavement in excess of 31 feet in width shall be assumed by the City-at-large; provided, that in unusual cases where it appears that a special benefit will accrue to abutting properties as the result of the installation of pavement in excess of 31 feet in width, then the cost of such pavement in excess of 31 feet in width shall be assessed against such properties.

FURTHER RESOLVED, that in all cases where pavement of greater than ordinary thickness is installed, any extra cost occasioned by such extra thickness shall be assumed by the City-at-large; provided, that in unusual cases where it appears that a special benefit will accrue to abutting properties as a result of the installation of greater than ordinary thickness, then the cost of the extra thickness of pavement shall be assessed against such properties."

I hereby certify that the above is a true and correct copy of a Resolution adopted by the City Commission of the City of Royal Oak at a regular meeting held February 10, 1958.

GLADYS FOGO, CITY CLERK

ATTACHMENT B
B-2

APPENDIX C

**CITY CODE
CHAPTER 94**

Chapter 94 - SPECIAL ASSESSMENTS^[1]

Sec. 94-1. - Purpose.

This chapter is adopted to comply with Chapter X of the Charter for the city to provide by ordinance for a complete special assessment procedure concerning the initiation of projects, plans and specifications, estimates of cost, notice and conduct of hearings, making and confirming of assessment rolls, correction of errors, contested assessments, financing of improvements made by special assessment, collection of special assessments and interest thereon, deferral of payments due to hardship, and all other matters concerning special assessments.

(Ord. No. 1637, 3-24-97)

Sec. 94-2. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Applicant means an owner and the owner's spouse, if any, who files an application for deferral under this chapter.

Cost, when referring to the cost of any public improvement, shall mean the cost of surveys, plans, rights-of-way, spreading of rolls, notices, advertising, financing, construction, legal fees, administrative expense, condemnation and all other costs incidental to the making of such improvement, the special assessments therefor and the financing thereof.

Engineer means the director of the department of engineering and public services.

Homestead means a dwelling owned and occupied as a home by the owner thereof, including all contiguous unoccupied real property owned by the person.

Household means a housing unit consisting of related persons residing in a homestead who are age 18 or older and are not claimed as dependents on the owner's state or federal income tax returns.

Household income means all income received by all members of a household in a tax year, while members of the household. If any household member has become unemployed or has resigned from employment within the six-month period prior to the application date, the household income shall be computed at the rate of pay immediately prior to the termination or resignation from employment with the following exceptions:

- (1) The household member has permanently retired.
- (2) The household member has received a permanent medical leave due to total disability.

Improvement means a public improvement of such a nature as to specially benefit any real property, any part of the cost of which is to be assessed against one or more lots or parcels of land, in proportion to the benefit derived therefrom.

Income means the sum of federal adjusted gross income, as defined in 26 U.S.C. 1, et seq., of the Internal Revenue Code, as amended, plus all income specifically excluded or exempt from the computations of the federal adjusted gross income.

- (1) The term does not include the first \$300.00 of gifts in cash or kind from nongovernmental sources or the first \$300.00 received from awards, prizes, lottery, bingo, or other gambling winnings.
- (2) Income does not include surplus foods, relief in kind supplied by a governmental agency, payments or credits under this chapter, any governmental grant which has to be used by the claimant for

rehabilitation of the homestead, amounts deducted from monthly Social Security or Railroad Retirement Benefits for Medicare premiums, or contributions by an employer to life, accident, or health insurance plans.

- (3) Income does not include energy assistance grants and energy assistance tax credits.

Manager means the city manager or his designee.

Net worth means the total value of assets owned less total liabilities. For purposes of this chapter, net worth shall not include the value of the homestead and file value of any one automobile registered in the name of the owner of the homestead.

Owner means a person who holds solely or concurrently with others a fee interest in a parcel of real property, or who is purchasing a parcel of real property under a mortgage or land contract.

Street means a public street, avenue, highway, road, path, boulevard, right-of-way, or alley or other access used for travel by the public.

(Ord. No. 1637, 3-24-97; Ord. No. 1962, 4-21-08)

Sec. 94-3. - Commission authority.

The city commission shall have the power and authority to determine that the whole or any part of the cost of any public improvement shall be defrayed by special assessments upon the property especially benefitted, consistent with the procedures set forth in this chapter.

(Ord. No. 1637, 3-24-97)

Sec. 94-4. - Initiation of improvement.

Proceedings for the making of public improvements within the city may be commenced by resolution of the city commission, on its own initiative.

- (1) The commission, in order to ascertain whether or not a satisfactory number of property owners to be assessed desire any particular improvement to be made, may request and receive a petition therefor, or may receive a petition voluntarily presented.
- (2) The commission shall carefully consider any petition received, but petitions shall be advisory only and shall not be jurisdictional. Petitions shall in no event be mandatory upon the commission.

(Ord. No. 1637, 3-24-97)

Sec. 94-5. - Petitions.

- (a) All petitions shall be circulated and signed on blank forms furnished by the city engineer. Such petitions shall contain, in addition to the signature of the owner(s), a brief description of the property owned by the respective signers thereof.
- (b) Petitions shall be verified by the affidavit(s) of the petition circulator(s) attesting that signatures on the petition are genuine and that the persons signing are owners of the described properties.
- (c) Petitions shall be filed with the city engineer.
- (d) All petitions shall be referred by the city engineer to the manager. The manager shall check the petitions to

determine whether they conform to the foregoing requirements and shall report his or her findings to the city engineer.

(Ord. No. 1637, 3-24-97; Ord. No. 1962, 4-21-08)

Sec. 94-6. - City engineer's report.

- (a) Before the commission shall decide on making any public improvements, the city engineer shall prepare and submit a preliminary report to the city commission which shall include a general description of the nature and scope of the project, a recommended approach to the project including coordination of other city projects and finding sources, preliminary estimates of cost, an estimate of the life of the improvement, a description of the proposed assessment district(s), and such other pertinent information as may enable the commission to determine the cost, scope, extent and necessity of the proposed improvement and whether any portion of the cost should be paid by the city at large. A copy of the city engineer's report shall also be filed with the city clerk for public examination.
- (b) Whenever any property interest is acquired by condemnation or otherwise for the purpose of any public improvement, the cost thereof and of the proceedings required to acquire such property interest may be added to the cost of such public improvement.

(Ord. No. 1637, 3-24-97)

Sec. 94-7. - Notice of public hearing.

- (a) After the filing of the city engineer's report under section 94-6, above, a public hearing before the city commission on the advisability of proceeding to establish a special assessment district for the making of the public improvement shall be set, which hearing shall be held not less than ten days after notice thereof has been both published in a newspaper published or generally circulated in the city, and sent by first-class mail to all property owners in the proposed special assessment district as shown by the current property tax roll of the city. The notice shall include a statement that appearance and protest at the public hearing is required in order to appeal the special assessment to the Michigan Tax Tribunal, and that an owner or interested party, or his or her agent, may appear and protest in person or by letter, if received by the commission prior to the public hearing. The hearing required by this section may be held at any regular or special meeting of the commission.
- (b) At the public hearing on the proposed improvement, all persons interested shall be given an opportunity to be heard.

(Ord. No. 1637, 3-24-97)

Sec. 94-8. - Determination of necessity by commission.

- (a) Following the hearing, the commission may determine whether to continue to proceed, or to modify the scope of the public improvement, if necessary, in such a manner as it deems to be in the best interest of the city, provided that if the amount of work is increased or properties are added to the district, then another public hearing shall be held pursuant to notice as prescribed in section 94-7.
- (b) If the commission determines to continue to proceed with the improvement, the commission shall adopt a resolution:
 - (1) Determining the necessity of the improvement;
 - (2) Approving the detailed plans and estimates of cost prepared by the city engineer;

- (3) Prescribing what portion of the cost of such improvement shall be paid by special assessment upon the pro benefited, determining what benefits will be received by affected properties and what portion, if any, of the paid by the city;
 - (4) Delineating the boundaries of the special assessment district;
 - (5) Determining the method or formula to be used in making the assessment; and
 - (6) Directing the manager to prepare a special assessment roll and present the same to the commission for confirmation (unless the special assessment roll was previously prepared).
- (c) The commission may modify the resolution to proceed that was adopted pursuant to subsection (b) at any time, but if any modification will increase the cost or scope of the improvement or add properties to the assessment district, a further public hearing shall be held and notice given as prescribed in section 94-7.

(Ord. No. 1637, 3-24-97; Ord. No. 1962, 4-21-08)

Sec. 94-9. - Special assessment roll.

- (a) No construction contract or expenditure, except for the cost of preparing necessary plans, specifications and estimates of costs, for any public improvement to be financed in whole or part by special assessment shall be made before the confirmation of the special assessment roll for such improvement.
- (b) The manager shall make a special assessment roll of all lots and parcels of land within the designated district to be benefited by the proposed improvement and assess to each lot or parcel of land the amount benefited thereby. The amount spread in each case shall be based upon the cost estimate of the city engineer.
- (c) After the manager completes the assessment roll, it shall be filed with the clerk for public examination and presentation to the commission for review and confirmation by it.
- (d) The commission shall fix the time and place at which the commission will meet to review the special assessment roll and to give interested persons an opportunity to be heard; which meeting shall not be less than ten days after notice thereof has been both published in a newspaper published or generally circulated in the city and sent by first-class mail to all property owners in the proposed special assessment district as shown by the current property tax roll of the city. The meeting required by this section may be held at any regular or special meeting of the commission.
- (e) The commission shall meet at the time and place scheduled for review of the special assessment roll.
 - (1) At such, meeting, the commission shall consider all objections to the special assessment roll submitted in writing or orally at the meeting;
 - (2) The commission may correct the roll as to any special assessment or description of any lot or parcel of land or other errors appearing therein; or
 - (3) The commission may, by resolution, annul the assessment roll and direct that a new roll be prepared, following the same procedures applicable to the making of the original roll.
- (f) If, after hearing all objections and making a record of such changes as the commission deems justified, the commission determines that it is satisfied with said special assessment roll, and that assessments are in proportion to benefits received, it shall thereupon pass a resolution making such determination and confirming the roll. The resolution shall also:
 - (1) Direct the manager to spread the various sums and amounts appearing thereon on a special assessment roll;
 - (2) Order placement of the roll on file in the city clerk's office and direct the clerk to attach his or her warrant to a certified copy within ten days;

- (3) Command the city treasurer to bill and collect the special assessments or installments as provided in this chapter within 60 days of billing, unless a later date for billing and collecting is established by the commission in accordance with the following paragraph;
 - (4) If the commission determines construction of part or all of the improvement will not occur immediately after the confirmation of the roll, and if the commission also deems it unnecessary to collect the assessment forthwith, the resolution shall provide for the billing and collection of the assessment at the time of the construction of the improvement; and
 - (5) Direct the treasurer to give notice by first-class mail to each property owner on the special assessment roll that the roll has been confirmed, and further containing the information set forth in subsections (h) and 94-10(b).
- (g) Whenever a special assessment roll shall be confirmed by the commission, it shall be final and conclusive. Such roll shall have the date of confirmation endorsed thereon and shall from that date be final and conclusive for the purpose of the improvement to which it applies, subject only to adjustment to conform to the actual cost of the improvement, or as otherwise provided in section 94-13.
- (h) Such special assessments and all proceedings upon which such special assessments are based shall be incontestable, unless an appeal to the Michigan Tax Tribunal is instituted within 30 days after the date of confirmation of such special assessment roll.
- (i) Failure on the part of the city or any official or employee thereof to give or mail any notice required to be given or mailed by this chapter, or failure by any property owner to receive any such notice shall not invalidate any special assessment or special assessment roll.
- (j) Where deemed appropriate, the commission may authorize the public hearing on necessity of proceeding with the public improvement and on confirmation of the special assessment roll to be combined provided that all public notice requirements of this chapter are fulfilled.

(Ord. No. 1637, 3-24-97; Ord. No. 1833, 4-19-04; Ord. No. 1962, 4-21-08)

Sec. 94-10. - Payments.

- (a) All special assessments shall be payable in such number of approximately equal installments, not to exceed ten, as the commission may determine. The first installment of a special assessment shall be due and payable within 60 days of billing, or such later date as the commission may establish closer to the time of construction, and one installment shall be due and payable each year thereafter on the anniversary of such due date, with annual interest upon all unpaid installments to be fixed by the commission at a rate not to exceed 12 percent per annum, provided that no interest shall be charged upon any amount paid within 60 days of billing of the first installment. The whole assessment, both primary and deferred, against any lot or parcel of land may be paid to the city treasurer at any time in full with accrued interest and penalties thereon. If any special assessment or any installment of a special assessment is not paid when due, then such assessment or installment shall be deemed to be delinquent and there shall be, in addition to interest, a penalty added at the rate of one percent for each month or fraction thereof that the same remains unpaid before being reported to the commission for the purpose of being reassessed upon the city tax roll.
- (b) After the commission has directed the billing and collection of the assessment, the treasurer shall notify by first-class mail each property owner on the special assessment roll of the obligation to pay the amount assessed and:
 - (1) When the special assessment is not payable in installments, the time within which it may be paid without interest, or penalty.

- (2) When the special assessment is payable in installments, the notice shall state the due date of the first instal date from which interest will be charged on future installments.
- (c) If any lots or lands are divided in compliance with city ordinance after a special assessment thereon has been confirmed and before the collection of all installments, the manager shall apportion the uncollected amounts upon the several parts of lots and lands so divided, and all assessments thereafter made upon such lots or lands shall be according to such apportionment.

(Ord. No. 1637, 3-24-97; Ord. No. 1962, 4-21-08)

Sec. 94-11. - Accounts.

Funds raised by special assessment to pay the cost of any public improvement shall be held in a special fund to pay such cost or to repay money borrowed therefor. Each special assessment account must be used only for the improvement project for which the assessment was levied. If there is a surplus, the surplus shall be refunded pro rata, without interest, as follows: Where the assessment has been paid in full, by a refund in cash to the owner of the premises at the time the refund was ordered, and where the assessment has not been paid in full, by credit on the assessment roll. No refund of \$20.00 or less shall be required.

(Ord. No. 1637, 3-24-97)

Sec. 94-12. - Lien until paid.

- (a) All special assessments, including installment payments, shall, from the date of the confirmation thereof, constitute a lien on the respective lots or parcels assessed, and until paid shall be charged against the respective owners of the lots or parcels assessed.
- (b) The city treasurer shall annually, on May 1, certify any delinquent special assessment, or any part thereof, together with all accrued interest and penalty, to the commission; and, it shall be transferred and reassessed, with an additional 15 percent penalty, on the next annual city tax roll. Such charges so assessed shall be collected in the same manner as general city taxes.

(Ord. No. 1637, 3-24-97; Ord. No. 1834, 4-19-04)

Sec. 94-13. - Adjustments and corrections.

- (a) Excessive assessments.
 - (1) The excess by which any special assessment proves larger than the actual cost of the improvement and expenses incidental thereto may be placed in the general fund of the city if such excess is five percent or less of the assessment.
 - (2) Should the assessment prove larger than necessary by more than five percent, the entire excess shall be refunded on a pro rata basis according to assessments to the owners of the property assessed as shown by the current assessment roll of the city, provided, however, no refunds shall be made of less than \$20.00.
 - a. Such refund shall be made by credit against future unpaid installments to the extent any installments are remaining, and the balance, if any, of such refund shall be in cash.
 - b. No refunds may be made which contravene the provisions of any outstanding evidence of indebtedness secured in whole or in part by such special assessment.
- (b) Additional pro rata assessments may be made when any special assessment roll proves insufficient to pay for the actual cost of the improvement for which it was levied and the expenses incident thereto, provided that

the additional pro rata assessment shall not exceed 25 percent of the total assessment originally confirmed unless a public hearing before the commission is first held to review and confirm such additional assessment, for which hearing notices shall be published and mailed as provided in the case of review of the original special assessment roll.

(c) Invalid assessments.

- (1) whenever any special assessment shall, in the opinion of the commission, be incorrect or invalid by reason of any irregularity or informality in the proceedings, or if any court or tribunal of competent jurisdiction shall adjudge the assessment to be illegal, the commission may, regardless of whether the improvement has been made or not, or whether any part of the assessment has been paid or not, cause a new assessment to be made for the same purpose for which the former assessment was made.
- (2) All proceedings on such reassessment and for the collection thereof shall be conducted in the same manner as provided for the original assessment.
- (3) Whenever any sum or part thereof levied upon any property under the assessment so set aside has been paid and not refunded, the payment so made shall be applied upon the reassessment or if the payments exceed the amount of the reassessment, refunds shall be made.
- (4) No judgment or decree nor any act of the commission vacating a special assessment shall destroy or impair the lien of the city upon the premises assessed for such amount of the assessment as may be equitably charged against the same or as by regular mode of proceeding might have been lawfully assessed thereupon.

(Ord. No. 1637, 3-24-97)

Sec. 94-14. - Assessment against single lot.

When any expense shall be incurred by the city upon or in respect to any separate or single lot or parcel of land which, by the provisions of this chapter, the city commission is authorized to charge and collect as a special assessment, and not being of that class of special assessments required to be made pro rata upon several lots or parcels of land in a special assessment district, an account of the labor, materials, or services for which such expense was incurred and the name and address of the owner or person chargeable therewith, if known, shall be reported to the commission in such manner as it may prescribe. The provisions of this chapter with reference to special assessments generally, and the proceedings necessary before making the improvements, shall not apply to assessments to cover the expense incurred in respect to that class of improvements contemplated in this section.

- (1) No improvement or expense shall be subject to special assessment under this section unless the owner of or party in interest in the property to be so assessed shall receive ten days' notice by mail of any meeting at which commission action on such an improvement, expense, or special assessment is to be considered, with such notice to be provided in accordance with the requirements and procedures set forth in this chapter.
- (2) The commission shall determine what amount or part of every expense is to be assessed and the person, if known, against whom such expense shall be charged, and the lot upon which the same shall be levied as a special assessment; and as often as the commission shall deem it expedient, it shall require all of the several amounts so reported and determined, and the several lots or parcels of land and person chargeable therewith, respectively, to be reported by the treasurer to the manager for assessment.
- (3) Upon receiving the commission's report, the manager shall make a special assessment roll, and levy as a special assessment upon each lot so reported to him and against the persons chargeable therewith, if known, the whole amount of all the charges so directed to be levied upon each lot or parcel of land

respectively, together with a penalty of ten percent, and when completed, the manager shall report the assessment to the commission and thereupon the same proceeding shall be had as provided in this chapter for special assessments in other cases, except the commission may require that the same be paid in one or any other number of installments not to exceed five; provided that the notice of the filing of the special assessment roll in such cases, and of the reviewing of the same, may be given by sending such notice by registered mail to the persons named in such roll at their last known address, instead of giving notice by publication. If such notice is given by publication, the commission may order the cost thereof to be added to the roll and distributed pro rata according to the amount of the special assessments therein. It shall not be necessary to make a separate roll for each lot or parcel of land against which such an assessment may be made, but assessments against several lots or parcels of land may be included in one roll.

(Ord. No. 1637, 3-24-97; Ord. No. 1962, 4-21-08)

Sec. 94-15. - Assessments for off-street parking.

When the proposed public improvement is a facility to provide public off-street parking, the commission may determine that any lot within the proposed assessment district which is developed to a floor area ratio of less than 1.0 will be additionally benefited if at some time in the future additional floor area is constructed on such property. In such instances, a resolution adopted pursuant to section 94-8 shall direct the manager to prepare the assessment roll by including therein a deferred assessment benefit, to be calculated as follows:

- (1) The manager shall compute the estimated benefit to the lot to be assessed using the actual square footage of land and building at the time of such assessment, to achieve the primary assessment figure.
- (2) The manager shall compute for each lot in the district the maximum additional square footage of building which could be added to the property under the current zoning ordinance without providing additional square footage of building which could be added to the property under the current zoning ordinance without providing additional on-site parking. If such property has, at the time of assessment, a floor area ratio of 1.0 or greater, no deferred off-street parking assessment shall be entered against such property. whether the lot or parcel is not being utilized at the time of assessment at the maximum floor area ratio of 1.0, the manager shall compute a deferred off-street parking assessment based on the additional allowable potential building area computed above and shall enter such amount on the roll as the deferred off-street parking assessment on such property.
- (3) Such deferred off-street parking assessments shall be canceled at the time of development if the building constructed or enlarged is residential in character. Primarily residential buildings shall be defined as any building with two or more stories in which the first floor or any portion thereof is occupied by a commercial or business use and all additional stories are utilized for residential purposes.

(Ord. No. 1637, 3-24-97; Ord. No. 1962, 4-21-08)

Sec. 94-16. - Deferred off-street parking assessments.

- (a) The manager shall enter the amount of any deferred off-street parking assessment upon the roll at the time of its preparation. Such assessment shall not be due as to any lot against which a deferred off-street parking assessment has been made until it shall be developed so as to increase the floor area existing at the time of the assessment by five percent or more or increase the floor area ratio to 1.0. Upon the issuance of a building permit authorizing such an increase in floor area, the city commission shall, by resolution, confirm the making

of the deferred off-street parking assessment and it shall be due and payable in full within 30 days. Failure to pay a deferred off-street parking assessment within the above-stated time period shall be grounds for issuance of a stop-work order on the subject property by the building official.

- (b) Deferred off-street parking assessments may be paid in full at the owner's option, at any time after the roll of primary assessments has been confirmed. A building owner may elect to finance a deferred off-street parking assessment with the primary assessment if such an election is made in writing and filed with the city treasurer within 14 months after confirmation of the primary assessment roll. Interest on a deferred off-street parking assessment shall not start to accrue until 60 days after such deferred off-street parking assessment was confirmed by the commission.

(Ord. No. 1637, 3-24-97; Ord. No. 1962, 4-21-08)

Sec. 94-17. - Time limitation.

No deferred off-street parking assessment shall be confirmed by the city commission unless such confirmation takes place within 20 years from the date on which the original roll was confirmed. As to any deferred off-street parking assessment not confirmed within such 20-year period, it shall no longer be considered a potential assessment against a lot. Any deferred off-street parking assessment which has been paid in advance shall not be refunded even though not confirmed within the 20-year period.

(Ord. No. 1637, 3-24-97)

Sec. 94-18. - Deferred payments of special assessments based on hardship.

- (a) The city may grant deferrals of special assessment payments of persons who, in the opinion of the city commission, by reason of hardship are unable to contribute toward the cost thereof, in accordance with the provisions of this section.
- (b) An owner may apply for deferment of any or all installment payments of special assessments due in a particular year on the owner's homestead. The application shall be made upon an affidavit form available from the city treasurer.
- (1) The affidavit form shall contain the following:
- a. The name, or names if owned jointly, and social security number of the applicant.
 - b. The homestead address and sidewall number.
 - c. The home and business telephone number of the applicant.
 - d. The length of ownership of the homestead by the applicant.
 - e. Total household income for the past calendar year. The applicant shall attach copies of the most recently filed federal and state income tax forms of all members of the household, including all schedules, to the application.
 - f. Current place of employment. If the applicant is unemployed, the date of termination or resignation from employment shall be stated.
 - g. A statement of the net worth of all household members as of the date of the application.
 - h. The number of dependents, as defined in 26 U.S.C. 1, et seq., of the Internal Revenue Code, as amended, residing with the applicant at the homestead.
 - i. If the applicant is over 65 years of age or totally and permanently disabled, the applicant shall attach a copy of the notice from the treasurer denying deferment of special assessment under MCL 211.765, as amended, to the application.

- j. The amount of the special assessment installment payment for which deferment is requested and the date such installment comes or was due.
 - k. A statement located immediately above the applicant's signature: "It is understood that if this deferment is authorized, the City will place a lien on your property."
 - l. The form shall be signed by the applicant and notarized. If the homestead is owned jointly by husband and wife, both shall sign and file the affidavit.
- (2) In addition to the above, copies of the following documents shall be attached to the application:
- a. Recorded deed and land contract or mortgage for the homestead property.
 - b. The cover page of the current homeowners or hazard insurance policy covering the homestead.
 - c. A death certificate or divorce decree, if such document affects the title to the homestead property.
 - d. Any other document that the city may require to process the application for deferment.
- (c) Application for deferment of an installment payment of a special assessment must be made no later than 30 days after the due date of a special assessment or installment for which deferment is requested.
- (d) To qualify for a deferment of an installment payment, the applicant must meet all of the following requirements:
- (1) Total household income attributed to the applicant in the past calendar year cannot exceed the level adopted by the state for its special assessment deferral program, plus an additional amount equal to the deduction allowed by state income tax law for each dependent residing with the applicant at the homestead;
 - (2) Total net worth of all members of the household cannot exceed \$10,000.00;
 - (3) The homestead must be the primary residence of the applicant;
 - (4) The homestead must have been owned and occupied by the applicant for at least three years;
 - (5) The applicant cannot be eligible for deferment of special assessment under MCL 211.761, et seq., as amended;
 - (6) The amount of the installment payments to be deferred on special assessments exceeds \$300.00 per year;
 - (7) Property taxes on the homestead property should not be more than two years delinquent.
- (e) Immediately upon receipt of the affidavit form, the treasurer shall stamp the application with the time and date of receipt. The treasurer shall promptly examine the application to determine if the applicant meets the requirements of this chapter.
- (1) The treasurer shall request the Manager to make an inspection of the property and property records and conduct an investigation and survey as the treasurer deems necessary. An applicant shall not be compelled to supply information not reasonably necessary to a proper determination of the eligibility of the owner and the homestead for the relief provided under this section.
 - (2) The treasurer shall promptly make a decision and shall notify the applicant of this decision not later than 30 days after the receipt of the application by the treasurer. The decision of the treasurer shall be final.
- (f) The payment of any installment payment on a special assessment due and payable on a homestead in a year in which the owner meets all the eligibility requirements of this section shall be deferred until the occurrence of the first of the following events:
- (1) The homestead or any part of the homestead is conveyed or transferred to another, provided however, that:
 - a. The original applicant for the deferral may convey or transfer an interest in the homestead to

another person jointly with the applicant provided that the original applicant continues to reside at the homestead, or

- b. An owner who owns the property jointly with another may convey or transfer that interest to the original applicant for the deferral provided that the original applicant to whom the property is conveyed continues to reside at the homestead;
 - (2) A land contract selling the homestead is entered into;
 - (3) The owner fails to maintain adequate homeowners and hazard insurance as required herein; or
 - (4) One year after the original applicant's death, subject to further order of the probate court; however, the death of a spouse shall not terminate the deferments of special assessments for a household owned by husband and wife as long as the spouse does not remarry.
- (g) Payment of deferred amounts.
 - (1) Any special assessment deferred under this section may be paid at anytime.
 - (2) Upon the occurrence of any one of the events terminating a deferment of an installment payment under subsection 94-18(f), above, the deferred amount plus interest shall be paid in full.
 - (3) If the owner fails to make such payment when the deferment is terminated, the provisions of this chapter regarding the collection of special assessments shall again apply to the deferred payment as if no deferment had been granted and the city may enforce the lien upon the property in any manner permitted by law.
- (h) Interest shall accrue on deferred installment payments at the monthly rate provided for nondeferred installment payments within the special assessment district.
- (i) The treasurer shall send to the owner, by first-class mail, a yearly statement showing the amounts of deferred assessments on the homestead and the interest outstanding thereon.
- (j) Notice of lien.
 - (1) Upon grant of a deferment or grant of the initial deferment if deferments are granted in subsequent years, the city shall record a notice of lien in its favor at the Oakland County Register of Deeds stating that there exists a lien upon such property for deferred special assessments. The lien created shall include the amount of interest provided hereunder.
 - (2) The owner shall sign all documents necessary for the filing of such lien as a condition to receiving a deferral.
 - (3) If subsequent deferments are granted, the treasurer shall ascertain whether the notice of the previously filed with the register of deeds is still in effect. If it is not, a new notice of lien shall be filed against the property with the register of deeds.
- (k) For the duration of the deferment, the owner shall maintain homeowners and hazard insurance on the homestead in an amount not less than the amount of the deferred assessment(s) and accrued interest plus the balance of any mortgage or other lien or encumbrance superior to the city's lien. On or before June 1st of each year for the duration of the deferment, the owner shall provide the treasurer with proof of such homeowners and hazard insurance in the form of a certificate of insurance, and such certificate of insurance shall show the city as an additional insured and shall further contain a clause requiring the insurance company to give the city 30 days advance notice of cancellation, termination or material change in the insurance coverage.
- (l) All deferments made under this section apply only to the installment payment for the year granted and for the specific special assessment district for which the deferment has been granted. An owner can apply for further deferments in any given year that installments are due if the eligibility requirements are met and this chapter

remains in effect.

- (m) Nothing in this chapter shall give any person a vested right to receive a deferment or in the standards to be applied in granting such a deferment.
 - (1) The city commission may change, modify, or delete any of the terms and conditions of this section or repeal it in its entirety at any time without notice to any applicant or recipient of a deferment.
 - (2) However, once a deferment is granted, it cannot be revoked and payment be required prior to the time set forth in this section.
- (n) Penalties.
 - (1) In addition to all other penalties imposed by this chapter, if any person shall make a false or misleading statement on an application for deferment under this section, such person shall be guilty of a misdemeanor and all amounts deferred shall be immediately due and payable.
 - (2) Failure to pay such deferrals within 30 days of receiving notice from the treasurer shall result in the foreclosure of the liens placed upon the subject property pursuant to this section.

(Ord. No. 1637, 3-24-97; Ord. No. 1962, 4-21-08)

APPENDIX D

**CITY CHARTER
CHAPTER 10**

CHAPTER X. - SPECIAL ASSESSMENTS

Section 1. - [Authority to impose; resolution.]

The commission shall have the power to determine that the whole or any part of the expense of any public improvement shall be defrayed by special assessments upon the property specially benefited or which may be specially benefited in the future and shall so declare by resolution. Such resolution shall state the estimated cost of the improvement, what proportion of the cost thereof shall be paid by special assessments, and what proportion, if any, shall be a general obligation of the city, the number of installments in which assessments may be paid, and shall designate the districts or land and premises upon which special assessments shall or may be levied. Such resolution may provide that specified development or improvement of property will benefit from a public improvement and establish assessments against such property to be collected if and after such improvement or development of property is undertaken.

(Amend. of 4-4-83)

State Law reference— Permissible that Charter provide for assessing costs of public improvements, MCL 117.4d, MSA 5.2077.

Section 2. - [Establishment of procedure.]

The commission shall prescribe by general ordinance complete special assessment procedure concerning plans and specifications, estimate of costs, the making of the assessment roll and correction of errors, the notice and conduct of hearings on the necessity of a public improvement and the confirmation of the special assessment roll, the collection of and interest to be borne by special assessments and any other matters concerning the making of improvements by the special assessment method.

(Amend. of 4-4-83)

Section 3. - [Imposition of lien.]

From the date of confirmation of any roll levying any special assessment, the full amount of the assessment and all interest thereon shall constitute a lien on the property subject thereto and that amount shall also be a debt of the person to whom assessed until paid and, in case of delinquency, may be collected as delinquent city property taxes.

(Amend. of 4-4-83)

Section 4. - [Collection.]

No action of any kind may be instituted for the purpose of contesting or enjoining the collection of any special assessment (a) unless, within 30 days after the confirmation of the special assessment roll, written notice is given to the commission indicating an intention to file such an action and stating the grounds on which it is claimed that the assessment is illegal and (b) unless that action shall be commenced within 60 days after the confirmation of the roll.

(Amend. of 4-4-83)

Section 5. - [Reassessment.]

Whenever the commission deems any special assessment invalid or defective, or whenever a court adjudges an assessment to be illegal in whole or in part, the commission may cause a new assessment to be levied for the same purpose, whether or not the improvement or any part thereof has been completed, or any part of the special assessment collected. In reassessment proceedings hereunder, it shall not be necessary for the commission to redetermine the necessity of the improvement or to hold a hearing thereon. If any portion of the original assessment is collected and not refunded, it shall be applied upon the reassessment, and the reassessment shall to that extent, be deemed satisfied. If more than the amount reassessed is collected, the balance shall be refunded to the person making such payment.

(Amend. of 4-4-83)

APPENDIX E

CONCRETE VS. ASPHALT ENGINEERING REPORT COMPLETED BY OHM

CITY OF BIRMINGHAM

UNIMPROVED STREETS STUDY COMMITTEE PAVEMENT IMPROVEMENT OPTIONS





INTRODUCTION

The City of Birmingham has created an Unimproved Street Study Committee to examine unimproved roads throughout the City and provide a recommendation outlining a long-term plan for these roads. Unimproved roads make up approximately 26 miles of the roughly 90 miles of roads under Birmingham's jurisdiction. Many of these roads were originally constructed as gravel roads in the early part of the 20th century with little to no provisions for drainage. Starting in the late 1940's, the City began installing chip seals over these roads to address the ongoing issues associated with gravel roads. The City has continued to maintain the unimproved roads utilizing a cape-seal process, which is comprised of a slurry seal over a chip seal. This process creates a non-structural driving surface to improve the look and feel of the roadway for a relatively low cost. These roads require maintenance that is more frequent and there has been growing concern regarding their durability and maintenance cycles.

The City has engaged OHM Advisors to provide additional information to the Study Committee for their use in development of a long-term plan to address the unimproved roads within the community.

GENERAL STREET IMPROVEMENT CONSIDERATIONS

DRAINAGE

A critical component in the design of a new roadway is how to handle drainage. Storm water runoff must be managed both for pavement performance/longevity and safety of motorists using the roadway. Water intrusion and accumulation in the pavement structure as well as the underlying subgrade cause many issues with roadway performance. Water in the subgrade and aggregate layers beneath the pavement can weaken these materials by increasing pore pressure and reducing shear resistance, which weakens the overall pavement structure. Saturation of underlying soils can also cause expansion, especially when the trapped water freezes. This action during freeze-thaw cycles is a primary cause of roadway deterioration in Michigan. Moisture can also accelerate degradation of both asphalt and concrete pavement itself by fostering distresses such as chemical reactions and aggregate stripping.

There are two primary methods of reducing water effects on the pavement are through surface drainage and subsurface drainage. Surface drainage is addressed with pavement cross slope and longitudinal grade to flow surface runoff from the pavement to a storm sewer or drainage ditch. In most urban/developed areas, roads include curb and gutter to route storm runoff to a storm sewer system. Roadside ditches can also be an effective method to provide surface drainage, but they require significant maintenance in order to function properly. In order to preserve the mature trees that exist along the unimproved roads in Birmingham, roadside ditches may not be a feasible option. Subsurface drainage is concerned with removing water that infiltrates through or is contained in the underlying subgrade. This is can be addressed with aggregate drainage layers and underdrains.



Most of the unimproved roads within Birmingham appear to have been originally constructed with little or no provisions for drainage. Storm sewer systems were not typically included on local gravel streets when many of the streets within the City were developed. It does not appear that ditches or other drainage methods were included with the original construction. Curb and gutter and storm sewers have been added to a number of the unimproved roads to provide a means for drainage. When these streets are improved, drainage will need to be addressed. Areas with existing storm sewer should be reviewed to ensure sufficient sizing, spacing, & capacity for drainage. All roads to be improved should include provisions for subsurface drainage as well.

SUBGRADE

Subgrade refers to the existing soil materials upon which the pavement structure is placed. Performance of the subgrade can have a significant impact on the overall performance of the roadway pavement. The subgrade must be able to support loads transferred from the pavement structure. This is especially important for asphalt roadways, where the aggregate base and subgrade are an integral part of the overall pavement support strength. Concrete pavement generally distributes loads over a larger area, resulting in lower pressure on the subgrade. The soil makeup of the subgrade is also an important consideration, as certain soils have large volume changes when exposed to excessive moisture or freezing conditions.

Since the unimproved roads within the City have existed for quite some time, there is not a major concern with strength and compaction of the existing subgrade. The gravel base has been in place and built upon over time, and there does not appear to be areas of subgrade failure. As the roads are improved, the subgrade should be evaluated and considered in the overall pavement design. Any areas of poor subgrade should be addressed with undercuts or reinforcement as required.



TRAFFIC AND LOADING

The amount of traffic, especially trucks and other heavy vehicles, is an important factor in the design of road pavements. The unimproved roads within the City are local streets that do not carry a significant volume of traffic. They primarily serve residential neighborhoods and are utilized by passenger cars with the occasional delivery/service truck or bus. Several of the unimproved roads serve as neighborhood collectors, which see slightly higher traffic volumes, but these are still low in terms of traffic loading impact to the pavement.

PAVEMENT MATERIAL CONSIDERATIONS

The decision on which pavement material to use is asked on every road reconstruction project. Neither material is necessarily better than the other, and each can be ideal for specific projects.

CONCRETE

In general, concrete roadways have a longer service life than asphalt. The typical design life of concrete pavement is 30 to 40 years, but their lifespan can stretch to 80 years or more if constructed and maintained properly. This durability is a primary reason this material is utilized on many roadway projects. Concrete is also considered a “rigid” pavement, which means it can carry heavy loads and also distribute those loads over a larger area. As a result, concrete pavements do not need underlying aggregate base layers for strength and load carrying capacity.





Initial construction costs for concrete roads are typically higher when compared to asphalt. The costs of concrete and asphalt materials fluctuate regularly, but local road construction with concrete is generally higher. Based on recent experience, initial construction costs for concrete local road pavements average \$165/foot (6-inch) to \$185/foot (7-inch). Though the initial construction costs are higher, the overall lifecycle cost of a concrete roadway may be less due to longevity of the pavement and required maintenance over its life.

In most cases, concrete pavement requires less frequent maintenance during its service life when compared to asphalt. However, when concrete repairs are required, they are usually more impactful to the roadway. Routine maintenance involves joint and crack sealing to prevent water intrusion beneath the pavement. Over time, a portion of the concrete will deteriorate and will require joint repairs and/or selective panel replacements. Overall, these maintenance activities are infrequent with the more significant work occurring in the later portions of the road's life span.

The initial construction duration for a concrete local road is typically longer than that of an asphalt local road. The required time for the concrete to cure before use also results in longer times residents don't have access to their properties during construction. If the concrete road is built with integral curb, it can reduce the construction duration by several weeks.

For local/residential roads similar to the unimproved roads being considered in Birmingham, the concrete pavement thickness is typically between 6 and 8 inches. The main variables used to determine an appropriate thickness are the strength of the subgrade and the anticipated truck traffic loading. These variables should be verified with each project to ensure an appropriate design, but many communities throughout the region have adopted "standard" sections for consistency. Based on the low anticipated truck volume and existing stable base for the unimproved streets, a standard concrete thickness of 6 or 7 inches could be utilized by the City.



ASPHALT

The typical design life of asphalt pavement is 15 to 20 years. With maintenance and rehabilitation treatments, this life can be extended to 30 years or more. Asphalt is considered a “flexible” pavement, which means it relies on underlying aggregate base layers for strength and load carrying capacity. The initial construction duration for an asphalt local road is typically shorter than that of a concrete local road. Asphalt can be placed quickly and then open for traffic use the same day.



Initial construction costs for asphalt roads are typically lower when compared to concrete. The costs of concrete and asphalt materials fluctuate regularly, but local road construction with concrete is generally higher. Based on recent experience, initial construction costs for asphalt local road pavements average \$125/foot (3-inch) to \$140/foot (4-inch). Though the initial construction costs are lower, the overall lifecycle cost of an asphalt roadway may be more due to a shorter service life and increased maintenance over its life.

Generally, asphalt pavement requires more frequent maintenance during its service life than concrete. As the asphalt ages, it becomes more brittle and cracks develop from the flexing strains. Also, areas of poor underlying soil can cause the pavement structure to fail prematurely under heavy loading. There are more maintenance options available for asphalt pavements than concrete, and many of them can be completed quickly with minimal impact to road users. Crack sealing is critical to prevent water intrusion and additional deterioration. Surface treatments such as slurry seals, can be utilized to extend the life of an asphalt road. Rehabilitation of the roadway via patching and/or overlays can also be effective to extend the service life.



For local/residential roads similar to the unimproved roads being considered in Birmingham, an asphalt pavement section is typically between 3 and 4 inches of asphalt on 8 to 10 inches of aggregate base. Similarly to concrete, the main variables used to determine an appropriate pavement section are the strength of the subgrade and the anticipated truck traffic loading. Based on the low anticipated truck volume and existing stable base for the unimproved streets, a standard section of 4 inches of asphalt on 8 inches of aggregate base could be utilized by the City. Asphalt roads should include curb and gutter to handle drainage. There are a number of curb options and configurations that could be used.

PAVEMENT OPTION COMPARISON

The following table summarizes the design life, initial construction cost, and anticipated maintenance cost for several local road paving options:

Type	Design Life	Initial Cost ¹	Avg. Maint ²
6" Concrete w/curb	30-40 years	\$380/foot	\$2.25/ft/year
7" Concrete w/curb	30-40 years	\$400/foot	\$2.25/ft/year
7" Concrete w/curb & 8" drainage layer	40+ years	\$450/foot	\$1.75/ft/year
3" Asphalt on 8" aggregate w/concrete curb	15-20 years	\$325/foot	\$5.00/ft/year
4" Asphalt on 8" aggregate w/concrete curb	15-20 years	\$340/foot	\$4.50/ft/year

¹Initial construction cost including administration, sidewalk, driveways, utilities, etc.

²Anticipated total maintenance costs over the life divided by life to determine average.

FUNDING STREET IMPROVEMENTS

There is a significant cost associated with constructing roads within any community. Many cities throughout the region constructed many of their local road networks through ambitious construction programs. Many of these programs were funded through bonds that were paid back through a local millage or creation of special assessment districts (SADs). If possible, road construction should be combined with other utility (water/sanitary) work in order to share costs for traffic control and other general condition items.

SAD'S

Communities differ greatly on the amount of the project costs that are charged to property owners through a SAD, with some charging 100% of the cost to others charging 50% of the cost. Our experience has been that most cities in the region that utilize SAD's for local street improvement charge 80% to 100% of the cost to the benefiting property owners. This is especially true for areas where the local streets only serve the neighborhood in which they are located. If the local road being improved is more of a collector, serves more than one neighborhood, or has a large amount of pass-through traffic, then the percentage of charge is typically reduced to between 50% and 75%. Some communities increase the amount of city share in the SAD to 40% to 50% in order to encourage utilization of the process for road improvements.



Nearly all of the SAD programs we have been involved with in the area are initiated through a property owner petition process. This is done to ensure that the property owners who will be included in the SAD are in support of it prior to the municipality expending resources on the project. As the petition process can be daunting to residents, most cities assist with preparing petition forms, project information, process guides, etc. or will even host and participate in a public informational meeting. Another technique used by some communities that seems to work well is an annual city-issued call for proposals/petitions for potential road improvements. A packet of information with all of the documents to initiate the petition are provided to respondents of the call.

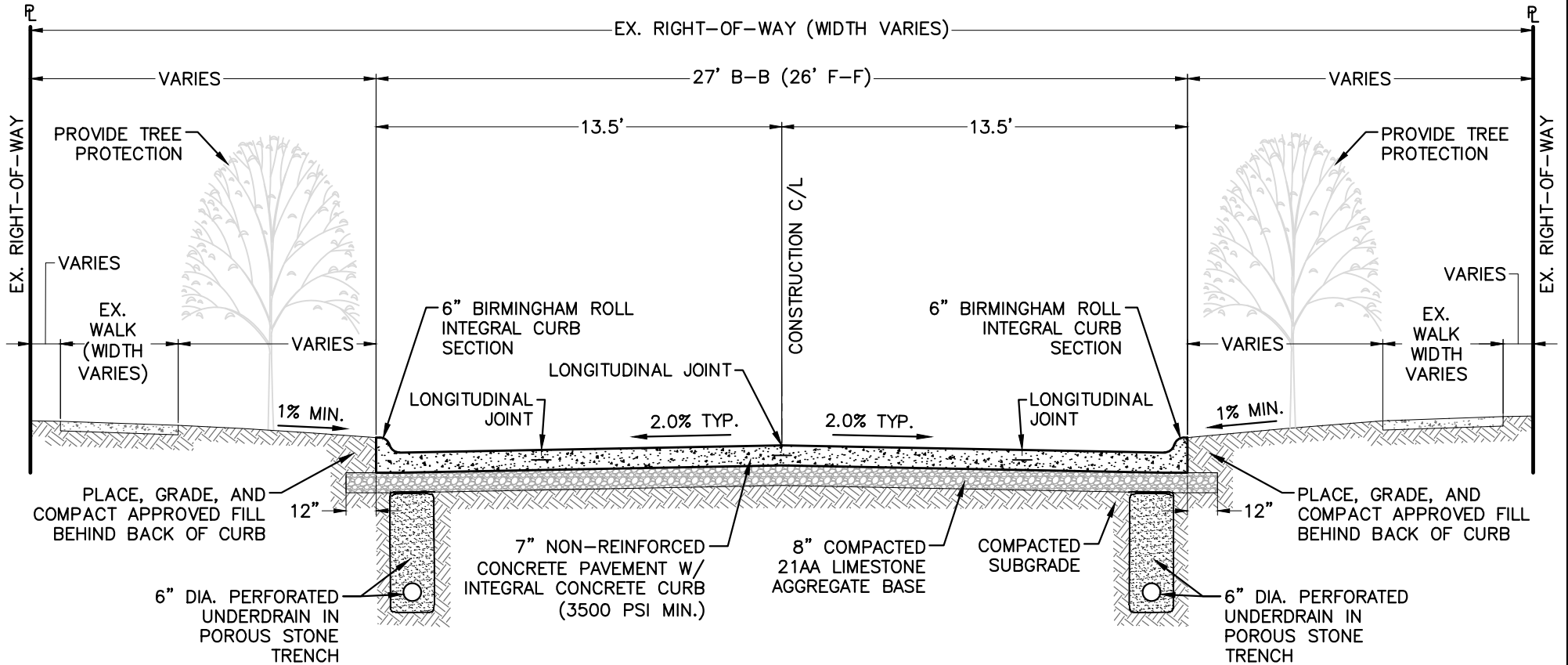
By law, municipalities have authority to establish SAD's. In some cases, SAD's are initiated by the City without a petition request from the property owners. We have seen this in instances where road conditions have become seriously degraded and become an issue of safety and overall community appearance. This is rare, since the property owners will typically desire their roads improved and initiate a petition prior to the roads deteriorating to that point. Cities that initiate the SAD process may experience more objections during the process than those that are initiated by the property owners, but that is not always the case. In addition, the cities that initiate the SAD process for road improvements usually charge 50% to 60% of the project cost to the property owners.

MILLAGE

Many communities fund their road programs through a city-wide millage. This can be an effective way of generating consistent revenue for a comprehensive asset management strategy for the road system. Cities typically utilize road millages to rehabilitate and reconstruct deteriorated streets as well as fund ongoing maintenance activities. Since the millage is across the entire city, the programs that are more successful have relatively consistent road conditions throughout the community. Construction of new roads or improvement of those that have not been done previously is typically not included in the millage program. Those improvement projects are still done using an SAD process, but a reduced portion of the cost may be charged to the property owners since they are also participating in the overall millage. Since less than 30% of the road network in Birmingham are unimproved roads, it may be challenging to employ a city-wide millage to fund their improvement.

APPENDIX F
STANDARD STREET CROSS SECTION
Cost Baseline

EXHIBIT



STANDARD CONCRETE ROAD CROSS-SECTION
FOR LOCAL STREET IMPROVEMENTS

SCALE: 1"=5'



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