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October 31, 2013

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City Clerk
City of West Allis

Re: Special Use Temporary Concrete Batch Plant Request & Application – November 5, 2013 Common Council Meeting

Dear Alderperson Gary T. Barczak:

I am writing to provide background on Michels' application on the agenda for the November 5, 2013 Common Council meeting. We have worked diligently with the City Planner for several months to address the surrounding neighborhood's concerns related to noise, dust, and traffic resulting from our operations.

The City Planner recommends approval of our application as a permitted special use subject to several conditions. We agree with all but the following conditions suggested by the City Planner: (1) pave the the entire batch plant site; (2) the pave the parking lot adjacent to the batch plant site; (3) use new asphalt or concrete; and (4) the hours of operations. Exhibit A outlines the City Planner's recommendation and Michels' recommendations for each of the four outstanding conditions.

The City Planners and Michels asked the Plan Commission to make a decision on these four outstanding conditions at the October 23, 2013 Plan Commission meeting. The Plan Commission elected to defer a decision on the outstanding conditions to the Common Council. They approved Michels' application subject to the conditions recommended by the City Planner partially because any decision may have future precedential implications.

Michels will require a temporary batch plant in the West Allis area as part of the Zoo Interchange Projects. The Quad Graphics site will have a smaller impact on the surrounding areas than any of the comparable sites on Wisconsin DOT right-of-way available for Michels to use if this application is not approved. Exhibit B provides a more detailed comparison of the Quad Graphics site versus these other available sites.

Additionally, as further background for your decision at the meeting, I have attached an exhibit with both a description of our proposed operations and a description of the benefits of our operations to West Allis. I also have attached a report analyzing the benefits of recycled asphalt millings by Collins Engineers, Inc., a licensed independent engineering firm.

In summary, the conditions we have proposed are reasonable and minimize any impact on the surrounding area as well, if not better, than the conditions proposed by the City Planners.

PO Box 128 | 817 West Main St. | Brownsville, WI 53006 | 920.583.3132 | fax 920.583.3429 | www.michels.us

Although time is short, we are asking to set up a time to meet with you prior to the November 5th meeting to further explain these exhibits and answer any questions you may have. Please call me at 414.405.9743 or e-mail me at rmurphy@michels.us to set up a time that works to meet with you. I will make myself available between now, through the weekend and leading up to the meeting.

Sincerely,

Ryan C. Murphy, P.E.
Michels Corporation

Enclosures:

Exhibit A – Outstanding Conditions and Michels Proposed Conditions
Exhibit B – Unique Temporary Site Characteristics
Exhibit C – Description of Temporary Batch Plant Operations
Exhibit D – Benefits to West Allis
Exhibit E – Third Party Engineer Report Comparing Asphalt Materials

c: Shaun Mueller, West Allis City Planner
Scott Post, West Allis City Attorney
Mike Debelak, Vice President
Michels Legal Department

Exhibit A – Outstanding Conditions and Michels Proposed Conditions

Condition #1: Extent to which the site needs to be paved

- City Planner's Recommendation: New asphalt pavement in all areas used by Michels' temporary plant.
- Michels' Recommendation: Michels will install recycled asphalt (all-weather, hard, durable and dustless) on all areas and locations of truck travel and parking. Placing asphalt (or recycled asphalt) under locations that will only include aggregate does not provide any benefit to the City or surrounding environment, and is prohibitively expensive (estimate additional cost of $300,000.00).
    - There will be no reduction to dust at locations under material piles because no tires can kick up dust at these locations.
    - No reduction to dust under the temporary plant because there is no traffic at and around this location.
    - No reduction to dust on locations of no truck traffic because there will be no activities to introduce or kick-up dust to the site.
    - Michels will use all other dust mitigation techniques throughout the site to manage and control dust, regardless if on re-cycled materials or un-paved areas.

Condition #2: Paving the parking lot next to the batch plant site

- City Planner's Recommendation: Pave Quad Graphics existing adjacent gravel parking lot.
- Michels' Recommendation: Leave the existing parking lot as is. This lot is not an assigned parking lot and Michels' operations will be separated by a concrete barrier to the Quad Site. Michels proposed batch plant operations will not use the adjacent parking lot in any manner. As such, this condition is not reasonably related to Michels request and has no legislative or legal connection to the application and intended use.

Condition #3: Best Material for Paving the Site

- City Planner's Recommendation: All paving use new asphalt.
- Michels' Recommendation: Michels will use recycled asphalt millings, the millings will be compacted and treated with solidifying agents for compaction and additional dust reduction. The recycled asphalt millings are **better** than new asphalt for the following reasons:
    - Recycled asphalt millings allow for better dust control than new asphalt.
    - Recycled asphalt millings absorb noise, new asphalt does not, which causes noise to echo and reflect more into the surrounding environment.
    - Recycled asphalt millings are more environmentally friendly.
    - Recycled asphalt millings are more cost effective (approximately $350,000.00 less than new asphalt). This amount is unreasonably prohibitive since Michels's operations will only last 3-4 years.
    - See the attached Ph.D and Professional Engineers Report.

Condition #4: Hours of Operations

- City Planner's Recommendation: General hours of operation from 7:00 A.M. to 10:00 P.M., with deliveries limited to 7:00 A.M. to 6:00 P.M.
- Michels Recommendation: General hours of operation from 6:00 A.M. to 6:00 P.M., with operations outside these hours only as required by Wisconsin DOT scheduling. All deliveries limited to 6:00 A.M. to 6:00 P.M. Michels will at all times comply with the City's noise ordinance, as noise from Michels operations cannot be heard from the nearest residence and Michels trucks will avoid all residential streets. Further, night operations allow for less traffic congestion from Michels trucks and paving operations on the streets in West Allis and the immediately surrounding areas.

Exhibit B – Unique Temporary Site Characteristics

Michels will require a temporary batch plant as part of operations on the Zoo Interchange Projects. Michels has spent over 1.5 years looking for plant sites. We have visited and inspected almost 40 other individual sites, in and around West Allis. This site behind Quad Graphics plant is the best site for a temporary batch plant in the area. The site truly unique and is the only one of its kind within the City of West Allis and throughout the entire region. If our application to use the Quad Graphics site is not approved, we will be forced to use a different site in the area, likely on Wisconsin DOT right-of-way (outside the control of the City of West Allis).

Specifically, this site is better than any alternative sites available for the following reasons:

Michels Site behind Quad Graphics:

1. 1,100 feet away from nearest residents.
2. Behind a 50-foot building that is 400' long.
3. Natural wooded and tree buffers on 3 sides of the site.
4. No access to residential streets.
5. No view from residential neighborhood.
6. Within jurisdiction of West Allis.
7. Zero improvements required (water, sewer or electric).

Other Sites:

1. Potentially 200 to 300 feet from residents
2. Only chain link fences or 10' wood fence separating other business and residents
3. Access directly onto local roads.
4. Other sites would not be limited by access conditions or restrictions.
5. All other locations will have an unobstructed view of 50 foot tall cement tower and drum.
6. Other potential sites on Wisconsin DOT ROW fall outside the ability for West Allis to assert any conditions on the use.
7. Other sites will require improvements to access to all City utilities.

Exhibit C – Description of Temporary Batch Plant Operations

What We Are:

- Michels' daily activities during paving operations will include the delivery of concrete, aggregates and sand by dump trucks and semi-trailer trucks. These deliveries will not occur at night and Michels will make an effort to limit the deliveries during morning and evening commutes. Michels' plan is to stockpile the materials on the site near the batch plant at heights not to exceed the height of the Quad building and existing tree line. This restriction will eliminate obstruction of any sight lines. Tankers will haul in cement then pump the material into storage tanks located directly in front of the concrete plant. This will usually happen one to two days prior to the beginning of the paving operation and continue while concrete is being produced. Dump trucks and agitor mixer trucks will be used to haul the mixed concrete to the paving site. The amount of truck activity will be determined by the size of the paving run to be constructed. These trucks will not operate or travel on West Theodore Trecker Way.

What We Are Not:

1. There will be **NO** crushing and dumping of demolition material or waste material at this location.
2. There will be **NO** deliveries of aggregates and sand during night hours.
3. There will be **NO** slamming of dump truck tailgates during evening or night hours at the plant site because there will be no night deliveries.
4. There will be **NO** dump truck back-up alarms sounding during evening or night hours because the truck route allows for continuous forward movement.
5. There will be **NO** additional access requirements from any parcel. Michels does not intend to change any current traffic patterns or legally permitted and authorized truck routes in the area.
6. There will be **NO** obstruction of sight lines because the proposed material piles are behind a 50-foot tall building and will be below the tops of the tree lines.
7. There will be **NO** production or sale of concrete for non-Michels participating projects. Therefore, the operation of the temporary plant will be limited to only Michels' operations.
8. There will be **NO** trucks on West Theodore Trecker Way. Michels will utilize the Hank Aaron State Trail to enter and exit the property on West Fairview Avenue and HWY 100.
9. Michels does not intend or plan to run the plant during the cold weather season. Unless otherwise approved or required by WisDOT, Michels does not plan to operate the plant from mid-December through mid-March.

Exhibit D – Benefits to West Allis

- Michels will pay taxes through the current property owner.
- Michels may purchase up to $150,000 in fuel per month from local businesses.
  (Michels will not utilize the Speedway on the corner of Theodore Trecker Way and HWY 100)
- Michels may purchase thousands of dollars of miscellaneous parts and equipment from West Allis businesses, including Northern Tool and Graybar.
- Michels will bring 50 employees to the area that will purchase food and lodging from local West Allis business. Weekly per diems about $550 / week / qualified employee.
- Purchasing $5,000 to $10,000 worth of water for our operations from the City.
- Michels will pay for fire and rescue teams training on Michels' equipment for 3 hours.
- Michels will pay for fire and rescue services used due to a Michels' incident.
- Close proximity to the Zoo Interchange projects will reduce environmental impacts and reduce local traffic congestion.
- Other potential batch plant locations are closer to West Allis residential areas (possibly 200 to 300 feet).
- Reduce air pollution.
- Tucked away behind 50' tall building and over 1,100 feet away from residential areas and no direct sight lines.
- Reduce cost for the taxpayers – closer operation lowers bidding costs which is a direct related to taxes and funding.
- No winter operations and no commercial sales to others.

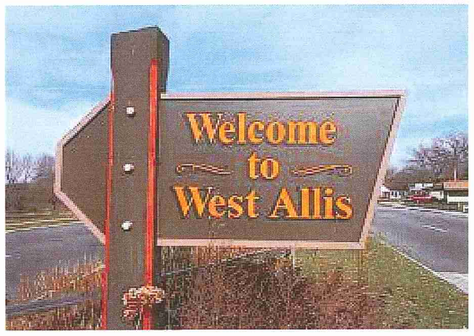


Exhibit E – Third Party Engineer Report Comparing Asphalt Materials

See Engineer Report on Comparing Asphalt Materials.

COLLINS ENGINEERS INC.

Michels Corporation
Recycled Asphalt Pavement Recommendations

October 31, 2013

Ryan Murphy
Sr. Manager of Eng. and Ops.
Michels Corporation
817 West Main St.
Brownsville, WI 53006

Dear Mr. Murphy,

This letter report summarizes the findings and recommendations from an investigation into the adequacy of using a Recycled Asphalt Pavement (RAP) for the proposed concrete batch plant site located in West Allis, Wisconsin. The use of RAP is a proposed alternative to using typical Portland Cement Concrete (PCC) or a Hot Mixed Asphalt (HMA) pavement types for the temporary location.

Method of Investigation

The adequacy of a RAP surface was investigated by reviewing past projects utilizing similar materials, performing literature reviews, and also analyzing the pavement structure against typical pavement surfaces using layered elastic analyses.

A visit to the proposed site was made on October 29, 2013 to visually inspect the location for soil conditions and general conditions at the site (vegetation, location to adjacent structures and utilities, etc.). Soil testing of the existing subgrade soil was not conducted, but visual observations were made and conservative soil properties were assumed during analysis.

General Description and History

The proposed site was located in West Allis, Wisconsin bounded between Highway 100, S. 116th Street, W. Theodore Trecker Way, and IH-94. The Owner of the property will lease the property to Michels Corporation for the intent to erect a portable ready mixed concrete batch plant facility to supply concrete for the duration of the Zoo Interchange Reconstruction project.

The site was located to the North of the Owner's warehousing facilities and directly adjacent to off-street parking and loading dock for the warehouse. The parking and loading dock area was partially paved with PCC and a bituminous pavement while other areas were comprised of an aggregate pavement surface. The pavement surface directly bordering the proposed temporary batch plant site was comprised of the crushed aggregate pavement surface.

Within the vicinity of the site were other industrial businesses and an electrical substation. A retail business was located further to the northeast of the proposed site. The adjacent properties were shielded by existing vegetated and wooded areas. Power line towers were located to the west of the site and ran to and from the electrical substation in generally the north-south directions.

Soil conditions on the proposed site were observed visually and appeared in general to be fill material consisting of very densely compacted gravel and not a typical native soil. Prior to the abandonment of the railroad and construction of the Hank Aaron State Trail, the site previously served as a railroad siding for the loading and unloading of rail cars. The rail road siding was likely constructed on a stable base to handle heavy loading from rail cars and the machinery used to load/unload containers. The soil observed during the site visit is consistent with this type of construction and usage.

Summary of Findings

Pavement Design Theory

The purpose of a pavement structure is to provide a stable surface that can be adequately traversed by the intended design vehicle. For many pavements, this typically includes using layers of engineered materials to develop sufficient strength to support the applied loads. Aside from strength, other features are typically integrated into the pavement system to provide additional beneficial properties. These features can range from noise attenuation, reflectivity, permeability, etc. but the most important feature is typically long term performance and durability. Pavements are subjected to a high number of load repetitions and degrade slowly over time through a process known as fatigue.

Strength in a pavement structure is derived from the underlying native soil layers which possesses a particular strength. Additional layers of engineered materials are added on top of the native soil layer to help distribute loads and reduce the resulting stresses to a level that is tolerable for the native soil layer ('tolerable' based on displacement criteria). The design thickness of a pavement structure depends on the native soil strength, the size and geometry of the applied loads and the service life required.

The serviceability and long term performance of a pavement depends on the ability of the final structure design to resist degradation from a variety of factors. The most common contributors to pavement degradation are material fatigue and moisture damage. Fatigue is the result of repetitive loadings slowly weakening one or more layers of the pavement structure.

In PCC and HMA pavement layers, the fatigue mechanism is exhibited through cracking, beginning with micro-cracking which eventually progresses to a crack through the full thickness of the layer. In pavement theory, each load repetition contributes to finite incremental growth of each crack. Cracking results in reduced strength of the pavement and reduces the ability of the pavement to distribute stresses. In addition, cracks create an opening in the structure which allows the introduction of moisture.

Many soils in Wisconsin can be sensitive to moisture content levels with higher levels of moisture resulting in reduced strength of that particular layer. Typically, fine grained soils (clays and silts) are the most moisture sensitive while granular materials (gravels and sands) are only mildly sensitive or moisture insensitive. A very important function of a pavement surface layer is to prevent the intrusion of moisture, especially when moisture sensitive soils are present and susceptible.

Analysis of Proposed Structure

The proposed site has very stiff, very dense granular soil layer approximately 10- to 12-inches thick and appears to have been part of an existing pavement structure for the now removed rail siding. The existing surface material should be relatively moisture insensitive and protection from moisture intrusion is not imperative. The proposed RAP structure will consist of recovered HMA materials from an existing HMA pavement and will be compacted to provide a dense, stable surface layer.

A layered elastic model was created for the existing conditions to estimate the vertical pressures exerted on the bottom of the existing aggregate layer resulting from a 9000 lb wheel load having an inflation pressure of 105 psi. The pavement model included 10 inches of the existing aggregate layer using a resilient stiffness modulus of 15,000 psi. The pressure at the bottom of the existing aggregate layer was found to be approximately 28 psi. This vertical pressure is the amount of load being distributed to the native soils below the subgrade and should be within an acceptable range based on experience with local conditions and pavement performance.

Based on this analysis, the existing structural aggregate layer can withstand the intended loadings. Since the intended usage is relatively short term and fatigue predictions tend to be highly variable, a thorough analysis of fatigue is unnecessary was not conducted.

Performance & Serviceability

The structure being proposed would be considered an unbound structural layer and these types of structures have been in use in the U.S. for most of the history of pavement engineering. Many rural areas utilize unbound pavement surfaces due to their low cost to install and maintain. One of the most common problems associated with unbound surfaces is dust control. During dry periods, unbound aggregate pavement surfaces to break down and migrate fine particles to the surface where they are made airborne under traffic. Different methods are available to mitigate dust control such as watering (either as plain or a brine solution), calcium chloride treatments, oil and chip seals and various other methods.

It is recommended to place 2 inches of RAP on top of the existing structural aggregate layers to prevent dusting due to traffic. Reclaimed asphalt pavement contains a sufficient amount of residual bituminous material coating each aggregate particle which would prevent excessive dusting. When HMA is produced, the bituminous material (binder) is added in sufficient quantity to coat all of the aggregate particles in the mix. Since reclaimed asphalt products are manufactured from existing HMA pavements, many of the particles that comprise the reclaimed asphalt remain coated. Some of the particles are fractured during manufacture, but many particles remain intact.

If dusting does become an issue, normal methods used for dust control for unbound aggregate surfaces can be used to mitigate dust generation with good results. Excessive dusting can be controlled by using tack coat emulsions to seal the surface.

Another issue common with unbound pavement surface layers is susceptibility of the material migrate easily, causing pot holes, ruts and/or other depressions that can affect the safety and ride quality. These can be caused by the variable nature of the soil profiles and also from traffic loads in conjunction with climate and precipitation. However, these issues are easily avoided by properly maintaining the surface. Proper maintenance includes tasks such as re-grading uneven surfaces and re-compacting and providing proper drainage to prevent ponding water.

Benefits

The popularity of RAP has increased in recent years due to a number of benefits provided by its use. Reclaimed materials from existing pavement structures saves the material from being landfilled and gives new life to a material that would otherwise be discarded. The majority of RAP usage in Wisconsin is in the form of road base materials and also in new HMA pavements.

Reclaimed asphalt is used as road base whenever possible for WisDOT projects due to cost savings and excellent performance. RAP is also used in the production of new HMA since the binder in the RAP contributes to the total amount of binder in the HMA mix, which reduces costs significantly. Aside from reducing costs, it also reduces energy consumption needed to produce new virgin materials.

In addition these benefits, RAP surfaces possess a higher permeability than PCC or HMA surfaces which allows water to permeate into the soil. This reduces runoff which is normally shed from impermeable surfaces. This reduces the necessity for storm water control measures and reduces the migration of silt.

It has also been studied that open graded, less stiff pavement surfaces are better at noise attenuation than hard, stiff materials which tend to reflect noise. It can be reasonably expected that the intended operations on the site will generate some noise from the operation of trucks and equipment and the RAP surface would likely help with reducing noise.

Conclusions and Recommendations

Based on the analysis and review of the proposed site and pavement materials, the proposed RAP pavement surface should perform as an adequate pavement for the intended use as a temporary pavement surface that is hard and durable. WisDOT uses RAP with great success as base courses and as a supplement to new HMA due to the cost and waste-reducing benefits and has become a standard of practice.

It is recommended to use the RAP in a 2 inch total layer thickness on top of the existing structural aggregate layer, constructed to normal WisDOT specifications but compacted to 90% of maximum density. Based on layered elastic analysis, this pavement structure will produce adequate stress distribution to the native soil layer. Dust should be minimal, but can be mitigated using typical dust control measures. For excessive dust nuisance, a tack coat emulsion, cut-backs, or an oil and chip seal can be placed.

It should be noted, that operations such as a concrete batch plant require constant dust control measures and sweeping to maintain a tolerable level of dust control, regardless of the pavement type. It can also be reasonably expected that RAP surface will help reduced tracking of batch plant materials to adjacent hard paved surfaces.

During construction and throughout the life of the pavement system, if soft spots/pot holes develop, the problematic areas can be repaired by undercutting the inferior soils and backfilling with RAP. If severe problems arise, the areas can be further strengthened with a biaxial geotextile after undercutting, but prior to backfilling.

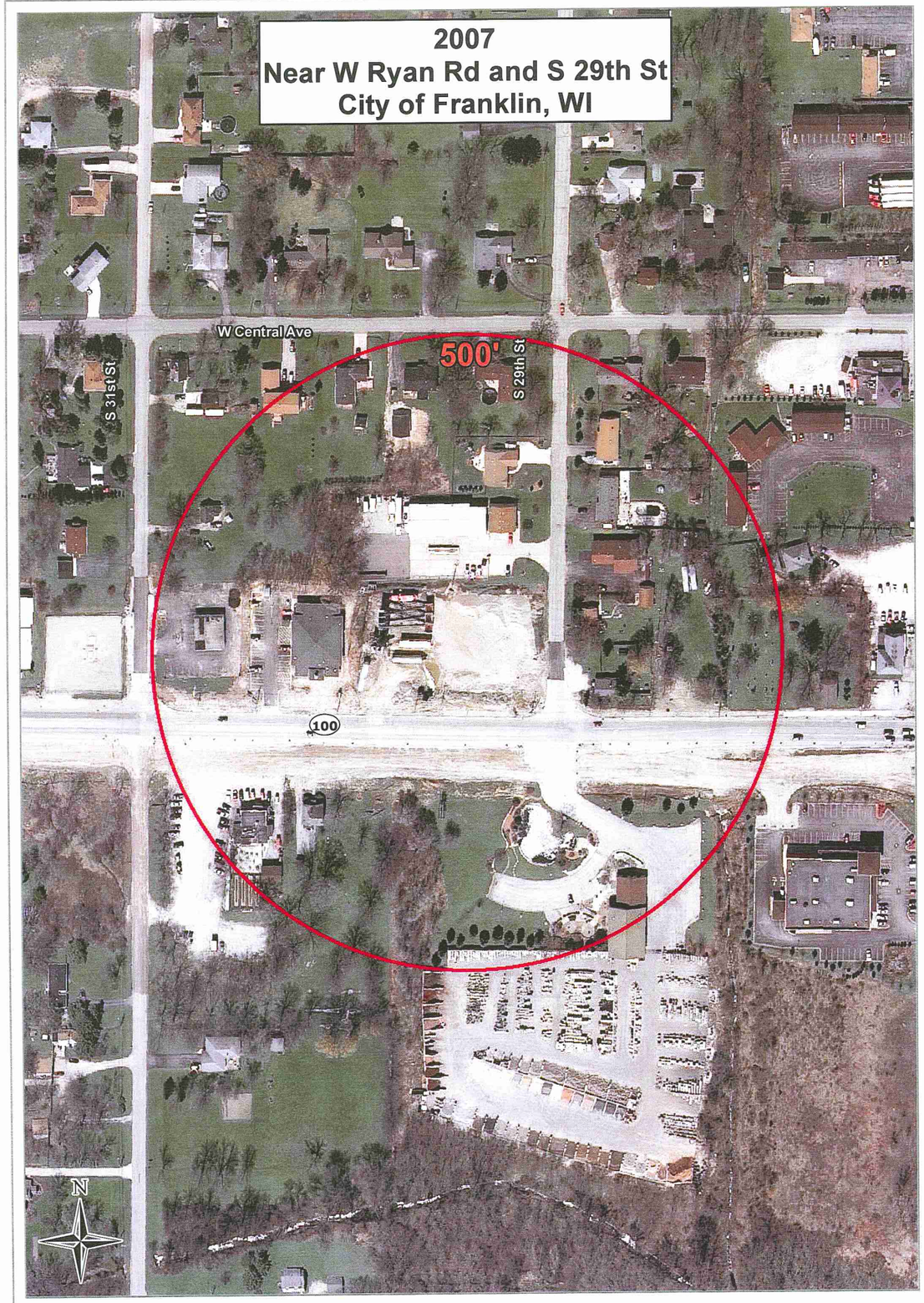
The RAP pavement structure is an economical choice and also reuses materials that would otherwise be landfilled. This is especially important since the facility will only be used for a short period of time. Typical pavements are designed for 10 to 20 year life spans and only a fraction of the design life would be consumed for legitimate use for this particular project. In addition, at the conclusion of operations, this pavement significantly reduces the amount of work required to demolish and restore the area.

Please contact me if you have any questions or need further assistance developing the proposed site.

Respectfully Submitted,

COLLINS ENGINEERS, INC.

Nicholas J. Hornyak, PhD, PE



1 inch = 200 feet

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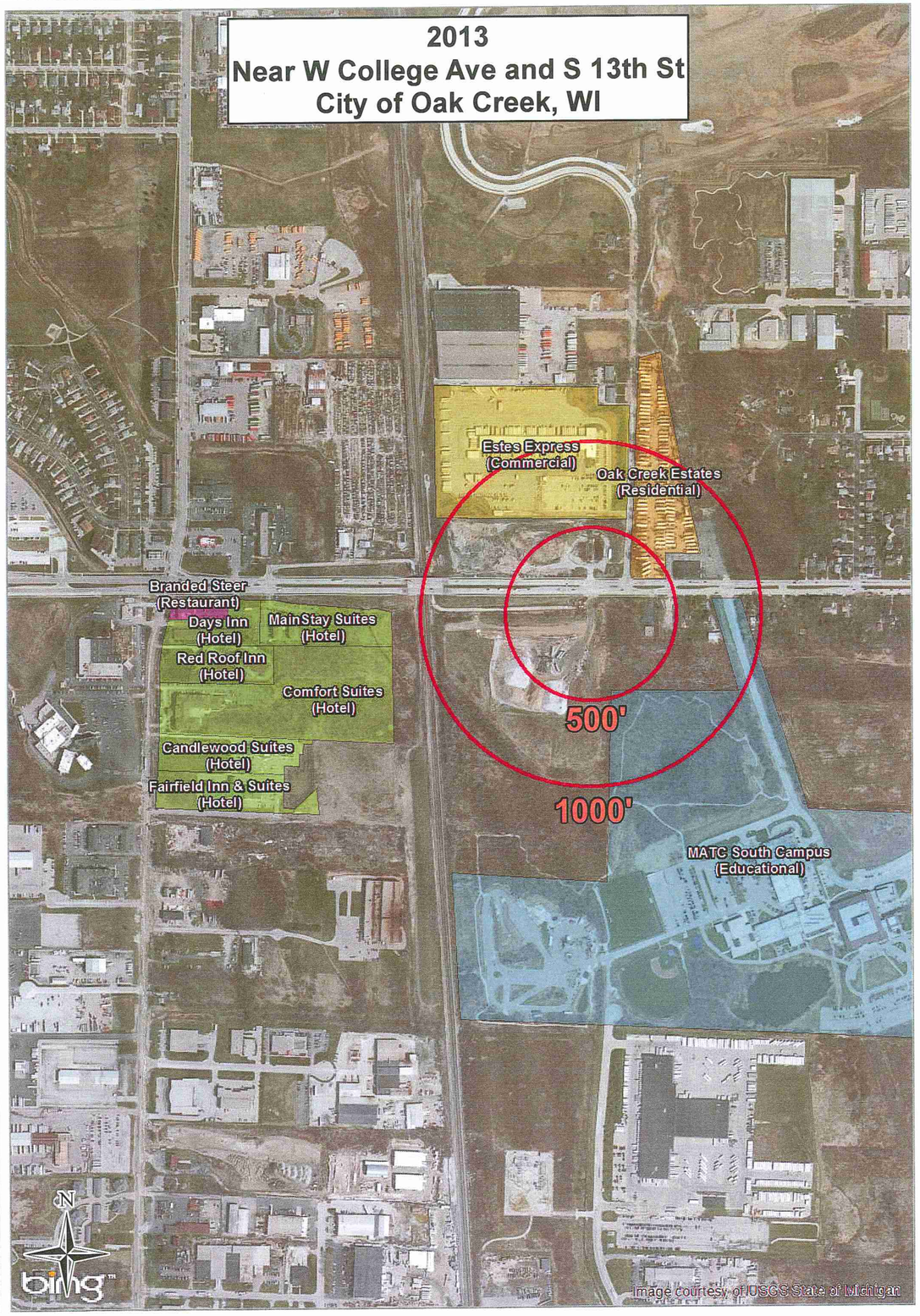

1 inch = 749 feet

0 275 550 1,100 1,650 2,200 2,750 Feet

MICHELS CORPORATION

Previous Sites No Complaints

Legend

- Set Back Line
- Commercial
- Educational
- Hotel
- Residential
- Restaurant

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