

Case File No. 17-0009
Tiller Corporation

Blaine Planning Department / 10801 Town Square Dr NE / Blaine, MN 55449 / (763) 785-6180



Tiller Corporation

Blaine Asphalt Plant and Recycling Facility Expansion

1. Introduction

Tiller Corporation (Tiller) and its operating divisions, Commercial Asphalt Co. and Barton Sand & Gravel Co., own and operate an asphalt plant and concrete and asphalt recycling facility in Blaine, MN (Facility). The 25.8 acre Facility is located in a portion of the northwest quadrant of 101st Avenue Northeast and Naples Street Northeast. In 1999, Tiller applied for and received a conditional use permit to construct and operate an asphalt plant and recycling facility.

The Facility was constructed on approximately 16 acres of upland with the balance of the property being wetland (Facility Parcel). The 16 acres is comprised of the asphalt plant, buildings, parking areas, access roads, stormwater features, setback areas, wooded areas and vegetated berm areas. The facility has been successfully operating for the past 17 years.

Since starting operations, market conditions have improved and technology and specifications have advanced. These changes have necessitated the need for a larger footprint for material stockpiling and processing. Tiller acquired 11.2 acres adjacent to, and immediately west of the Facility (Determan Parcel). Tiller is proposing to expand the materials stockpiling and processing area by approximately 4.6 acres. The expansion will extend the existing stockpile and processing area to the west into the Determan Parcel. Figure 1, Existing Conditions, illustrates the Facility Parcel and the Determan Parcel boundaries, the location of the asphalt plant and current stockpiling and processing activities, and the location of proposed expansion area.

2. Project Need

The project is needed to accommodate the growing demand for concrete and asphalt recycling. The Blaine Facility was constructed in 1999 and began operations in 2000. The original design consisted of the asphalt plant, outdoor storage areas, access roads, and stormwater management and wetland mitigation areas. The Facility also houses a comprehensive mix design laboratory that designs and tests various asphalt mixes which are then produced at Tiller's various asphalt plant sites.

Since operations began, not only has there been an increasing trend of total hot-mix production at the Facility, but also a significant increase in the amount of recycled aggregate products (recycled asphalt and concrete pavement) and RAP used in the asphalt production. This increase in use of recycled materials allows Tiller to be more efficient and participate in more sustainable practices. Tiller's sales of recycled aggregate base have more than doubled from 2005 levels. Since the Facility started operating, the percent of RAP used in mixes at the Blaine facility has increased from approximately 7% to over 22%.

There has also been a variety of changes in mix designs specified for state, county and local construction projects. The use of recycled asphalt and concrete has increased significantly. Recycled asphalt and concrete pavements have one of the highest recycling rates for all recyclable materials. The recycled concrete and asphalt can be processed into a variety of aggregate materials for reuse in local construction projects. The demand for these materials is expected to increase as natural aggregate supplies diminish. This trend is expected to continue into the future.

According to the Federal Highway Administration (FHWA), environmental stewardship is designated as a major focus area of the United States Department of Transportation (USDOT) strategic plan. The FHWA supports and promotes the use of recycled highway materials in pavement construction in an effort to preserve the natural environment, reduce waste, and provide cost effective materials for constructing highways. The primary objective is to encourage the use of recycled materials in the construction of highways to the maximum economical and practical extent possible with equal or improved performance.¹

The National Asphalt Pavement Association (NAPA) reports that as early as 1993, the Environmental Protection Agency (EPA) and FHWA identified asphalt pavement as America's number one recycled product in a report to Congress. It continues to be reclaimed and reused at a greater rate than any other product in the U.S. The use of recycled materials in asphalt pavements saves about 50 million cubic yards of landfill space each year.

NAPA, in partnership with the Federal Highway Administration (FHWA), is quantifying the use of these technologies through industry surveys. According to the latest survey data, during the 2014 construction season RAP, consisting of more than 71.9 million tons of recycled asphalt pavement and nearly 2 million tons of recycled asphalt shingles, were put to use in new pavements in the United States, saving taxpayers more than \$2.8 billion.

The expansion will allow the Facility to continue to move in a more sustainable direction by providing the additional space needed to continue its use of recycled materials. Asphalt mixes produced at this Facility are used within the community and surrounding areas. A local source of various asphalt mixes provides a community-wide benefit by lowering construction costs of infrastructure projects, including local roads and local developments.

¹ US Department of Transportation: Federal Highway Administration, Pavement webpage.
<https://www.fhwa.dot.gov/Pavement/recycling/rap/index.cfm>

3. Project Description

Tiller is proposing a 4.6 acre expansion at the Facility to accommodate current and future needs to accommodate the expansion of their existing materials stockpiling and processing area. The need for this additional area is a direct result of the increased use of RAP and recycled aggregates. Proposed site improvements include construction of a materials stockpiling and processing area and stormwater management features.

4. Wetlands

The Determan Parcel consists of 11.2 acres of which 6.3 acres are upland area and 4.9 acres are delineated wetland. The expansion area, proposed on both the Determan Parcel and Facility Parcel, will impact approximately 2.6 acres of wetlands regulated under Minnesota's Wetland Conservation Act. The wetlands are also United States Army Corps of Engineers (Corps) jurisdictional wetlands. A copy of the Notice of Decision approving the Wetland Delineation is included as Attachment 1.

Wetland replacement plan applications have been prepared and submitted to the Rice Creek Watershed District and the Corps to mitigate for the proposed wetland impacts. The wetland impacts are necessary to accommodate the expansion of the Facility and the continuation of Tiller's existing operations. A federally authorized wetland bank purchase of up to 5.10 acres from the City of Blaine is anticipated in order to fulfill the mitigation requirements.

The proposed expansion does not encompass the entire Determan Parcel. The property is "L shaped" and has frontage along Flanders Street along the west property line. The legal description for the Determan Parcel is Lot 1, Block 1 and Lot 6, Block 1 Zimmerman Industrial Park. The proposed improvements on the Determan Parcel will include all of Lot 6 and a portion of Lot 1. This leaves the western portion of Lot 1 which fronts Flanders Street available for future development.

Figure 2, Site Plan, illustrates the location of the existing Facility Parcel, the Determan Parcel, and existing and proposed improvements.

5. Comprehensive Plan

The Facility Parcel is guided Heavy Industrial (HI) in the current City of Blaine Comprehensive Plan. The eastern portion (Lot 6) of the Determan Parcel is also guided HI and the western portion (Lot 1) is guided Light Industrial (LI).² The proposed expansion is primarily located on the portion of the Determan Parcel guided HI. All new materials storage and processing areas are proposed for this area. The portion

² http://www.ci.blaine.mn.us/_docs/_Planning/2030/2030ComprehensivePlan.pdf

of the Determan Parcel guided LI will contain the majority of the necessary additional stormwater management features. These uses are consistent with the City of Blaine Comprehensive Plan. Figure 3 is an excerpt from the City's Comprehensive Land Use Plan.

6. Rezoning Request

The Facility Parcel is zoned Heavy Industrial (I-2A), Lot 6 of the Determan Parcel is zoned Heavy Industrial (I-2) and Lot 1 is zoned Light Industrial (L-1).³ A zone change is being requested for Lot 6 of the Determan Parcel. No zone changes are being requested for the Facility Parcel or for Lot 1 of the Determan Parcel.

In the I-2A zone, asphalt processing and recycling facilities are allowed as a conditional use. As mentioned above the Facility Parcel is zoned I-2A. Tiller is requesting that the portion of the Determan Parcel legally described as: Lot 6, Block 1 Zimmerman Industrial Park, be rezoned from I-2 Heavy Industrial to I-2A Heavy Industrial. This will accommodate the proposed site improvements and allow for construction of a materials stockpiling and processing area as well as the necessary stormwater management features.

This rezoning request is consistent with the land use and zoning within the immediate area. Properties immediately to the northeast, east, southeast and south as well as Lot 6 are all guided Heavy Industrial. Properties immediately to the northeast, east and southeast are zoned I-2A. Figure 4 is an excerpt from the City's Zoning Map that illustrates the current zoning of the Project and surrounding area.

The portion of the Determan Parcel that is legally described as: Lot 1, Block 1 Zimmerman Industrial Park, will remain zoned I-1 Light Industrial. Stormwater management features will be constructed on the eastern portion of that property. As mentioned previously, this allows for future development of the portion of the property fronting Flanders Street.

7. Conditional Use Permit Amendment Request

The Facility Parcel is operating under the conditional use permit issued in 1999. Tiller is requesting that the permit be amended to include the Determan Parcel. The only portion of the Determan Parcel that will have operational activities associated with the concrete and asphalt processing and recycling will be Lot 6. The eastern portion of Lot 1 will not have any operational activities associated with the concrete and asphalt processing, but is needed for stormwater management features.

Tiller has reviewed the information that was supplied with its CUP Application dated March 8, 1999 in order to document the changes or additions and deletions that have

³ http://www.ci.blaine.mn.us/_Docs/maps/ZoningMap.pdf

occurred in the past 18 years. The following table summarizes original estimates and current conditions.

Table 1: Operational Conditions

Description	Estimated 1999	Actual 2016
Asphalt Plant Output	600 tons per hour	600 tons per hour
Annual asphalt mix production	150,000 -200,000 tons	415,000 ton average
Asphalt cement storage	2- 40,000 gallon tanks	5- 40,000 gallon tanks
Waste oil storage	20,000 gallons	none
Diesel fuel storage	1,000 gallons	500 gallons
Maximum stockpile volume	150,000 cubic yards	150,000 cubic yards
Recycled concrete and asphalt	100,000 tons per year	67,000 tons per year
Maximum stockpile height	30 feet	30 feet
Asphalt plant operating hours	24 hours per day	24 hours per day
Processing recycled aggregate	7:00 a.m.-7:00 p.m.	7:00 a.m.-7:00 p.m.
Average one-way trucks	15 per hour	23 per hour
Maximum one-way trucks	30 per hour	40 per hour

The annual asphalt mix production has increased substantially from the 1999 estimate. Production at this type of facility is a function of the number and sizes of construction projects within the Facility's service area. These projects include city streets, county and state roads, parking lots, paved trails, and sports facilities. The first full year of production at this facility was 170,000 tons which matches the 1999 estimate. Due to increased construction, the average annual production for the past 5 years has been approximately 415,000 tons.

In 1999 Tiller estimated 100,000 tons per year for recycled concrete and asphalt that would be processed into aggregate base materials. This goal has not been reached because a majority of the asphalt coming to the Facility for recycling is directed to RAP. The volume of annual asphalt mix production reflects the additional recycled asphalt directed to RAP versus recycled asphalt and concrete. The goal for the Facility still is to achieve approximately 100,000 tons per year of recycled concrete and asphalt for aggregate base materials.

The increased annual production results in additional truck trips. The numbers in Table 1 reflect truck trips for both asphalt mix production and recycled aggregate material production.

The 1999 CUP has a condition that requires a 0.2 acre area that contained some trees be left undisturbed. This area has remained undisturbed, but a number of the trees once present have succumbed to what is believed to be various diseases. As a result of developing a plan to avoid, minimize and /or mitigate the on-site wetlands, Tiller is proposing that these trees be allowed to be removed. When reviewing the wetland sequencing with the Rice Creek Watershed District's Technical Evaluation Panel

(TEP), options to avoid wetland impacts were discussed. One option to avoid or minimize wetland impacts included removing the wooded area protected in the 1999 CUP. The TEP issued a Findings Report for the City's consideration, which includes TEWP Findings and recommendations regarding the wooded area. They did not find the wooded area to be of preservation quality and recommend impacting this area in order to avoid additional wetland impacts. The TEP's Findings Report is included as Attachment 2.

Condition 1 of the 1999 CUP required the Site plan be modified to preserve an area of significant trees along the site's western edge. This involved reducing the proposed size of the outside storage area and establishing the western edge of the storage area approximately 180 feet east of the site's west property line.

It is believed that one of the main purposes for leaving the trees in this area was to provide screening of the Facility from the property to the west. The trees no longer serve a screening purpose as Tiller now owns the property to the west. Leaving this area undisturbed will require additional wetland impacts in order to connect the Facility Parcel to the Determan Parcel. The TEP and Tiller's consultant, Critical Connections Ecological Services, have both indicated these trees are not of preservation quality. For these reasons, Tiller is requesting Condition 1 of the 1999 CUP be removed.

8. Operating Standards

The standards for asphalt processing and recycling facilities outlined in the City of Blaine ordinance are listed below.

(a) Minimum lot size of twenty (20) acres

The site meets this standard. The Facility Parcel is 25.8 acres and the Determan Parcel is an additional 11.2 acres for a total of 37 acres.

(b) Recycling and outside storage of materials in rear yard only.

All recycling and outside storage occurs in the rear yard. Starting at Naples Street, there is a vegetated berm then a vehicle parking area for the Design Lab then the Design Lab building and then the asphalt plant. All outside storage and recycling take place behind the asphalt plant.

(c) Outside storage of asphalt materials or asphalt processing facility to meet the following setbacks:

1. Fifty (50) feet against I-2 (Heavy Industrial) and I-2A (Heavy Industrial) zoned uses.
2. Fifty (50) feet against I-1 (Light Industrial) uses or airport property.
3. One hundred (100) feet against all other zoning districts or public right-of-way.

All setbacks for outside storage are being met on the Facility Parcel and will be met on the Determan Parcel.

(d) Maximum outside storage height of thirty (30) feet.

Outside storage does not exceed 30 feet in height on the Facility Parcel and will not exceed 30 feet on the Determan Parcel. Belt stackers are utilized to create material stockpiles. The belt stackers utilized at the Facility cannot stack material higher than 30 feet.

(e) Maximum outside storage volume of one hundred fifty thousand (150,000) cubic yards.

Maximum outside storage of aggregate stockpiles will not exceed 150,000 cubic yards.

(f) Facility must prepare for City approval a Pollution Prevention Plan which would identify the type of wastes generated, procedures for spill containment, and disposal methods.

A Stormwater Pollution Prevention Plan (SWPPP) was prepared when the Facility was first constructed. As is the case with all SWPPPs, updates occur on an ongoing basis. The current SWPPP will undergo another series of updates to accommodate the proposed expansion and any requirements spelled out by Rice Creek Watershed District and the Corps. Once the updates are completed the updated SWPPP will be provided to the City.

(g) The facility must be operated in such a manner as to minimize the potential for spills or discharge of any pollution.

The Facility has a Spill Prevention Control and Countermeasures Plan (SPCC) in place. The SPCC Plan spells out measures that are taken to prevent and then minimize spills. It also provides guidance and contact information for Facility personnel in the event there is a spill. All responsible site personnel are trained based on the guidance in the SPCC Plan.

(h) The applicant to obtain and adhere to all other required agency (MPCA, Anoka County) permits and standards.

The Facility has air quality permits for the asphalt plant and portable processing equipment brought to the site. There is also a stormwater permit that covers all stormwater discharges from the Facility. All of these permits are issued by the MPCA. Annual reports are submitted to MPCA for both of the air quality permits and the stormwater permit. The MPCA may conduct periodic inspections.

All above ground storage tanks (AST) are also regulated by MPCA. The AST program requires registration, labeling and periodic inspections of all storage tanks. In addition, all tanks of a certain capacity are required to be equipped with secondary containment. Tanks at the Facility are located within a secondary containment structure. This concrete structure is designed to contain 110% of the volume of the largest tank within the structure.

Anoka County requires a very small quantity generator hazardous waste license due to the fact the design lab and quality control lab utilize a parts washer. Reports are submitted to Anoka County and annual inspections are conducted.

- (i) *Facility to conduct and provide written report to the City of annual soil and water quality tests through an independent and recognized testing company.*

The Facility is covered by an MPCA issued stormwater permit (MNG49000 General Permit). Since the site discharges stormwater, samples are taken twice a year in compliance with the conditions of the General Permit, and the results are reported to MPCA. Currently Pace Analytical Services, Inc. analyzes the samples. In the past Tiller has not submitted results to the City but will begin doing so. Since all storage tanks are within a concrete secondary containment structure, soil tests are not conducted.

- (j) *Applicant to prepare for City approval a facility closure plan that provides a financial guarantee in an amount to be determined by the City to ensure that site remediation and abatement measures can be successfully implemented.*

To date, a closure plan has not been prepared for the site. Tiller will coordinate with City staff to develop a time line for a plan to be prepared and will submit an agreed upon financial guarantee.

9. Summary

Tiller is proposing to expand their existing asphalt plant facility. The proposed expansion will accommodate the increased trend in concrete and asphalt processing and recycling and general increase demand for asphalt mixes. They have purchased adjacent property, consisting of two separate parcels which will allow the extension of their existing stockpile and processing area to the west. The eastern parcel requires rezoning from I-2-Heavy Industrial to I-2A Heavy Industrial and an amendment to their existing Conditional Use Permit.

The proposed expansion at Tiller's Blaine Facility will help to serve and support the local community with a continued local supply of various asphalt mixes and utilization of additional recyclable materials to meet the ever changing specifications associated with the industry. The project represents a move towards sustainability and helps to extend the supply of virgin aggregate materials.

Tiller Corporation is a proud member of the Blaine business community and looks forward to working with the City to successfully complete this project.

10. Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the state of Minnesota.



Kirsten Pauly, PE

Date: March 9, 2017

Reg No: 2142



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**Tiller Corporation
 Asphalt Plant & Recycling
 Facility**

Rezone & CUP
 Amendment

City of Blaine, MN

DATE	REVISION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

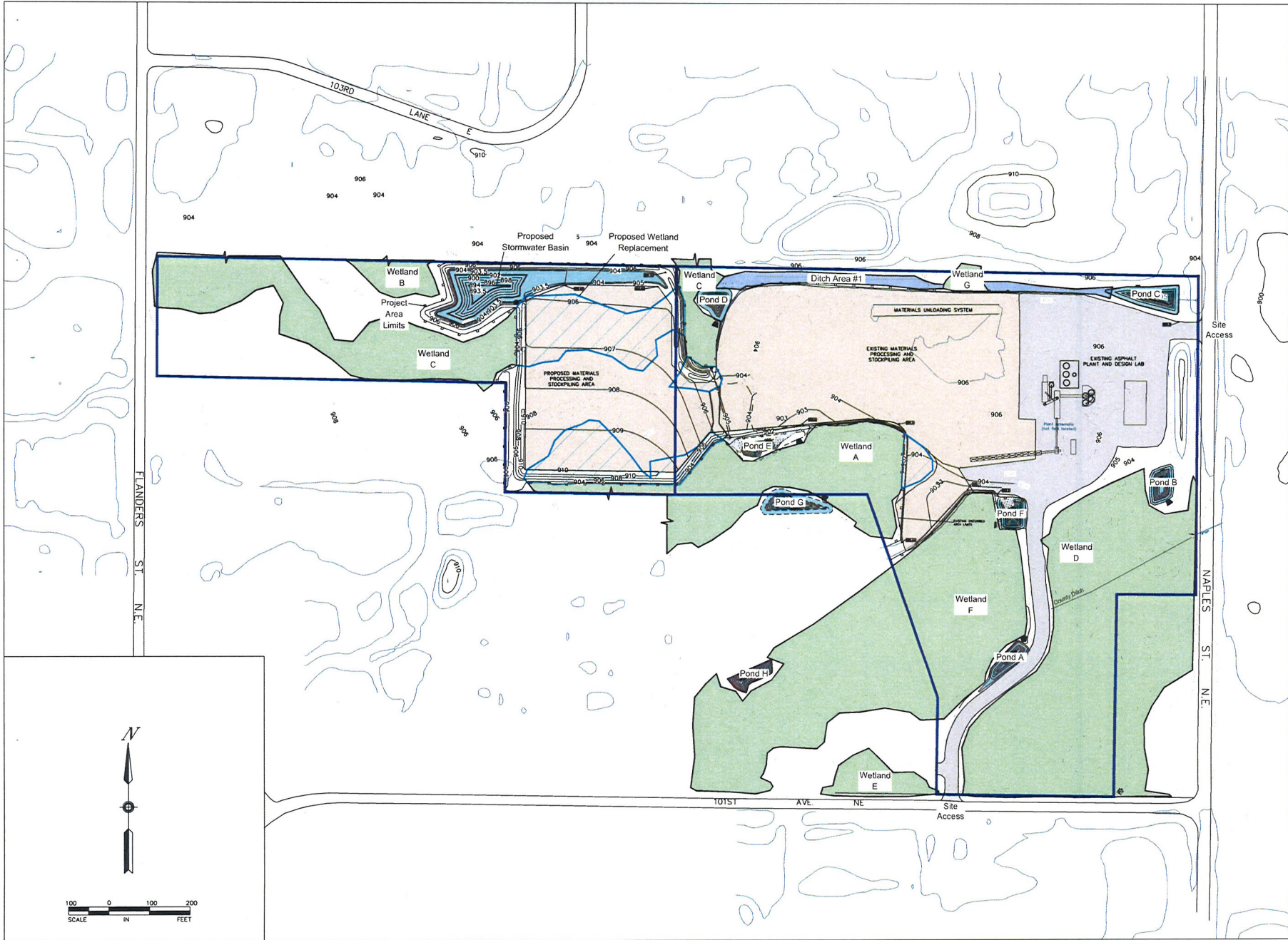
Kristi Parby
 Kristi Parby
 DATE: 3/8/2017 REG. NO.: 21842

INFORMATION:
 PROJECT NO.: _____
 DRAWN BY: SR
 CHECKED BY: _____
 APPROVED BY: _____
 SCALE: _____
 DATE: 3/8/2017

DESCRIPTION:
 Site Plan

SHEET NO.

Figure 2



SCALE
 0 100 200
 FEET
 1" = 100'

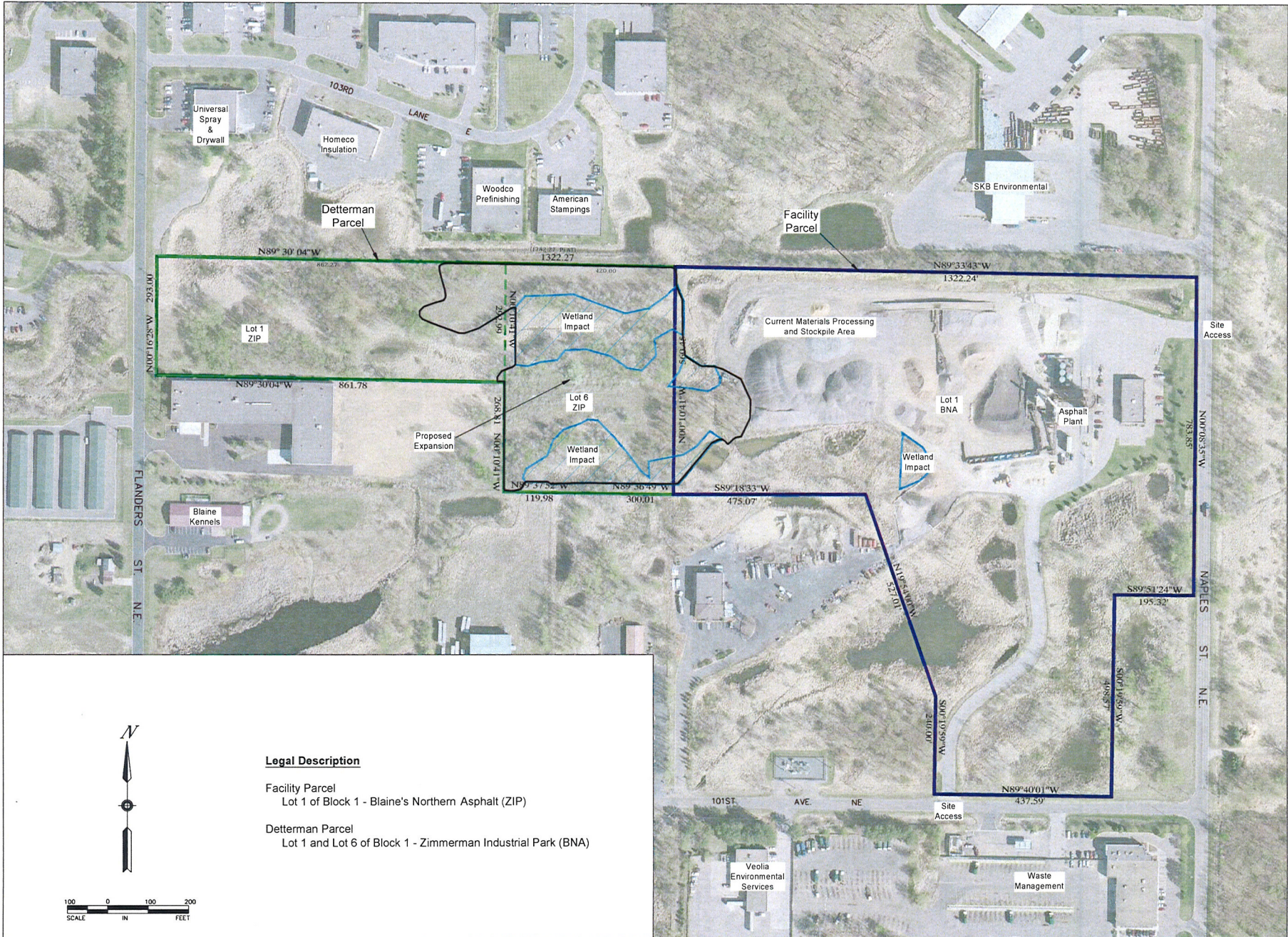


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Tiller Corporation
 Asphalt Plant & Recycling
 Facility

Rezone & CUP
 Amendment

City of Blaine, MN



DATE	REVISION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Kristi Parby
 Kristi Parby
 DATE: 3/9/2017 REG. NO. 21842

INFORMATION:
 PROJECT NO. _____
 DRAWN BY: _____
 CHECKED BY: _____
 APPROVED BY: _____
 SCALE: _____
 DATE: 3/9/2017

DESCRIPTION:
 Existing Conditions
 SHEET NO. _____

Legal Description
 Facility Parcel
 Lot 1 of Block 1 - Blaine's Northern Asphalt (ZIP)
 Detterman Parcel
 Lot 1 and Lot 6 of Block 1 - Zimmerman Industrial Park (BNA)



Figure 1
 of 4

CITY OF BLAINE

RESOLUTION NO. 99-154

**GRANTING A CONDITIONAL USE PERMIT
PER SECTIONS 31.1984(e)(h)(i)(t)(v), 31.1995 AND 31.1996 OF THE ZONING CODE
OF THE CITY OF BLAINE
COMMERCIAL ASPHALT COMPANY
10280 NAPLES AVENUE NE**

WHEREAS, an application has been filed by Commercial Asphalt Company as Conditional Use Permit Case File No. 99-25; and

WHEREAS, a public hearing has been held by the Blaine Planning Commission on May 11, 1999; and

WHEREAS, the Blaine Planning Commission recommends said Conditional Use Permit be approved; and

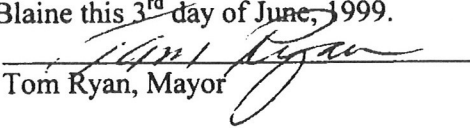
WHEREAS, the Blaine City Council has reviewed said case on June 3, 1999.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Blaine that a Conditional Use Permit is hereby approved per Sections 31.1984(e)(h)(i)(t)(v), 31.1995 and 31.1996 of the zoning code to Commercial Asphalt Company to operate a hot-mix asphalt plant, including asphalt and concrete recycling, a contractor yard with associate outside storage, and a zero lot line for a cross access at 10280 Naples Street NE with the following conditions:

- 1) Site plan be modified to preserve a large area of significant trees along the site's western edge. This will involve reducing the size of the outside storage area and establishing the western edge of the storage area approximately 180 feet east of the site's west property line.
- 2) Outside storage area to be clearly delineated by a combination of drainage swales, barricades, boulders and/or fencing to restrict access to wetlands and preserved tree areas. Outside storage perimeter to be detailed on final site plan subject to City approval.
- 3) Minimum building size of 5,000 square feet to be incorporated into initial building permit as required by code.
- 4) Provision for onsite hydrant(s).
- 5) Construction of 12-foot high undulating berm along front of site (Naples Street), with a maximum slope of 3:1. Front edge of berm to be incorporated into four-foot high retaining wall (rock or keystone block) to increase effectiveness of the berm and to utilize less of the site.

- 6) Landscape plan to include 1 row of Norway Pine; 1 row of Black Hills Spruce and one row of alternately planted Maple and Flowering Crab trees. All trees to be planted on the berm along Naples Street. Tree sizes to meet City Performance Standards and to be staggered with 15-foot spacing between rows and trees. Berm to have underground irrigation.
- 7) Conditional Use Permit contingent upon City Council approving Naples Street improvements.
- 8) Applicant to provide payment of \$30,000 to cover one-quarter of the cost of traffic signal improvements at 101st Avenue and County Road 52.
- 9) Applicant to understand that 101st Avenue will be signed "NO LEFT TURN" onto County Road 52 during the peak morning time as determined by the City Engineer. (Please note that the City does not have sole authority and must work with Anoka County Highway Department).
- 10) Applicant to understand that Naples Street will be a dead end south of 101st Avenue with the City modifying Naples Street with the construction of a cul-de-sac just north of 95th Avenue.
- 11) All building construction to meet the I-2A zoning standards.
- 12) Asphalt recycling (crushing) be limited to 45 days in any two-year period. This will allow material crushing for a total of 90 days in any two-year period when combined with the 45 days currently permitted by I-2A code for the concrete crushing.
- 13) All material crushing to be between the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday.
- 14) Applicant shall provide City with a copy of all correspondence with the Minnesota Pollution Control Agency (MPCA) regarding site within five days of receipt.
- 15) Applicant shall provide City with a copy of all inspection reports of site performed by any regulatory body within five days of receipt.
- 16) Applicant agrees to minimize outgoing vehicles from the site during morning and/or evening peak hours when requested by the City.
- 17) Delivery of products (aggregate, asphalt to be recycled, and oil) to the site are prohibited between 7:00 a.m. and 8:00 a.m. until such time the 95th Avenue bridge over I-35W is reconstructed. The City will notify the applicant in writing once this condition is no longer in effect.
- 18) This Conditional Use Permit is subject to review in one year.

PASSED by the City Council of the City of Blaine this 3rd day of June, 1999.


Tom Ryan, Mayor

ATTEST:


Joyce Twistol, CMC, City Clerk