

May 8, 2023

Alternative Compliance Operating Plan & Fugitive Dust Control Operational Plan

Prepared In Support of a *Certificate of Alternative Compliance* for the City
of Detroit Bulk Solid Materials Storage Application on behalf of:

Greenfield Supply Center, LLC

12625 Greenfield Road, Detroit, MI 48227

Prepared By:



7901 Sylvania Avenue
Sylvania, Ohio 43560
Local 419-841-3232
Fax 419-882-8772

www.NRMsolution.com

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1 Introduction

This operational plan has fugitive dust control has been developed and implemented for the Greenfield Supply Center, LLC facility located at 12625 Greenfield Road, Detroit MI 48227. The facility was issued Michigan Department of Environmental Quality Permit to Operate No. 48-18 on April 30, 2018 (Appendix A). This plant was relocated and a like plant with an active permit, No. 13-16, was moved to the facility on November 10, 2021. This plant is equivalent in setup and processing amount; one crusher, one screen, and six conveyors (Appendix A). These plants are subject to relocation from time to time and are further discussed in Section 5.2 of this plan. The purpose of this plan is to describe the methods and tools used to control fugitive dust emissions in accordance with the requirements of Detroit City Code Chapter 42, Article II, Division 5, Subdivision B, *Bulk Solid Materials* (previously Chapter 22, Article V). More specifically, the contents of this operational plan will demonstrate the facility's compliance with Section 42-2-155 (previously Section 22-5-6), Alternative Compliance for Qualified Solid Bulk Materials of the Detroit City Code. The facility location is shown in Figure 1 of Appendix B and a copy the approved Site Plans dated 2019 are presented in Appendix D. Site plans will be updated as they are provided.

2 Approved State Operating Plan {Section 42-2-155(a)(1)-(2)}

In accordance with Detroit Code Section 42-2-155(a)(1)-(2) (previously 22-5-6(a)(i)-(ii)), Greenfield Supply Center, LLC had developed and implemented a state operating plan in pursuant to Section 5524 of the Natural Resources and Environmental Protection Act, MCL 324.5524, and Michigan Air Quality administrative rules R 336.1371 and 336.1372. The state operating plan was approved by the Michigan Department of Environmental Quality (MDEQ) on April 30, 2018 as part of a permit-to-install application submitted by the Facility. A copy of the approved state operating plan is incorporated into this operating plan as Appendix A. The state operating plan does not expire and has not been amended since its approval.

3 Facility Map {Section 42-2-155(a)(3)(a)}

The Greenfield Supply Center, LLC facility is located in M4 (Intensive Industrial) zoning and sits at the corner of Greenfield Road and Fullerton Avenue. The Operational Plan contains the figure showing the location of the Facility and its surroundings including roadway and transportation corridors within 0.25 miles of the facility used to transport materials to/from the property in accordance with Detroit City Ordinance Section 42-2-155(a)(3)(a) (previously 22-5-6(a)(iii)(A)).

The Facility comprises of two 1 story industrial buildings, one billboard, railroad tracks, material crushing and processing plant, construction aggregate and topsoil stockpiles, truck scale, and two sets of metal rumble strips placed before and after the truck scale. Approximately 1.6 acres of the northeastern portion of the property and the truck route at the facility will be paved. The remaining portions of the property

is unpaved. The Existing Conditions Plan shows these items in greater detail along with the following information in accordance with Detroit City Ordinance Section 42-2-155(a)(3)(a) (previously 22-5-6(a)(iii)(A)) and can be seen on the Site Plans in Appendix D:

- Buildings
- On site utilities
- Storm drains and storm water outfalls
- Potential fugitive dust emission points including the location of construction aggregated storage piles

4 Description of Facility Operations {Section 42-2-155(a)(3)(b)}

The primary industrial activity at this site is the importing and recycling/crushing of concrete into usable construction aggregate. Concrete is brought onto the site by railroad and truck and stockpiled using front-end loaders, or similar equipment. Front-end loaders are used to load concrete into a portable crushing and screening plant. The finished crushed concrete products are stockpiled by conveyor stackers and moved to additional stockpile areas by front-end loaders as needed. A retail landscaping store, Greenfield Supply Center, is located on the northeast side of the property and is open to the public. Trucks entering and exiting the facility are required to drive on the two sets of metal rumble strips located on both sides of the truck scale.

The Greenfield Supply Center, LLC will operate five (5) days a week (from Monday through Friday) during the hours of 7:00am and 7:00pm and one (1) day a week (Saturday) from 7:00am to 2:00pm.

5 Fugitive Dust Control Measures {Section 42-2-155(a)(3)(c)}

Fugitive dust may be generated from the construction aggregate storage and handling activities at the facility. Operational and structural controls will be used at Greenfield Supply Center, LLC facility to minimize the amount of fugitive dust generated on site and to prevent fugitive dust emissions exceeding 5% opacity from the onsite roads, lots and storage piles, or exceeding 20% opacity from other sources in accordance with MCL 324.5524(2). Greenfield Supply Center, LLC will be paving the complete interior trucking route from the apron of the facility entrance which will include the scale, truck loading and unloading areas. Greenfield Supply Center, LLC will be installing an additional set of metal rumble strips in front of the truck scale. Rumble strips, also known as shaker racks, exit grids, etc. remove material from the truck tires prior to leaving the facility. The rumble strips create a bouncing and shaking action to dislodge mud, soils, or any stones accumulated while at the facility. To further assist with fugitive dust control, Greenfield Supply Center, LLC will install a municipal water service. This connection to municipal water will increase our ability to access water needed for dust suppression. Additional fugitive dust control measures are discussed in the following sections, and in the state operating plan in Appendix A.

5.1 Stockpiling and Material Transfers

A potential from fugitive dust creation exists during stockpiling of concrete, crushed concrete or other recyclable construction aggregates from trucks or other construction equipment (front end loaders, excavators, etc) and during loading of concrete, crushed concrete or construction aggregate into trucks. To minimize dust, the drop height during stockpiling and truck loading is maintained at a minimum. Water sprays are also used as needed to control fugitive dust emissions. Truck drivers are required to drive on the paved interior roads and over the two sets of metal rumble strips, and tarp loads before leaving the facility to control fugitive dust emissions during transport.

5.2 Material Processing and Conveying

Typically, recyclable construction aggregate, concrete, asphaltic concrete, rock, stone or block is delivered to the Greenfield Supply Center, LLC facility by truck and dumped on the ground in an unloading area. These materials can be loaded onto and off the railroad spur utilizing a conveyor system. Material stored in the unloading area is then transferred via front end loader, or similar piece of construction equipment, to the on-site portable crushing/recycling plant. Truck unloading and construction equipment unloading heights will be kept to a minimum to control fugitive dust emissions. Recyclable construction aggregate will be sprayed down by water as necessary to reduce fugitive dust before being unloaded into the portable crushing/recycling plant. The crushing/recycling plant itself has a series of water spray nozzles to suppress fugitive dust as needed. Stacking conveyors and transfer points on the crushing/recycling plant will be setup to reduce the drop height to the maximum extent practicable to control fugitive dust. As stated in Section 1 of this plan, the material processing plant is subject to relocation from time to time (Permits #13-16 and #48-18). Copies of the relocation notices will be kept at the facility.

5.3 Traffic Management

Construction equipment and truck speeds on site will be restricted to 8 miles per hour (mph), except during high wind conditions, when all construction equipment and truck speeds will be limited to 5mph. As stated above, all truck loading and unloading will be conducted on the installed interior paved truck roads. Refer Section 9 of this operating plan for additional information on operations during high wind conditions.

5.4 Cleaning and Sweeping

Greenfield Supply Center, LLC will clean and sweep the on-site paved roadways and paved parking areas to minimize aggregate material accumulation on these surfaces as needed but no less than twice a day. The exterior streets within ¼ mile (and their adjacent walkways) will be clean and sweep at least twice a day. Greenfield Road will be swept as needed by Greenfield Supply Center, LLC, as needed but no less than twice a day. As stated in Section 5 of this plan, the truck route at the facility will be paved along with installing an additional metal rumble strip. Rumble strips, also known as shaker racks, exit grids, etc. remove material from the truck tires prior to leaving the facility. The rumble strips create a bouncing and shaking action to dislodge mud, soils, or any stones accumulated while at the facility. As stated in Section Records of cleaning and sweeping will be maintained as described in Section 6 of this operational plan. Unpaved surfaces, paved roads, rumble strips, and parking areas will be watered, as needed, to reduce fugitive dust emissions as described in Section 5.5 of this operational plan.

5.5 Dust Suppression

Water, calcium chloride or another acceptable chemical dust suppressant may be applied to paved and unpaved portions of the Greenfield Supply Center, LLC facility at the owner/operator's discretion to

minimize fugitive dust generated from equipment and vehicles travelling on the facility property. No wastewater or recycled oils will be used for fugitive dust control at the facility. Two stormwater holding ponds are located on the west side of the site. These holding ponds along with the installation of municipal water service are used for fugitive dust control. The facility maintains records of water and dust suppressant applications as described in Section 6 of this operational plan.

5.6 Employee Training

Facility employees receive annual environmental and training covering the topics of storm water management, spill prevention, response and reporting, and fugitive dust control. This training includes discussion of the use and maintenance of the control measures discussed in this operational plan.

5.7 Routine Inspections

During operating days, a routine inspection of the facility is completed by an on-site employee or manager. During these inspections, construction aggregate stockpiles, unpaved on-site roads and Greenfield Road, and rumble strips are inspected for the presence of fugitive dust. Corrective actions in the form of additional sweeping and applications of dust suppressant will be implemented whenever dust issues are noted during daily inspections. A sample inspection report form is provided in Appendix C. Records of the daily inspections, sweeper and dust logs are maintained as described in Section 6.

Visual fugitive dust and opacity tests are conducted on a quarterly basis by a certified NRM employee. The opacity is determined by reference test Method 9d, as defined in Section 5525(j) of the Michigan Natural Resources and Environmental Protection Act. Copies of these reports are kept on site and are available for review.

5.8 Sedimentation and Erosion Control

Sediments from construction aggregate stockpiles have the potential to migrate via sheet flow to on-site catch basins and storm drains. The catch basins located near the crushing/recycling plant and the construction aggregate stockpiles are sealed to prevent any sediment from entering the catch basins. Additional information regarding storm water pollution prevention is discussed in the Facility's Storm Water Pollution Prevention Plan.

6 Recordkeeping {Sec. 42-2-155(a)(3)(d)}

In accordance with Detroit City Ordinance Section 42-2-155(a)(3)(d) (previously 22-5-6(D)), the facility will maintain records of road cleaning, dust suppressant application, road and stockpile watering, facility inspections, laser rangefinder maintenance and calibration, and employee training for at least 3 years (5 years for records required by the Michigan Department of Environmental Quality). These records are maintained electronically in the Greenfield Supply Center, LLC database and/or at the facility.

7 Setback and Screening Requirements {Sec. 42-2-155(a)(3)(e)}

The facility property is zoned M4 – intensive industrial, by the City of Detroit. The site is surrounded by other M-4 zoned properties. No front, rear, or side setbacks or stockpile screening are required in accordance with Detroit Zoning Ordinance Section 50-13-85. However, setbacks are noted in the site plan C100 of Appendix D as 20-feet from the road right of way and 150-feet from residentially zoned areas. These setbacks were presented in the Site Plan set for the Conditional Use Permit.

8 Height Limits {Sec. 42-5-6(a)(3)(f)}

After new stockpiles are placed on site, a Laser Technology, Inc. TruPulse 200 laser range finder or equivalent device, is used to confirm that the vertical height of every new stockpile is less than 50ft. The rangefinder is maintained and calibrated in accordance with manufacturer specifications by Greenfield Supply Center, LLC and height measurements are recorded and kept at the facility.

9 High Wind Conditions {Sec. 42-2-155(a)(3)(h)}

Site management will monitor wind conditions through publicly available weather information. When high wind conditions are forecasted, the following actions will be taken:

- Facility speed limits will be reduced to 5 miles per hour.
- Additional inspections of stockpiles, paved roads and unpaved roads shall be conducted to evaluate the need for additional sweeping and/or water treatment.
- Traffic and material handling and processing operations shall be limited to essential activities.

APPENDIX A



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



C. HEIDI GREYER
DIRECTOR

April 30, 2018

Mr. Tony Calo, President
Greenfield Supply Center, LLC
P.O. Box 530563
Livonia, Michigan 48153

Dear Mr. Calo:

This letter is in reference to your Permit to Install application for a portable crushing plant (State Registration Number P0358) located at 12625 Greenfield Road, Detroit, Michigan. This application, identified as No. 48-18, has been evaluated and approved by the Air Quality Division, pursuant to the delegation of authority from the Michigan Department of Environmental Quality (DEQ).

This approval is based upon and subject to compliance with all administrative rules promulgated pursuant to Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and conditions stipulated in the enclosed supplement. Please review these conditions thoroughly so that you may take the actions necessary to ensure compliance with all of these conditions.

To help us improve the service we provide our customers, we encourage you to complete a *Permit to Install Customer Service Survey* on the following Web page:

<https://www.surveymonkey.com/s/aqdptics>

Please contact me if you have any questions regarding this permit.

Sincerely,

Nicholas Carlson, Environmental Engineer
General Manufacturing/Chemical Process Unit
Permit Section, Air Quality Division
517-284-6738
CarlsonN1@michigan.gov

Enclosures

cc/enc: Mr. Chip Tokar, NRM
Ms. Wilhelmina McLemore, DEQ



PERMIT TO INSTALL APPLICATION

For authority to install, construct, reconstruct, relocate, or modify process, fuel-burning or refuse burning equipment and/or control equipment. Permits to install are required by administrative rules pursuant to Section 5505 of 1994 PA 451, as

FOR DEQ USE
APPLICATION NUMBER

48-18

Please type or print clearly. The "Application Instructions" and "Information Required for an Administratively Complete Permit to Install Application" are available on the Air Quality Division (AQD) Permit Web Page at <http://www.deq.state.mi.us/aps>. Please call the AQD at 517-284-6804 if you have not been contacted within 15 days of your application submittal.

1. FACILITY CODES: State Registration Number (SRN) and North American Industry Classification System (NAICS)			
SRN	P 0 3 5 8	NAICS	2 1 1 3 1 9
2. APPLICANT NAME: (Business License Name of Corporation, Partnership, Individual Owner, Government Agency) Kraken Crushed Concrete & Recycling, LLC; d.b.a. Greenfield Supply Center, LLC			
3. APPLICANT ADDRESS: (Number and Street) P.O. Box 530563			MAIL CODE:
CITY: (City, Village or Township) Livonia	STATE: MI	ZIP CODE: 48153	COUNTY: Wayne
4. EQUIPMENT OR PROCESS LOCATION: (Number and Street - if different than Item 3) 12625 Greenfield Road			
CITY: (City, Village or Township) Detroit		ZIP CODE: 48227	COUNTY: Wayne
5. GENERAL NATURE OF BUSINESS: Concrete Crushing and Recycling			
6. EQUIPMENT OR PROCESS DESCRIPTION: (A Description MUST Be Provided Here. Include Emission Unit IDs. Attach additional sheets if necessary; number and date each page of the submittal.) Kraken Crushed Concrete & Recycling will be moving their portable crushing plant onto the property for a crushing job. Concrete will be crushed down to into a usable recycled product that will be stored on site in stockpiles. The jaw crusher will be fed by a loader, or similar piece of equipment. Crushed concrete will then travel along conveyors to the Screener, which will sperate the material into different products or send larger pieces of concrete back to the jaw crusher via a return conveyor. Finished products will be stored in stockpiles created from stacking discharge conveyors running from the screener. This application is being submitted as a part of a site-specific permit application, along with general permit application forms. The estimated date the crusher will be removed from the site is:			
7. REASON FOR APPLICATION: (Check all that apply.) <input checked="" type="checkbox"/> INSTALLATION / CONSTRUCTION OF NEW EQUIPMENT OR PROCESS <input type="checkbox"/> RECONSTRUCTION / MODIFICATION / RELOCATION OF EXISTING EQUIPMENT OR PROCESS - DATE INSTALLED: <input type="checkbox"/> OTHER - DESCRIBE			
8. IF THE EQUIPMENT OR PROCESS THAT WILL BE COVERED BY THIS PERMIT TO INSTALL (PTI) IS CURRENTLY COVERED BY ANY ACTIVE PERMITS, LIST THE PTI NUMBER(S):			
9. DOES THIS FACILITY HAVE AN EXISTING RENEWABLE OPERATING PERMIT (ROP)? <input checked="" type="checkbox"/> NOT APPLICABLE <input type="checkbox"/> PENDING APPLICATION <input type="checkbox"/> YES PENDING APPLICATION OR ROP NUMBER:			
10. AUTHORIZED EMPLOYEE: Tony Calo		TITLE: President	PHONE NUMBER: (Include Area Code) 248-468-9203
SIGNATURE: 		DATE: 3-16-18	E-MAIL ADDRESS:
11. CONTACT: (If different than Authorized Employee. The person to contact with questions regarding this application) Chip Tokar		PHONE NUMBER: (Include Area Code) 419-841-3232	
CONTACT AFFILIATION: Consultant		E-MAIL ADDRESS: ctokar@nrmsolution.com	
12. IS THE CONTACT PERSON AUTHORIZED TO NEGOTIATE THE TERMS AND CONDITIONS OF THE PERMIT TO INSTALL? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
FOR DEQ USE ONLY - DO NOT WRITE BELOW			
DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: 4/17/18			
DATE PERMIT TO INSTALL APPROVED: 4/25/18		SIGNATURE:	
DATE APPLICATION / PTI VOIDED:		SIGNATURE:	
DATE APPLICATION DENIED:		SIGNATURE:	
A PERMIT CERTIFICATE WILL BE ISSUED UPON APPROVAL OF A PERMIT TO INSTALL			

RECEIVED

MAR 21 2018

AIR QUALITY DIV.

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

April 25, 2018

**PERMIT TO INSTALL
48-18**

**ISSUED TO
Greenfield Supply Center, LLC**

**LOCATED AT
12625 Greenfield Road
Detroit, Michigan**

**IN THE COUNTY OF
Wayne**

**STATE REGISTRATION NUMBER
P0358**

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

April 17, 2018

DATE PERMIT TO INSTALL APPROVED:

April 25, 2018

SIGNATURE:

Melissa Byrnes

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO ₂ e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H ₂ S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUPROCESS	A combination of process equipment (screens, crushers, feeders, conveyors, etc.) at 12625 Greenfield Road, Detroit, Michigan, used to reduce larger materials down to smaller sizes, classify and sort materials into various product types, material handling and transporting of material to storage areas. Control methods include equipment enclosures or enclosed within a building, water sprays, drop chutes and/or pant legs for transfer points.	FGCRUSHING	EUPROCESS
EUTRUCKTRAFFIC	Truck traffic for delivery of material products to customers; truck traffic from quarry pit to processing area and loader traffic associated with processing equipment, storage pile handling and loading delivery trucks. All commercial truck areas and unpaved road portions from the quarry pit to the process area.	FGCRUSHING	EUTRUCKTRAFFIC
EUSTORAGE	Open area stock piles of various material sizes and product types. Water spray of material products are used when necessary for material storage piles.	FGCRUSHING	EUSTORAGE

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGCRUSHING	A nonmetallic mineral crushing facility located at 12625 Greenfield Road, Detroit, Michigan, consisting of crusher(s) and associated process equipment including grinding mills, drills, screening operations, bucket elevators, belt conveyors, loading and bagging operations, storage bins, enclosed truck or railcar loading stations and any other material handling equipment operated at the site. Each crusher and screen shall be equipped with a water spray. A baghouse dust collector may alternatively be installed in lieu of water spray for any particular piece of equipment. Operation of the control equipment is required only when necessary to meet applicable emission limits.	EUPROCESS, EUTRUCKTRAFFIC, EUSTORAGE

The following conditions apply to: FGCRUSHING

DESCRIPTION: A nonmetallic mineral crushing facility located at 12625 Greenfield Road, Detroit, Michigan, consisting of crusher(s) and associated process equipment including grinding mills, drills, screening operations, bucket elevators, belt conveyors, loading and bagging operations, storage bins, enclosed truck or railcar loading stations and any other material handling equipment operated at the site. Each crusher and screen shall be equipped with a water spray. A baghouse dust collector may alternatively be installed in lieu of water spray for any particular piece of equipment. Operation of the control equipment is required only when necessary to meet applicable emission limits.

Emission Units: EUPROCESS, EUTRUCKTRAFFIC, EUSTORAGE

POLLUTION CONTROL EQUIPMENT: Water Sprays

I. EMISSION LIMITS

1. Visible emissions from FGCRUSHING shall not exceed the limits in the following table: (R 336.1301, 40 CFR 52.21 (c) & (d), 40 CFR 60.670)

	Equipment	Opacity Limit (%)
1.2a	Any equipment enclosed within a building	No visible emissions
1.2b	All crushers	12
1.2c	Screens	7
1.2d	Rock drills	5
1.2e	Conveyors/Transfer points	7
1.2f	Wash screens and all subsequent equipment downstream up to the next crusher or storage bin	No visible emissions
1.2g	All equipment controlled by a baghouse dust collector	7
1.2h	Wheel loaders and truck traffic	5
1.2i	Material storage piles	5
1.2j	Any other process equipment which is part of the nonmetallic mineral crushing facility or related processes	7

II. MATERIAL LIMITS

1. The permittee shall not process more than 600,000 tons of material through FGCRUSHING per 12-month rolling time period as determined at the end of each calendar month. (R 336.1205, 40 CFR 52.21 (c) & (d))
2. The permittee shall not crush any asbestos tailings or asbestos containing waste materials, as defined by the National Emission Standard for Hazardous Air Pollutants regulations, in FGCRUSHING. (40 CFR Part 61 Subpart M)

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGCRUSHING unless the program for continuous fugitive emissions control for all facility roadways, the facility yard, all storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. (R 336.1371, R336.1372, Act 451 324.5524)
2. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and OOO, as they apply to FGCRUSHING. (40 CFR Part 60 Subparts A & OOO)

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any portion of FGCRUSHING unless the water sprays for each crusher and each screen are installed, maintained and operated in a satisfactory manner. **(R 336.1910, 40 CFR 52.21 (c) & (d))**
2. The permittee shall install and maintain a belt scale(s) on the transfer conveyor(s) portion of FGCRUSHING which continuously shows the daily throughput rate for the conveyor(s). **(40 CFR 52.21 (c) & (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(40 CFR 52.21 (c) & (d))**
2. The permittee shall keep daily and monthly records of the amount of material processed through FGCRUSHING. Furthermore, the permittee shall calculate on a monthly basis, the yearly throughput rate based upon the most recent 12-month rolling time period. The permittee shall keep records of the amount of material processed on file and make them available to the Department upon request. **(40 CFR 52.21 (c) & (d))**
3. The permittee shall not operate FGCRUSHING unless the nuisance minimization plan for fugitive dust for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. **(R 336.1371)**
4. The permittee shall keep records of all watering/dust suppressant applications for the site roadways, plant yard and stockpiles as required by Appendix A. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1371)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FGCRUSHING. **(R 336.1201(7)(a))**
2. The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7)**
3. The permittee shall submit notification to the AQD District Supervisor at least 10 days prior to relocating FGCRUSHING to this site. **(Act 451 324.5505, 40 CFR 52.21 (c) & (d))**

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. In the event that EUPROCESS is removed from this location, the permittee may return, install and operate this equipment at this location pursuant to this Permit to Install, provided that all of the following conditions are met:
 - a. There are no outstanding and unresolved compliance issues, resulting from written notification by the AQD, involving either EUPROCESS or this location.
 - b. The permittee provides written notification to the AQD District Supervisor, at least one week prior to the return of EUPROCESS, that the equipment is scheduled to return to this location.

Notwithstanding the provisions of this condition, the AQD may void this permit during the time that EUPROCESS is removed from this location if it has reason to believe that, if returned, EUPROCESS is not likely to operate in compliance with all applicable rules and permit conditions. If this action is taken, the AQD shall notify the permittee, in writing, of the reasons therefore. The voiding of this permit shall be without prejudice to the permittee's right to file a new Permit to Install application. **(Act 451 324.5505, R 336.1201, R 336.1205, 40 CFR 52.21 (c) & (d), 40 CFR 60.7)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**APPENDIX A:
Nuisance Minimization Plan for
Fugitive Dust**

I. Site Roadways / Plant Yard

- A. The dust on the site roadways and the plant yard shall be controlled by applications of water, calcium chloride or other acceptable and approved fugitive dust control compounds. Applications of dust suppressants shall be done as often as necessary to meet all applicable emission limits. A record of all watering/dust suppressant applications shall be kept on file and be made available to the AQD upon request.
- B. All paved roadways and the plant yards shall be swept as needed between applications.

II. Plant

The drop distance at each transfer point shall be reduced to the minimum the equipment can achieve. The transfer point from the re-circulating belt to the feed belt shall be equipped with an enclosed chute.

III. Storage Piles

- A. Stockpiling of all nonmetallic minerals shall be performed to minimize drop distance and control potential dust problems.
- B. Stockpiles shall be watered on an as needed basis in order to meet the opacity limit of 5 percent. Equipment to apply water or dust suppressant shall be available at the site or on call for use at the site within a given operating day. A record of all watering/dust suppressant applications shall be kept on file and be made available to the AQD upon request.

IV. Truck Traffic

On-site vehicles shall be loaded to prevent their contents from dropping, leaking, blowing or otherwise escaping. This shall be accomplished by loading so that no part of the load shall come in contact within 6 inches of the top of any side board, side panel or tailgate. Otherwise, the truck shall be tarped.

V. AQD/MDEQ Inspection

The provisions and procedures of this plan are subject to adjustment by written notification from the AQD if, following an inspection, the AQD finds the fugitive dust requirements and/or permitted emission limits are not being met.



7901 Sylvania Road
Sylvania, Ohio 43560
Local 419-841-3232
Fax 419-882-8772

www.NRMsolution.com

Electronically Delivered: November 1, 2021

EGLE, Air Quality Division
P.O. Box 30473
Lansing, MI 48909-7742

Attention: Mr. Nicholas Carlson, Environmental Engineer

Reference: Relocation Notice
Kraken Crushed Concrete & Recycling, LLC
General Permit No. 13-16

Dear Mr. Carlson,

Natural Resource Management, LLC (NRM) has been retained by Kraken Crushed Concrete & Recycling, LLC to complete a relocation notice for the above referenced facility. The facility will be moved to the site on November 10, 2021.

If you have any questions, please contact Alyssa Grell at 419-841-3232.

Sincerely,

A handwritten signature in blue ink that reads "Alyssa Grell".

Alyssa Grell, Geologist
Natural Resources Management, LLC

cc: Mr. Tony Calo, Kraken Crushed Concrete & Recycling, LLC
PO Box 702068
Plymouth, MI 48170



**GENERAL AIR PERMIT TO INSTALL APPLICATION
RELOCATION NOTICE**

For EGLE Use Only
Permit Number

*Authorized under 1994 PA 451, as amended. Completion of form is required.
Applicant may be subject to civil and /or criminal penalties for providing false information.*

Instructions: Use this form to request authority to relocate a nonmetallic mineral processing facility under the terms and conditions of a general permit to install pursuant to Rule 201a. A copy of the original general permit forms (EQP5727, EQP5729, and EQP5756) and any additional Process Information forms for modifications to this plant must be submitted with this form. Attach a detailed site map for the new location which shows all site characteristics including the location of any residential and/or commercial establishments and places of public assembly which are located within 1,000 feet of the proposed site. Certify and submit this form and any attachments to the Permit Section and the appropriate district office for the new location. See map for district office locations.

1. FACILITY CODES STATE REGISTRATION NUMBER (SRN): P0358 STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODE: 1429		
2. APPLICANT NAME (Business license name of the corporation, partnership, individual or government agency that owns the facility) Kraken Crushed Concrete & Recycling, LLC		
3. APPLICANT MAILING ADDRESS (Street Address or P.O. Box Number) P.O. Box 702068		
4. CITY: Plymouth	5. STATE: MI	6. ZIP CODE: 48170
7. NAME OF AUTHORIZED EMPLOYEE: Tony Calo / April Martin		
8. TITLE (person identified in item 7) President		9. TELEPHONE NO. (person identified in Item 7) 248-468-9203
10. CONTACT PERSON (technical point of contact, if different than name in Item 7) April Martin		11. TELEPHONE NO. (contact person) 248-468-9203
12. Is any equipment (e.g. crusher, screens, etc.) associated with this permit rented? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If Yes, provide the name of the company renting the equipment as well as the rental company. Be sure to include any rented equipment on form EQP 5756. RENTER: RENTAL COMPANY:		

CURRENT PLANT LOCATION

12. MINE/QUARRY NAME: Brownstown		13. GENERAL PERMIT NUMBER: 13-16
14. STREET ADDRESS: 18550 Allen Road		
15. CITY: Brownstown	16. ZIP CODE: 48193	17. COUNTY: Wayne
18. SECTION: 3	19. TOWNSHIP: 4S	20. RANGE: 10E

NEW PLANT LOCATION

21. MINE/QUARRY NAME: Greenfield Road Site		
22. STREET ADDRESS: 12625 Greenfield Road		
23. CITY: Detroit	24. ZIP CODE: 48227	25. COUNTY: Wayne
26. SECTION: 25	27. TOWNSHIP: 1S	28. RANGE: 10E
29. DATES PLANT IS TO BE LOCATED AT THIS SITE 11/10/2021 TO ~Spring 2022		30. AMOUNT TO BE PROCESSED AT THIS SITE (tons per year)
31. DIRECTIONS FROM NEAREST TOWN: From Detroit, go 11mi east on I-96, turn north on Greenfield Rd and site will be 0.3mi on the west.		

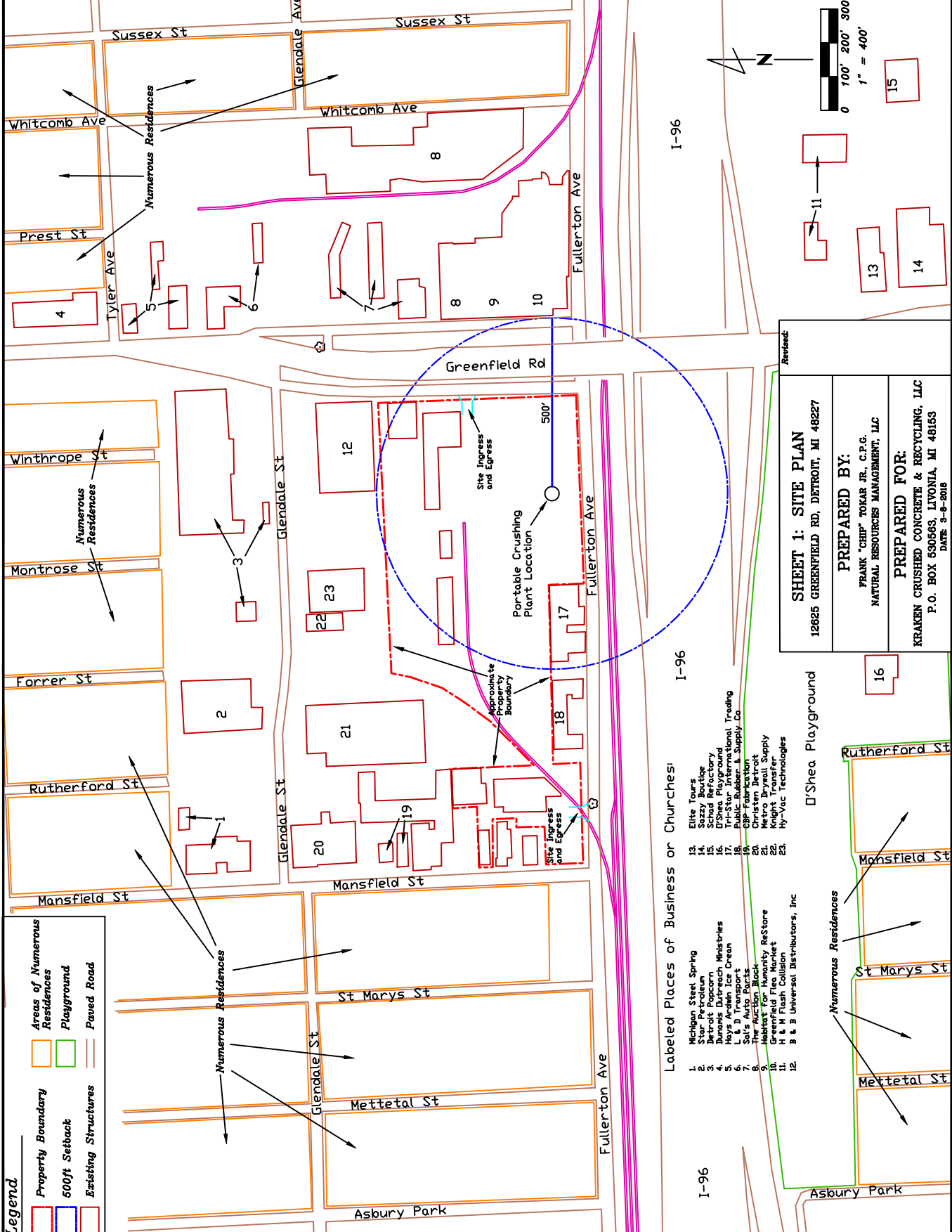
Applicant Certification: I certify, under penalty of law, that this permit application and any attachments were prepared by me, or under my direction or supervision in accordance with a system to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. In addition, the equipment described in this application meets the necessary criteria for applicability for a General Permit to Install. Furthermore, I certify that I can and will comply with all conditions outlined in the General Permit to Install. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.


SIGNATURE OF AUTHORIZED EMPLOYEE

11-1-2021
DATE

QP5757 (Revised 7/2003)

Site Map for New Location



Legend

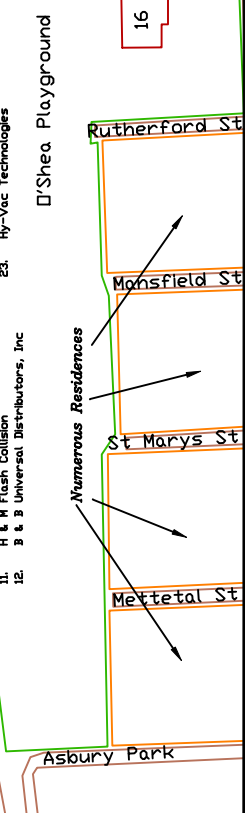
- Property Boundary
- 500ft Setback
- Areas of Numerous Residences
- Playground
- Paved Road
- Existing Structures

Labeled Places of Business or Churches:

- | | |
|---|---|
| <ul style="list-style-type: none"> 1. Michigan Steel Spring 2. Detroit Popcorn 3. Dunons Dubreach Ministries 4. Hays Ardain Ice Cream 5. L & J Transport 6. The Auction Block 7. Habitat for Humanity ReStore 8. Greenfield Flea Market 9. H & H Fish Collision 10. B & B Universal Distributors, Inc | <ul style="list-style-type: none"> 13. Elite Tours 14. School Refectory 15. School Refectory 16. D'Shea Playground 17. Tri-Star International Trading 18. Public Rubber & Supply Co 19. Christian Barakat 20. Metro Drywall Supply 21. Knight Transfer 22. Knight Transfer 23. Hy-Vac Technologies |
|---|---|

Revised:

<p>SHEET 1: SITE PLAN 12625 GREENFIELD RD, DETROIT, MI 48227</p>
<p>PREPARED BY: FRANK "CHIP" TOKAR JR., C.P.G. NATURAL RESOURCES MANAGEMENT, LLC</p>
<p>PREPARED FOR: KRAKEN CRUSHED CONCRETE & RECYCLING, LLC P.O. BOX 530563, LIVONIA, MI 48153 DATE: 9-8-2018</p>



Original General Permit Forms

RECEIVED

S.T.



Michigan Department Of Environmental Quality - Air Quality Division 2016

GENERAL PERMIT TO INSTALL APPLICATION

GENERAL INFORMATION

AIR QUALITY DIVISION

FOR DEQ USE ONLY
PERMIT NUMBER
13-16

Authorized under 1994 PA 451, as amended. Completion of form is required. Applicant may be subject to civil and/or criminal penalties for providing false information.

Instructions: Use this form to request authority to install and operate a source, process or process equipment under the terms and conditions of a general permit to install pursuant to Rule 201a. Prepare this form, the appropriate Process Information form(s) and the Additional Information form (if needed). Submit all information, including forms, in duplicate. NOTE: A general permit cannot apply to a source, process, or process equipment that is covered by a Permit to Install pursuant to Rule 201 and is further referenced in an outstanding consent order or consent judgment.

1. FACILITY CODES		State Registration Number (SRN):		P	0	3	5	8	North American Industry Classification System (NAICS)		2	1	2	3	1	9
2. APPLICANT NAME (Business license name of the corporation, partnership, individual or government agency that owns the facility)																
Kraken Crushed Concrete & Recycling LLC																
3. APPLICANT MAILING ADDRESS (Street Address or P.O. Box Number)																
P.O. Box 530563																
CITY										STATE		ZIP CODE				
Livonia										MI		48153 -				
4. AUTHORIZED EMPLOYEE										TITLE		PHONE NO. (Include Area Code)				
Tony Calo										President		248 - 468 - 9203				
5. CONTACT: (If different than Authorized Employee - for questions regarding this application)										PHONE NO. (Include Area Code)						
April Martin										248 - 468 - 9203						
6. EQUIPMENT OR PROCESS LOCATION (Number and street, if different than mailing address)																
7871 Chubb Road																
CITY										ZIP CODE		COUNTY				
Northville										48168 -		Washtenaw				
7. THE EQUIPMENT IDENTIFIED IN THE APPLICATION IS <input checked="" type="checkbox"/> NEW <input type="checkbox"/> EXISTING - DATE INSTALLED:																
8. IS THERE AN EXISTING PERMIT TO INSTALL FOR ANY EQUIPMENT IDENTIFIED IN THIS APPLICATION? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO																
IF YES, INCLUDE PERMIT TO INSTALL NUMBER(S)																
9. DOES THIS SOURCE HAVE AN EXISTING RENEWABLE OPERATING PERMIT? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NOT APPLICABLE																
IF YES, INCLUDE RENEWABLE OPERATING PERMIT NUMBER:																
10. IS ANY OF THE EQUIPMENT INCLUDED IN AN OUTSTANDING CONSENT ORDER OR CONSENT JUDGMENT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO																
11. THE FOLLOWING FORMS ARE ATTACHED AS PART OF THIS PERMIT APPLICATION (check all that apply)																
<input checked="" type="checkbox"/> PROCESS INFORMATION (EQP 5756)																
(Complete the appropriate form for the process or equipment to be installed and insert the form number in the space provided.)																
<input checked="" type="checkbox"/> ADDITIONAL INFORMATION (EQP5729)																

Applicant Certification: I certify, under penalty of law, that this permit application and the attachments were prepared by me, or under my direction or supervision in accordance with a system to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. In addition, the equipment described in this application meets the necessary criteria for applicability for a General Permit to Install. Furthermore, I certify that I can and will comply with all conditions outlined in the General Permit to Install. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.

SIGNATURE OF AUTHORIZED EMPLOYEE (Person identified in Item 4)	DATE	E-MAIL ADDRESS
	12/27/2015	

Submit original completed application and all attachments to:

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION - PERMIT SECTION
P.O. BOX 30260
LANSING, MI 48909-7760

DEQ USE ONLY - DO NOT WRITE BELOW	
DATE APPLICATION COMPLETE	1-29-16
DATE GENERAL PERMIT TO INSTALL GRANTED	2-3-16
SIGNATURE	
DATE GENERAL PERMIT TO INSTALL VOIDED	SIGNATURE



Michigan Department Of Environmental Quality - Air Quality Division
GENERAL PERMIT TO INSTALL APPLICATION
ADDITIONAL INFORMATION

FOR DEQ USE ONLY
PERMIT NUMBER
13 16

Authorized under 1994 PA 451, as amended. Completion of form is required if additional information is needed to make an application complete. Applicant may be subject to civil and/or criminal penalties for providing false information.

Instructions: Use this form to include additional information or attachments. Prepare and submit this form with General Information form (EQP5727).

1. FACILITY CODE	2. ID (Provide the identification number of the device, emission unit or stack/vent for which additional information is being submitted.)
STATE REGISTRATION NUMBER (SRN) P 0 3 5 8	

3. WHAT TYPE OF ADDITIONAL INFORMATION ARE YOU SUBMITTING WITH THIS APPLICATION? (check all that apply)

ATTACHMENT (if checked, describe and list what is attached. May include drawings, charts, calculations, assumptions, etc.)

1. Site Plan
2. Diagram of crushing facility setup
3. EQP5756 forms listing all devices in the crushing facility setup

TECHNICAL (Specialized information regarding the installation, construction, or use of a process or stack/vent)

GENERAL (Any supplemental information that is not technical information)

4. ADDITIONAL INFORMATION NARRATIVE (A brief description of the information or attachment. May include calculations, design parameters, small diagrams, etc.)



Michigan Department Of Environmental Quality - Air Quality Division

GENERAL PERMIT TO INSTALL APPLICATION
NONMETALLIC MINERAL CRUSHING- (PAGE 2 OF 2)

FOR DEQ USE ONLY

PERMIT NUMBER

13-16

Authorized under 189-1 PA 451, as amended. Completion of form is required. Applicant may be subject to civil and for criminal penalties for providing false information.

Instructions: Page 1 of this form must be completed and certified by an authorized employee. Provide an ID and complete all items for each piece of process equipment at the facility. If the equipment is shop built, the manufactured date may be estimated. This data is mandatory. Use as many copies of this page as needed to list all process equipment. Use Additional Information form EQP5729 if needed to describe why a device is not subject to NSPS.

For a Modification: Provide the information for all existing and new or additional process equipment. Submit pages 1 and 2 to the Permit Section and the appropriate district office. See map for district office locations.

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.) Jaw Crusher		DEVICE ID (Assign an Identification number for this device) KCC-1	
MAKE AND MODEL Lippmann J3062		SERIAL NUMBER 2015-10237	MANUFACTURED DATE (year) 2015
MAXIMUM RATED CAPACITY (tons per hour) 350	CONTROL? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CONTROL TYPE water spray	
IS DEVICE SUBJECT TO NSPS? <input checked="" type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input checked="" type="checkbox"/> NO, DATE TEST SCHEDULED <input type="checkbox"/> NO, REASON NOT SUBJECT			

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.) Discharge Conveyor		DEVICE ID (Assign an Identification number for this device) KCC-1	
MAKE AND MODEL part of Jaw Crusher above		SERIAL NUMBER 2015-10240	MANUFACTURED DATE (year) 2015
MAXIMUM RATED CAPACITY (tons per hour) 350	CONTROL? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CONTROL TYPE water spray	
IS DEVICE SUBJECT TO NSPS? <input checked="" type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input checked="" type="checkbox"/> NO, DATE TEST SCHEDULED <input type="checkbox"/> NO, REASON NOT SUBJECT			

See, draw 1-27 call with April Mar

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.) Screener		DEVICE ID (Assign an Identification number for this device) KCC-2	
MAKE AND MODEL Lippmann 5165		SERIAL NUMBER 2015-10242	MANUFACTURED DATE (year) 2015
MAXIMUM RATED CAPACITY (tons per hour)	CONTROL? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CONTROL TYPE This was her error - it does have water spray	
IS DEVICE SUBJECT TO NSPS? <input checked="" type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input type="checkbox"/> NO, DATE TEST SCHEDULED <input type="checkbox"/> NO, REASON NOT SUBJECT 1/27/16 -- will be scheduling			

water spray - CAS 1-27-16

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.) Recycle Conveyor		DEVICE ID (Assign an Identification number for this device) KCC-3	
MAKE AND MODEL Woolley Grasshopper		SERIAL NUMBER 2300.90569	MANUFACTURED DATE (year) 2015
MAXIMUM RATED CAPACITY (tons per hour)	CONTROL? <input type="checkbox"/> YES <input type="checkbox"/> NO	CONTROL TYPE	
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input type="checkbox"/> NO, DATE TEST SCHEDULED <input type="checkbox"/> NO, REASON NOT SUBJECT See email 1-29-16			

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.) Screen Feed Conveyor		DEVICE ID (Assign an Identification number for this device) KCC-4	
MAKE AND MODEL WHO TH80		SERIAL NUMBER 2279	MANUFACTURED DATE (year) 2015
MAXIMUM RATED CAPACITY (tons per hour)	CONTROL? <input type="checkbox"/> YES <input type="checkbox"/> NO	CONTROL TYPE	
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input type="checkbox"/> NO, DATE TEST SCHEDULED <input type="checkbox"/> NO, REASON NOT SUBJECT			

See 1-29-16 email 1-27-16 drill & schedule



Michigan Department Of Environmental Quality - Air Quality Division

GENERAL PERMIT TO INSTALL APPLICATION
NONMETALLIC MINERAL CRUSHING - (PAGE 2 OF 2)

FOR DEQ USE ONLY

PERMIT NUMBER

13-16

Authorized under 1994 PA 451, as amended. Completion of form is required. Applicant may be subject to civil and/or criminal penalties for providing false information.

Instructions: Page 1 of this form must be completed and certified by an authorized employee. Provide an ID and complete all items for each piece of process equipment at the facility. If the equipment is shop built, the manufactured date may be estimated. This data is mandatory. Use as many copies of this page as needed to list all process equipment. Use Additional Information form EQP5729 if needed to describe why a device is not subject to NSPS.

For a Modification: Provide the information for all existing and new or additional process equipment. Submit pages 1 and 2 to the Permit Section and the appropriate district office. See map for district office locations.

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.) Discharge Conveyor		DEVICE ID (Assign an identification number for this device) KCC-5	
MAKE AND MODEL Thor 30" x 120'		SERIAL NUMBER 1342	MANUFACTURED DATE (year) 1984
MAXIMUM RATED CAPACITY (tons per hour)	CONTROL? <input type="checkbox"/> YES <input type="checkbox"/> NO CONTROL TYPE		
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input type="checkbox"/> NO, DATE TEST SCHEDULED <input type="checkbox"/> NO, REASON NOT SUBJECT			

1-27-11
will
send

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.) Discharge Conveyor		DEVICE ID (Assign an identification number for this device) KCC-6	
MAKE AND MODEL Thor 30" x 80'		SERIAL NUMBER 04078698655	MANUFACTURED DATE (year) 1986
MAXIMUM RATED CAPACITY (tons per hour)	CONTROL? <input type="checkbox"/> YES <input type="checkbox"/> NO CONTROL TYPE		
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input type="checkbox"/> NO, DATE TEST SCHEDULED <input type="checkbox"/> NO, REASON NOT SUBJECT			

call
Pvt
Mork

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.)		DEVICE ID (Assign an identification number for this device)	
MAKE AND MODEL		SERIAL NUMBER	MANUFACTURED DATE (year)
MAXIMUM RATED CAPACITY (tons per hour)	CONTROL? <input type="checkbox"/> YES <input type="checkbox"/> NO CONTROL TYPE		
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input type="checkbox"/> NO, DATE TEST SCHEDULED <input type="checkbox"/> NO, REASON NOT SUBJECT			

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.)		DEVICE ID (Assign an identification number for this device)	
MAKE AND MODEL		SERIAL NUMBER	MANUFACTURED DATE (year)
MAXIMUM RATED CAPACITY (tons per hour)	CONTROL? <input type="checkbox"/> YES <input type="checkbox"/> NO CONTROL TYPE		
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input type="checkbox"/> NO, DATE TEST SCHEDULED <input type="checkbox"/> NO, REASON NOT SUBJECT			

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.)		DEVICE ID (Assign an identification number for this device)	
MAKE AND MODEL		SERIAL NUMBER	MANUFACTURED DATE (year)
MAXIMUM RATED CAPACITY (tons per hour)	CONTROL? <input type="checkbox"/> YES <input type="checkbox"/> NO CONTROL TYPE		
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input type="checkbox"/> NO, DATE TEST SCHEDULED <input type="checkbox"/> NO, REASON NOT SUBJECT			

Process Information Forms Previously Submitted for Modifications



STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY



GRETCHEN WHITMER
GOVERNOR

LANSING

LIESL EICHLER CLARK
DIRECTOR

August 27, 2019

Mr. Tony Calo, President
Kraken Crushed Concrete & Recycling, LLC
P.O. Box 530563
Livonia, Michigan 48153

Dear Mr. Calo

This letter is to acknowledge receipt of a Process Information form for a modification to your General Permit to Install (PTI) for a nonmetallic mineral crushing facility, located at 12625 Greenfield Road in Detroit, Michigan. This General PTI, identified as No. 13-16 has been updated to reflect the removal of conveyors (Device I.D. KCC-4 and KCC-5) and the addition of the following three conveyors (Device I.D. KCC-7, KCC-10 and KCC-11).

Approval of this modification is based upon your certification that all General PTI applicability criteria shall continue to be met after the replacement or modification is complete. The terms and conditions of General PTI No. 13-16 remain in effect to assure that the process or process equipment will operate in compliance with all applicable requirements for air pollution control.

Please note that Special Condition No. III.2 requires all equipment subject to the federal New Source Performance Standards (NSPS), Subpart OOO, for Nonmetallic Mineral Processing plants, be tested to demonstrate compliance with visible emission and particulate emission limits. If it is determined that this equipment has not been previously tested, you are required to schedule testing upon start-up of the plant with the addition of the new equipment.

Please contact the AQD District Office or me if you have any questions regarding this permit.

Sincerely,

Sue Thelen
Air Quality Division, Permit Section
517-284-6804
Thelens4@michigan.gov

cc: ~~Ms. Alyssa Grell, NRM~~
Ms. Wilhelmina McLemore, EGLE



7901 Sylvania Road
Sylvania, Ohio 43560
Local 419-841-3232
Fax 419-882-8772

www.NRMmining.com

July 3, 2019

EGLE, Air Quality Division
301 East Louis Glick Highway
Jackson, MI 49201

Attention: Mr. Nicholas Carlson, Environmental Engineer

Reference: Modification Notice
Kraken Concrete & Recycling, LLC
Permit No. 13-16

Dear Mr. Carlson,

Natural Resource Management, LLC (NRM) has been retained by Kraken Concrete & Recycling, LLC to complete the Modification Notice for the above referenced facility.

Compliance testing for visible emissions in accordance with Special Condition 1.8 of the permit is scheduled to be on or around August 31, 2019. We will submit a Notice of Intent to test prior to that date.

If you have any questions, please contact Alyssa Grell at 419-841-3232.

Sincerely,

Alyssa Grell, Geologist
Natural Resources Management, LLC

cc: Mr. Tony Calo, Kraken Concrete & Recycling, LLC
PO Box 530563
Livonia, MI 48153



Michigan Department Of Environmental Quality - Air Quality Division

GENERAL PERMIT TO INSTALL APPLICATION

PROCESS INFORMATION - NONMETALLIC MINERAL CRUSHING (PAGE 1 OF 2)

FOR DEQ USE ONLY
PERMIT NUMBER

Authorized Under 1994 PA 451, as amended. Completion of form is required. Applicant may be subject to civil and/or criminal penalties for providing false information.

Instructions: Use this form to request authority to install and operate a nonmetallic mineral crushing facility, under the terms and conditions of a general permit to install pursuant to Rule 201a. If two or more primary crushers operate in parallel, each constitutes a separate facility. Complete a separate copy of this form for each facility. Prepare and submit this form with the General Information form (EQP5727). For a Modification: Complete Items 1-9. Identify all existing and new or additional process equipment. Certify and submit pages 1 and 2 of this form to the Permit Section and the appropriate district office. See map for district office locations.

1. FACILITY CODE		2. MINE/QUARRY NAME	
STATE REGISTRATION NUMBER (SRN) P 0 3 5 3		Kraken Crushed Concrete & Recycling, LLC	
SECTION 14	TOWNSHIP 1S	RANGE 7E	3. AMOUNT PROCESSED AT THIS SITE (tons per year) 600,000
4. DESCRIPTION (Brief description of this facility or proposed modification. Attach a detailed site map showing all site characteristics including the location of any residential and/or commercial establishments and places of public assembly located within 1,000 feet of the proposed site)			
Replacements to equipment on site			
5. DOES THIS FACILITY HAVE ANY OUTSTANDING UNRESOLVED AIR VIOLATIONS?			<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
6. ARE THE CRUSHER(S) LOCATED A MINIMUM OF 500 FEET FROM ALL RESIDENTIAL OR COMMERCIAL ESTABLISHMENTS OR PLACES OF PUBLIC ASSEMBLY?			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
7. WAS THIS FACILITY PREVIOUSLY PERMITTED PURSUANT TO RULE 201? IF YES, PERMIT NO. 13-16			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
8. APPLICATION IS FOR <input type="checkbox"/> NEW GENERAL PERMIT <input checked="" type="checkbox"/> MODIFICATION TO EXISTING GENERAL PERMIT - PERMIT NO. 13-16			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
9. FOR A MODIFICATION: IS THE FACILITY CURRENTLY IN COMPLIANCE WITH ALL CONDITIONS OF THE EXISTING GENERAL PERMIT, INCLUDING BUT NOT LIMITED TO THE TESTING OF ALL NSPS SUBJECT EQUIPMENT?			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

Instructions for completing the following items: Each piece of equipment must have a unique identification number (ID). The ID may be any combination of up to 10 letters, numbers or keyboard characters with no spaces between characters. Provide an ID and complete all items for each piece of process equipment at the facility. If equipment is shop built, the manufactured date may be estimated. This data is mandatory. Use as many copies of page 2 as needed to list all process equipment. Use Additional Information form EQP5729 if needed to describe why a device is not subject to NSPS.

DEVICE DESCRIPTION (crusher type, screen, conveyor, drill, etc.)		DEVICE ID (Assign an identification number for this device)	
Jaw Crusher		KCC-1	
MAKE AND MODEL Lippmann J3062		SERIAL NUMBER 2015-10237	MANUFACTURED DATE (year) 2015
MAXIMUM RATED CAPACITY (tons per hour) 350	CONTROL? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO CONTROL TYPE Water spray as needed		
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input checked="" type="checkbox"/> YES, DATE TEST PASSED 2/18/2016 <input type="checkbox"/> NO, DATE TEST SCHEDULED			
<input type="checkbox"/> NO, REASON NOT SUBJECT			

DEVICE DESCRIPTION (crusher type, screen, conveyor, drill, etc.)		DEVICE ID (Assign an identification number for this device)	
Discharge Conveyor from Jaw Crusher		KCC-1	
MAKE AND MODEL Lippmann J3062		SERIAL NUMBER 2015-10240	MANUFACTURED DATE (year) 2015
MAXIMUM RATED CAPACITY (tons per hour) 350	CONTROL? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO CONTROL TYPE Water spray as needed		
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input checked="" type="checkbox"/> YES, DATE TEST PASSED 2/18/2016 <input type="checkbox"/> NO, DATE TEST SCHEDULED			
<input type="checkbox"/> NO, REASON NOT SUBJECT			

This page must be certified by an authorized employee
 Applicant Certification: I certify, under penalty of law, that this permit application and any attachments were prepared by me, or under my direction or supervision in accordance with a system to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. In addition, the equipment described in this application meets the necessary criteria for applicability for a General Permit to Install. Furthermore, I certify that I can and will comply with all conditions outlined in the General Permit to Install. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.

SIGNATURE OF AUTHORIZED EMPLOYEE <i>April M...</i>	DATE 7-18-19
---	------------------------

Michigan Department Of Environmental Quality - Air Quality Division



**GENERAL PERMIT TO INSTALL APPLICATION
NONMETALLIC MINERAL CRUSHING- (PAGE 2 OF 2)**

FOR DEQ USE ONLY
PERMIT NUMBER

Authorized under 1994 PA 451, as amended. Completion of form is required. Applicant may be subject to civil and/or criminal penalties for providing false information.

Instructions: Page 1 of this form must be completed and certified by an authorized employee. Provide an ID and complete all items for each piece of process equipment at the facility. If the equipment is shop built, the manufactured date may be estimated. This data is mandatory. Use as many copies of this page as needed to list all process equipment. Use Additional Information form EQP5729 if needed to describe why a device is not subject to NSPS.

For a Modification: Provide the information for all existing and new or additional process equipment. Submit pages 1 and 2 to the Permit Section and the appropriate district office. See map for district office locations.

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.) Screener		DEVICE ID (Assign an identification number for this device) KCC-2	
MAKE AND MODEL Lippmann 5165		SERIAL NUMBER 2015-10242	MANUFACTURED DATE (year) 2015
MAXIMUM RATED CAPACITY (tons per hour) 350	CONTROL? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO CONTROL TYPE Water spray as needed		
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input checked="" type="checkbox"/> YES, DATE TEST PASSED 2/18/2016 <input type="checkbox"/> NO, DATE TEST SCHEDULED <input type="checkbox"/> NO, REASON NOT SUBJECT			

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.) Recycle Conveyor		DEVICE ID (Assign an identification number for this device) KCC-3	
MAKE AND MODEL Woolley Grasshopper 36" x 60'		SERIAL NUMBER 2300-90569	MANUFACTURED DATE (year) 2015
MAXIMUM RATED CAPACITY (tons per hour) 350	CONTROL? <input type="checkbox"/> YES <input type="checkbox"/> NO CONTROL TYPE		
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input checked="" type="checkbox"/> YES, DATE TEST PASSED 2/18/2016 <input type="checkbox"/> NO, DATE TEST SCHEDULED <input type="checkbox"/> NO, REASON NOT SUBJECT			

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.) Screen Feed Conveyor		DEVICE ID (Assign an identification number for this device) KCC-10	
MAKE AND MODEL Lippmann 60" x 65'		SERIAL NUMBER 2019-90174	MANUFACTURED DATE (year)
MAXIMUM RATED CAPACITY (tons per hour) 350	CONTROL? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO CONTROL TYPE Water spray as needed		
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input checked="" type="checkbox"/> NO, DATE TEST SCHEDULED 8/31/2019 <input type="checkbox"/> NO, REASON NOT SUBJECT			

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.) Jump Conveyor		DEVICE ID (Assign an identification number for this device) KCC-7	
MAKE AND MODEL Site Built 30" x 30'		SERIAL NUMBER NA	MANUFACTURED DATE (year) 2015
MAXIMUM RATED CAPACITY (tons per hour) 350	CONTROL? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO CONTROL TYPE Spray as needed		
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input checked="" type="checkbox"/> NO, DATE TEST SCHEDULED 8/31/2019 <input type="checkbox"/> NO, REASON NOT SUBJECT			

DEVICE DESCRIPTION (crusher-type, screen, conveyor, drill, etc.) Discharge Conveyor		DEVICE ID (Assign an identification number for this device) KCC-11	
MAKE AND MODEL McCloskey 36" x 125'		SERIAL NUMBER 84321	MANUFACTURED DATE (year) 2015
MAXIMUM RATED CAPACITY (tons per hour) 350	CONTROL? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO CONTROL TYPE Spray as needed		
IS DEVICE SUBJECT TO NSPS? <input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input checked="" type="checkbox"/> NO, DATE TEST SCHEDULED 8/31/2019 <input type="checkbox"/> NO, REASON NOT SUBJECT			

Michigan Department Of Environmental Quality - Air Quality Division



GENERAL PERMIT TO INSTALL APPLICATION
NONMETALLIC MINERAL CRUSHING- (PAGE 2 OF 2)

FOR DEQ USE ONLY
PERMIT NUMBER

Authorized under 1994 PA 451, as amended. Completion of form is required. Applicant may be subject to civil and for criminal penalties for providing false information.

Instructions: Page 1 of this form must be completed and certified by an authorized employee. Provide an ID and complete all items for each piece of process equipment at the facility. If the equipment is shop built, the manufactured date may be estimated. This data is mandatory. Use as many copies of this page as needed to list all process equipment. Use Additional Information form EQP5729 if needed to describe why a device is not subject to NSPS.

For a Modification: Provide the information for all existing and new or additional process equipment. Submit pages 1 and 2 to the Permit Section and the appropriate district office. See map for district office locations.

DEVICE DESCRIPTION (<i>crusher-type, screen, conveyor, drill, etc.</i>)		DEVICE ID (<i>Assign an identification number for this device</i>)	
Conveyor		KCC-6	
MAKE AND MODEL		SERIAL NUMBER	MANUFACTURED DATE (year)
THOR 30" x 80'		0407-869-8655	Unknown
MAXIMUM RATED CAPACITY (<i>tons per hour</i>)	CONTROL? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
350	CONTROL TYPE Water spray as needed		
IS DEVICE SUBJECT TO NSPS?			
<input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input checked="" type="checkbox"/> YES, DATE TEST PASSED 2/18/2016 <input type="checkbox"/> NO, DATE TEST SCHEDULED			
<input type="checkbox"/> NO, REASON NOT SUBJECT			

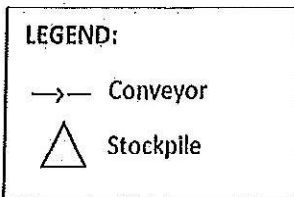
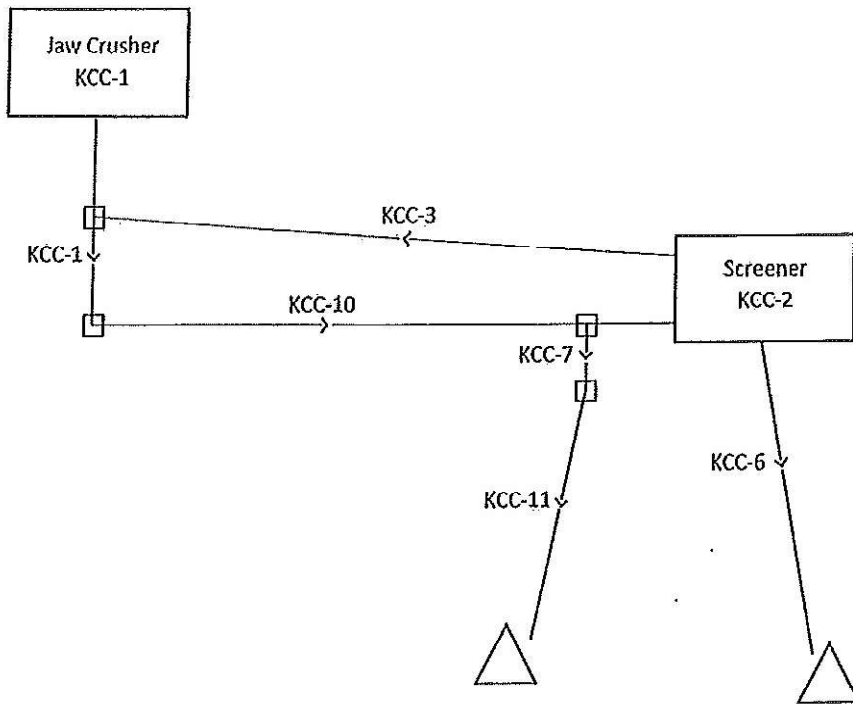
DEVICE DESCRIPTION (<i>crusher-type, screen, conveyor, drill, etc.</i>)		DEVICE ID (<i>Assign an identification number for this device</i>)	
MAKE AND MODEL		SERIAL NUMBER	MANUFACTURED DATE (year)
MAXIMUM RATED CAPACITY (<i>tons per hour</i>)	CONTROL? <input type="checkbox"/> YES <input type="checkbox"/> NO		
	CONTROL TYPE		
IS DEVICE SUBJECT TO NSPS?			
<input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input type="checkbox"/> NO, DATE TEST SCHEDULED			
<input type="checkbox"/> NO, REASON NOT SUBJECT			

DEVICE DESCRIPTION (<i>crusher-type, screen, conveyor, drill, etc.</i>)		DEVICE ID (<i>Assign an identification number for this device</i>)	
MAKE AND MODEL		SERIAL NUMBER	MANUFACTURED DATE (year)
MAXIMUM RATED CAPACITY (<i>tons per hour</i>)	CONTROL? <input type="checkbox"/> YES <input type="checkbox"/> NO		
	CONTROL TYPE		
IS DEVICE SUBJECT TO NSPS?			
<input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input type="checkbox"/> NO, DATE TEST SCHEDULED			
<input type="checkbox"/> NO, REASON NOT SUBJECT			

DEVICE DESCRIPTION (<i>crusher-type, screen, conveyor, drill, etc.</i>)		DEVICE ID (<i>Assign an identification number for this device</i>)	
MAKE AND MODEL		SERIAL NUMBER	MANUFACTURED DATE (year)
MAXIMUM RATED CAPACITY (<i>tons per hour</i>)	CONTROL? <input type="checkbox"/> YES <input type="checkbox"/> NO		
	CONTROL TYPE		
IS DEVICE SUBJECT TO NSPS?			
<input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input type="checkbox"/> NO, DATE TEST SCHEDULED			
<input type="checkbox"/> NO, REASON NOT SUBJECT			

DEVICE DESCRIPTION (<i>crusher-type, screen, conveyor, drill, etc.</i>)		DEVICE ID (<i>Assign an identification number for this device</i>)	
MAKE AND MODEL		SERIAL NUMBER	MANUFACTURED DATE (year)
MAXIMUM RATED CAPACITY (<i>tons per hour</i>)	CONTROL? <input type="checkbox"/> YES <input type="checkbox"/> NO		
	CONTROL TYPE		
IS DEVICE SUBJECT TO NSPS?			
<input type="checkbox"/> YES, HAS DEVICE BEEN TESTED? <input type="checkbox"/> YES, DATE TEST PASSED <input type="checkbox"/> NO, DATE TEST SCHEDULED			
<input type="checkbox"/> NO, REASON NOT SUBJECT			

Kraken Crushed Concrete & Recycling
Flow Diagram
July 2019



Kraken Crushed Concrete & Recycling LLC

7/3/2019

Equipment List

Device Description	Make&Model	Device ID	Serial Number	Mfg. Date	Rated Capacity (TPH)	Wet or Dry	Control Type
Jaw Crusher	Lippmann J3062	KCC-1	2015-10237	2015	350	Dry	Water Spray
Discharge Conveyor from Jaw Crusher	Lippmann J3062	KCC-1	2015-10240	2015	350	Dry	Water Spray
Screenner	Lippmann 5165	KCC-2	2015-10242	2015	350	Dry	Water Spray
Recycle Conveyor	Woolley Grasshopper 36" x 100'	KCC-3	2300-90569	2015	350	Dry	Water Spray
Screen Feed Conveyor	Lippmann 60" x 65'	KCC-10	2019-00002	2019	350	Dry	Water Spray
Jump Conveyor	Site Built 30" x 30'	KCC-7	2015-00001	2015	350	Dry	Water Spray
Discharge Conveyor	McCloskey 36" x 125'	KCC-11	84321	2015	350	Dry	Water Spray as Needed
Conveyor	THOR 30" x 80'	KCC-6	0407-869-8655	Unknown	350	Dry	Water Spray as Needed



7901 Sylvania Road
Sylvania, Ohio 43560
Local 419-841-3232
Fax 419-882-8772

www.NRMmining.com

September 17, 2019

EGLE, Air Quality Division
P.O. Box 30473
Lansing, MI 48909-7742

Attention: Mr. Nicholas Carlson, Environmental Engineer

Reference: Notice of Relocation for Conveyor
Kraken Crushed Concrete & Recycling, LLC
Permit No. 13-16

Dear Mr. Carlson,

Natural Resource Management, LLC (NRM) has been retained by Kraken Crushed Concrete & Recycling, LLC to complete a letter for relocation of a conveyor on the above referenced facility. This site will be moving a site-built conveyor (KCC-7) from this plant to their Dino-Mite Plant, Permit No. 48-18. An Air Modification will be sent in for Permit No. 48-18.

A flow diagram of this site is attached to add to the file.

If you have any questions, please contact Alyssa Grell at 419-841-3232.

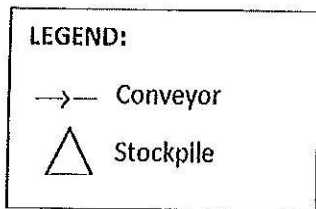
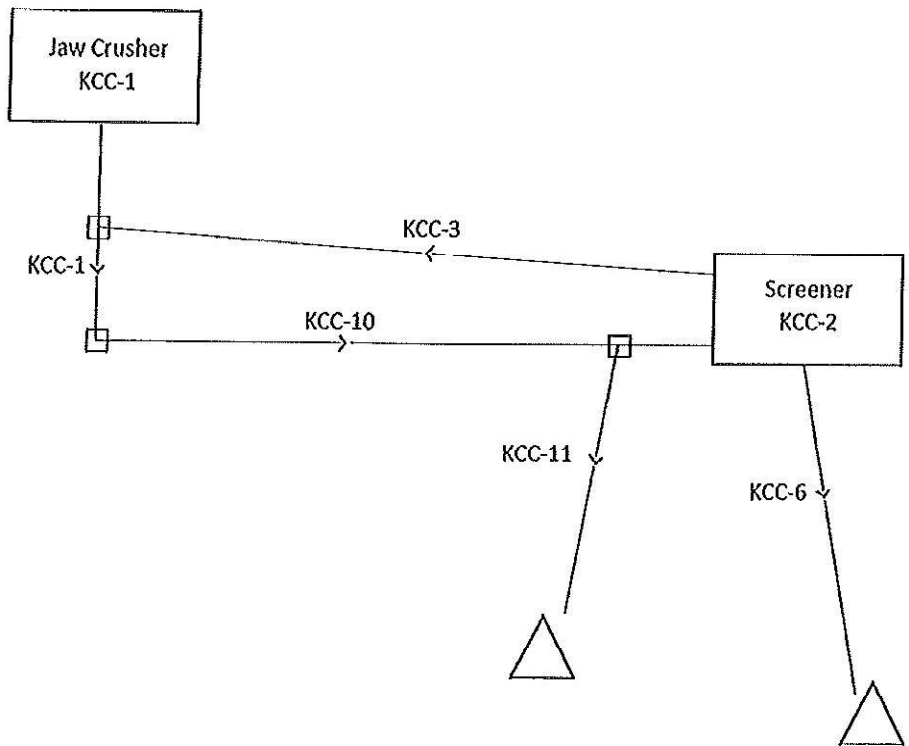
Sincerely,

A handwritten signature in cursive script that reads "Alyssa Grell".

Alyssa Grell, Geologist
Natural Resources Management, LLC

cc: Mr. Tony Calo, Dino-Mite Crushing & Recycling, LLC
PO Box 530563
Livonia, MI 48153

Kraken Crushed Concrete & Recycling
Flow Diagram
September 2019



APPENDIX B

MCL 324.5524 Operating Program

Greenfield Supply Center, LLC
12625 Greenfield Road
Detroit, Michigan 48227

Prepared For:

Kraken Crushed Concrete & Recycling, LLC
d.b.a. Greenfield Supply Center, LLC
P.O. Box 530563
Livonia, Michigan 48153

Prepared By:

Natural Resources Management, LLC
With Assistance From Michigan Aggregates Association
6715 Maplewood Avenue
Sylvania, Ohio 43560
419-841-3232

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Introduction

This Operating Program has been developed and implemented for the Greenfield Supply Center, LLC Facility located at 12625 Greenfield Road, Detroit, Michigan 48227 (Facility/Site) herein described as the Greenfield Road Facility. The purpose of this program is to describe the tools and methods used to control fugitive dust emissions in accordance Section 5524 of the Natural Resources and Environmental Protection Act, being MCL 324.5524, *Fugitive dust sources or emissions*.

The primary industrial activity at this Site is the crushing and screening of recycled concrete and storage/transportation of construction aggregates. Recycled concrete is delivered to the Site by rail road and truck. Material is crushed, screened/sorted and stockpiled utilizing crushing and screening machinery, conveyors and front-end loaders. Front-end loaders are also used to load construction aggregates into outbound trucks. Construction aggregates are loaded onto and off the rail road spur utilizing a conveyor system.

Greenfield Road Facility's planned operational days will be 7 days a week.

The facility is bordered by Fullerton Avenue and I-96 to the south, industrial buildings and Glendale Street to the north, Mansfield Street to the West and Greenfield Avenue to the East. The Facility property, and all adjacent parcels are zoned M4 intensive industrial.

The following sections of this Operating Program are organized in order of the requirements of MCL 324.5524.

Applicability- MCL 324.5524(1)

The provisions of MCL 324.5524 apply to fugitive dust sources at the Greenfield Road Facility because it meets the standard industrial classification (SIC) code and locational requirements established in MCL 324.5524. Facility operations are covered under SIC major group 42, *motorfreight transportation and warehousing* and 14 *mining and quarrying of non-metallic minerals*. The Greenfield Road Facility specializes in the import and export of construction aggregates. The SIC code used to describe the Facility's primary industrial activities is 4214 - *Local Trucking with Storage and 1429 – Crushed and Broken Stone not elsewhere classified*. The corresponding North American Industry Classification System (NAICS) code for the Facility is 484220 – *Specialized freight (except used good) trucking, local and 212312 limestone quarrying and crushing*

Fugitive Dust Opacity Limits - MCL 324.5524(2)

In accordance with MCL 324.5524(2), best practices and operational controls are implemented at the Facility to limit fugitive dust emissions from paved and unpaved roads, lots, construction aggregate storage piles, and material handling activities to an opacity no greater than 5%. Emissions from any other source are limited to an opacity no greater than 20%. Specific controls used to control fugitive dust emissions are discussed in the following sections of this Operating Program.

Fugitive Dust Controls - MCL 324.5524(3)(a)

Stockpile, Conveyor Loading, and Traffic Patterns - MCL 324.5524(3)(a)(i)-(iii)

MCL 324.5524(3)(a)(i) through 324.5524(3)(a)(iii) requires specific controls to limit fugitive dust emission from stockpiles, conveyor loading activities, and traffic pattern access areas surrounding stockpiles. As explained in MCL 324.5523(3)(a)(i), these controls are applicable to facilities where the total uncontrolled emissions of fugitive dust from material storage piles are greater than 50 tons per year and where potential particulate emissions from all sources, including fugitive dust sources, exceeds 100 tons per year. The Greenfield Road Facility's total uncontrolled fugitive dust emissions do not exceed 50 tons per year. Therefore, the requirements of MCL 324.5524(3)(a)(i) - (iii) do not apply to this site. Refer to Appendix A of this program for potential-to-emit (PTE) calculations for the site.

Material Handling with Pollution Control Equipment-MCL324.5524(3)(a)(iv)

The Greenfield Road Facility does not utilize pollution control equipment to collect particulate emission from material unloading and transport operations. Therefore, the requirements of MCL 324.5523(3)(a)(iv) do not apply to the Greenfield Road Facility.

Other Activity Controls - MCL 324.5524(3)(a)(v)

A potential for fugitive dust creation exists during the crushing, screening and stockpiling of construction aggregates. Additionally, unloading and loading activities have a potential for fugitive dust emissions. To minimize fugitive dust emissions, water sprays are used as needed on the crusher, conveyor transfer points and stockpiles, in accordance with MCL 324.5523(3)(a)(v).

Particulate Collection Equipment - MCL 324.5524(3)(b)

The Facility does not use particulate collection equipment to control fugitive dust emissions; therefore, MCL 324.5524(3)(b) is not applicable to the Greenfield Road Facility operations.

Vehicle Transport of Materials with High Silt Content - MCL 324.5524(3)(c)

The Greenfield Road Facility complies with the requirements of MCL 324.5524(3)(c) by requiring truck drivers to tarp all loads before leaving the Facility to control fugitive dust emissions during transport. A sign is posted on site to remind drivers of the requirement to tarp loads.

Vehicle Transport of Materials - MCL 324.5524(3)(d)-(e)

Customer vehicles used to transport construction aggregate off-site are not owned or operated by Greenfield Supply Center, LLC. It is the vehicle owner/operator's responsibility to ensure their vehicles are maintained in good operating condition and comply with Michigan law and regulations. However, if a Greenfield Supply Center employee observes a customer vehicle is not in a condition to transport materials without spillage or leakage (e.g., the truck does not have a tarp), then this is communicated to the driver, and the vehicle is not loaded.

If customers transport materials in vehicles with less than a 2-ton capacity, then those vehicles are not subject to tarping requirements in accordance with MCL 324.5524(3)(e).

Vehicle Transport of Materials - MCL 324.5524(3)(f)

The Greenfield Road Facility typically handles construction aggregate materials. The site does not store or handle fly ash; therefore, the requirements of MCL 324.5524(3)(f) do not apply to the Greenfield Road Facility operations.

Vehicle Transport of Materials - MCL 324.5524(3)(g)

The Greenfield Road Facility typically handles construction aggregate materials. If the site stores and handles iron or steel slag, the slag material will be at ambient temperature, and transport vehicles follow the transport practices described in the above sections of this Operating Program.

Requirement to Prepare an Operating Program - MCL 324.5524(4)

This Operating Program has been prepared in accordance with MCL 324.5524, *Fugitive dust sources or emissions*, to document the methods and controls implemented at the Greenfield Road Facility to control fugitive dust emissions from the Site's construction aggregate material storage and handling activities. This program has been designed to reduce fugitive dust emissions to the lowest level possible through the application of reasonably available and economically feasible controls.

Operating Program Contents - MCL 324.5524(5)

Facility Contact Information - MCL 324.5524(5)(a)-(b)

Facility Name:	Greenfield Supply Center, LLC – Greenfield Road Facility
Facility Address:	12625 Greenfield Road, Detroit, Michigan 48227
Facility Manger:	Tony Macioci, Site Manager (313) 363-2376
Owner/Operator:	Greenfield Supply Center, LLC 7871 Chubb Road, Northville, MI 48168
Environmental:	Natural Resources Management, LLC 6715 Maplewood Avenue, Sylvania, OH 43560 Chip Tokar 419-841-3232

The Greenfield Road Facility manager, Tony Macioci, is responsible for implementation of the Operating Program with guidance and support from Natural Resources Management, LLC, Environmental Consultant.

Facility Maps and Diagrams - MCL 324.5524(5)(c)

In accordance with MCL 234.5524(5)(c), maps and diagrams of the Greenfield Supply Center, LLC Facility are provided as Figure 1 and Figure 2 to this Operating Program. **Figure 1** shows the general site location and its surroundings within 0.25-mile of the Facility. **Figure 2** depicts the general Facility layout, including the following details:

- Approximate storage pile locations
- Crusher, Screening and Conveyor Processing Locations
- Load-in and load-out operations
- Traffic patterns within the Facility property

Material Handling Pollution Control Equipment Locations - MCL 324.5524(5)(d)

As previously described, the Greenfield Road Facility does not maintain pollution control equipment for use during construction aggregate loading and transporting operations.

Fugitive Dust Control Best Management Practices - MCL 324.5524(5)(e)

Material Processing and Conveying

Typically, broken concrete, brick, block or asphaltic concrete is delivered to the Greenfield Road Facility by rail road or truck. Material is unloaded from the trucks by dumping. Rail cars may be unloaded by excavator. Material is further broken down by excavator/hammer and transferred to the crusher by loader. The material is crushed to -8", screened and transferred to sorted stockpiles by conveyor at selected locations within the site boundary (see **Figure 2**). Fugitive dust is controlled during processing using water sprays. Whenever materials are loaded or unloaded by conveyor, transfer points and drop heights are also minimized to the maximum extent practicable to control fugitive dust emissions. Water sprays are used during conveyor transfer operations to wet the material to further control fugitive dust when the inherent moisture or precipitation is insufficient to control the fugitive dust.

Traffic Management

Equipment and truck speeds on-site are normally restricted to 8 MPH and communicated to employees and visitors by signage near the Facility entrance.

Dust Suppression

Water, calcium chloride or another acceptable chemical dust suppressant may be applied to unpaved portions of the Greenfield Road Facility at the owner/operator's discretion to minimize fugitive dust generated from equipment and vehicles travelling on the facility property. A water truck will be maintained or contracted to supply water for watering unpaved portions of the facility. Additional information regarding dust suppression use and recordkeeping are discussed in the next two sections of this Program.

Use of Waste or Recycled Oils for Fugitive Dust Control - MCL 324.5524(5)(f)

No waste or recycled oils are used for fugitive dust control at the Greenfield Road Facility. Therefore, the requirements of MCL 324.5524(5)(f) do not apply to this operation.

Dust Suppressant Recordkeeping - MCL 324.5524(5)(g)

Water, with no chemical additive is the primary material used for dust suppression on unpaved surfaces and stockpiles at the Greenfield Road Facility. In the event of extremely dry weather conditions, the operator may also select to have unpaved roads treated with a chloride solution by a third-party contractor. The operator maintains records of chloride applications for at least 5 years. These records may be maintained either electronically or by written log books in the Greenfield Supply Center office and made available upon request.

Paved Road and Parking Facility Cleaning - MCL 324.5524(5)(h)

In accordance with MCL 324.5524(5)(h), on site, paved traffic pattern roads, and Greenfield Road, a paved public right-of-way, are cleaned by a wet sweeper truck as warranted, weather permitting. Records of paved road cleaning activities are maintained for at least 5 years as required by the MDEQ. These records may be maintained either electronically or by written log books in the Greenfield Supply Center office and made available upon request.

Other Information - MCL 324.5524(5)(i)

In accordance with MCL 324.5524(5)(i), Greenfield Supply Center will provide the MDEQ with any additional information the department requests to facilitate its review of this operating program.

Operating Program Submittal - MCL 324.5524(6)

In accordance with MCL 324.5524(6), this Operating Program has been submitted to the MDEQ for approval as part of a Site-Specific General Permit-to-Install (PTI) Application.

Operation Program Amendment - MCL 324.5524(7)

This Operating Program will be amended and resubmitted to the MDEQ for approval in the event of operational changes that may result in significant increases of fugitive dust emissions from the Site.

Alternate Provisions for Fugitive Dust Control - MCL 324.5524(8)

Greenfield Supply Center, LLC is not requesting MDEQ approval of alternate fugitive dust controls to establish compliance with MCL 324.5524. Therefore, the requirements of MCL 324.5524(8) do not apply at the Greenfield Road Facility.

Alternate Provision Submittal to USEPA - MCL 324.5524(9)

We are not seeking MDEQ approval for any alternate provisions for compliance with MCL 324.5524. Therefore, fugitive dust control at the Greenfield Road Facility does not require United States Environmental Protection Agency (USEPA) approval or incorporation in the state implementation plan.

Figure 1: Property Location

11025 Greenview Ave, Detroit, MI 48227

Grandmont #1

Greenfield Supply Center, LLC



LEGEND

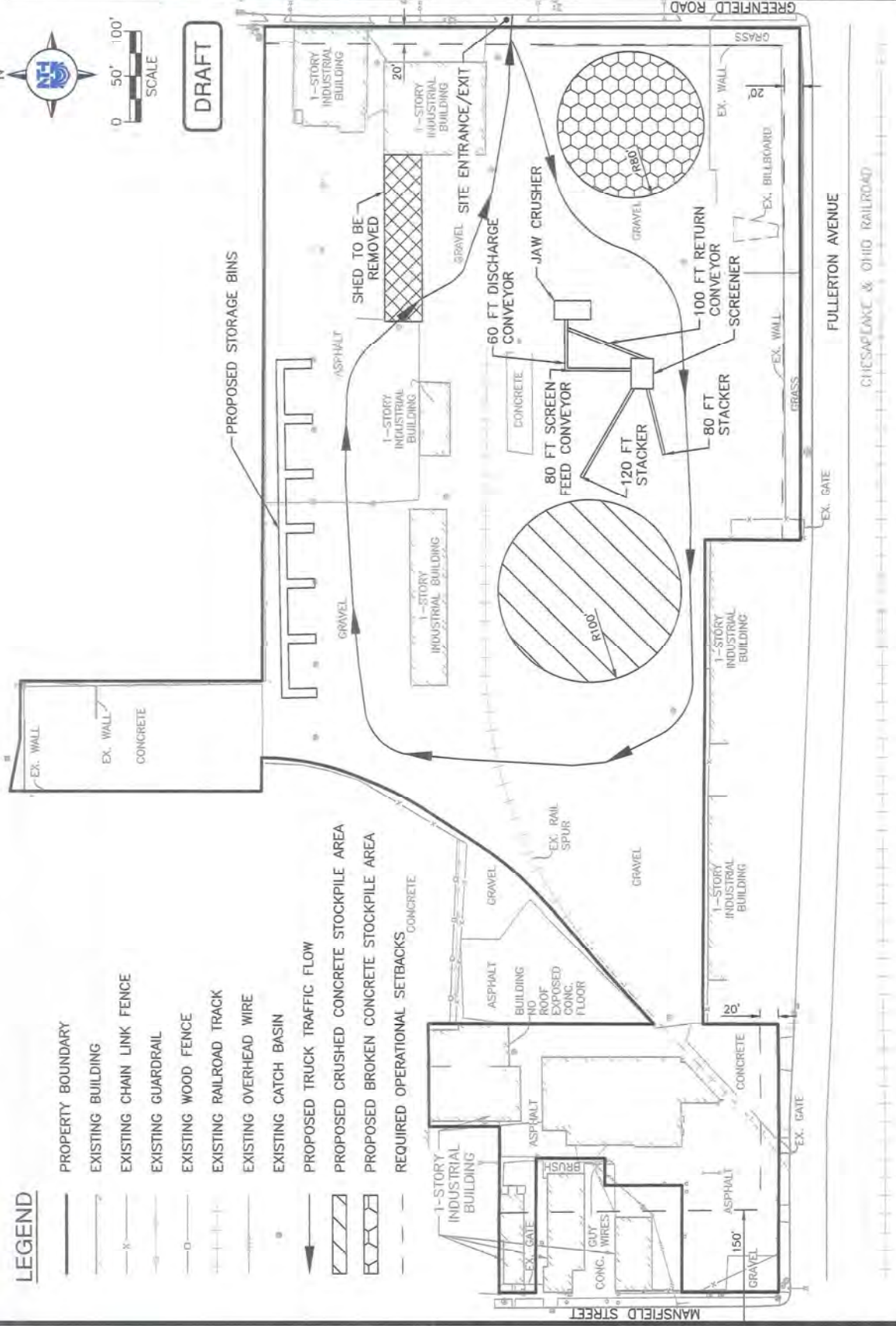
- PROPERTY BOUNDARY
- EXISTING BUILDING
- X- EXISTING CHAIN LINK FENCE
- - - EXISTING GUARDRAIL
- o- EXISTING WOOD FENCE
- + + + EXISTING RAILROAD TRACK
- - - EXISTING OVERHEAD WIRE
- EXISTING CATCH BASIN
- PROPOSED TRUCK TRAFFIC FLOW
- ▨ PROPOSED CRUSHED CONCRETE STOCKPILE AREA
- ▧ PROPOSED BROKEN CONCRETE STOCKPILE AREA
- - - REQUIRED OPERATIONAL SETBACKS



DRAFT

<p>PRELIMINARY SITE PLAN for operational plan</p>		<p>GREENFIELD SUPPLY CENTER LLC DETROIT, MICHIGAN</p>	
<p>CONTRACT NO. 180132-SP-2</p>	<p>DATE 4/3/2018</p>	<p>SCALE 1" = 100'</p>	<p>DATE 3/26/2018</p>
<p>PROJECT NO. 62-180132</p>	<p>DRIVER BY SLG</p>	<p>DESIGNED BY SLG</p>	<p>DATE 3/26/2018</p>
<p>CONTRACT NAME 180132-SP-2</p>	<p>DATE 4/3/2018</p>	<p>SCALE 1" = 100'</p>	<p>DATE 3/26/2018</p>
<p>NTH Consultants, Ltd.</p>		<p>Infrastructure Engineering and Environmental Services</p>	

FIGURE: 2



APPENDIX A

Greenfield Supply Center LLC

Potential to Emit based on maximum permitted production of 3,066,000tons/yr

Roadway Emissions 3-05-002-90

Unpaved Roadway Emission Factor, AP-42(2006) section 13.2.2 eqn (1a)

Emission Factor = $k \cdot (s/12)^{0.9} \cdot (W/3)^{0.45}$ lb/VMT

Description	PM10 Particle Size, k	Silt Content, s	Avg. Vehicle Speed (mph), S	Avg. Vehicle Weight (tons), W	PM10 Emission Factor, lbs/vmt
Aggregate trucks	1.5	4.8	10	44	2.20
loader	1.5	4.8	10	28	1.80

Silt content from sand & gravel processing value

Roadway, Actual Emissions

Description	Round Trip Distance, miles/trip	No. trips/yr	Miles/yr	PM10 Emission Factor, lb/vmt	Control Efficiency, %	PM10 emissions, tons/yr
Aggregate trucks unpaved (delivery)	0.35978	69682	25070	2.20	80	5.52
Customer Trucks unpaved	0.35978	69682	25070	2.20	80	5.52
loader unpaved	0.189358	109500	109500	1.80	80	19.67
<i>control is watering/dust suppression/sweeping</i>			159640	Total		30.71

Storage Piles, 3-05-002-03

Wind Erosion, from USEPA's Control of Open Fugitive Dust Sources, sept 1988

assume a maximum of 3 acres of storage

s (silt content) = 3.9 AP-42 table 13.2.4-1; stone quarrying, various limestone products
 p (#days w/>0.01" rain) = 130 default
 f (%time wind exceed 12mph) = 30 default
 $E = 1.7 \cdot (s/1.5) \cdot [(365-p)/235] \cdot (f/15)$ lb/day/acre
 E = 8.84 lbs/day/acre
 Acres of storage = 4 acres maximum acreage
 PM Emissions (365 days) = 6.45 tons/yr
PM10 Emissions = 3.07 tons/yr assume 2.1 PM10=PM from AP-42 ratio for aggregate processing

Aggregate Handling and Storage Piles, AP-42 Section 13.2.4(2006)

Load in is accomplished by haul truck, loadout by front end loaders,

U (mean wind speed)= 9.7 mph [www.weatherbase.com\(3/7/2018\)](http://www.weatherbase.com(3/7/2018))
 M (moisture content) = 2.1 % table 13.2.4-1; stone quarrying, various limestone products
 k (particle size multiplier) = 0.35
 Emission Factor = $k \cdot 0.0032 \cdot (U/5)^{1.3} / (M/2)^{1.4}$ lb/ton
 Emission Factor = 0.002476 lb PM10/ton

PM10 Emissions = 1.11 tons PM10/yr

TOTAL Emissions (storage pile and roadway) =	34.89 tons PM10/yr
---	---------------------------

Aggregate Processing

Air Emission Source	Rated Capacity, TPH	Capacity, TPY	PM10 EF, lb/ton	PM10 emissions, tons/yr
Loader to Feeder*	350	3066000	0.000016	0.024528
Grizzly Feeder	350	3066000	0.000740	1.134420
Feeder to Crusher KCC-1	350	3066000	0.000046	0.070518
Crusher, KCC-1	350	3066000	0.000540	0.827820
Crusher to KCC-1	350	3066000	0.000046	0.070518
KCC-1 to KCC-4	350	3066000	0.000046	0.070518

KCC-4 to screen KCC-2	350	3066000	0.000046	0.070518
Screen, KCC-2	350	3066000	0.000740	1.134420
KCC-2 to KCC-3	350	3066000	0.000046	0.070518
KCC-3 to KCC-1	350	3066000	0.000046	0.070518
KCC-2 to KCC-5	350	3066000	0.000046	0.070518
KCC-2 to KCC-6	350	3066000	0.000046	0.070518

AP-42 11.19.2-2, 8/04

3.685332

Rail Unloading

Emission Point	Rated Capacity, TPH	Capacity, TPY	PM10 EF, lb/ton	PM10 emissions, tons/yr
Rail to Feeder	350	3066000	0.000016	0.024528
Feeder to Conv 1	350	3066000	0.000046	0.070518

AP-42 11.19.2-2, 8/04

0.095046

TOTAL PM10 EMISSIONS	Tons/Yr
Rail and Storage Piles	34.89
Aggregate Processing	3.69
Rail Unloading	0.10

38.67

APPENDIX C

**Greenfield Supply Center 12625 Greenfield Road
Daily Roadway/Stockpile/Crusher Dust Suppression Form**

Date of Inspection: ____ / ____ / ____ Time: _____ Employee: _____

Weather Conditions (temperature, wind speed, wind direction)

1. Is there Dust from roadways observed?

Yes: ____ If Yes, Indicate each Road segment On Map On Back of Form: _____ No: ____

If yes to above, record actions taken: Sweeping: ____ Road segment(s): _____
 Chloride: ____ Road segment(s): _____
 Water Truck: ____ Road segment(s): _____
 Slow Trucks Down To 5 mph: _____
 Limit Activities to necessary operations: _____

2. Is there Dust from Stockpiles/Load-In/ Load-out observed?

Yes: ____ If Yes, Indicate Stockpile Locations On Map On Back of Form. # of piles inspected ____ No: ____

If yes to above, record actions taken: Water Sprays: _____
 Drop Conveyor Height Needed? _____
 Limit Load in or Load Out Needed? _____

3. Is there Dust from Crusher/Conveyors Observed?

Yes: ____ If Yes, Indicate location on Back of Form: _____ No: ____

If yes to above, record actions taken: Water Sprays: ____ Plant segment(s): _____
 Drop Conveyor Height: _____
 Water Truck: ____ Road segment(s): _____

4. Is there any Debris observed on the Rumble Strips?

Yes: ____ No: ____

If yes to above, record actions taken: _____

5. Is any maintenance needed on the Sweeper Brushes?

Yes: ____ No: ____

If yes to above, record actions taken: _____

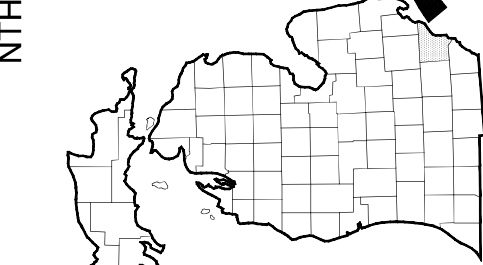
Comments: _____

APPENDIX D

GREENFIELD SUPPLY CENTER SITE DEVELOPMENT

12625 GREENFIELD ROAD
DETROIT, MI 48227

NTH PROJECT NO. 62-180132-00



OWNER:
GREEN VALLEY PROPERTIES LLC
12625 Greenfield Road
Detroit, Michigan 48227
Contact: Mr. Anthony Calb
Phone: 313-363-1946

ENGINEER:
NTH Consultants, LTD.
41780 Six Mile Road
Northville, Michigan 48168
Contact: Mrs. Samantha L. Grant, P.E.
Phone: (248) 862-2035

GENERAL NOTES:

- TOPOGRAPHIC MAP PREPARED BY ARBEZ/DONNAN, LLC, 32233 SCHOOLCROFT RD., SUITE 103, LUCINA, MICHIGAN 48150, DATED APRIL 9, 2016.
- ALL BUILDINGS, SITE FEATURES, AND UTILITY LOCATIONS ARE APPROXIMATE AND ARE BASED UPON RECORD DRAWINGS AND SITE PHOTOGRAPHIC SURVEY. FIELD VERIFY ALL EXISTING SITE FEATURES PRIOR TO COMMENCING WORK. UNDERGROUND WORK SHALL BE IDENTIFIED AND LOCATED, DO NOT BEGIN UNDERGROUND WORK UNTIL THE SITE HAS BEEN OBSERVED FOR FIELD CONDITIONS.
- DUST SUPPRESSION WILL OCCUR AS NECESSARY AND AS CONDITIONS WARRANT. TRACK OUT OF SOIL ON PUBLIC ROADS WILL BE MAINTAINED AND MANAGED IN ACCORDANCE WITH THE SITE-SPECIFIC PERMIT.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS, REGULATIONS, AND THE STATE OF MICHIGAN, WHERE APPLICABLE.
- THE CONTRACTOR SHALL ADHERE TO ALL SITE, LOCAL COUNTY AND STATE ORDINANCES GOVERNING HOURS OF OPERATION.
- THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND IMPLEMENTING HIS OWN HEALTH AND SAFETY PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS TO COMPLETE THE WORK. PERMITS TO BE OBTAINED INCLUDE, BUT ARE NOT LIMITED TO, THE CITY OF DETROIT, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY, AND WAYNE COUNTY, AS APPLICABLE, PRIOR TO COMMENCING WORK.
- ALL UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL DISC A MINIMUM OF 3 WORKING DAYS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES. CONTRACTOR SHALL NOT BEGIN UNDERGROUND WORK UNTIL THE SITE HAS BEEN VISITED AND MARKED BY REPRESENTATIVES OF ALL AFFECTED UTILITIES.
- THE CONTRACTOR SHALL PROVIDE THE NECESSARY TRAFFIC CONTROL AND SIGNALS, PER LOCAL UNIFORM CODES, TO MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES. CONTRACTOR SHALL OBTAIN NECESSARY TRAFFIC CONTROL PERMITS FROM AGENCY HAVING JURISDICTION PRIOR TO WORKING WITHIN RIGHT-OF-WAY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL NECESSARY CONSTRUCTION ALIGNMENT REFERENCES BY MEANS OF STAKES, STRINGLINES, OR OTHER APPROPRIATE MEANS.
- THE CONTRACTOR SHALL USE APPROPRIATE MEANS, METHODS AND EQUIPMENT AND TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGE TO THE EXISTING SITE FEATURES SUCH AS, BUT NOT LIMITED TO, ROAD UTILITY POLES, OR UTILITY MARKERS. ANY SITE FEATURE DAMAGE THAT OCCURS AS A RESULT OF THE CONTRACTOR'S WORK SHALL BE REPAIRED AND/OR RESTORED BY THE CONTRACTOR AT HIS/HER OWNERS' SOLE AND EXCLUSIVE COST TO THE OWNER.
- CONTRACTOR SHALL PROVIDE SIGNS INDICATING THE LOCATION OF SURROUNDING UTILITIES.
- ALL PROPERTIES OR FACILITIES AND RELATED UTILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, SHALL BE PROTECTED AND MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE OWNER OR THE OWNER'S REPRESENTATIVE SHALL BE THE SOLE JUDGE OF THE ACCEPTABILITY OF ANY SUCH REPAIRS OR RECONSTRUCTIONS.

MICHIGAN
APPROX SCALE 1"=50 MILES



WAYNE COUNTY
1"=1,000'

- SHEET INDEX**
- C-100 COVER SHEET
 - C-101 TOPOGRAPHIC SURVEY (1 OF 2)
 - C-102 TOPOGRAPHIC SURVEY (2 OF 2)
 - C-103 EXISTING SITE AND DEMOLITION PLAN
 - C-104 PROPOSED SITE AND LANDSCAPING PLAN
 - C-105 GRADING AND UTILITY PLAN
 - C-106 UTILITY PROFILE PLAN
 - C-107 STORMWATER MANAGEMENT PLAN
 - C-108 STORMWATER CALCULATIONS
 - C-109 BUILDING FLOOR PLAN
 - C-110 DETAILS (1 OF 2)
 - C-111 DETAILS (2 OF 2)

ISSUED FOR REVIEW

SITE AND PROJECT DESCRIPTION:
PARCEL ID: 22050990-1, 22050992.001, AND 22057119.001
NOTE: PARCELS IN LOT 4 WERE COMBINED ON MAY 30, 2018

LOT A
PART OF THE EAST 1/4 OF SECTION 25, TOWN 13 SOUTH, RANGE 10 EAST, CITY OF DETROIT, WAYNE COUNTY, MICHIGAN, PART OF THE FOLLOWING BEING A POINT DISTANT FROM THE SOUTHWEST 1/4 CORNER OF SAID SECTION 25 AND PROCEEDING NORTH 89 DEGREES 43 MINUTES 30 SECONDS WEST 207.00 FEET TO THE SOUTHWEST 1/4 CORNER OF SAID SECTION 25 AND PROCEEDING NORTH 89 DEGREES 43 MINUTES 30 SECONDS WEST 112.62 FEET, THENCE SOUTH 00 DEGREES 07 MINUTES 30 SECONDS WEST 84.00 FEET, THENCE ALONG THE NORTH LINE OF FULLERTON AVENUE, NORTH 89 DEGREES 43 MINUTES 30 SECONDS WEST 33.00 FEET, THENCE NORTH 02 DEGREES 03 MINUTES 02 SECONDS WEST 53.34 FEET, THENCE NORTH 47 DEGREES 45 MINUTES 08 SECONDS EAST AND DISTANCE 119.40 FEET TO A POINT ON CHORD BEARS NORTH 14 DEGREES 54 MINUTES 34 SECONDS EAST 30.59 FEET, THENCE NORTH 49 DEGREES 31 MINUTES 49 SECONDS EAST 11.00 FEET, THENCE ALONG A CURVE TO THE RIGHT, RADIUS 175.17 FEET, CENTRAL ANGLE 02 DEGREES 53 MINUTES 54 SECONDS, AN ARC DISTANCE OF 47.29 FEET, THENCE SOUTH 00 DEGREES 07 MINUTES 30 SECONDS EAST 26.48 FEET, THENCE ALONG A CURVE TO THE LEFT, RADIUS 114.79 FEET, CENTRAL ANGLE 04 DEGREES 14 MINUTES 12 SECONDS, AN ARC DISTANCE OF 73.38 FEET, THENCE NORTH 32 DEGREES 46 MINUTES 30 SECONDS WEST 53.34 FEET, THENCE NORTH 30 DEGREES 10 MINUTES 19 SECONDS, AN ARC DISTANCE OF 32.75 FEET AND THENCE CHORD BEARS NORTH 20 DEGREES 42 MINUTES 32 SECONDS EAST 73.38 FEET, THENCE NORTH 32 DEGREES 46 MINUTES 30 SECONDS WEST 53.34 FEET, THENCE NORTH 47 DEGREES 45 MINUTES 08 SECONDS EAST 30.59 FEET, THENCE NORTH 02 DEGREES 03 MINUTES 02 SECONDS WEST 53.34 FEET, THENCE NORTH 47 DEGREES 45 MINUTES 08 SECONDS EAST AND DISTANCE 119.40 FEET TO A POINT ON CHORD BEARS NORTH 14 DEGREES 54 MINUTES 34 SECONDS EAST 30.59 FEET, THENCE NORTH 49 DEGREES 31 MINUTES 49 SECONDS EAST 11.00 FEET, THENCE ALONG A CURVE TO THE RIGHT, RADIUS 175.17 FEET, CENTRAL ANGLE 02 DEGREES 53 MINUTES 54 SECONDS, AN ARC DISTANCE OF 47.29 FEET, THENCE SOUTH 00 DEGREES 07 MINUTES 30 SECONDS EAST 26.48 FEET, THENCE ALONG A CURVE TO THE LEFT, RADIUS 114.79 FEET, CENTRAL ANGLE 04 DEGREES 14 MINUTES 12 SECONDS, AN ARC DISTANCE OF 73.38 FEET, THENCE NORTH 32 DEGREES 46 MINUTES 30 SECONDS WEST 53.34 FEET, THENCE NORTH 30 DEGREES 10 MINUTES 19 SECONDS, AN ARC DISTANCE OF 32.75 FEET AND THENCE CHORD BEARS NORTH 20 DEGREES 42 MINUTES 32 SECONDS EAST 73.38 FEET, THENCE NORTH 32 DEGREES 46 MINUTES 30 SECONDS WEST 53.34 FEET, THENCE NORTH 47 DEGREES 45 MINUTES 08 SECONDS EAST 30.59 FEET, THENCE NORTH 02 DEGREES 03 MINUTES 02 SECONDS WEST 53.34 FEET, THENCE NORTH 47 DEGREES 45 MINUTES 08 SECONDS EAST AND DISTANCE 119.40 FEET TO A POINT ON CHORD BEARS NORTH 14 DEGREES 54 MINUTES 34 SECONDS EAST 30.59 FEET, THENCE NORTH 49 DEGREES 31 MINUTES 49 SECONDS EAST 11.00 FEET, THENCE ALONG A CURVE TO THE RIGHT, RADIUS 175.17 FEET, CENTRAL ANGLE 02 DEGREES 53 MINUTES 54 SECONDS, AN ARC DISTANCE OF 47.29 FEET, THENCE SOUTH 00 DEGREES 07 MINUTES 30 SECONDS EAST 26.48 FEET, THENCE ALONG A CURVE TO THE LEFT, RADIUS 114.79 FEET, CENTRAL ANGLE 04 DEGREES 14 MINUTES 12 SECONDS, AN ARC DISTANCE OF 73.38 FEET, THENCE NORTH 32 DEGREES 46 MINUTES 30 SECONDS WEST 53.34 FEET, THENCE NORTH 30 DEGREES 10 MINUTES 19 SECONDS, AN ARC DISTANCE OF 32.75 FEET TO THE POINT OF BEGINNING.

LOT B
PART OF THE NORTHEAST 1/4 OF SECTION 25, TOWN 13 SOUTH, RANGE 10 EAST, CITY OF DETROIT, WAYNE COUNTY, MICHIGAN, PART OF THE FOLLOWING BEING A POINT DISTANT FROM THE SOUTHWEST 1/4 CORNER OF SAID SECTION 25 AND PROCEEDING NORTH 89 DEGREES 43 MINUTES 30 SECONDS WEST 207.00 FEET TO THE SOUTHWEST 1/4 CORNER OF SAID SECTION 25 AND PROCEEDING NORTH 89 DEGREES 43 MINUTES 30 SECONDS WEST 112.62 FEET, THENCE SOUTH 00 DEGREES 07 MINUTES 30 SECONDS WEST 84.00 FEET, THENCE ALONG THE NORTH LINE OF FULLERTON AVENUE, NORTH 89 DEGREES 43 MINUTES 30 SECONDS WEST 33.00 FEET, THENCE NORTH 02 DEGREES 03 MINUTES 02 SECONDS WEST 53.34 FEET, THENCE NORTH 47 DEGREES 45 MINUTES 08 SECONDS EAST AND DISTANCE 119.40 FEET TO A POINT ON CHORD BEARS NORTH 14 DEGREES 54 MINUTES 34 SECONDS EAST 30.59 FEET, THENCE NORTH 49 DEGREES 31 MINUTES 49 SECONDS EAST 11.00 FEET, THENCE ALONG A CURVE TO THE RIGHT, RADIUS 175.17 FEET, CENTRAL ANGLE 02 DEGREES 53 MINUTES 54 SECONDS, AN ARC DISTANCE OF 47.29 FEET, THENCE SOUTH 00 DEGREES 07 MINUTES 30 SECONDS EAST 26.48 FEET, THENCE ALONG A CURVE TO THE LEFT, RADIUS 114.79 FEET, CENTRAL ANGLE 04 DEGREES 14 MINUTES 12 SECONDS, AN ARC DISTANCE OF 73.38 FEET, THENCE NORTH 32 DEGREES 46 MINUTES 30 SECONDS WEST 53.34 FEET, THENCE NORTH 30 DEGREES 10 MINUTES 19 SECONDS, AN ARC DISTANCE OF 32.75 FEET AND THENCE CHORD BEARS NORTH 20 DEGREES 42 MINUTES 32 SECONDS EAST 73.38 FEET, THENCE NORTH 32 DEGREES 46 MINUTES 30 SECONDS WEST 53.34 FEET, THENCE NORTH 47 DEGREES 45 MINUTES 08 SECONDS EAST 30.59 FEET, THENCE NORTH 02 DEGREES 03 MINUTES 02 SECONDS WEST 53.34 FEET, THENCE NORTH 47 DEGREES 45 MINUTES 08 SECONDS EAST AND DISTANCE 119.40 FEET TO A POINT ON CHORD BEARS NORTH 14 DEGREES 54 MINUTES 34 SECONDS EAST 30.59 FEET, THENCE NORTH 49 DEGREES 31 MINUTES 49 SECONDS EAST 11.00 FEET, THENCE ALONG A CURVE TO THE RIGHT, RADIUS 175.17 FEET, CENTRAL ANGLE 02 DEGREES 53 MINUTES 54 SECONDS, AN ARC DISTANCE OF 47.29 FEET, THENCE SOUTH 00 DEGREES 07 MINUTES 30 SECONDS EAST 26.48 FEET, THENCE ALONG A CURVE TO THE LEFT, RADIUS 114.79 FEET, CENTRAL ANGLE 04 DEGREES 14 MINUTES 12 SECONDS, AN ARC DISTANCE OF 73.38 FEET, THENCE NORTH 32 DEGREES 46 MINUTES 30 SECONDS WEST 53.34 FEET, THENCE NORTH 30 DEGREES 10 MINUTES 19 SECONDS, AN ARC DISTANCE OF 32.75 FEET TO THE POINT OF BEGINNING.

DESCRIPTION OF PROPOSED SITE CIVIL CONSTRUCTION
PROPOSED SITE CIVIL CONSTRUCTION FOR GREENFIELD SUPPLY CENTER INCLUDES REPAIRING OF THE SITE TO PROMOTE EFFECTIVE STORMWATER DRAINAGE FACILITIES. PROPOSED ON-SITE STORMWATER INFRASTRUCTURE WILL DRAIN TO A DETENTION BASIN WITH A ON-SITE PERMANENT POOL OF WATER ON A NEIGHBORING PARCEL. A REIN AND FENCE COMBINATION WILL BE CONSTRUCTED TO SCREEN CONCRETE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR PROPOSED BUILDING UPGRADES.

NTH Consultants, Ltd.
Infrastructure Engineering and Environmental Services

Northville, MI
313-377-3900
Detroit, MI
616-451-8270
Cleveland, OH
216-334-0400

NO.	REVISION	DATE BY
1	ISSUED SHEET C-112	4/26/2018

PROJECT NAME:
GREENFIELD SUPPLY CENTER SITE DEVELOPMENT

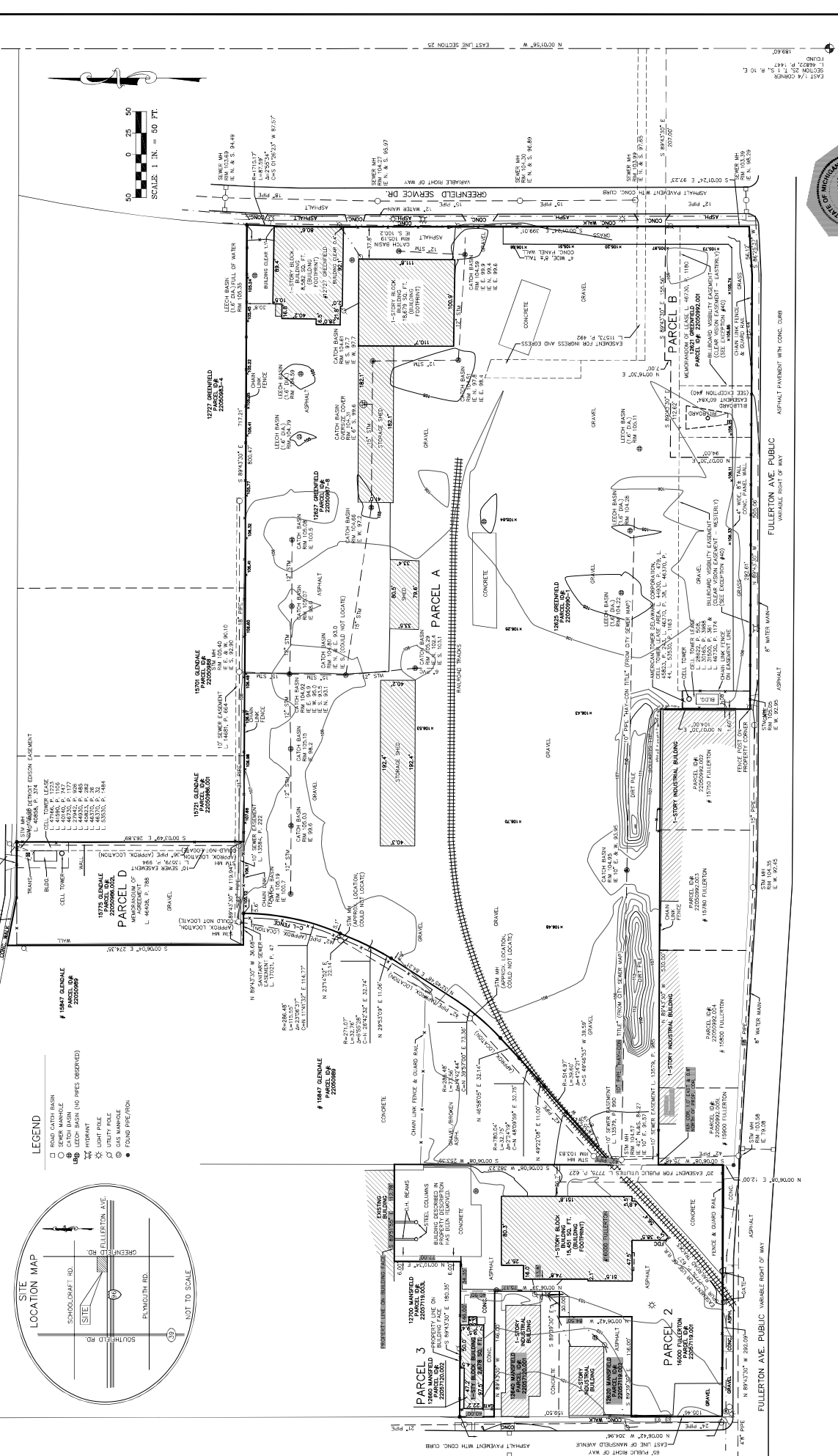
PROJECT LOCATION:
12625 GREENFIELD ROAD
DETROIT, MI 48227

PROPERTY	OWNER
180132-001	180132-001
180132-002	180132-002
180132-003	180132-003
180132-004	180132-004
180132-005	180132-005

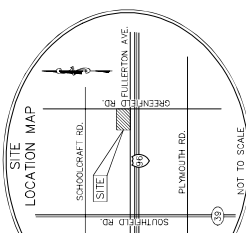
COVER SHEET

SHEET REFERENCE NUMBER:
C-100

SECTION 25, T. 13 N., R. 10 W., S. 34-49
 SECTION 25, T. 13 N., R. 10 W., S. 34-49
 FOUND

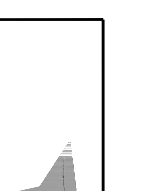


- LEGEND**
- ROAD CATCH BASIN
 - OTHER MANHOLE
 - LEACH BASIN
 - LEACH BASIN (NO PRESS OBSERVED)
 - LIGHT POLE
 - UTILITY POLE
 - GAS MANHOLE
 - FOUND PIPE/IRON



GLENDALE AVE. PUBLIC
 S. 8243207' E. 531.27'

SCALE 1 IN. = 50 FT.

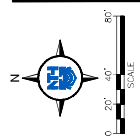


DATE: 04/09/16
 DESIGNED BY: WDD
 FILE: 18005
 SHEET # 18005
 SHEET 1 OF 1

PREPARED FOR
GREEN VALLEY PROPERTIES LLC
 34643 SARAH BETH LANE, LIVONIA, MI 48152

ARPEE/DONNAN, INC.
 LAND SURVEYING · ENGINEERING · MAPPING
 32223 SCHOOLCRAFT RD., SUITE 103
 LIVONIA, MICHIGAN 48150
 PHONE: (734) 293-3325 FAX: (734) 293-3324

TOPOGRAPHIC SURVEY
 12627, 12625 AND 12621 GREENFIELD ROAD, 15775
 GREENFIELD ROAD AND 15775 GREENFIELD ROAD
 GREENFIELD STREET, DETROIT, MI 48227



NO.	DESCRIPTION	DATE BY
1	PREPARED FOR REVIEW	4/20/2018
2	REVISION	
3	REVISION	
4	REVISION	
5	REVISION	
6	REVISION	
7	REVISION	
8	REVISION	
9	REVISION	
10	REVISION	
11	REVISION	
12	REVISION	
13	REVISION	
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15	REVISION	
16	REVISION	
17	REVISION	
18	REVISION	
19	REVISION	
20	REVISION	

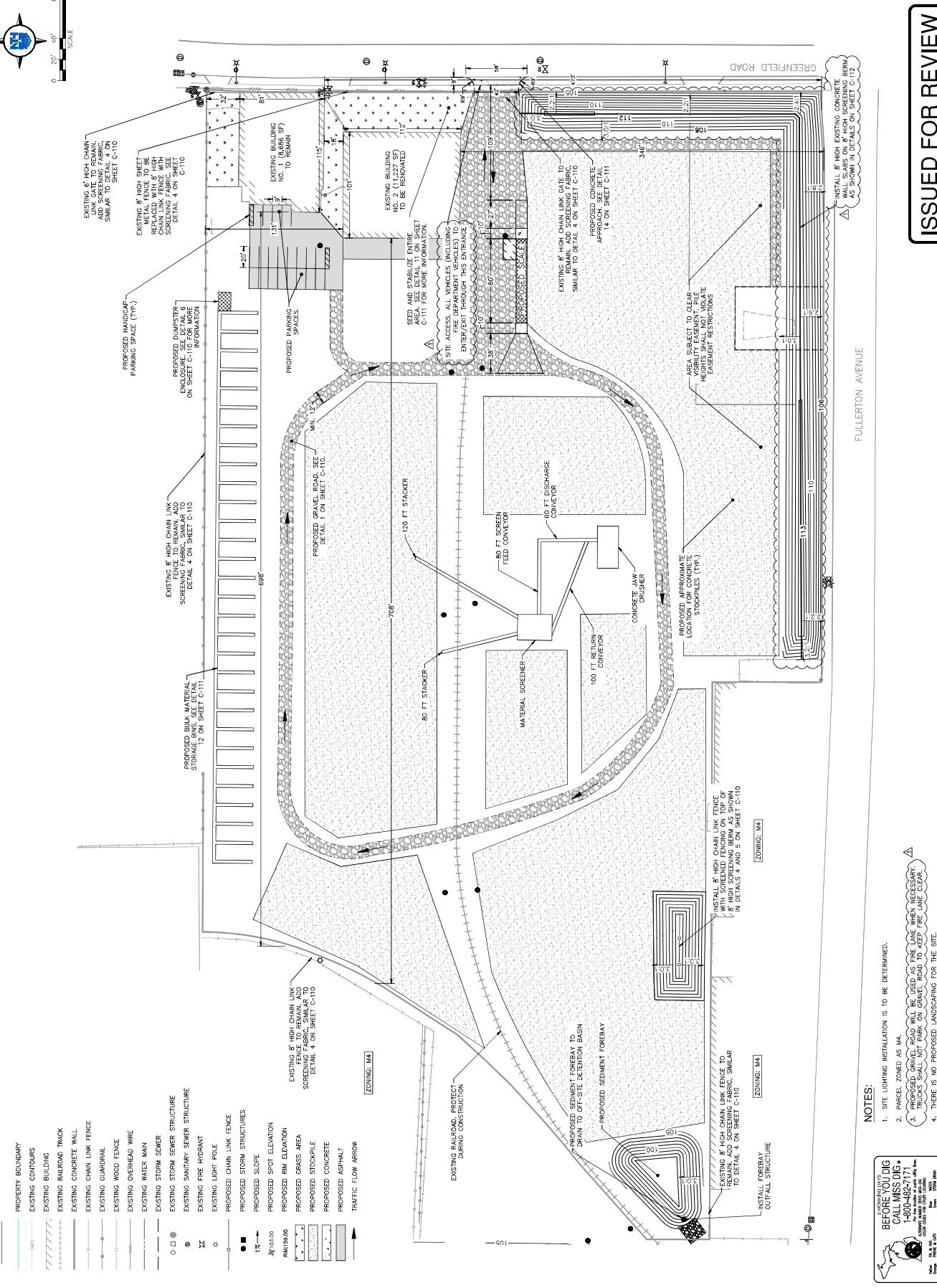
PROJECT NAME:
GREENFIELD SUPPLY CENTER SITE DEVELOPMENT

PROJECT LOCATION:
12625 GREENFIELD ROAD
DETROIT, MI 48227

NO.	DATE	BY
1	10/12/2017	MM
2	11/14/2017	MM
3	11/14/2017	MM
4	11/14/2017	MM
5	11/14/2017	MM
6	11/14/2017	MM
7	11/14/2017	MM
8	11/14/2017	MM
9	11/14/2017	MM
10	11/14/2017	MM
11	11/14/2017	MM
12	11/14/2017	MM
13	11/14/2017	MM
14	11/14/2017	MM
15	11/14/2017	MM
16	11/14/2017	MM
17	11/14/2017	MM
18	11/14/2017	MM
19	11/14/2017	MM
20	11/14/2017	MM

SHEET TITLE:
PROPOSED SITE AND LANDSCAPING PLAN

SHEET REFERENCE NUMBER:
C-104



- LEGEND**
- PROPERTY BOUNDARY
 - EXISTING CONTOURS
 - EXISTING BUILDING
 - EXISTING RAILROAD TRACK
 - EXISTING CONCRETE WALL
 - EXISTING CHAIN LINK FENCE
 - EXISTING GUARDRAIL
 - EXISTING WOOD FENCE
 - EXISTING OVERHEAD WIRE
 - EXISTING WATER MAIN
 - EXISTING STORM SEWER
 - EXISTING STORM SEWER STRUCTURE
 - EXISTING SANITARY SEWER STRUCTURE
 - EXISTING FIRE HYDRANT
 - EXISTING LIGHT POLE
 - PROPOSED CHAIN LINK FENCE
 - PROPOSED STORM STRUCTURES
 - PROPOSED SLIDE
 - PROPOSED SPOT ELEVATION
 - PROPOSED RIM ELEVATION
 - PROPOSED GRASS AREA
 - PROPOSED STOCKPILE
 - PROPOSED CONCRETE
 - PROPOSED ASPHALT
 - TRAFFIC FLOW ARROW

- NOTES:**
- SITE LIGHTING INSTALLATION IS TO BE DETERMINED.
 - PARCEL ZONED AS M4.
 - PROPOSED GRAVEL ROAD WILL BE USED AS FIRE LANE WHEN NECESSARY. TRUCKS SHALL NOT PARK ON GRAVEL ROAD TO KEEP FIRE LANE CLEAR.
 - THERE IS NO PROPOSED LANDSCAPING FOR THE SITE.
 - ALL STOCKPILES TO BE NO TALLER THAN 50'.

BEFORE YOU DIG
CALL MISS DIG
1-800-482-1171

MISS DIG is a free service that provides a central location for all utility companies to report and locate underground utilities. Call 1-800-482-1171 to get more information.

MISS DIG is a service provided by the Michigan Department of Transportation (MDOT). For more information, visit www.michigan.gov/missdig.

ISSUED FOR REVIEW



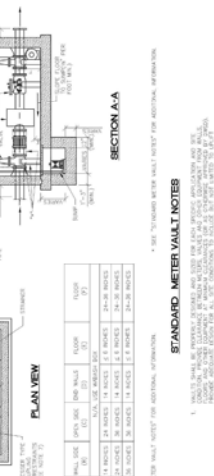
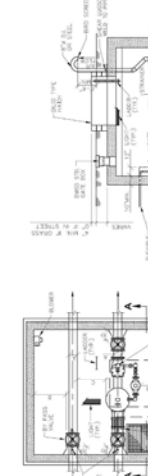
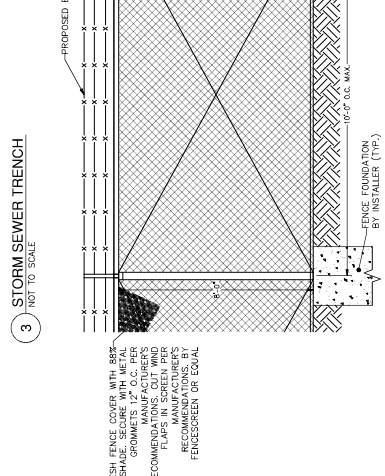
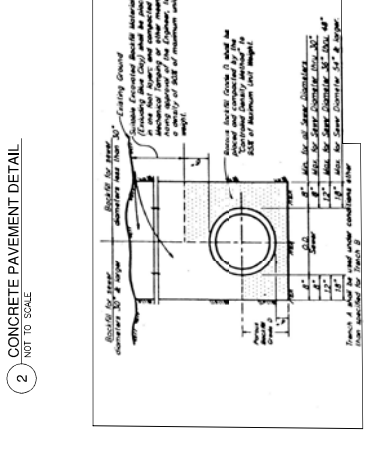
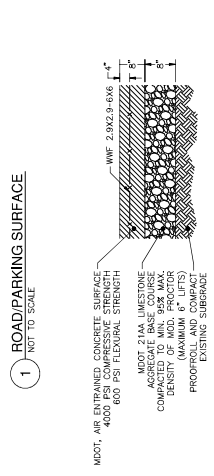
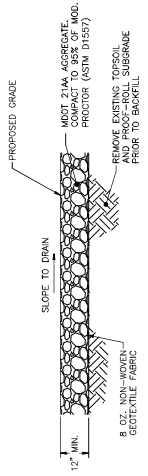
NTH Consultants, LLC
Infrastructure Engineering and Environmental Services
Norwalk, MI 48455-0000
Detroit, MI 48207-3900
Livonia, MI 48150-1800
Cleveland, OH 44130-4000

Date: 03/01/19

POND CALCULATIONS

- I. Total Volume Required of Detention Area - 10-year, 24-hr Storm
- 1) $V = 17250 \text{ cu ft}$
 - 2) $V = 17250 \text{ cu ft}$
- II. Basin volume provided

Storage Provided - Detention Basin	Elev.	Area	Avg. Area	Height	Volume
5	96.67	13,359	19,518	1.0	6,657
6	97.00	26,726	27,157	1.0	26,175
7	98.00	28,557	30,039	1.0	53,332
8	99.00	31,451	32,954	1.0	83,371
9	100.00	34,437	35,932	1.0	116,335
10	101.00	37,427	38,945	1.0	152,287
11	102.00	40,462	41,990	1.0	191,212
12	103.00	43,548	45,076	1.0	232,617
13	104.00	46,682	48,202	1.0	276,992
14	105.00	49,862	51,368	1.0	324,337
15	106.00	53,095	54,574	1.0	374,652
16	107.00	56,480	57,820	1.0	427,937
17	108.00	60,015	61,106	1.0	484,192
18	109.00	63,700	64,432	1.0	543,417
19	110.00	67,535	67,800	1.0	605,612
20	111.00	71,520	71,310	1.0	670,777
21	112.00	75,655	74,962	1.0	738,902
22	113.00	80,040	78,756	1.0	810,000
23	114.00	84,675	82,692	1.0	884,072
24	115.00	89,560	86,770	1.0	961,120
25	116.00	94,695	90,990	1.0	1,041,145
26	117.00	100,080	95,352	1.0	1,124,148
27	118.00	105,715	100,000	1.0	1,210,120
28	119.00	111,600	104,932	1.0	1,300,052
29	120.00	117,735	110,160	1.0	1,393,944
30	121.00	124,120	115,692	1.0	1,491,788
31	122.00	130,855	121,530	1.0	1,593,584
32	123.00	138,040	127,672	1.0	1,700,332
33	124.00	145,675	134,120	1.0	1,812,032
34	125.00	153,760	140,872	1.0	1,928,684
35	126.00	162,295	147,930	1.0	2,050,288
36	127.00	171,280	155,292	1.0	2,176,844
37	128.00	180,715	162,960	1.0	2,307,352
38	129.00	190,600	170,932	1.0	2,441,812
39	130.00	200,935	179,210	1.0	2,589,224
40	131.00	211,720	187,792	1.0	2,749,588
41	132.00	222,955	196,680	1.0	2,922,904
42	133.00	234,640	205,872	1.0	3,109,172
43	134.00	246,775	215,370	1.0	3,308,392
44	135.00	259,360	225,172	1.0	3,520,564
45	136.00	272,395	235,280	1.0	3,745,688
46	137.00	285,880	245,692	1.0	3,983,764
47	138.00	299,815	256,410	1.0	4,234,792
48	139.00	314,200	267,432	1.0	4,498,772
49	140.00	329,035	278,760	1.0	4,775,704
50	141.00	344,320	290,392	1.0	5,065,588
51	142.00	360,055	302,330	1.0	5,368,424
52	143.00	376,240	314,572	1.0	5,684,212
53	144.00	392,875	327,120	1.0	6,012,952
54	145.00	410,060	340,000	1.0	6,354,644
55	146.00	427,795	353,222	1.0	6,709,288
56	147.00	446,080	366,796	1.0	7,076,884
57	148.00	464,915	380,732	1.0	7,457,432
58	149.00	484,300	395,030	1.0	7,850,932
59	150.00	504,235	409,692	1.0	8,257,384
60	151.00	524,720	424,720	1.0	8,676,788
61	152.00	545,755	440,112	1.0	9,109,144
62	153.00	567,340	455,860	1.0	9,554,452
63	154.00	589,475	471,972	1.0	1,001,272
64	155.00	612,160	488,440	1.0	1,049,504
65	156.00	635,395	505,262	1.0	1,100,148
66	157.00	659,180	522,440	1.0	1,153,192
67	158.00	683,515	540,000	1.0	1,208,636
68	159.00	708,400	557,932	1.0	1,266,480
69	160.00	733,835	576,240	1.0	1,326,724
70	161.00	759,820	594,924	1.0	1,389,368
71	162.00	786,355	613,984	1.0	1,454,412
72	163.00	813,440	633,420	1.0	1,521,856
73	164.00	841,075	653,232	1.0	1,591,700
74	165.00	869,260	673,420	1.0	1,662,944
75	166.00	897,995	693,984	1.0	1,735,588
76	167.00	927,280	714,924	1.0	1,809,632
77	168.00	957,115	736,240	1.0	1,885,076
78	169.00	987,500	757,932	1.0	1,961,920
79	170.00	1018,435	779,992	1.0	2,040,164
80	171.00	1049,920	802,420	1.0	2,119,808
81	172.00	1081,955	825,224	1.0	2,200,852
82	173.00	1114,540	848,400	1.0	2,283,296
83	174.00	1147,675	871,948	1.0	2,367,140
84	175.00	1181,360	895,868	1.0	2,452,384
85	176.00	1215,595	920,160	1.0	2,539,028
86	177.00	1250,380	944,832	1.0	2,627,072
87	178.00	1285,715	969,884	1.0	2,716,516
88	179.00	1321,600	995,316	1.0	2,807,360
89	180.00	1358,035	1,021,128	1.0	2,900,604
90	181.00	1395,020	1,047,320	1.0	2,996,248
91	182.00	1432,555	1,073,892	1.0	3,094,292
92	183.00	1470,640	1,100,844	1.0	3,194,736
93	184.00	1509,275	1,128,176	1.0	3,297,580
94	185.00	1548,460	1,155,888	1.0	3,402,824
95	186.00	1588,195	1,183,980	1.0	3,510,468
96	187.00	1628,480	1,212,452	1.0	3,620,512
97	188.00	1669,315	1,241,304	1.0	3,732,956
98	189.00	1710,700	1,270,536	1.0	3,847,800
99	190.00	1752,635	1,300,148	1.0	3,965,044
100	191.00	1795,120	1,330,140	1.0	4,084,688
101	192.00	1838,155	1,360,512	1.0	4,206,732
102	193.00	1881,740	1,391,264	1.0	4,331,176
103	194.00	1925,875	1,422,396	1.0	4,458,020
104	195.00	1970,560	1,453,908	1.0	4,587,264
105	196.00	2015,795	1,485,800	1.0	4,718,908
106	197.00	2061,580	1,518,072	1.0	4,852,952
107	198.00	2107,915	1,550,724	1.0	4,989,396
108	199.00	2154,800	1,583,756	1.0	5,128,240
109	200.00	2202,235	1,617,168	1.0	5,269,484
110	201.00	2250,220	1,650,960	1.0	5,413,128
111	202.00	2298,755	1,685,132	1.0	5,559,172
112	203.00	2347,840	1,719,684	1.0	5,707,616
113	204.00	2397,475	1,754,616	1.0	5,858,460
114	205.00	2447,660	1,789,928	1.0	6,011,704
115	206.00	2498,395	1,825,620	1.0	6,167,348
116	207.00	2549,680	1,861,692	1.0	6,325,392
117	208.00	2601,515	1,898,144	1.0	6,485,836
118	209.00	2653,900	1,934,976	1.0	6,648,680
119	210.00	2706,835	1,972,188	1.0	6,813,924
120	211.00	2760,320	2,009,780	1.0	6,981,568
121	212.00	2814,355	2,047,752	1.0	7,151,612
122	213.00	2868,940	2,086,104	1.0	7,324,056
123	214.00	2924,075	2,124,836	1.0	7,500,000
124	215.00	2979,760	2,163,948	1.0	7,678,444
125	216.00	3035,995	2,203,440	1.0	7,859,388
126	217.00	3092,780	2,243,312	1.0	8,042,832
127	218.00	3149,115	2,283,564	1.0	8,228,776
128	219.00	3206,000	2,324,196	1.0	8,417,220
129	220.00	3263,435	2,365,208	1.0	8,608,164
130	221.00	3321,420	2,406,600	1.0	8,801,608
131	222.00	3379,955	2,448,372	1.0	8,997,552
132	223.00	3439,040	2,490,524	1.0	9,195,996
133	224.00	3498,675	2,533,056	1.0	9,396,940
134	225.00	3558,860	2,575,968	1.0	9,600,384
135	226.00	3619,595	2,619,260	1.0	9,806,328
136	227.00	3680,880	2,662,932	1.0	1,001,472
137	228.00	3742,715	2,706,984	1.0	1,022,716
138	229.00	3805,100	2,751,416	1.0	1,044,160
139	230.00	3868,035	2,796,228	1.0	1,065,804
140	231.00	3931,520	2,841,420	1.0	1,087,548
141	232.00	3995,555	2,886,992	1.0	1,109,492
142	233.00	4060,140	2,932,944	1.0	1,131,636
143	234.00	4125,275	2,979,276	1.0	1,153,980
144	235.00	4190,960	3,025,988	1.0	1,176,524
145	236.00	4257,195	3,073,080	1.0	1,199,268
146	237.00	4323,980	3,120,552	1.0	1,222,212
147	238.00	4391,315	3,168,404	1.0	1,245,356
148	239.00	4459,200	3,216,636	1.0	1,268,700
149	240.00	4527,635	3,265,248	1.0	1,292,244
150	241.00	4596,620	3,314,240	1.0	1,315,988
151	242.00	4666,155	3,363,612	1.0	1,340,032
152	243.00	4736,240	3,413,364	1.0	1,364,276
153	244.00	4806,875	3,463,496	1.0	1,388,720
154	245.00	4878,060	3,513,908	1.0	1,413,364
155	246.00	4949,795	3,564,600	1.0	1,438,208
156	247.00	5022,080	3,615,572	1.0	1,463,252
157	248.00	5094,91			



- STANDARD METER VAULT NOTES**
1. THIS METER VAULT SHALL BE INSTALLED IN ACCORDANCE WITH THE NOTES AND SPECIFICATIONS.
 2. ALL DIMENSIONS SHALL BE VERIFIED AS SHOWN ON THIS SHEET.
 3. ALL DIMENSIONS SHALL BE VERIFIED AS SHOWN ON THIS SHEET.
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