MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION

June 10, 2019

PERMIT TO INSTALL
87-19

ISSUED TO
Floyd's U-Cart Redi Mix Concrete

LOCATED AT
14284 Meyers Road
Detroit, Michigan

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
N0373

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. 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: **May 24, 2019**	
DATE PERMIT TO INSTALL APPROVED: **June 10, 2019**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

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

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H_2S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO_x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO_2	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

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 Environment, Great Lakes, and Energy, 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 Rule 210 (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 Rule 219 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 Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(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 Rule 301, 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 Rule 303 (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 Rule 370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

FGFACILITY CONDITIONS

DESCRIPTION: The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment and exempt equipment.

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGFACILITY unless the fugitive dust control plan specified in Appendix A, or an alternate approvable plan submitted to the AQD District Supervisor, for all plant roadways, the plant yard, all material storage piles, and all material handling operations has been implemented and is maintained. **(R 336.1371, R 336.1372, Act 451 324.5524)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

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 keep, in a satisfactory manner, records showing the annual potential to emit calculations for PM, in tons per year, for FGFACILITY. The permittee shall update the potential to emit calculation whenever a new permitted or exempt emission unit is installed, or whenever a permitted, exempt, or grandfathered emission unit is modified or removed. Potential to emit calculations shall be based on the maximum operational capacity of the equipment operated for the entire year, except they may account for applicable permit requirements or applicable laws or rules limiting the potential to emit. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(Act 451 324.5524**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

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

APPENDIX A

Fugitive Dust Control Plan

Floyd's Redi Mix Concrete

14284 Meyers Road, Detroit, Michigan 48227

1.0 Regulatory Requirements

Floyd's U-Cart Redi Mix Concrete (FRC) has establish a Fugitive Dust Program as described in the Statute and Rule 289 to allow issuance of a permit to install (PTI) that will include an approved State Operating Plan or Fugitive Dust Plan. It must also meet the requirements of the Statute and Rules 371 and 372. The provisions and procedures of this fugitive dust plan are subject to adjustment by written notification from the department if, following an inspection, the department determines the fugitive dust requirements or permitted opacity limits are not being met.

1.1 MCL 324.5524

Fugitive emissions from several industrial groups located in specific areas of Michigan are regulated under the Statute as described in the following Sections.

1.2 Opacity Requirements [MCL 324.5524(2)]

Opacity from fugitive dust emissions associated with roads, lots, and storage piles is limited to 5% measured using Test Reference Method 9D, which uses a specific point of measuring opacity and a 3-minute averaging time. Other sources of fugitive dust are limited to 20% using Test Reference Method 9d, although these limits do not apply at times in which the wind speed exceeds 25 mph.

1.2.1 Storage Piles and Associated Material Handling [MCL 324.5524(3)]

The Statute includes specific requirements for facilities with storage piles having potential uncontrolled emissions of greater than 50 tpy of PM and whose total potential uncontrolled emissions exceed 100 tpy of PM. These requirements, outlined in MCL 324.5524(3)(a)(i) through (iii), do not apply to the FRC facility as its emissions are much less than the thresholds referenced in the Statute.

FRC operates a fabric filter dust collector and an enclosure area for the mixer truck loading and cement handling activities to meet the requirements of MCL 324.5524(3)(a)(iv).

Crushers, grinding mills, screening operations, bucket elevators, conveyor transfer points, conveyor bagging operations, storage bins, and fine product truck and railcar loading operations must be controlled by water or surfactant application, choke feeding, or equivalent method(s) of air pollution control.

The Statute also includes special requirements for the transporting materials with a silt content greater than 1%, including the use of completely enclosed trucks, tarps, or similar controls in MCL 324.5524(3)(c), though there are some exceptions for handling slag and vehicles with a capacity under two tons.

1.2.2 State Operating Program and Record Keeping [MCL 324.5524(4) and (5)]

Sources of fugitive dust subject to the Statute requirements must develop an operating program or Fugitive Dust Plan subject to review and approval by EGLE. The Statute also lists information which must be included in an operating program or Fugitive Dust Plan for it to be considered approvable. Approved Fugitive Dust Programs must be incorporated into a legally enforceable order or PTI.

1.3 Michigan Rule 371

Michigan Rule 371 allows EGLE to request that a facility develop a Fugitive Dust Plan in the event that ambient air quality indicates a need to reduce fugitive emissions or if there have been a number of complaints. The Rule further details the types of information that must be included in a Fugitive Dust Plan and requires a description of bulk materials handled at the facility, control techniques used to reduce fugitive emissions, and record keeping methods that will be used to demonstrate compliance.

1.4 Michigan Rule 372

Rule 372 requires that facilities requiring a Fugitive Dust Plan may include typical control methods listed in the rule, as described below:

(2) The following provisions apply to the loading or unloading of open storage piles of bulk materials as a source of fugitive dust:

(a) Open storage piles of bulk materials, hereinafter referred to as "piles", which meet any of the following 3 conditions need not be included in a fugitive dust control program:

(i) All piles of the same material at a manufacturing or commercial location which have a total volume of less than 100 cubic meters (131 yards^3).

(ii) Any piles at a manufacturing or commercial location if the total annual volumetric throughput of all the stored material at the site is less than 10,000 cubic meters (13,100 yards^3).

(iii) Any single pile at a manufacturing or commercial location that has a volume of less than 42 cubic meters (55 yards^3).

(b) Typical control methods for controlling fugitive emissions resulting from the loading or unloading of piles may include, but are not limited to, the following:

(i) Completely enclosing the pile within a building furnished with department approved air pollution control equipment.

(ii) Using pneumatic conveying or telescopic chutes.

(iii) Spraying the working surface of the pile with water or dust-suppressant compound.

(iv) Directing engine exhaust gases that are generated by the machine used on the piles for loading or unloading upwards.

(v) Minimizing the drop distance from which the material is discharged into the pile. The drop distance shall be specified in the control program.

(vi) Periodic removal of spilled material in areas within 100 meters (328 feet) from the pile. The frequency of removal shall be specified in the control program.

(3) All of the following provisions apply to the transporting of bulk materials as a source of fugitive dust:

(a) Trucks which have less than a 2-ton capacity that are used to transport sand, gravel, stones, peat, and topsoil are exempt from the provisions of this sub rule.

(b) Typical control methods for controlling fugitive emissions resulting from the transporting of bulk materials by truck may include, but are not limited to, the following:

(i) Completely covering open-bodied trucks.

(ii) Cleaning the wheels and the body of each truck to remove spilled materials after the truck has been loaded.

(iii) Use of completely enclosed trucks.

(iv) Tarping the truck when operating empty if residue has not been completely removed after emptying.

(v) Cleaning the residue from the inside of the truck after emptying.

(vi) Loading trucks so that no part of the load making contact with any sideboard, side panel, or rear part of the load enclosure comes within 6 inches of the top part of the enclosure.

(vii) Maintaining tight truck bodies so that leakages within the body will be eliminated and future leakages prevented.

(viii) Spraying the material being transported in a vehicle with a dust suppressant. The frequency of spraying shall be specified in the control program.

(ix) Restricting the speed of the vehicle which transports the material. The speed of the vehicle shall be specified in the control program.

(4) The following provision applies to outdoor conveying as a source of fugitive dust:
Typical control methods for controlling fugitive emissions resulting from conveying bulk materials may include, but are not limited to, the following:

(a) Completely enclosing all conveyor belts and equipping them with belt wipers and hoppers of proper size to prevent excessive spills.
(b) Enclosing transfer points and, if necessary, exhausting them to a baghouse or similar control device at all times when the conveyors are in operation.
(c) Equipping the conveyor belt with not less than 210-degree enclosures.
(d) Restricting the speed of conveyor belts. The belt speed shall be specified in the control program.
(e) Periodically cleaning the conveyor belt to remove the residual material. The frequency of cleaning shall be specified in the control program.
(f) Minimizing the distance between transfer points. The distance between transfer points shall be specified in the control program.
(g) Removing the spilled material from the ground under conveyors. The frequency of removal shall be specified in the control program.

2.0 Process Description

FRC operates a concrete batch plant at 14284 Meyers Rd. Concrete is a mineral product, which is basically composed of water, cement, and aggregate, including medium and course sand. Supplementary cement materials are also added, depending on the type of mixture and desired product. The production of concrete starts with delivery of the raw materials to the plant location. Aggregate is delivered to ground storage piles. Cement and cement supplement is delivered to the site and pneumatically conveyed to an elevated storage silo. From the elevated silo, the desired amount of cement is gravity fed to a weigh hopper, sand and gravel are loaded into a separate hopper and conveyed into the truck for mixing. Occasionally during the year, other building construction materials may also be stored at the site.

Total dust emissions from material storage piles result from several distinct activities within the storage cycle:

- Loading of material onto storage piles (batch or continuous drop operations).
- Equipment traffic in a storage area.
- Screening of aggregate.
- Loadout of material for shipment or for return to the process stream (batch or continuous drop operations).

2.1 Material Handling

Fugitive emissions can occur during material handling operations such as loading/unloading of bulk solid materials and onsite conveyance of the material. Either adding material to a storage pile or removing it from a pile typically involves dropping the material onto a receiving surface. *A truck dumping onto a pile* or *loading out from the pile to a truck with a front-end* loader are examples of **batch drop operations**. *Adding material to the pile by a conveyor stacker* is an example of a **continuous drop operation***.* Employees are trained to identify material handling operations that can generate fugitive dust as well as methods to mitigate fugitive dust. These actions are summarized below:

- Material handling involves dropping material onto a receiving surface by use of a conveyor system, front-end loaders and/or truck dumping. Water will be employed during material handling operations if visible emissions are noted.
- Areas around the conveyor belts and transfer points will be maintained throughout the process by removing debris from around these points.
- Stacker operations will be limited when average wind speeds exceed 25 mph over two consecutive 5-minute intervals.
- Head ends of conveyors to all drop points shall have a minimal height as operationally practical.
- The drop distance at each transfer point shall be reduced to the minimum the equipment can achieve.

- Material loading and unloading from trucks will occur in a timely and efficient manner to minimize transfer time.
- Trucks hauling bulk materials will be covered with tarps as required by the Statute.
- 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 sideboard, side panel, or tailgate. Otherwise, the truck shall be tarped.

2.2 Equipment Traffic

Fugitive emissions can occur from truck traffic or from other equipment, like front-end loaders. To control fugitive emissions from equipment traffic, the following measures will be employed:

- Open areas/lots and roadways will be treated with water, calcium chloride, or other accepted and approved fugitive dust control compounds via watering trucks as often as necessary to meet an opacity limit of 5%.
- Roadways will be swept as needed between applications (see Appendix 1 for sweeper information).
- Material spilled onto roadways or open areas/lots will be cleaned immediately.
- A speed limit of 8 mph is enforced on all site roadways.
- Material will be removed from the tires and underside of trucks exiting the site by use of rumble strips, a gravel pad and/or water wash of the tires and the underside of the truck.

2.3 Storage Piles

Storage piles are located throughout the facility. Figure 1 of the PTI provides a current layout of the facility. Fugitive emissions occur during material handling at the facility when material is dropped from/to a conveyor system, front-end loader or from truck dumping. Water is employed during material handling operations as needed to control visible emissions. In addition:

- All storage piles will be treated with water on an as-needed basis in order to meet an opacity limit of 5%. Additional chemical dust suppressant solutions will be used, if needed. 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.
- Weather conditions, such as during dry and windy conditions, may warrant regular water treatment.
- FRC personnel will monitor weather conditions and will use Ambient Weather WS-2902A Weather Station or similar technology to measure wind speed and direction to ensure that onsite material handling activities are limited when average wind speeds exceed 20 mph for more than two consecutive 5-minute periods.
- Sweeping around the storage piles will be conducted as necessary.
- Pile heights will be limited to 50 feet to minimize wind shear effects on the piles.
- Stockpiling of all nonmetallic minerals shall be performed to minimize drop distance and control
- potential dust problems.

Figure 2 of the PTI presents a typical site map indicating possible locations for storage piles and other site information.

3.0 Fugitive Dust Plan Recordkeeping

FRC has developed a record keeping form (Appendix 2) and keeps records of:

- Weather conditions (wind direction/speed)
- Records of paved/unpaved roads and lots sweeping activities
- Records of all dust suppressant (water and other) applied to roadways, storage piles and open areas/lots

The log sheet will generally be filled out in the morning on days the facility is operating and used for planning fugitive dust control activities for the day. Records will be kept in a log format and will be kept for a minimum of

five years and be made available to the department upon request. Safety data sheets will also be available for any dust suppressants used at the site beside water.

This Plan also needs to clearly identify the site address and responsible person with contact information:

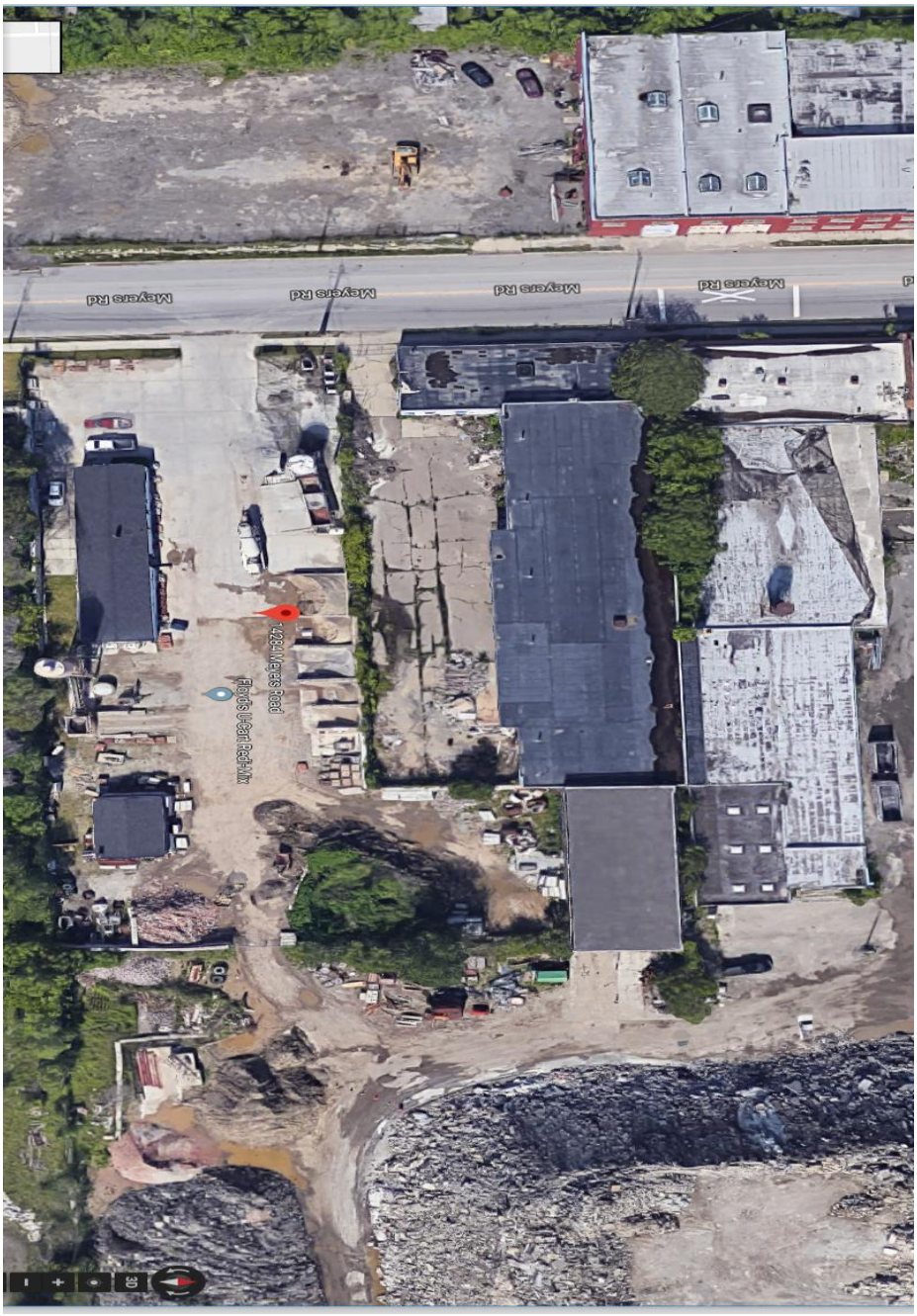
Mr. Fred Warstler – Owner

14284 Meyers Rd.

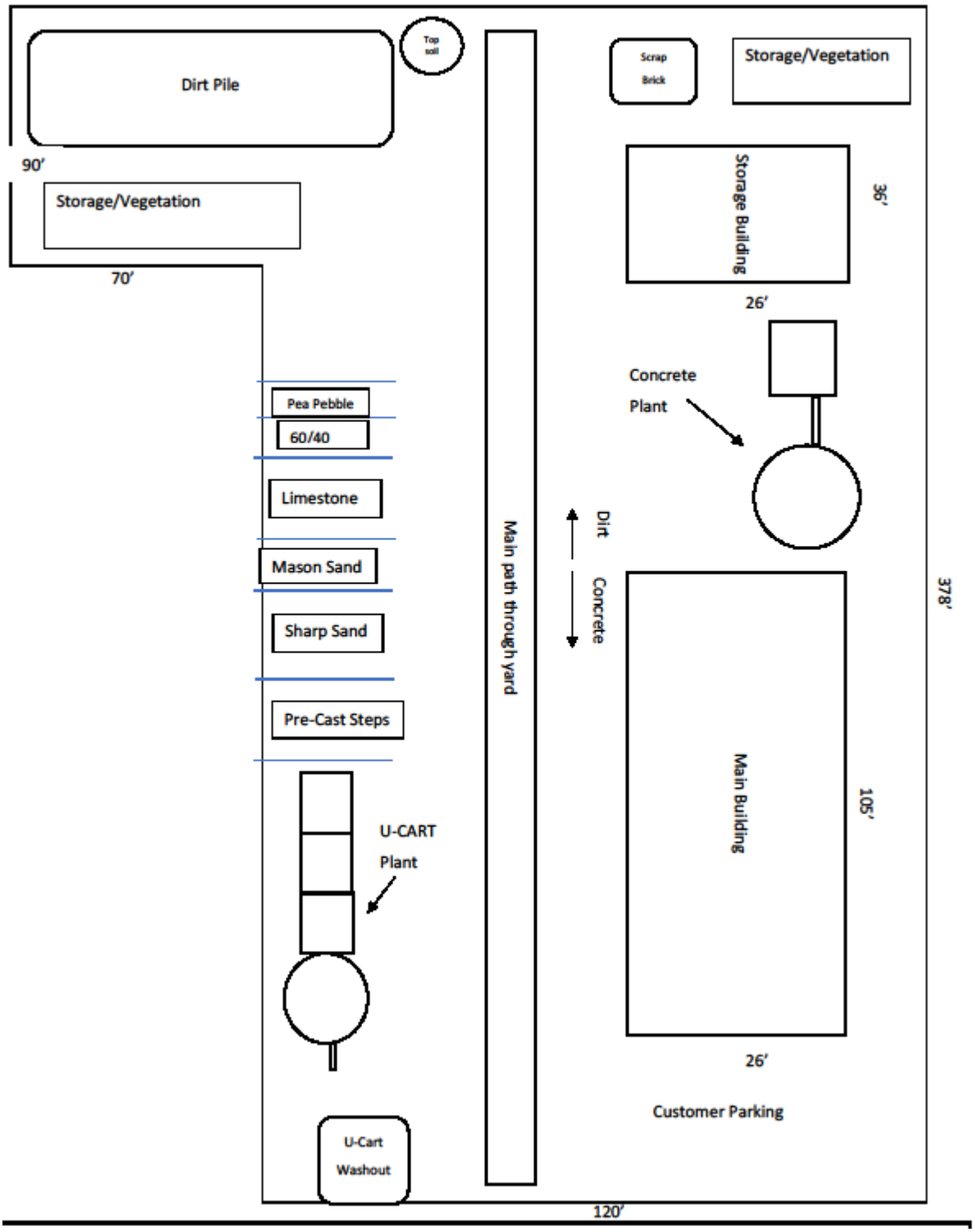
Detroit, Michigan 48227

(313) 834-2366

4.0 Figure 1 Image of Property



5.0 Figure 2 Drawing of Property



6.0 Appendix 1 Sweeper

FRC yard is swept as needed with a sweepster power broom attached to a CAT 242b skid steer very similar to the one pictured above. The yard is only swept after it has rained or been watered down to minimize dust.

Detroit Recycled Concrete is operated by Nagle Paving and they sweep their yard and street with and enclosed vacuum and sweeping machine (similar to the one pictured below) at least three times a week. We have a relationship with Detroit Recycled and the sweeper truck commonly sweeps the paved portion of FRC yard as well as 1/4 mile in each direction of Meyers road to eliminate any dust.

7.0 Appendix 2 Record Sheet

Floyd's Fugitive Dust Recordkeep

Week Of:

Date						
Pavement Swept						
Water Spread on Unpaved section of yard						
Calcium Spread						
Precipitation						
Temperature						
Wind Speed						
Initals						