All Mail to: 1701 Main Street Union Grove, WI 53182



Grading-Paving-Sealing-Striping
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EXHIBITS

- 1. RACINE COUNTY TECHNICAL MEMO
- **2.WDNR NR135**
- 3. FINANCIAL ASSURNACE
- 4. RACINE COUNTY SEEDING REQUIREMENTS
- 5. WDNR WELL LOGS & WELL AGREEMENT
- **6. RECLAMATION**
- 7. CARDINAL ENGINEERING PLAN

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Public Works & Development Services

14200 Washington Avenue Sturtevant, WI 53177 262-886-8440 fax: 262-886-8480

Technical Memo

Prepared: August 13, 2020

To: Brian Jensen, Racine County Superintendent of Development Services

From: Alex Valley, P.E., Civil Engineer

Re: Proposed Asphalt Contractors Burlington non-metallic mining site CTH P access

Racine County Engineering has had an opportunity to review the existing access point onto CTH P for the subject property (Tax ID 002021907010000) with regard to a change of use and resulting safety questions. Our review was completed by comparing existing conditions with established WisDOT (Wisconsin Department of Transportation) FDM (Facilities Development Manual) standards that are also used by Racine County. The design vehicle used for the entirety of this review was a SU (single unit) truck based on the proposed truck usage for this access point. Below is a synopsis of the conditions and findings of this review broken down by topic.

Conditions

Roadway Characteristics

- 1) CTH P is functionally classified as a Minor Arterial within the Burlington/Rochester/Waterford Urban Area
- 2) The speed limit on CTH P is 45 MPH at this location
- 3) The existing roadway features 12-foot lanes with varying width paved shoulders
- 4) Existing CTH P pavement condition is identified as "failed"
- 5) Paved turn lanes exist for this access point, further information on which can be found below
- 6) 2017 traffic count indicates 8,600 vehicles on CTH P per day near this location
- 7) CTH P (Racine County Line to STH 11) currently experiences a crash rate above the WisDOT UCL (Upper Control Limit)

Access Characteristics

- 1) Existing access point is the sole frontage location for access to a public road
- 2) Frontage width is 33-feet resulting in minimal opportunity for widening or relocation of the access point
- 3) The existing access point aligns directly across CTH P from Fish Hatchery Road
- 4) The existing access location falls on the inside of a horizontal curve

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Review Findings

ISD (Intersection Sight Distance)

- 1) Existing ISD to the north does not meet the minimum standards established in WisDOT FDM 11-10 Table 5.2 for Case B1 with a SU Design Vehicle
- 2) Existing ISD to the south does not meet the minimum standards established in WisDOT FDM 11-10 Table 5.2 for Case B2 with a SU Design Vehicle

Geometric and Access Design

- 1) With a narrow driveway approach width limited by the property frontage dimensions, it should be noted that trucks may not be able to maneuver and enter the site while another vehicle is waiting to leave the site
 - a. This may cause trucks to make wider turns that encroach into the through/left-turn lane when turning into the site from the north or to stop completely to allow traffic to exit before pulling into the driveway, both of which are not acceptable operationally or with respect to safety of the traveling public
 - b. No plans for improvement of the access are included with this proposal
- 2) An auxiliary lane is present in the form of a southbound bypass lane for vehicles continuing straight on CTH P. Considering the proposed use with truck traffic entering and leaving the site, this lane should be changed to meet the standards for a dedicated southbound right-turn lane. The existing conditions do not meet minimum lengths outlined in WisDOT FDM 11-25.
 - a. No plans for improvement of the roadway are included with this proposal
- 3) Numerous other access points are located within the upstream and downstream functional areas of the CTH P/Fish Hatchery Road/Proposed Asphalt Contractors site intersection and within the bypass/acceleration and deceleration lanes. This condition creates driver confusion and contributes to crashes.
 - a. Consolidation or elimination of unnecessary access points should be coordinated with nearby property owners and included
 - b. No plans for access modifications are included with this proposal

While not comprehensive, hopefully this review provides insight into highway infrastructure and safety considerations that must be taken into account with any substantial change in use or development that occurs. Future proposal considerations would include review of these items as well as improvement plans developed by the applicant or their consultant. Improvements within County Highway right-of-way would require this review along with a permit which Engineering can assist with at such time.



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Nonmetallic Mining Newsletter

Fall 2008 PUB WA-1280 2008



Revisions to NR 135 Now in Effect

Chapter NR 135, Wis. Adm. Code, has been in effect since December 2000. The code was revised in 2006 and the changes became effective **December 1, 2006**. You may obtain the new rule by going to http://www.legis.state.wi.us/rsb/code/nr/nr135.pdf or you may request a copy from your DNR regional contact.

The revised rule required changes in the dates for fee collection and reporting but could not become fully effective until Regulatory Authorities (RAs) amended their reclamation ordinances. Now that the amended ordinances are in place, it is possible to realize the benefits that come with the streamlining of routine administrative process. For example, the due date for fees and annual reports have been synchronized, and annual reports are now based on the same year during which fees were collected. In addition, the DNR has developed a new web-based application that further streamlines this process. This web-based reporting tool is discussed below.

Online Annual Reporting and Fee Transmittal Now Available

The administrative process for both annual fee transmittal to the DNR and annual reporting have been integrated and simplified, thanks to a new webbased reporting tool. This new reporting process takes the place of both the Excel template, previously used for electronic annual reporting, and the fee transmittal cover sheet.

Appropriate RA staff should have received an introductory email or letter informing them of this new approach and process. Each contact has been given an ID and password, a link to the reporting tool and directions for its use. Please save this information for future report years.

Once you have logged on to the reporting tool, you will be guided through two pages of mandatory questions and one page of optional questions. After

completing those questions, the report will be submitted electronically; however, you will still need to print and sign the last page of the report and mail it, along with appropriate fees, to the department.

Your NR 135 regional contact can provide a paper version of the new report upon request. If you lose your password or have questions regarding the new reporting tool, please contact Steve Drake (steve.drake@wisconsin.gov) or 608-267-7567.

Using Waste Fill Materials in Nonmetallic Mining Reclamation

Recently, we've received questions about the practice of using waste materials such as foundry sand and "clean fill" at nonmetallic mine reclamation sites.

Certain types of waste are considered "clean fill" under s. NR 500.08(2), Wis. Adm. Code and may be used without prior approval from the DNR. See the sidebar for a list of acceptable alternative fill materials.

Clean fill must be used in a nuisance-free and aesthetic manner and may not be placed in a floodplain. In accordance with s. NR 504.04(4)(a-f) Wis. Adm. Code, using clean fill for reclamation must not result in the taking of a threatened or endangered species, or negatively impact wetlands, surface or groundwater.

Industrial byproducts are another class of waste materials sometimes proposed for use in mine reclamation projects. Any project involving these wastes must be managed in accordance with ch. NR 538, Wis. Adm. Code, beneficial reuse rules. The wastes are assigned a category based on analytical test results and their potential to impact the environment. Their use is restricted based on these categories.



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For Mine Operators:

Be aware of all sources of fill material being placed in your mine site and where material is placed. Make sure sediment running off the waste piles does not impact a natural wetland or surface water body. Place materials above the water table to avoid potential impacts to groundwater.

If you are approached by a waste broker or generator regarding the potential use of industrial byproducts as part of your mine reclamation, make sure the broker is reputable and has the financial resources available to implement the project. Most larger projects need DNR concurrence, so plan on making your site and reclamation plans available for the reviewers.

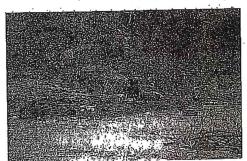
You should be aware that certain projects using more than 30,000 cubic yards of waste material will require public notice and a possible public information hearing in accordance with s. NR 538.18, Wis. Adm. Code.

Contact your local officials to determine if the reclamation plan needs to be modified and to see if any additional permits are required.

For RAs:

As the NR 135 RA you will have approved this in the reclamation plan (existing plans will need to be modified to include the use of these materials. Notify the DNR if any waste appears to be an unacceptable material or is being placed in an unacceptable manner.

Municipal solid waste- what most of us think of as household garbage- and unsorted residential construction and demolition waste cannot be used as fill material in mine reclamation. These wastes contain materials that can adversely impact the environment (i.e. lead paint, asbestos, plastics).



Illegal disposal of solid waste at abandoned mine. (Photo by Tom Portle, DNR)

Acceptable alternative materials

Materials defined as clean fill and exempt from ch. NR 500 solid waste rules:

- Mine spoils (crushed stone, sand and overburden soils)
- Clean soil
- Brick
- Building stone
- Unpainted concrete (even if reinforced)
- Unpainted/untreated wood
- Broken pavement (even if it contains asphalt)

Materials defined as industrial byproducts and regulated under ch. NR 538 (beneficial use rules):

- Coal combustion ash and slag
- Foundry system sand
- Lime kiln dust
- Flue gas desulfurization waste

Miscellaneous:

- Compost from municipal recycling programs
- Sediment from stormwater ponds
- Paper mill sludge

If the operator plans on achieving final grades by accepting off-site fill materials, those details must be included in the approved reclamation plan. Proposed uses of any waste materials need to conform to the approved plan; otherwise the plan will need to be modified in accordance with s. NR 135.24, Wis. Adm. Code

Reclamation Opportunities with Alternative Materials

Another use of alternative materials is the mitigation of safety or stability hazards associated with vertical or other steep highwalls. Alternative materials may be used to construct a safety berm at the top of a potentially hazardous highwall to control access.

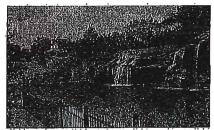
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Materials used in backfilling a highwall can serve to mitigate safety hazards and improve slopes for reclamation. (DNR Photo)



Proper highwall reclamation may provide scenic landscapes and recreational opportunities. (Above photos courtesy of Dr. Bruce Brown, WGNHS)

Substitute Soil may be in need in cases where topsoil and/or subsoil are in short supply; there may be an opportunity to use alternative materials to amend or supplement soil. Check with local municipal recycling programs regarding the availability of compost material and other organic materials.



Use of these organic materials can help provide a more optimum soil environment and rooting zone to support plant growth. Refer to NR 135.03 (24) for the definition of substitute soil.

The use of industrial byproducts in reclamation of the Foley Pit serves as an illustration of permitting considerations and coordination among agencies, the mine, and the generator. The project received a Grant of Exemption from the DNR to allow the use of industrial byproducts in mine reclamation. It also required cooperation between the DNR solid waste and reclamation staff, as well as the East Central Wisconsin Regional Planning Commission (ECWRPC), which administers the NR 135 program in that jurisdiction. The foundry sand proved to be a safe and cost effective fill material when used in achieving approximate original contours (AOC).



Foundry sand being incorporated as part of grading activities during reclamation of the Foley Pit (Photo by Daye Misterek, DNR)



Successful Reclamation Outcome at the Foley Pit. (DNR photo)

How Do Alternative Materials Fit into the Reclamation Plan?

The nature of the material itself, the proposed use, current reclamation plan language and permit conditions may need to be considered. Each case must be evaluated to ensure compliance with applicable state and local laws.

While some cases, like the Foley Pit reclamation, require direct DNR involvement, these are the exception rather than the rule. Typically, either the operator and/or the RA will review the reclamation plan to ensure that it covers the proposed material and its proposed use. When necessary, the reclamation plan may be amended or permit modified. Please keep in mind that both the reclamation plan and its corresponding financial assurance must be updated to reflect current conditions and costs.



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Financial Assurance for Reclamation of the Burlington Campground Pit

Average depth of soil is 1.5 feet

For 1 acre of ground that is 2,420 C.Y.

There is a short distance to move dirt and no compaction required for placement.

Shape subgrade: Dozer 10 hr x \$150/hr= \$1,500.00

Place Soil Excavation \$150/hr

3 haul trucks 450/hr

Dozer \$150/hr

Move 300 C.Y./hr \$750/hr x 8 hours= \$6,000

\$7,500/acre

\$577.50 /acre x 15 acres=

Maximum of 15 acres open x \$7,500=

\$112,500

bilization

\$4,000

Prepare soil for seed 6 hours x \$75/hr x 15 acres=

\$6,750

\$123,250

15 acres x 2,420 C.Y.=36,300 C.Y.

\$123,250/ \$36,300= \$3.40

Seed 90 lbs/acre x \$6.00/lb=\$540

Fertilizer 50 lbs/acre x .75/ lb= \$37.50

Silt fence at bottom of slopes 1,200 L.F. x \$3.00/ L.F.=

\$3,600.00

\$8,662.50

Remove truck scale

\$1,000.00

\$132,912.50

County Administration 10%

13,291,25

Total:\$146,203.75

Bond \$150,000

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SEEDING DATES:

SEEDING TYPE	DATES	
Permanent Seeding	April 1 st – September 15 th	
Temporary Seeding	September 16th - October 31st	
· · · · · · · · · · · · · · · · · · ·	November 1 st – Snow cover	

If permanent seeding is not completed prior to winter, the site will need to be stabilized with straw, mulch or erosion control fabric and permanent seeding will need to be finished during the next acceptable time period following the temporary seeding. Reference instructions included with seed mixture for additional information. Consider watering to help establish the seeding when applicable. Water application rates shall be controlled to prevent runoff and erosion.

PERMANENT SEEDING: FROM APRIL 1ST THRU SEPT 15TH

MINIMUM PURE LIVE SEED (PLS) 1 RATE PER ACRE AND TOTAL POUNDS OF SEED NEEDED

	RATE/ACRES	POUNDS
Kentucky Bluegrass	4.5	0.5
Creeping Red Fescue	6,0	0,6
Perennial Ryegrass	15,0	1.5

¹ PLS = (% Germination x %Purity)

Seed mixture shall meet all requirements of the Wi weed laws. Species identified as restricted or prohibited by law shall not be planted. Certified seed shall be used, and the seeding rates will be based on pure live seed.

Permanent seeding and mulching or sodding of all disturbed soil areas must be completed within seven days after final grading. Permanent seeding is completed to permanently stabilize areas of exposed soil. Permanent seeding shall be completed during the next acceptable time period following temporary seeding. Topsoil installation shall be completed prior to permanent seeding.

TEMPORARY SEEDING: FROM SEPTEMBER 16TH THRU OCTOBER 31ST

SEED A TEMPORARY COVER CROP OF EITHER ONE OF THE FOLLOWING

Bane, "	Pounds/Acre	Rejectivity.
Winter Cereal Rye	131	97
Annual Ryegrass	80	97
Qats	131	98

Temporary seeding should be done from September 16th to October 31st to reduce runoff and erosion until permanent seeding or other erosion control practices can be established. This should be done when disturbed areas will not be brought to final grade for a period greater than 30 days.

DORMANT SEEDING: FROM NOVEMBER 1ST THRU SNOW COVER

Dormant seeding in the fall, between November and snow cover is another option. For dormant seeding, increase the seeds per square foot by 15%. Dormant seed is applied after climatic conditions prevent germination until the following spring (April 1st). Dormant seeding may be completed prior to snow cover at which time seeding is not allowed again until April 1st at which time permanent seeding may resume. Use permanent seeding mixture for dormant seeding. Seed is broadcast and incorporated, no-tilled, or drilled into the seedbed. Seedbed preparations and conditions are similar to conventional seeding.

ESTABLISHING AND MAINTAINING VEGETATION

MATERIALS

If no soil test is available, apply a minimum of 150 pounds of 20-10-10 fertilizer per acre. This is equivalent to 30 pounds nitrogen (N), 15 pounds phosphate (P_2O_5), and 15 pounds potash (K_2O) per acre.

SEEDBED PREPARATION:

Seedbed preparation shall immediately follow construction activities. Prepare a fine, firm seedbed to a minimum depth of three inches. A seedbed is considered firm when a footprint penetrates ¼ to ½ inch deep.

SEEDING

Inoculate legumes with the specific inoculum for the species in accordance with the manufacturer's recommendations. When using a hydroseeder, five times the recommended rate of inoculant shall be added to the hydroseeder. Inoculant shall not be missed with liquid fertilizer.

Seed may be broadcast or drilled as appropriate to the site. Seed and fertilize as soon as possible after construction. Seeding perpendicular to direction of flow is required to limit erosion. Seed grasses and legumes no more than ¼ inch deep.

MAINTANENCE

During construction areas that have been seeded shall at a minimum be inspected weekly and within 24 hours after every precipitation even that produces 0.5 inches of rain or more during a 24-hour period. Inspect weekly during the growing season until vegetation is densely established or permit expires. Repair and reseed areas that have erosion damage as necessary.

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Art. VII, Div. 4. PERFORMANCE STANDARDS*

Sec. 20-1061. Compliance.

This chapter permits specific uses in specific districts; and these performance standards are designed to limit, restrict, and prohibit the effects of those uses outside their premises or district. All structures, lands, air, and waters shall hereafter, in addition to their use, site and sanitary, floodland and shoreland regulations, comply with the following performance standards. (Code 1975, § 7.091)

Sec. 20-1062. Water quality protection.

No residential, commercial, industrial, institutional, or recreational use shall locate, store, discharge, or permit the discharge of any treated, untreated, or inadequately treated liquid, gaseous, or solid materials of such nature, quantity, obnoxiousness, toxicity, or temperature that might run off, seep, percolate, or wash or be harmful to human, animal, plant, or aquatic life. This section shall not apply to uses other than those enumerated in it.

(Code 1975, § 7.092)

Sec. 20-1063. Noise.

All noise shall be so muffied or otherwise controlled as not to become objectionable due to intermittence, duration, beat frequency, impulse character, periodic character, or shriliness. (Code 1975, § 7.093)

Sec. 20-1064. Radioactivity and electrical disturbances.

No activity shall emit radioactivity or electrical disturbances so as to endanger the use of neighboring premises. (Code 1975, § 7.094)

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L:\DS\FORMS\Performance Standards

RACINE COUNTY

Sec. 20-1065. Exterior lighting.

Any lighting source on any use, lot or parcel which is for the purpose of illuminating any structure exterior, sign, parking lot or outdoor area shall be established in a manner which satisfies the following conditions:

- (1) Such lighting shall be arranged, oriented, or shielded in such a manner that direct radiation or glare from such source does not penetrate adjacent or nearby parcels or the public right-of-way.
- (2) The source of such illumination shall be arranged, oriented, or shielded in a manner which will not endanger the safety of pedestrian or vehicular traffic.

(Ord. No. 86-86, § 7.095, 8-26-86)

Sec. 20-1066. Maintenance.

Any fence, wall, hedge, yard space or landscaped area required by this chapter or grant of variance or conditional use shall be kept free of an accumulation of refuse or debris. Plant materials must be well kept in a healthy, growing condition; and structures, such as walls and fences, shall be maintained in sound conditions, and good repair and appearance at all times.

(Ord. No. 86-86, § 7.096, 8-26-86)

Sec. 20-1067. Odors.

No residential, commercial, industrial, institutional, or recreational use shall emit an odor of such nature or quantity as to be offensive or unhealthful which is detectable at the lot line. The guide for determining odor measurement and control shall be Chapter NR 429 of the Wisconsin Administrative Code and amendments thereto. (Ord. No. 93-3, 5-11-93)

Cross reference-Outdoor burning, § 13-51 et seq.

*Cross reference-Schedule of deposits for violation of the provisions in this division, §5-3.

Well Construction Report WISCONSIN UNIQUE WELL NUMBER	HM052	Drinking Water and Groundwater - DG/5 Form 330 Department of Natural Resources, Box 7921 Madison Wi 53707			
Property GAUGER, MARVIN Owner	Phone # (414)534-656	1. Well Location Fire # (If a	vail.)		
Mailing 34433 WALBURG LN	(414)534-050	Town of BURLINGTON			
Address		Street Address or Road Name and Number			
City BURLINGTON State V	VI Zip Code 53105	34433 WALBURG LN			
County Co. Permit # Notification #	Completed	Subdivision Name Lot # Blo	ck#		
Racine	10-27-1993				
Well Constructor (Business Name) Lic. #	Facility ID # (Public We	lls) Latitude / Longitude in Decimal Degree (DD) Method Co	ode		
ASCHAUER E.G. @ SONS INC 66		42.6316 °N -88.2924 °W GCD013			
	Well Plan Approval #	NW SE Section Township Range			
Address PO BOV 206			E		
Address PO BOX 206 KANSASVILLE WI 53139-0206	Approval Date (mm-dd-yy)	y) 2. Well Type New Well			
		of previous unique well # constructed in			
Hicap Permanent Well # Common Well #	Specific Capacity	Reason for replaced or reconstructed well?			
	0.80	NEW CONST.			
3. Well serves 1 # of	Hicap Well ? No				
Private,potable	Hicap Property? No				
Heat Exchange# of drillholes	Hicap Potable ?	Construction Type Drilled			
I. Potential Contamination Sources - ON REVERSE	SIDE				
5. Drillhole Dimensions and Construction Method		Geology 8. Geology Type, From (ft.)	To (fi		
Dia. (in.) From (ft.) To (ft.) Upper Enlarged	Lower Open	Codes Caving/Noncaving, Color, Hardness, etc			
10 Surface 10 Drillhole	Bedrock	F FILL Surface			
6 10 102 Rotary - Mud Circula		R C G STONY RED CLAY 2	2		
Yes Rotary - Air		G C GRAVEL @ CLAY 27	8		
Rotary - Air & Foam Drill-Through Casing		Y SAND @ GRAVEL 86	10		
Reverse Rotary	rammer	•			
Cable-tool Biti	n. dia				
Dual Rotary					
Temp. Outer Casing	in. dia				
Removed?d explain on back side	epth ft. (If NO				
	,	9, Static Water Level 11. Well Is			
6. Casing, Liner, Screen			ما		
Dia. (in.) Material, Weight, Specification Manufacturer & Method of Assembly	From (ft.) To (ft.)	oo iii oo	res		
6 STEEL 18.97# PER FT A53B SAWHILL P.E.B	. Surface 99	Pumping level 77 ft. below surface Disinfected ?	/es		
WELD JTS.		Pumping at 15 GP M for 4 Hrs. Capped ?	/es		
Dia. (in.) Screen type, material & slot size	From (ft.) To (ft.) 99 102	Pumping Method ?			
6 TELESCOPE 304 SS #25	99 102	12. Notified Owner of need to fill & seal ?			
7. Grout or Other Sealing Material					
Method FULL HOLE	- /#\: #010				
	o (ft.) # Sacks Cement	Filled & Sealed Well(s) as needed?	10		
CRUMBLES DRILL CUTTINGS @ Surface SLUR	10 · :	NONE			
		13. Constructor / Supervisory Driller Lic # Date S	laned		
RFC	EIVED				
I ham	and delivery or the second design.	EA 10-27-			
രല്	13 2020	Drill Rig Operator Lic or Reg # Date S FA 10-27-			
		FA 10-27-			

4a. Potential Contamination Sources	Is the well loca	ated in floodpl	ain? <u>No</u>				
Туре	Qualifier	Distance	Туре			Qualifier	Distance
POWTS dispersal component (soil absorption of	unit	70	Foundation	Drain to Clearw	ater		15
or mound)				amination Source	es		15
Building Overhang		15	Sewer - Bui	Iding Sanitary			40
Downspout/Yard Hydrant		15		olding, or POWT	Q Tank		54
			Septic of Tit	biding, or FOW I	o Talik		J4
Comment:							
Water Quality Text:							
Water Quantity Text:							
Difficulty Text:							
Created On: 11-30-1993 Created by:	HFRC LOAD	L	Jpdated On:	06-27-2019	Updated by:	PARCEL_MA	ГСН

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