



February 17, 2018

Ms. Nancy Ryan
Wisconsin Department of Natural Resources
2300 North Martin Luther King Jr. Drive
Milwaukee, WI 53212

RE: Soil Placement Approval Request for the Proposed BMO Tower
Development Located at 778 North Water Street in Milwaukee, Wisconsin
— DNR BRRTs # 02-41-579828; FEC Project No. 171204

Dear Ms. Ryan:

On behalf of Broadway Tierra Partners, LLC, ***Friess Environmental Consulting, Inc. (FEC)*** submits this letter to request that the Wisconsin Department of Natural Resources (DNR) grant a ch. NR 718.12 Wisconsin Administrative Code (WAC) approval for approximately 2,300-2,400 cubic yards (CY) of soil scheduled for excavation from the above-referenced property. The soils are proposed to be disposed of at the R&R excavating site (“the “Site”) located near the intersection of Highway 60 and Highway I in the Town of Cedarburg.

This letter provides a description of the generator site history and re-development plans, presents a summary of characterization data obtained to date for the generator site, and provides our conclusions and recommendations regarding the management of the soils. This letter will also discuss the continued protectiveness of human health and the environment through management of these soils and the low hazard risk to remove and place the soils at the R&R Excavating Site.

R&R Excavating Site

The Site is located near the intersection of Highway 60 and Highway I in the Town of Cedarburg. The Site totals approximately 39.5-acres of which 11 acres had historically been quarried and subsequently filled as part of the quarry reclamation plan. The property is bordered by vacant agricultural land to the south and east, former quarries to the north and west, and Highway I farther to the east.

The Site meets the locational criteria outlined in ch. NR 718.12(1)(c) WAC. The soils placed at the R&R Excavating site have not been and will not be located within a floodplain; within 100 feet of any wetland or critical habitat area; within 300 feet of any navigable river, stream, lake, pond or flowage; or within 100 feet of any on-site water supply well or 300 feet of any off-site water supply well. In addition, soils have not been placed and will not be placed within 3 feet of the groundwater table. Information related to the Site as it relates to the ch. NR 718.12 locational criteria has been previously provided to and approved by the DNR.

The soils proposed to be placed at the Site as part of this ch. NR 718.12 and/or LHE approval request will be placed at a depth of approximately 20 feet below the proposed finished grade and at a distance greater than 3 feet above the groundwater table at the Site. Based on the relatively insoluble and/or highly immobile nature of the impacts, the planned capping of the Site, and the increased distance from the groundwater table at the disposal site versus the generator site, we request an exemption to the locational criteria of ch. NR 718.12(1)(c)6 to allow placement of the contaminated soil at a depth greater than the depth of the original excavation from which it was removed.

Although it is not a condition of the approved reclamation plan, nor does the Site have groundwater quality exceedances, it is understood that the owner of the Site will accept placement of the Site on the DNR GIS registry following completion of the reclamation plan as part of the ch. NR 718.12 approval to accept soils at the Site. The GIS registry would prohibit construction of a potable well on the Site without prior DNR approval, document soil conditions on the Site, and implement a cap maintenance plan (CMP) for the Site. No development is planned as part of the reclamation.

Response Action (Generator) Site Description

The development project is located at 778 North Water Street in Milwaukee, Wisconsin. Several environmental studies have been conducted at the Site including Phase I and II Environmental Site Assessments and soil management sampling.

Based on a review of the Phase I ESA, the subject property was identified as a registered underground storage tank (UST) site. Two gasoline USTs were closed/filled with inert material on November 28, 1990 and December 16, 1991. The subject property was also historically occupied by Badger Auto Service Company Garage from 1935 to 1965. Additionally, a review of city directories and Sanborn Fire Insurance maps indicated that the subject property was historically utilized for printing operations and two 280-gallon gasoline tanks were buried in the alley between the subject property parcels and three gasoline tanks were located on the western side of the subject property. The historical use of the site was considered a possible recognized environmental conditions (PREC).

Sigma completed Phase II Environmental Site Assessment (ESA) and site investigation (SI) activities at the above referenced property (the "Site") between January and November, 2017, in order to assess potential environmental impacts associated with recognized environmental conditions identified in Sigma's Phase I ESA report completed for the Site in May 2017, and to characterize subsurface material for off-site disposal during earthwork activity associated with the construction of a new office building and parking garage. The results of Sigma's work identified Resource Conservation and Recovery Act (RCRA) metals in soil above actionable levels, as well as low-level detections of polycyclic aromatic hydrocarbons (PAHs), within the subsurface of the site. Low level VOCs were

detected in isolated areas, but are not part of this soil disposal exemption. The soils will require soils management during earthwork.

On January 30, 2017, Sigma completed eight soil borings and five temporary wells within the executive garage area. Additionally, between April 13 and 14, 2017, Sigma completed eleven soil borings within the auto-banking area and lower basement level of the site. Soil borings within the executive garage and auto-banking areas were advanced to an approximate maximum depth of 8 to 12 feet below ground surface (bgs). The lower basement level sub-slab soil borings were completed with hand-held drilling equipment. Soil samples were collected continuously from the ground surface to the boring termination depth. Soil samples collected from the soil borings were field screened by visual and olfactory observations and by a calibrated photoionization detector (PID) to semi-qualitatively assess the presence of volatile organic compounds (VOCs). The PID field screening results were recorded on the soil boring logs.

Based on the results of the Phase II ESA and the proposed development plans, Sigma conducted a site investigation consisting of eighteen additional soil probes. A total of six groundwater samples were collected from 5 temporary wells. In addition, two samples were collected and submitted for water leach testing. The results of the SI were provided in their Site investigation Report & Remedial Action Plan for the BMO Downtown Campus Parking Structure dated January 4, 2018. The sample results, probe logs and lab reports were provided to the DNR in Sigma's SI/RAP dated January 4, 2018.

Thirty seven soil probes and five groundwater monitoring wells have been conducted on the site. One to three soil samples from each soil boring location (56 discrete soil samples total) were submitted for laboratory analysis of VOCs, PAHs, RCRA metals or lead, PCBs, and/or ethylene glycol. The soil sampling conducted for the environmental assessments has sufficiently characterized the soils to be removed for disposal. In addition, a soil sample was collected for analysis for each 100 cubic yards of contaminated soil for the first 600 yards and an additional sample was collected for analysis for each additional 300 cubic yards to be removed thus meeting the requirements of NR 718.12 (e), WAC.

The soil proposed for placement is excess soil generated during excavation for building construction as part of redevelopment. The development will involve construction of the new BMO Tower. Reworked fill is present on the site. Information regarding the development plans is included with this request.

Based on the results of the recent subsurface explorations, there are no significant sources of impact to the soil. Although the intent is to minimize any off-site transport, approximately 2,300-2,400 CY of soil are anticipated to require off-site management. The fill soils can be managed with a ch. NR 718.12 approval for placement at the R&R Excavating site. Based on a review of the analytical data from the generator site, the concentrations of this soil would be less than those soils placed at the R&R Excavating Site under previous disposal approvals.

Development Plans

The redevelopment of the site will consist of a new 25-story retail and office building referred to as the BMO Tower. The redevelopment (building, foundations, utilities, landscaping) will cover nearly all 35,765 square feet and the existing BMO Tower office building. The new construction will include lower level storage and building service rooms, a ground level (1st and 2nd floors) building lobby and limited retail space, and eight levels of above-ground parking (floors 3 through 10). The remaining fourteen floors (11 through 25) will be dedicated office space. Redevelopment plans for the proposed BMO Tower are attached. The current structure is being demolished. Construction of the new structure is anticipated to begin in February 2018 and be completed by January 2019. The site plan for the proposed development is attached.

It is anticipated that approximately 2,300-2,400 CY of material will be generated during excavation for basements, footings/foundations, utility construction and subgrade preparation/ grading for the floor slabs, parking lots, drive areas and sidewalks will be required. These soils will be placed of at the R&R Excavating site.

Sigma will monitor the earthmoving activities for unanticipated environmental conditions (such as a buried tank or barrel, strong unidentifiable odors, discolored soil, or volatile vapors) and to manage the materials appropriately, if necessary.

Conclusions

Approximately 2,300-2,400 CY of soils would originate from the generator site. The soils contain impacts that are likely attributable to the fill soils. The soils to be removed are associated with footing, foundation, and utility excavation related to the construction of the new BMO Tower. The soils cannot be transported off-site as clean fill. We request that the DNR grant the ch. NR 718.12 exemption approval, as well as an exemption to ch. NR 718.12(1) (c) 6, for the disposal of soil from the proposed development at the R&R Excavating Site.

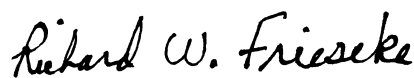
We appreciate your assistance with this request. If you have any questions or comments regarding this submittal, please contact us at (414) 228-9815.

Respectfully,

Friess Environmental Consulting, Inc.



Trenton J. Ott
Project Manager



Richard W. Frieseke, P.E.
President

171204BMO

Project Contacts

Disposal Site

R&R Excavating Site
Parcel # 03-022-04-000
County Road I
Cedarburg, WI 53012
SE ¼ of the NE ¼, Section 22, Township 10 N, Range 21 E
WTM Coordinates: 683133, 318082; 43.317884 Latitude, -87.988200 Longitude

Charmoli Holdings, LLC
Mr. Dick and Maxine Charmoli
320 Douglas Lane
Cedarburg, WI 53012
(262) 377-5736

Ponfil Trust
224 Aspen Drive
Grafton, WI 53024
(262) 238-0300

Friess Environmental Consulting, Inc.
Mr. Rick Frieseke
6635 North Sidney Place
Milwaukee, WI 53209
(414) 228-9815

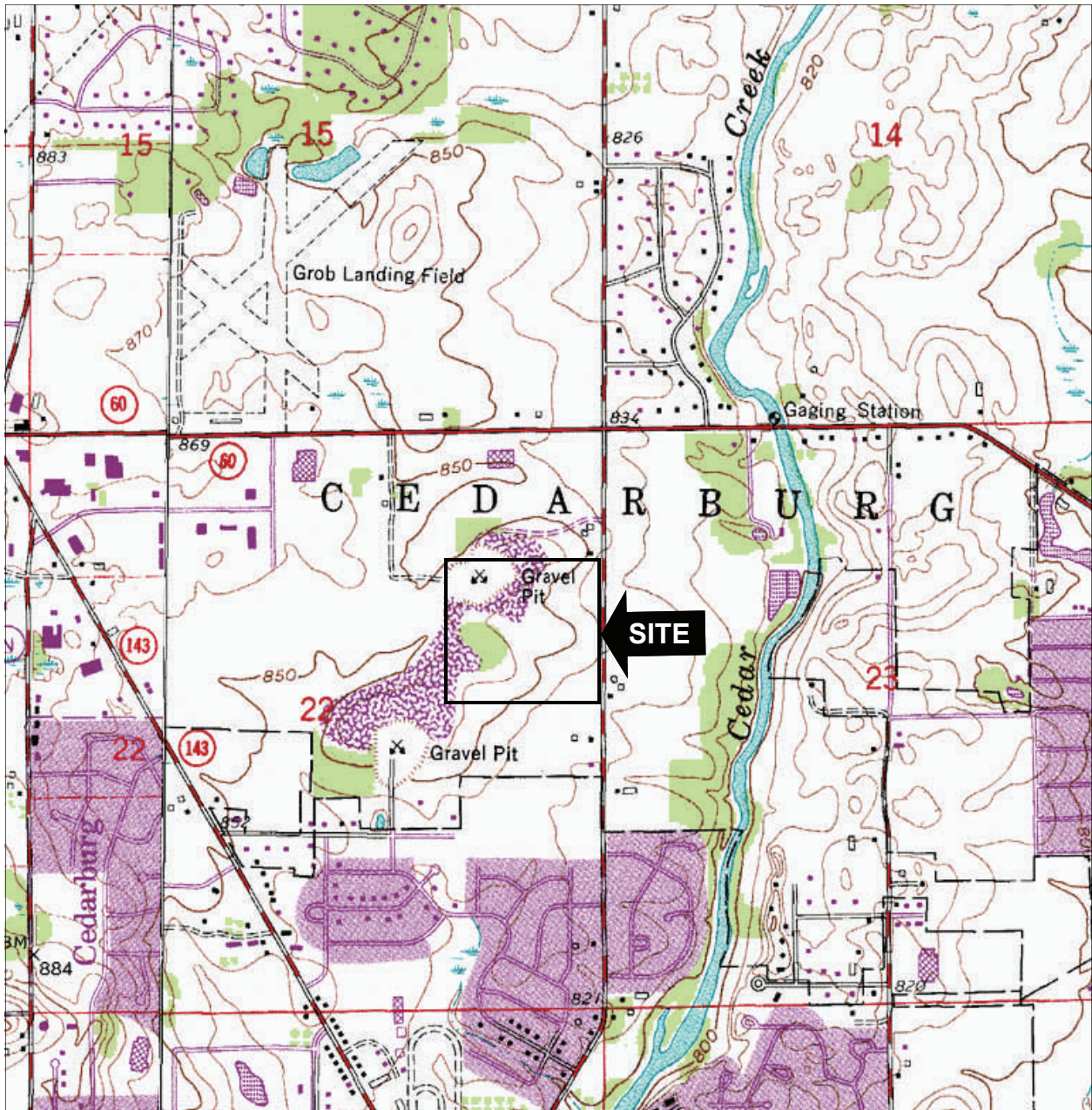
Generator Site

BMO Tower
778 North Water Street
Milwaukee, Wisconsin 53202
Telephone: (414) 443-0700
Southeast ¼ of the Northeast ¼ Section 29 Township 7 North, Range 22 East
WTM Coordinates: 690217, 285020; 43.24592 Latitude, -87.95452 Longitude

Broadway Tierra Partners, LLC
c/o Irgens Development
833 Michigan Street, Suite 400
Milwaukee, WI 53202
Telephone: (414) 443-0700
Contact: Tim Gasperetti, P.E.

Disposal Site Information


1. Site Diagrams
2. Reclamation Plan




<p>Approximate Scale</p> <p>1" = 2,000'</p>	<p>United States Geological Survey Topographic Map Sheboygan South Quadrangle</p> <p>NW 1/4 of Section 22, Township 9 North, Range 21 East</p>	
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	<p>Vicinity Diagram R&R Excavating Site Town of Cedarburg, Wisconsin</p>	<p>Figure 1</p>
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	2010 Aerial Photograph	
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	<p>Site Diagram R&R Excavating Site Cedarburg, Wisconsin</p>	<p>Figure 2</p>
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TOWN OF CEDARBURG OZAUKEE COUNTY, WISCONSIN

R.&R. EXCAVATING & BULLDOZING, INC. - QUARRY RECLAMATION PLAN in the Se. 1/4 of the Ne. 1/4 of Section 22, T.10N. R.21E. Sheboygan Rd. C.T.H. "V" - 1/4 mile south of S.T.H. "60"

• JULY 10, 2012 •

Site Information:

Total Property Area = 39.45 acres (100%)
Quarry Area = 11.01 acres (27.9%)

Current Zoning = A-1 (Agricultural District)
R-2 (Single Family Residential District)

Site Fill Statistics:

Proposed 12" of Top Soil = 17,750 cubic yards
Proposed 24" Soil Cap = 35,500 cubic yards
Proposed General Fill = 536,510 cubic yards
Total Site Fill Volume = 589,760 cubic yards

PROPERTY DESCRIPTION:

The Southeast 1/4 of the Northeast 1/4 of Section 22, Town 10 North, Range 21 East, in the County of Ozaukee, State of Wisconsin, inclusive of Cedar and Susan Aves Nos. 3385, 3400 and Vol. 2, Pages 92-93, as Document No. 233606 at the Ozaukee County Register of Deeds.

Excepting therefrom the East 33.0 feet, previously conveyed or dedicated for highway purposes.

OWNER:

Richard Chamnoli
320 Douglas Lane
Cedarburg, WI 53012

OPERATOR:

R.&R. Excavating & Bulldozing, Inc.
Richard Chamnoli, President
320 Douglas Lane
Cedarburg, WI 53012

Site History:

This site was originally opened as a Quarry gravel pit in the late 1940's to early 1950's. R.&R. Excavating & Bulldozing, Inc. took over ownership and site operations in the early 1960's, and continued gravel mining operations until Jan. 2012. Limestone mining operations at this site took place from 1990 through 2011 in conjunction with the gravel mining. In January 2012, all mining operations at this site ceased. Heavy filling operations commenced in 2005 and are on-going.

Post-mining Land Use:

The ultimate land use for the Quarry located on this property shall be in accordance with it's current zoning which is A-1 (Agricultural District) as referenced on this cover sheet. Filling will continue to occur at the site until the final reclamation grades are attained with the final layer being of a topsoil material suitable to support the desired function of the land based on it's zoning. The final grading plan will be designed to match the existing topography and drainage of the surrounding lands.

Biological Information:

The lands adjacent to the reclamation site consist of a hardwood forest on the Northwest corner and agricultural lands planted with soy surrounding the remainder of the site. It is assumed that deer, birds, and various other wildlife utilize said lands for feeding, habitat cover, and travel between green space corridors.

Reclamation Measures:

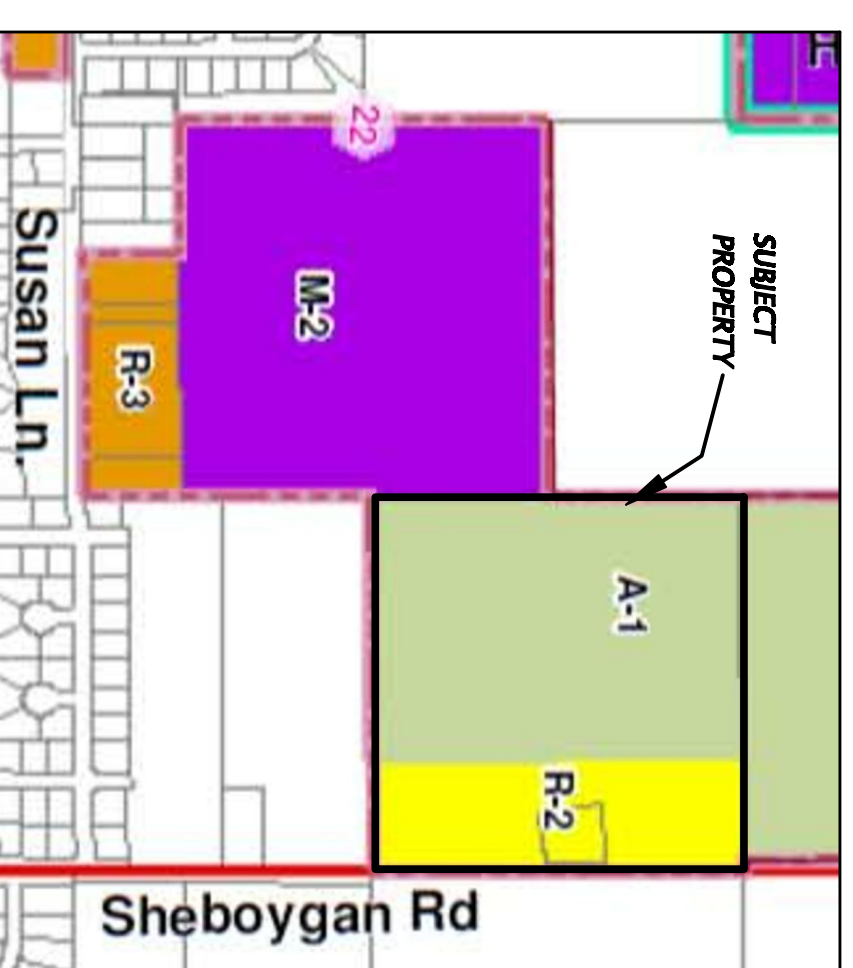
See Reclamation Measures on sheet 8 of 8

F.E.M.A. Note:

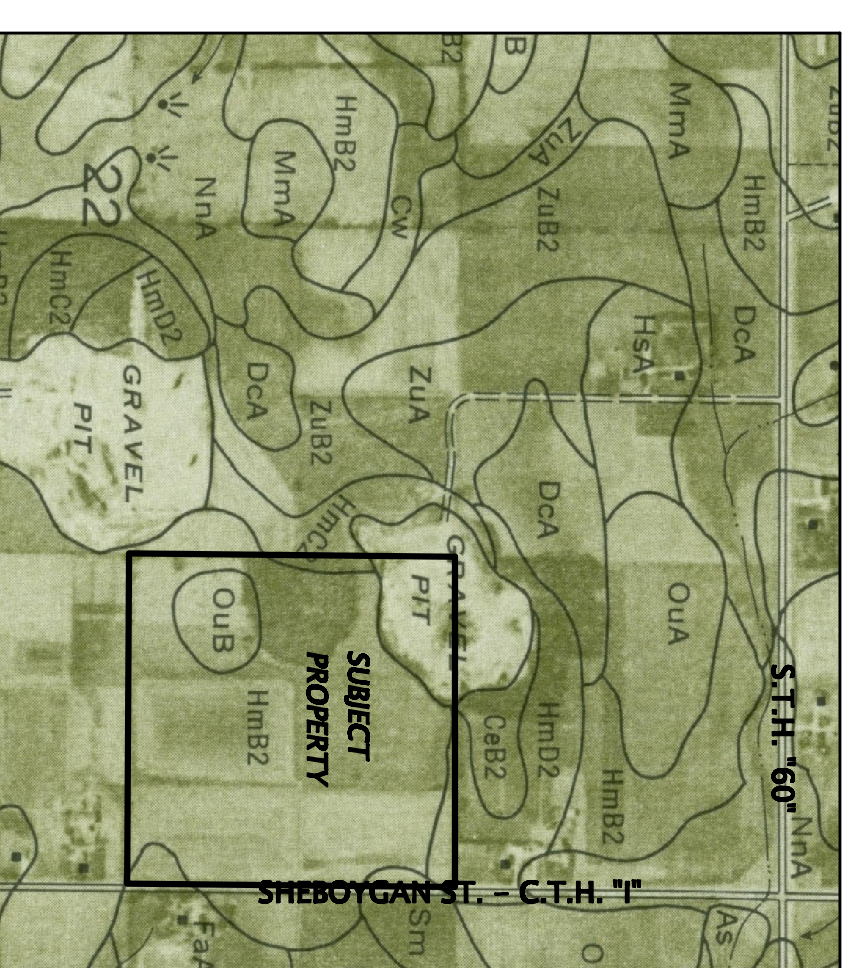
1. The subject property lies within Zone "X" areas determined to be outside the 0.2% annual chance Floodplain as determined by Flood Insurance Rate Map Community Panel No. 55089C 0178 F, Map Revised: December 4, 2007.



LOCATION MAP



ZONING MAP



SOILS MAP

Per the United States Department of Agriculture Soil Conservation Service report dated September, 1970

SOIL TYPES:

- Hmb2 - Hochheim loam, 2 to 6 percent slopes, eroded
- HmC2 - Hochheim loam, 6 to 12 percent slopes, eroded
- HmbD2 - Hochheim loam, 12 to 20 percent slopes, eroded
- CeB2 - Casco loam, 2 to 6 percent slopes, eroded
- FAA - Fabius loam, 1 to 2 percent slopes
- OUB - Ozaukee silt loam, 2 to 6 percent slopes
- Sm - Sebeka silt loam

Index of Sheets

Sheet	Description
1	COVER
2	SITE SURVEY & QUARRY LIMITS
3	EXISTING DRAINAGE PATTERNS
4	FINAL RECLAMATION GRADING PLAN
5	INTERIM RECLAMATION GRADING PLAN
6-7	GEOLOGICAL CROSS SECTIONS
8	RECLAMATION MEASURES & EROSION CONTROL DETAILS

Plan Date: July 10, 2012

Revision Date: March 28, 2013

Revision Date: April 5, 2013

Benchmark Note:

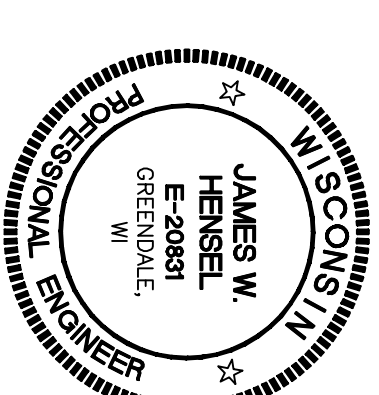
1. Main benchmark is the Section corner monument at the SE corner of the NE 1/4 of Section 22, Town 10 North, Range 21 East. Top of monument elevation = 833.26.

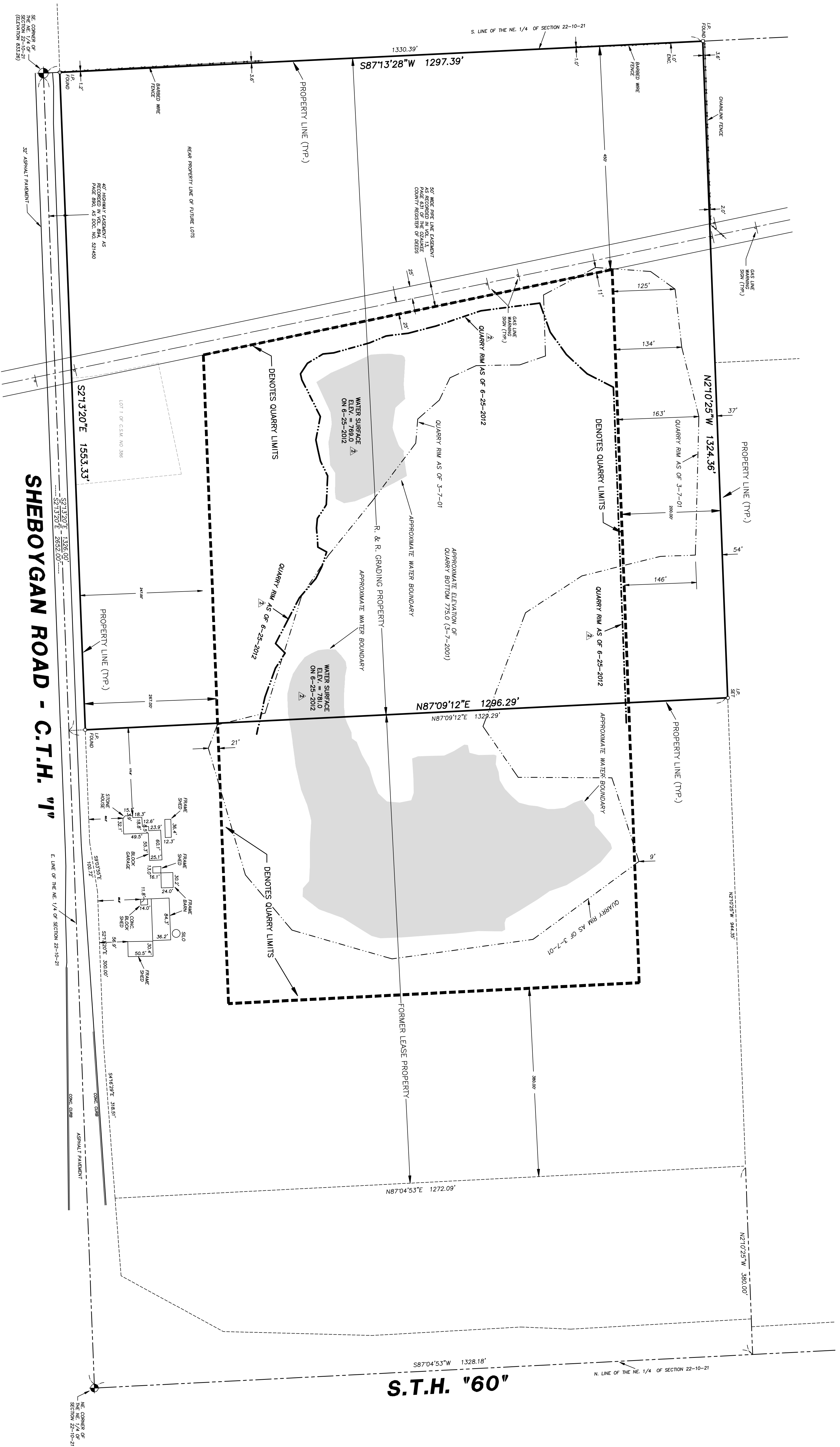
CERTIFICATION OF RECLAMATION PLAN

I hereby certify, as duly authorized representative or agent, that I, Richard Chamnoli will comply with the provisions of this reclamation plan as well as the statewide nonmetallic mining reclamation standards established in ss. NR 135.05 through NR 135.15, Wisconsin Administrative Code.

Richard Chamnoli, Owner/Operator

Dated: _____



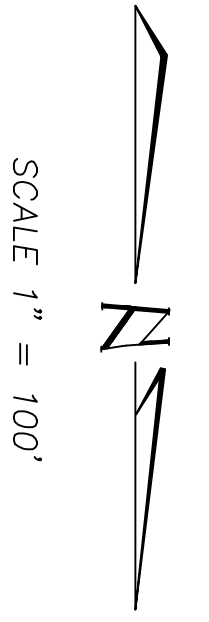


R. & R. PROPERTY DESCRIPTION:
 The Southeast 1/4 of the Northeast 1/4 of Section 22, Town 10 North, Range 21 East, in the Town of Cedarburg, Ozaukee County, Wisconsin, inclusive of Certified Survey Map No. 386, as recorded in Vol. 2, Pages 92-93, as Document No. 235606 of the Ozaukee County Register of Deeds.
 Excepting therefrom the East 33.0 feet, previously conveyed or dedicated for Highway purposes.

SURVEY CERTIFICATE
 I have surveyed the above described property and the above map is a true representation thereof and shows the size and location of the property, its exterior boundaries, the location and dimensions of all visible structures thereon, boundary fences, apparent easements, roadways, and visible encroachments, if any.
 This survey is made for the exclusive use of the present owners of the property, and also those who purchase, mortgage, or guarantee the title thereto within one (1) year from date hereof.

FORMER LEASE PROPERTY DESCRIPTION:
 The Northeast 1/4 of the Northeast 1/4 of Section 22, Town 10 North, Range 21 East, in the Town of Cedarburg, Ozaukee County, Wisconsin, excepting therefrom Certified Survey Map No. 1363 as recorded in Vol. 7, Pages 80-81, as Document No. 329217 of the Ozaukee County Register of Deeds also excepting therefrom that portion conveyed to the State of Wisconsin in Vol. 902, Page 855, at the Ozaukee County Register of Deeds

BENCHMARK NOTE:
 BENCHMARK IS THE TOP OF SE CORNER OF THE NE 1/4 OF SECTION 22-10-21 ELEVATION 833.28



QUARRY SURVEY
 for
R. & R. Excavating and Bulldozing, Inc.
 Sheboygan Rd. - C.T.H. "1"
 Town of Cedarburg, WI.

SHEET
2
 OF **8**

NSE
NORTH SHORE ENGINEERING, INC.
 Consulting Engineers & Land Surveyors
 1433 N. Port Washington Rd., Menom. Wisconsin, 53092
 (262) 241-9400 • FAX: (262) 241-5337
 www.northshoreengineering.net

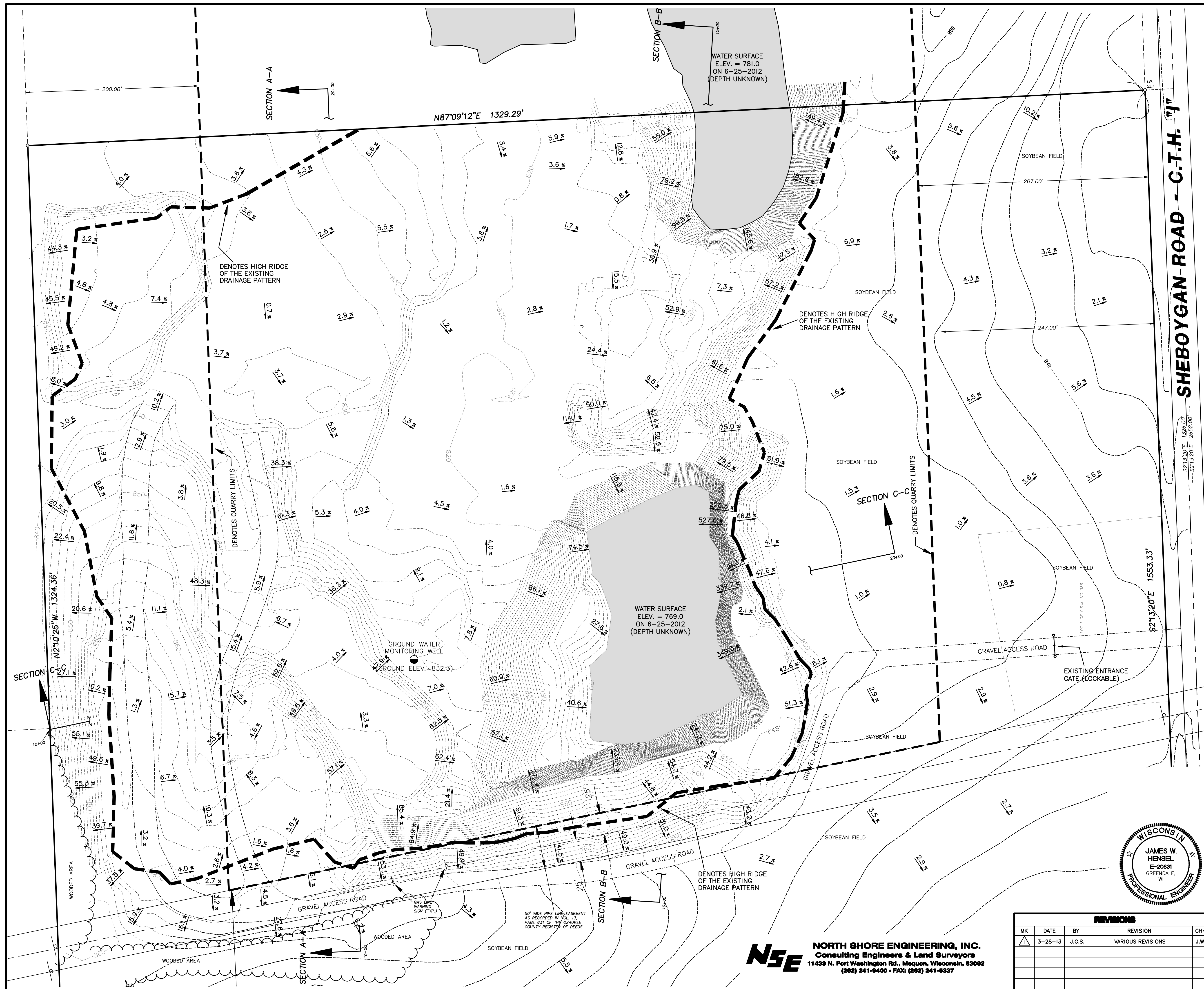
FIELD CREW:	D.R.G. & A.B.E.	PLM No.:	LS-598-12
DATE:	MARCH 5, 2011		
DWGN. BY:	J.G.S.		
CHECK. BY:	J.W.H.		

3-05-2011
 Date
 James G. Schneider
 Surveyor - S-2127

CERTAIN UNDERGROUND STRUCTURES HAVE BEEN LOCATED ON THE DRAWING. THESE LOCATIONS SHALL NOT BE TAKEN AS CONCLUSIVE. VERIFICATION TO THE SATISFACTION OF THE CONTRACTOR OF ALL UNDERGROUND STRUCTURES, WHETHER SHOWN ON THE DRAWING OR NOT, SHALL BE ASSUMED AS A CONDITION OF THE CONTRACT.

DIGGERS HOTLINE

Toll Free (800) 242-8511
 Milwaukee Area (414) 259-1181
 Hearing Impaired TDD (800) 542-2289
 www.DiggersHotline.com

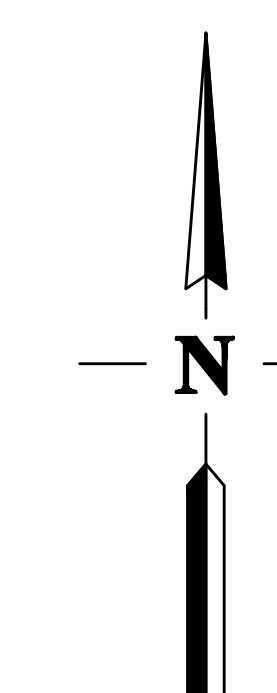


Benchmark Note :

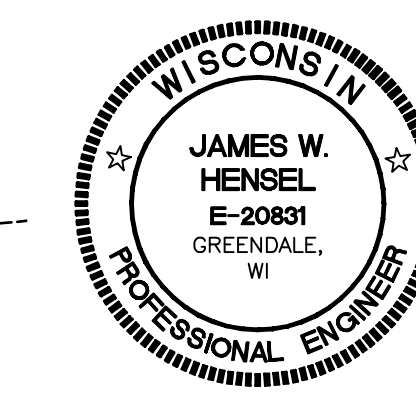
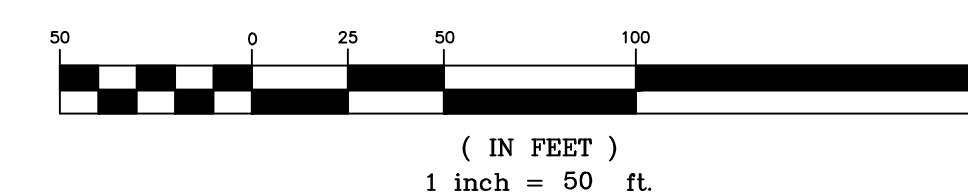
1. Main Benchmark is the Section corner monument at the SE. corner of the NE. 1/4 of Section 22, Town 10 North, Range 21 East. Top of monument elevation = 833.26.

Legend

- 838 ----- DENOTES EXISTING MINOR CONTOUR
- 840 ----- DENOTES EXISTING MAJOR CONTOUR



GRAPHIC SCALE



TOWN OF CEDARBURG			
OZAUKEE COUNTY		WISCONSIN	
R. & R. QUARRY - C.T.H. "I"			
Existing Drainage Pattern Plan			
DESIGNED: J.W.H.	DRAWN: J.G.S.	CHECKED: D.E.O.	SHEET 3 OF 8
DATE: 8-15-2012	SCALE: 1"=50'		
APPROVED:	PROJECT: LS-3350		

REVISIONS				
MK	DATE	BY	REVISION	CHK'D
△	3-28-13	J.G.S.	VARIOUS REVISIONS	J.W.H.

NSE NORTH SHORE ENGINEERING, INC.
 Consulting Engineers & Land Surveyors
 11433 N. Port Washington Rd., Mequon, Wisconsin, 53092
 (262) 241-9400 • FAX: (262) 241-5337

50' WIDE PIPE LINE EASEMENT AS RECORDED IN VOL. 13, PAGE 631 OF THE OZAUKEE COUNTY REGISTER OF DEEDS

GAS LINE WARNING SIGN (TYP.)

SECTION C-C

SECTION A-A

SECTION B-B

SECTION B-B

SECTION C-C

CERTAIN UNDERGROUND UTILITIES HAVE BEEN LOCATED BY THE CONTRACTOR AND SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. WHETHER SHOWN ON THE DRAWING OR NOT, SHALL BE ASSUMED AS A CONDITION OF THE CONTRACT.

DIGGERS HOTLINE

Toll Free (800) 242-8511
 Milwaukee Area (414) 259-1181
 Hearing Impaired TDD (800) 542-2289
 www.DiggersHotline.com

NOTE:
 TEMPORARY TOPSOIL STOCKPILES SHALL BE PLACED AT THE DISCRETION OF THE CONTRACTOR WITH THE ENGINEER'S APPROVAL, BUT SHALL BE LOCATED NO CLOSER THAN 50 FEET FROM POND, WETLANDS, DITCHES OR OTHER STORMWATER CONVEYANCE SYSTEM, UNLESS APPROVED BY THE ADMINISTERING AUTHORITY. MEASURES SHALL BE TAKEN TO MINIMIZE EROSION AND RUNOFF FROM ANY TOPSOIL STOCKPILES THAT WILL LIKELY REMAIN FOR MORE THAN 5 WORKING DAYS. ANY SOIL STOCKPILE THAT STABILIZATION PRACTICES SUCH AS TEMPORARY OR PERMANENT SEEDING AND MULCHING.

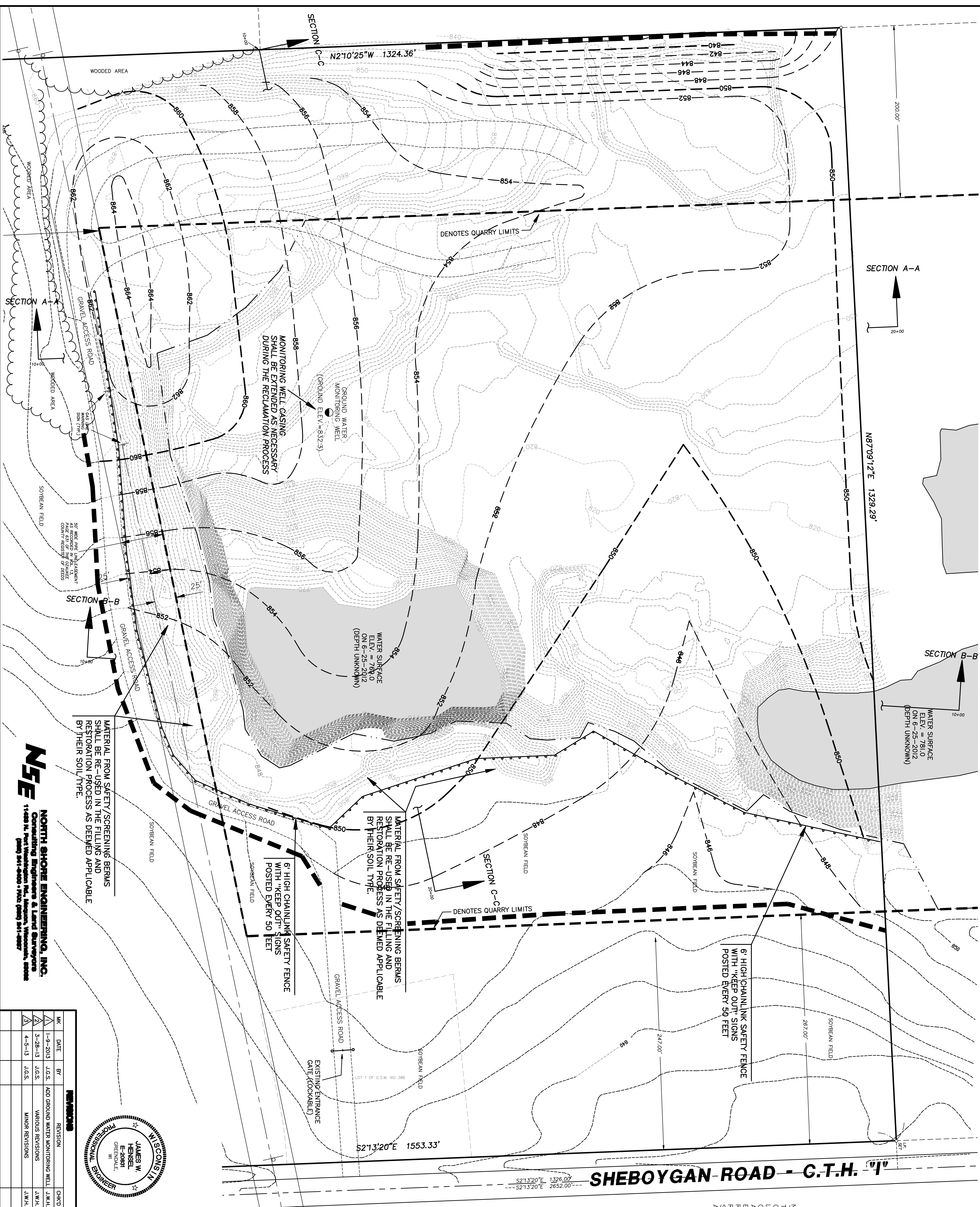
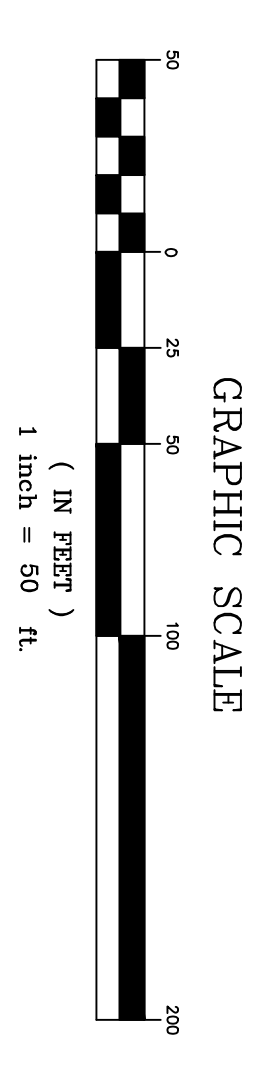
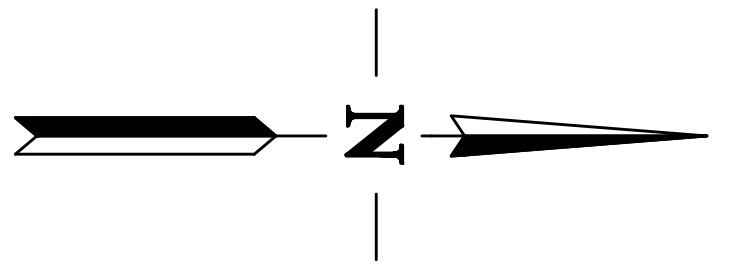
Benchmark Note:
 1. Main Benchmark is the section corner monument at the SE corner of the NE 1/4 of Section 22, Town 10 North, Range 21 East. Top of monument elevation = 833.28.

Legend

- 838 --- DENOTES EXISTING MINOR CONTOUR
- 840 --- DENOTES EXISTING MAJOR CONTOUR
- 848 --- DENOTES PROPOSED MINOR CONTOUR
- 850 --- DENOTES PROPOSED MAJOR CONTOUR
- DENOTES PROPOSED CHAINLINK FENCE
- DENOTES PROPOSED SILT FENCE

Site Fill Statistics:

Proposed 12" of Top Soil = 17,750 cubic yards
 Proposed 24" Soil Cap = 35,500 cubic yards
 Proposed General Fill = 536,510 cubic yards
 Total Site Fill Volume = 589,760 cubic yards

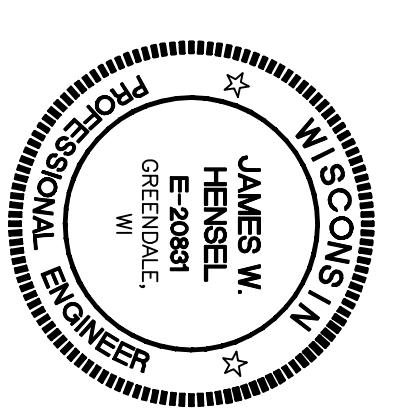


MATERIAL FROM SAFETY/SCREENING BERMS SHALL BE RE-USED IN THE FILLING AND RESTORATION PROCESS AS DETERMined APPLICABLE BY THEIR SOIL TYPE.

MATERIAL FROM SAFETY/SCREENING BERMS SHALL BE RE-USED IN THE FILLING AND RESTORATION PROCESS AS DETERMined APPLICABLE BY THEIR SOIL TYPE.

6' HIGH CHAINLINK SAFETY FENCE WITH "KEEP OUT" SIGNS POSTED EVERY 50 FEET

6' HIGH CHAINLINK SAFETY FENCE WITH "KEEP OUT" SIGNS POSTED EVERY 50 FEET



REVISIONS

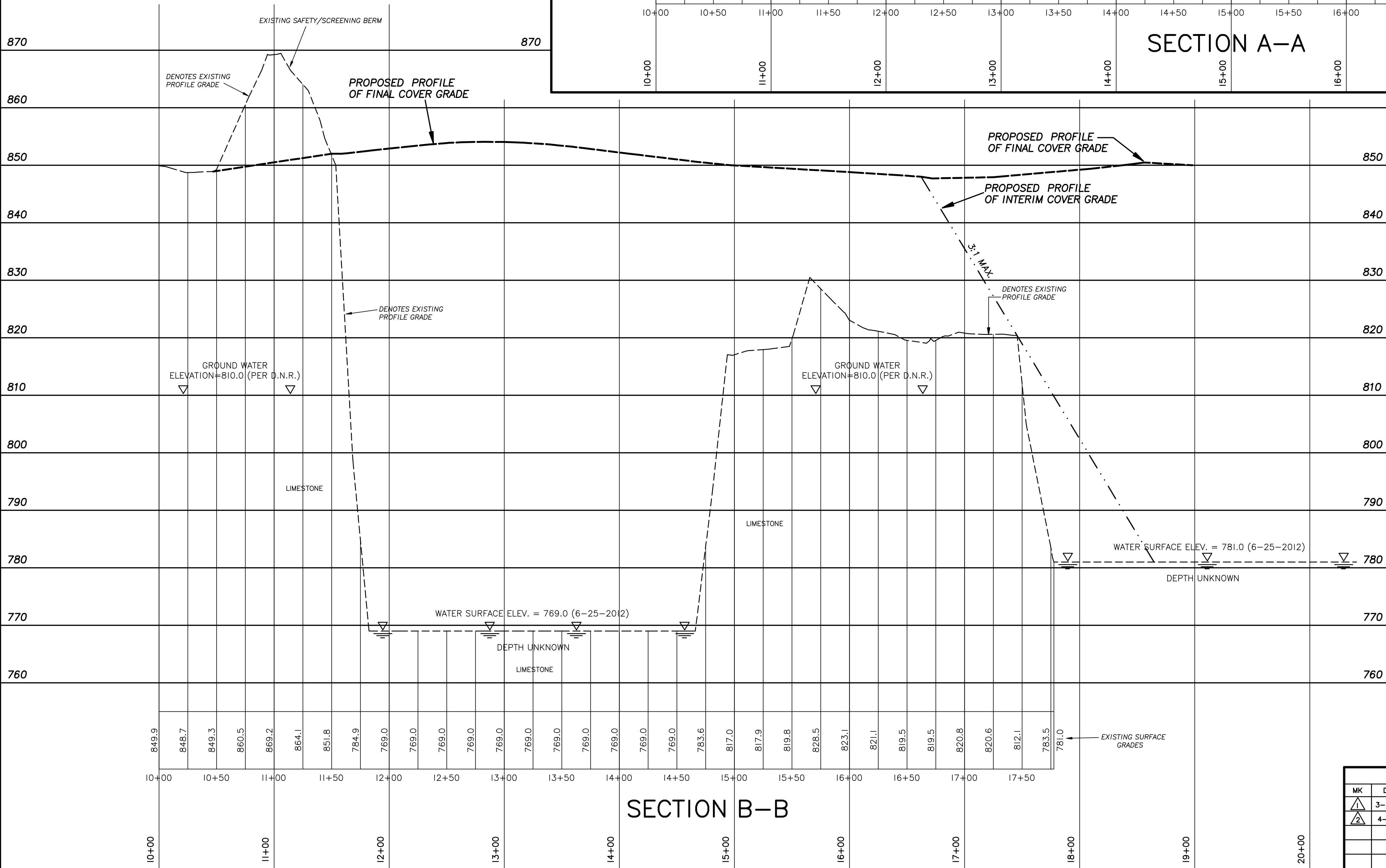
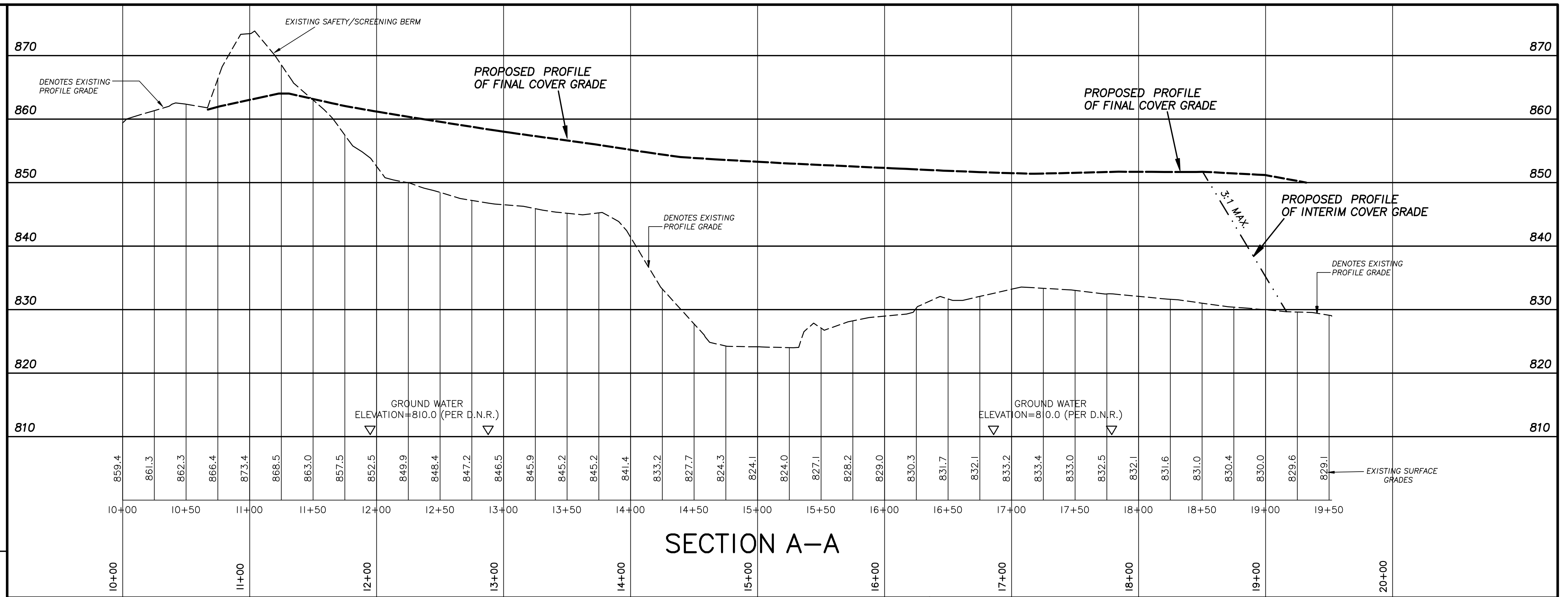
MK	DATE	BY	REVISION	CHKD
1	1-9-2013	J.G.S.	ADD GROUND WATER MONITORING WELL	J.W.H.
2	3-28-13	J.G.S.	VARIOUS REVISIONS	J.W.H.
3	4-5-13	J.G.S.	MINOR REVISIONS	J.W.H.

NSE
 NORTH SHORE ENGINEERING, INC.
 Consulting Engineers & Land Surveyors
 11489 N. Port Washington Rd., Lebanon, Wisconsin, 53048
 (920) 841-0400 • Fax: (920) 841-0827

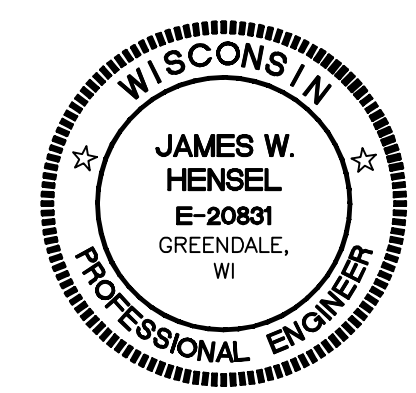
TOWN OF CEDARBURG
 R. & R. QUARRY - C.T.H. "I"
 WISCONSIN

Final Reclamation Grading Plan

DESIGNED: J.W.H. CHECKED: D.E.O. SHEET **4**
 DRAWN: J.G.S. SCALE: 1"=50'
 DATE: 7-10-2012 PROJECT: LS-3950 OF **8**



NSE NORTH SHORE ENGINEERING, INC.
Consulting Engineers & Land Surveyors
11433 N. Port Washington Rd., Mequon, Wisconsin, 53092
(262) 241-9400 • FAX: (262) 241-8337

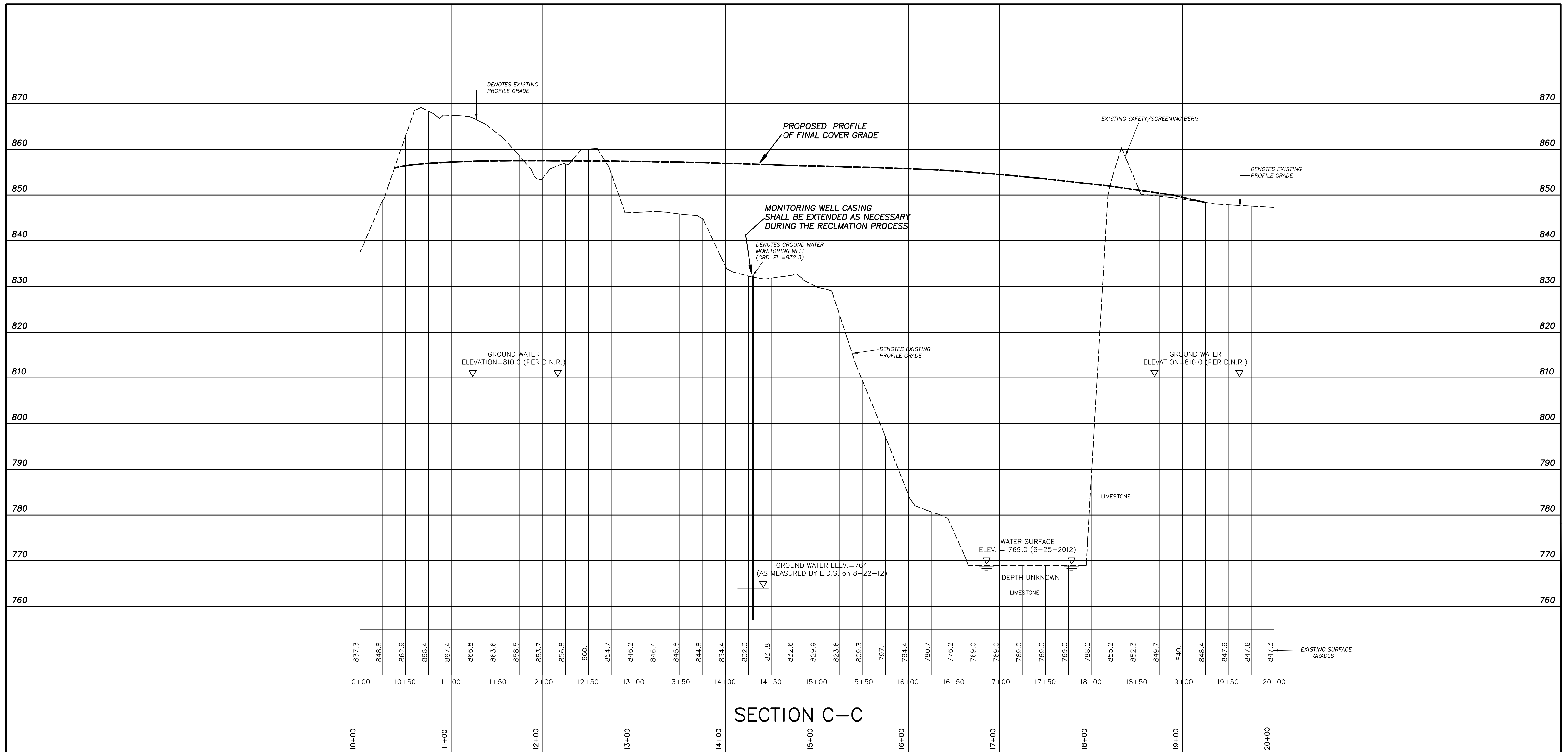


TOWN OF CEDARBURG
OZAUKEE COUNTY WISCONSIN
R. & R. QUARRY - C.T.H. "I"

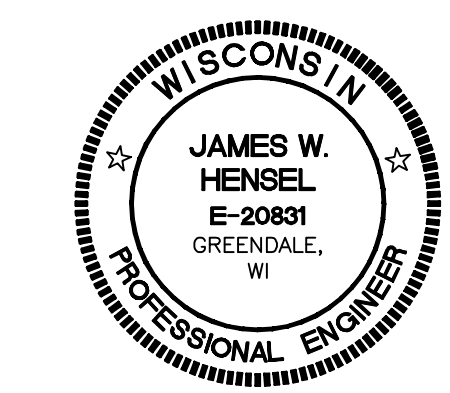
Geological Cross-Sections

REVISIONS				
MK	DATE	BY	REVISION	CHK'D
3	3-28-13	J.G.S.	REVISED FINAL COVER	J.W.H.
4	4-5-13	J.G.S.	ADD GROUND WATER ELEVATIONS	J.W.H.

DESIGNED: J.W.H.	DRAWN: J.G.S.	CHECKED: D.E.O.	SHEET 6 OF 8
DATE: 7-10-2012	SCALE: HOR. 1"=50' VERT. 1"=10'	PROJECT: LS-3350	
APPROVED:			



NSE NORTH SHORE ENGINEERING, INC.
Consulting Engineers & Land Surveyors
11433 N. Port Washington Rd., Mequon, Wisconsin, 53092
(262) 241-9400 • FAX: (262) 241-8337



REVISIONS				
MK	DATE	BY	REVISION	CHK'D
△	3-28-13	J.G.S.	VARIOUS REVISIONS	J.W.H.
△	4-5-13	J.G.S.	ADD GOUND WATER ELEVATIONS	J.W.H.

TOWN OF CEDARBURG

OZAUKEE COUNTY WISCONSIN

R. & R. QUARRY - C.T.H. "I"

Geological Cross-Sections

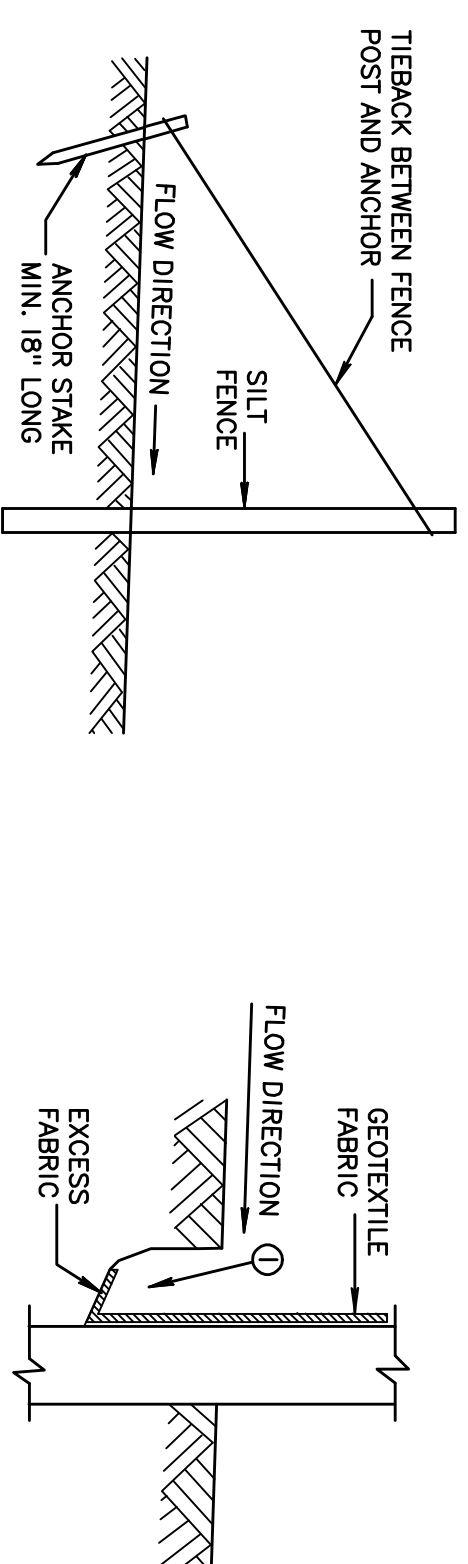
DESIGNED: J.W.H.	DRAWN: J.G.S.	CHECKED: D.E.O.	SHEET 7 OF 8
DATE: 7-10-2012	SCALE: HOR. 1"=50' VERT. 1"=10'	APPROVED:	
PROJECT: LS-3350			

A. GENERAL NOTES

- All required reclamation work operations shall conform to the requirements of the following.
 - Town of Cedarburg and Ozaukee County Codes and Ordinances.
 - Wisconsin Administrative Code – NR135
 - Wisconsin D.O.T. 2012 Standard Specifications for Highway and Structure Construction
 - Wisconsin D.M.R. Technical Standards
- The Owner and/or Operator shall be responsible for permit acquisitions and related costs thereon.
- The Contractor shall install and maintain the following temporary B.M.P.'s in accordance with current Wisconsin D.M.R. Technical Standards.
 - Silt Fencing per WDMR Tech. Std. 1056
 - Gravel access road shall serve as tracking pad
 - Seeding per WDMR Tech. Std. 1056 for Construction Sites
 - Grading and embankment work operations of fill materials shall be in accordance with Section 207 of the State D.O.T. Specifications.
 - Placement of approved fill materials shall be in 12-inch to 15-inch lifts. Compaction may be completed with grading equipment and truck traffic. Proof rolling shall be completed by loaded dump trucks.
 - All filling below the D.M.R. established and agreed upon ground water elevation of 81.00 shall be CLEAN FILL ONLY.
 - Topsoil shall be placed across the grading area to a minimum depth of 12-inches and in accordance with NR 135.10 and NR 135.11. Topsoil materials shall conform to Section 625 of State D.O.T. Specifications.
 - Soil cap shall be placed across the grading area, directly below the top soil layer to a minimum depth of 24-inches and shall consist of soils comparable or in like kind with Hochheim Loam, as referenced in the United States Department of Agriculture Soil Conservation Service report Dated September, 1970.
 - Re-vegetation shall be in accordance with Sections 625, 627, and 630 of Wisconsin DOT 2012 Standard Specifications for Highway and Structure Construction
 - Safety fencing shall be installed as shown on Sheets 3 and 4 of the plans. Fencing shall be 6' high chainlink with "KEEP OUT" signs posted every 50' along the length of the fence and maintained throughout reclamation of the quarry.
 - On site water testing was performed on 6-7-2012. Please reference reports dated 6-8-2012 and 6-12-2012, prepared by Synergy Environmental Lab, Inc. (See report included with reclamation plan)
 - Storm water runoff shall be maintained and directed to the Southeast corner of the site. This area will be utilized to store surface water throughout the filling operations. Surface water mitigation will be accomplished through evaporation and infiltration. At such time that the filling operations nears completion and a dewatering becomes necessary, a set of plans, designed by a Licensed Engineer, shall be provided to Ozaukee County Land and Water Management & the Wisconsin Department of Natural Resources for their approval.

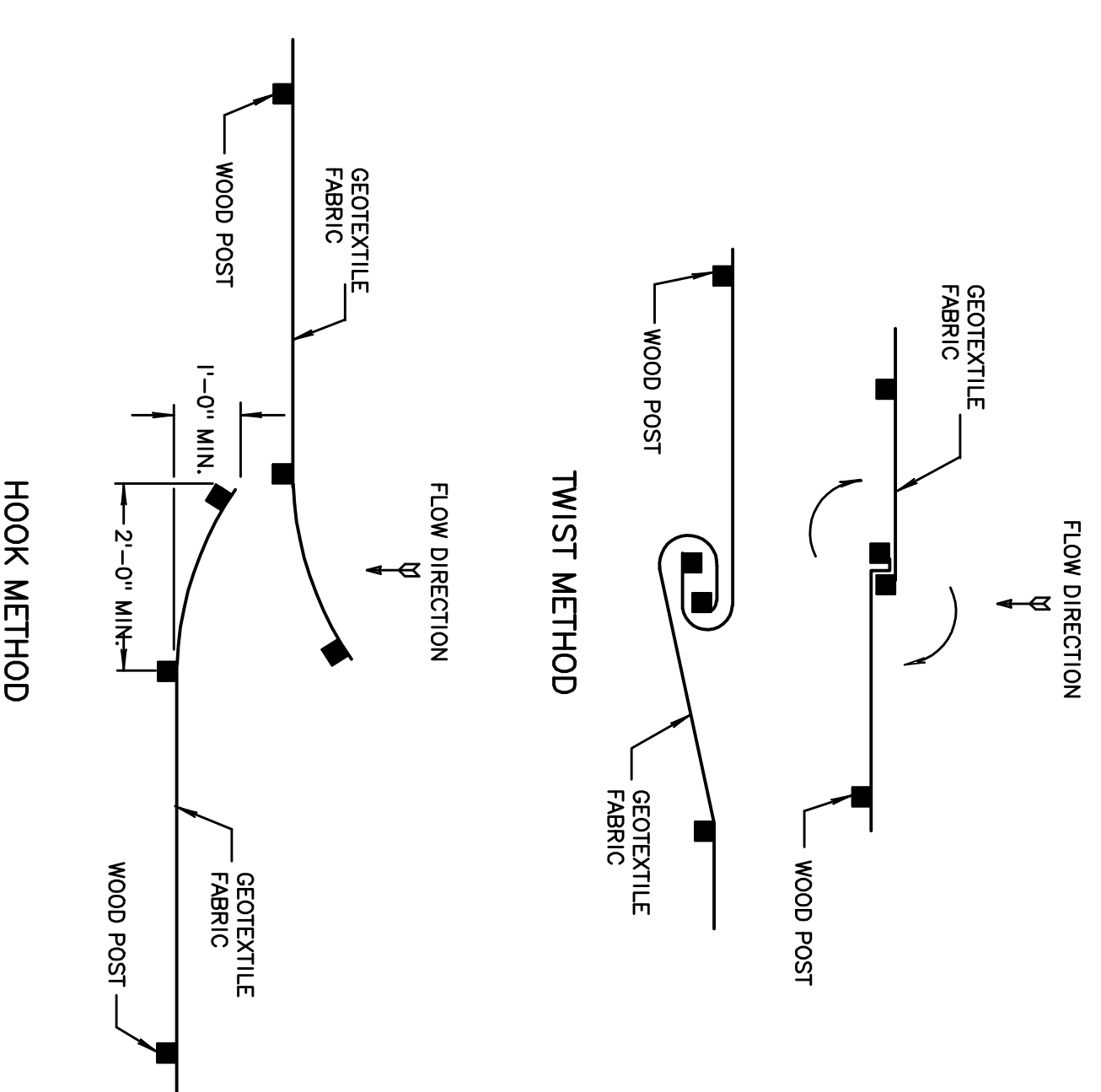
B. RECLAMATION MEASURES

- The reclamation measures and plan shall conform to the requirements of NR 135.19.
- Proposed earthwork and reclamation shall be as follows and as shown on Plan Sheets 4 and 5 of the Plans.
 - High walls will be eliminated with the proposed earthwork.
 - Finished slope angles generally vary from 1% to 2%, with slopes of drainage swales at 2 1/2 % to 4%. The interim reclamation grading plan as shown on Sheet 5 of the Plans has 3:1 side slopes at the northerly limits of the reclamation area. These 3:1 slopes are required to blend the final grading contours with existing post-mining lands.
 - Existing safety/screening berms shall be used as part of the fill for this reclamation plan at such point in the filling process that they are no longer needed for safety measures.
 - Prior to the placement of topsoil, all graded surfaces will be scarified for effective topsoil adhesion.
 - Rough and final grading will be completed such that ponding of water will be eliminated on the reclaimed surface.
 - All topsoil will be placed to match the proposed finished grades and contours of the grading plans.
 - Approved: February 16, 2005 Memorandum as prepared by Environmental & Development Solutions and as approved by the Town of Cedarburg and R & R Excavating & Bulldozing representative. The Memorandum of Understanding outlines the protocol for filling operations at the site. (See memorandum included with reclamation plan)
 - Slopes shall not exceed 3:1 for this reclamation plan
- Topsoil construction shall be as follows.
 - Erosion and sedimentation Best Management Practices (B.M.P.) shall be installed and constructed prior to topsoil removal/strippling.
 - The Contractor shall remove all topsoil and store topsoil materials onsite and as directed by the project inspector.
 - All topsoil storage piles shall receive erosion control protection measures as required. Additional protection shall include re-vegetation seeding and mulching. Seeding shall be restricted to natural prairie seed mixtures.
 - Topsoil will be redistributed onto the graded site in accordance with Section 625 of the D.O.T. Standard Specifications.
 - The re-vegetation plan shall be completed as follows.
 - All graded areas shall be re-vegetated and stabilized as soon as possible after site grading operations.
 - Seed materials shall be nursery grade and free of contamination by weed species.
 - Seed mixtures shall be as follows.
 - Seed Mixture #3 per: A Guide to Developing Reclamation Plans for Nonmetallic Mining Sites in Wisconsin Appendix C for wildlife and passive recreation. Seed rate application shall be as recommended in said reference or suppliers recommendations based on site conditions.
 - Seed Mixture #2 & #3 per: A Guide to Developing Reclamation Plans for Nonmetallic Mining Sites in Wisconsin Appendix C for stabilization, wildlife, grazing, and passive reclamation. Seed rate application shall be as recommended in said reference or suppliers recommendations based on site conditions.
 - It is estimated that successful reclamation shall take 2-3 growing years to reach the success standard of 70% uniform vegetative growth as described below.
 - Seed application shall take place anytime during the growing season pending suitable soil conditions. Seed application shall not take place between July 1 and august 15, immediately after a rainfall event; during windy conditions; or when ground conditions are dry.
 - Seeding applications shall conform to the requirements of said reference material or suppliers recommendations based on site conditions.
 - For the 3:1 slopes in the interim reclamation grading, hydroseeding, may be used. This procedure shall conform to the requirements of Section 627 of the D.O.T. Specifications. (Slope stabilization shall include the installation of Jute mat/mulch per Section 628 of the D.O.T. Specifications.
 - Mulching of all seeded areas shall be applied at a rate of between 1.0 and 1.5 tons per acre. All mulching materials and construction methods shall conform to the requirements of Section 627 D.O.T. Standard Specifications.
 - Standards for re-vegetation shall be as follows.
 - Re-vegetation success shall be determined based on the percent vegetative cover. Methods and Standard for said success shall consist of a 1 meter square or equivalent plot with a uniform vegetative cover of no less than 70% of said plot.
 - Inspections onsite by County personnel and Owner representative shall take place.
 - Reports that include quantifiable data on re-vegetation shall be provided by the Owner or Owner's agent to the County.
- The following erosion control plan shall be implemented as part of the reclamation plan.
 - After topsoil removal and stock piling, each area/stockpile shall have a perimeter silt fence installation with appropriate temporary seed mixture application.
 - Silt Fencing shall be installed as shown on Sheets 3 and 4 of the Plans and at such time that the filling operations have raised the grade enough to require the need for runoff protection.
 - Seeding and mulching operations shall be completed as soon as possible after grading operations.
 - The reclamation site shall be monitored, inspected, and maintained until vegetative cover is fully established.



SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)

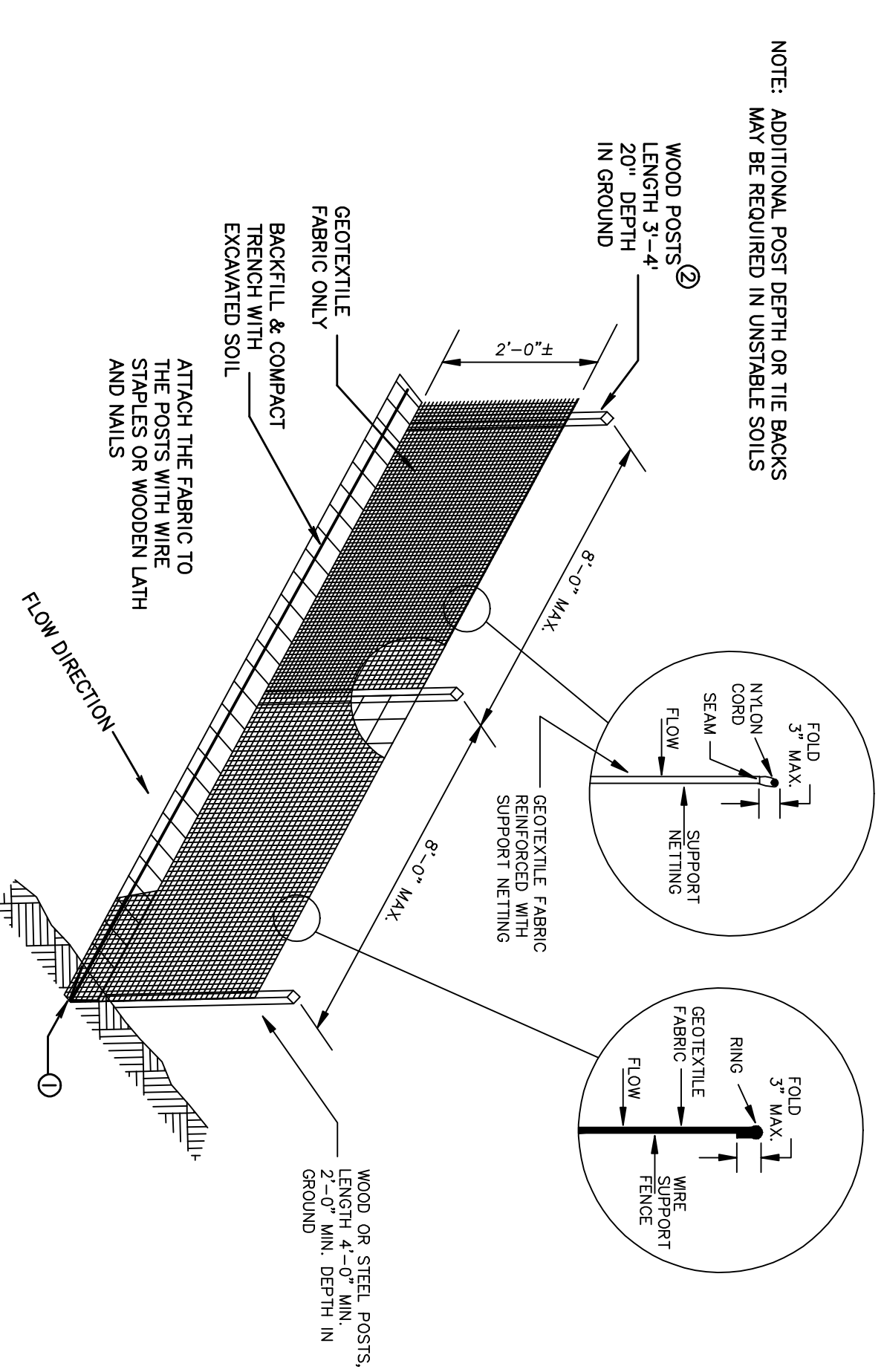
TRENCH DETAIL



JOINING TWO LENGTHS OF SILT FENCE ©

GENERAL NOTES — SILT FENCE

- TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL. IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS: A) OVERLAP THE END POSTS AND TWIST OR ROTATE, AT LEAST 180 DEGREES; B) HOOK THE END OF EACH SILT FENCE LENGTH.

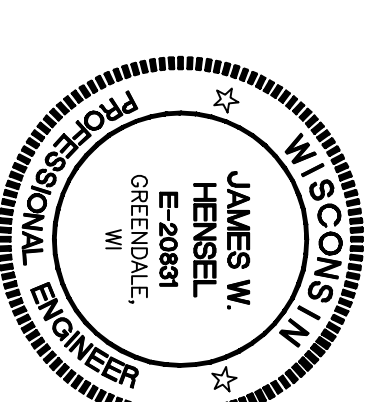


* NOTE: 8'-0" POST SPACING ALLOWED IF A WOODEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

Erosion Control Maintenance Plan

- Install and maintain temporary B.M.P.'s during the duration of the project. Remove all fencing only after vegetation is established onsite and after final Town approval of all onsite reclamation. Final stabilization is defined as an established uniform perennial vegetative cover with an overall site density of at least 80%.
- All temporary and permanent B.M.P.'s shall be inspected for performance and proper operation after all rainfall events of 0.5 inches or greater within a 24 hour period. The owners representative shall report and/or replace said B.M.P.'s as soon as possible where necessary.
- All BMP's shall be inspected and maintained in accordance with current DNR Technical Standards.
- Any sediment tracked onto a public road should be removed by mechanical means, not flushing, before the end of each working day.



REVISIONS			
NO.	DATE	BY	REVISION
1	3-28-13	J.G.S.	VARIOUS REVISIONS
2	4-5-13	J.G.S.	CLEAN FILL NOTE
		J.W.H.	
		J.W.H.	

DESIGNED:	J.W.H.	DRAWN:	J.G.S.	CHECKED:	D.E.O.	SHEET	8
DATE:	7-10-2012	SCALE:		PROJECT:	LS-3350	OF	8

Site Reclamation Details

OSHAKEE COUNTY
TOWN OF CEDARBURG
R. & R. QUARRY - C.T.H. "I"
WISCONSIN

NSE
NORTH SHORE ENGINEERING, INC.
Consulting Engineers & Land Surveyors
11453 N. Port Washington Trail, Wauwatosa, Wisconsin, 53092
(262) 541-9600 • FAX: (262) 541-9587



THIS CERTIFIES THAT A

NON-METALLIC RECLAMATION PERMIT

Has Been Issued To:

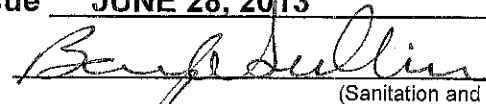
Owner: R & R EXCAVATING & BULLDOZING, INC.

Non-Metallic Mining Operator: SAME

Site Location: WEST SIDE OF HWY I (SHEBOYGAN ROAD)

Legal Description:

Part of the SE 1/4 of NE 1/4 of Section 22 In The Township 10 N-Range 21 E, Town of CEDARBURG; Parcel Identification Number 03-022-04-000.00 Date of Issue JUNE 28, 2013


(Sanitation and Health Specialist)

Any changes of planned project or change in ownership must be reported to the Ozaukee County Department of Land and Water Management or this permit may be revoked.

POST ON PREMISES IN PLAIN VIEW

121 W. MAIN STREET, P.O. BOX 994, PORT WASHINGTON, WI 53074-0994
Phone: (262) 284 8313 Metro: (262) 238-8313 Fax: (262) 284-8367 Metro Fax: (262) 238-8367