City of Mankato

ZONING REQUEST APPLICATION

10 Civic Center Plaza ~PO Box 3368, Mankato, MN 56002-3368

Phone (507) 387-8620FAX (507) 387-6845

For Office Use Only

File No. Date Existing Zoning PIN

Applicant Name: Jordan Sands Phone: (W) 507-385-8343 (H) 612-327-6227

Address: 1710 Roe Crest Drive Street, North Mankato, MN 56003

Legal Description of Parcel: Parts of Section 30 & 31, T109N, R26W. See Attachment C

Address of Property if Applicable: Multiple, See Attachment C

☑ **CONDITIONAL USE PERMIT AND PLANNED UNIT DEVELOPMENT**: Include the items listed below.

☐ **VARIANCE:** Indicate variance requested and hardship making variance necessary. Also furnish a site plan on 8-1/2" x 11" paper showing size of lot, size of structure, and distance from lot lines. Site plan shall be drawn to a tenth scale (1:10; 1:20, etc.)

☐ **REZONING & ORDINANCE AMENDMENT**: Please contact the Planning & Zoning Administrator for submittal requirements.

Summary of Request – Attach additional sheets if necessary.

Conditional use approval for amending and extending an existing permit to allow silica sand mining and the inclusion of additional properties. See Attachment B.

, Director of Prg. Mgmt

Signature of Applicant

* See Attachment A for property owner signatures

☑ a. A site plan depicts the location, dimensions, floor area, and the type of construction of the proposal.

☐ b. Floor plan showing specific uses within the building.

☐ c. The number, the size and type of dwelling units in each building, and the overall dwelling unit density.

☐ d. The proposed treatment of open spaces and the exterior surfaces of all structures, with sketches of proposed landscaping and structures, including typical elevations.

☐ e. Architectural graphics, including typical floor plans and elevations, profiles, and cross-sections.

☐ f. The number, location, and dimensions of parking spaces and loading docks, with means of ingress and egress.

☐ g. The proposed traffic circulation pattern within the area of the development including the location and description of public improvements to be installed, including any streets and access easements.

- [ ] h. The location of all fire hydrants on the property and the location of all fire hydrants within one-hundred fifty (150) feet of the property.
- [ ] i. The location and dimension of all accesses for fire and emergency vehicles.
- [ ] j. Statement of whether or not the building will be sprinkled and fire flow availability for the sprinkler system and fire hydrants.
- [ ] k. The location, intensity and design of exterior lighting.
- [ ] l. The location and purpose of any existing or proposed dedication or easement.
- [ ] m. The general drainage plan for the development tract.
- [ ] n. The location and dimensions of adjacent properties, abutting public right-of-ways and easements on the property.
- [x] o. Significant topographical or physical features of the site including existing trees.
- [x] p. Wetland delineations for all wetlands on the site.
- [ ] q. The location and proposed treatment of any historical structure or other historical design element or feature.
- [ ] r. Utility service plans (water, sewer, storm).
- [x] s. Landscaping plan.

Note: All Plans shall be drawn to a tenth scale (1: 10, 1:20, etc.)

Zoning Request Fee: Payable with Application (make check payable to City of Mankato):

- [x] $335 Conditional Use Permit
- [ ] $335 Rezoning
- [ ] $95 Variance for one-and two-family dwelling
- [ ] $325 Variance (other uses)

Hearing Notice Fee: Payable Prior to Planning Commission/Administrative Hearing: _____notices X $2.00/notice =

$ _____.

Public hearing notices are billed to applicant and **must** be paid prior to the Planning Commission/Administrative Hearing.

Ltr Sent **STATUS OF REQUEST ACTIVITIES:**

- [ ] Notification of Land Use Request
- [ ] Billing for Notifications
- [ ] Billing for Notices PAID
- [ ] Planning Commission/ Administrative Hearing
- [ ] City Council Hearing

Planning Commission: [ ] Approved [ ] Denied [ ] Tabled
Comments on Action: _____

City Council: [ ] Approved [ ] Denied [ ] Tabled
Comments on Action: _____

_____

ATTACHMENT A

Lime Township Conditional Use Permit Application
Jordan Sands, LLC

APPLICATION & PROPERTY OWNER SIGNATURE PAGE

As to the properties indicated, I hereby certify with my signature that all data contained in the Application as well as all supporting data are true and correct to the best of my knowledge.

Signature of Property Owner:

Coughlan Quarries, LLC

By: James P. Coughlan 9-10-12

Its: Officer, Treasurer

Owner of parcels: R40.04.30.400.014 and R40.04.30.400.013

As to the properties indicated, I hereby certify with my signature that all data contained in the Application as well as all supporting data are true and correct to the best of my knowledge.

Signature of Property Owner:

Mankato-Kasota Stone, Inc.

By: James P. Coughlan 9-10-12

Its: Treasurer

Owner of parcels: R40.04.30.400.006

As to the properties indicated, I hereby certify with my signature that all data contained in the Application as well as all supporting data are true and correct to the best of my knowledge.

Signature of Property Owner:

OMG Midwest (dba Southern Minnesota Construction Company, Inc)

By:

Its: GM

Owner of parcels: R40.04.31.200.005, R40.04.31.200.006, R40.04.31.200.007, and R40.04.30.300.005

ATTACHMENT A

Lime Township Conditional Use Permit Application
Jordan Sands, LLC

APPLICANT & PROPERTY OWNER SIGNATURE PAGE

As to the properties indicated, I hereby certify with my signature that all data contained in the Application as well as all supporting data are true and correct to the best of my knowledge.

Signature of Property Owner:

Coughlan Quarries, LLC

Robert J Coughlan

By: ROBERT J. COUGHLAN

Its: Co-Chief Manager

Owner of parcels: R40.04.30.400.012, R40.04.29.300.006, R40.04.31.000.006, and R40.04.31.200.008.

As to the properties indicated, I hereby certify with my signature that all data contained in the Application as well as all supporting data are true and correct to the best of my knowledge.

Signature of Property Owner:

Holtmeier Construction, Inc

Joe Holtmeier

By: Joe Holtmeier

Its: V. P.

Owner of parcels: R40.04.31.200.026 and R40.04.32.100.034.

As to the properties indicated, I hereby certify with my signature that all data contained in the Application as well as all supporting data are true and correct to the best of my knowledge.

Signature of Property Owner:

Southern Minnesota Construction Company, Inc

By: Eric Leverson

Its: General Manager

Owner of parcels: R40.04.31.200.005, R.40.04.31.200.006, R.40.04.31.200.007, and R.40.04.32.100.001

ATTACHMENT B

Lime Township Conditional Use Permit Application
Jordan Sands, LLC

INDUSTRIAL SAND MINING AND PROCESSING

This Summary of Request serves to address the requirements of Section 19—Extracting, Stockpiling and Processing of Minerals and Materials and other applicable sections of the Lime Township Zoning Ordinance.

1.0 Introduction

1.1. Summary of Request

Jordan Sands, LLC (Project Proposer) proposes to repurpose and develop existing mining operations and to construct an industrial sand processing facility on property located in Lime Township in the northern portion of Blue Earth County. The Project will be developed on four parcels encompassing 153.6 acres (Project Area). The Project Area is situated approximately ¾ miles east of the Minnesota River and just outside of the Mankato city limits. Approximately 40 acres of the Project Area is dedicated to processing, approximately 70 acres of the Project Area will be mined, and approximately 44 acres of land will be un-mined setback buffer areas.

County Road 5 runs northeast-southwest through the Project Area and the Union Pacific (UP) railroad operates a mainline that runs along the southeastern portion of the Project Area. *Figure 1 – General Project Location*, illustrates the location of the Project Area with respect to Blue Earth County. *Figure 2 – USGS Quad Map Excerpt*, illustrates the location of the Project Area with respect to surrounding features.

The Project Area was selected after examination of suitable land in the area that was able to meet the needs of the Project. All four parcels have been part of past mining operations or are currently being mined for construction aggregates and dimensional stone. The Project will be a continuation of mining these materials with the addition of sandstone mining and construction of the sand processing facilities. *Figure 3 – Site Plan* illustrates the proposed site layout.

An Environmental Assessment Worksheet (EAW) was prepared for the project[i]. The Lime Township Board, acting as the Responsible Government Unit (RGU) for the project, voted 3-2 on Tuesday, May 14, 2013 to approve the Findings of Fact as detailed in the Record of Decision[ii] declaring that the project does not have the potential for significant environmental effects and does not require further environmental study.

Figures submitted with the application include:

Figure 1 – General Project Location
Figure 2 – USGS Quad Map Excerpt
Figure 3 – Site Plan
Figure 4 – Project Area Ownership and Property Tax Identification Numbers
Figure 5 – City of Mankato Land Use Plan
Figure 6 – Land Use Map
Figure 7 – Site Topography
Figure 8 – Site Stratigraphy
Figure 9 – Mine Plan
Figure 10 – Typical Mining Cross Section
Figure 11 – Jefferson Quarry Location Map
Figure 12 – Wet Plant Elevations
Figure 13 – Stockpile Elevations
Figure 14 – Dry Plant Elevations
Figure 15 – Land Cover (before)
Figure 16 – Land Cover (after)

1.2. About Jordan Sands, LLC

The Jordan Sands' management team consists of three experienced executives responsible for all aspects of the business, including corporate and financial management, geology and mine planning/development, mining and processing operations, quality assurance and control, environmental, health and safety, marketing and sales processes, and logistics. The team is listed below:

Table 1 - Jordan Table 1. Jordan Sands Management Team

Name and Title	Contact Information
Scott Sustacek, Chief Executive Officer	1710 Roe Crest Drive North Mankato, MN 56003 P: 507-385-8343 s.sustacek@jordansands.com
Bill Rouse, COO, CFO	1710 Roe Crest Drive North Mankato, MN 56003 P: 507-385-8409 b.rouse@coughlancompanies.com
Brett Skilbred, Director of Project Development	1710 Roe Crest Drive North Mankato, MN 56003 P: 507-385-8341 b.skilbred@jordansands.com

1.3. Uses for Industrial Sand

Industrial sand is a term normally applied to high purity silica sand products with closely controlled sizing. It is a more precise product than common concrete and asphalt gravels. Silica is the name given to a group of minerals composed solely of silicon and oxygen, the two most abundant elements in the earth's crust. In spite of its simple chemical formula, SiO_2, silica exists in many different shapes and crystalline structures.

Quartz is the most common silica crystal and the second most common mineral on the earth's crust. It is found in almost every type of rock; igneous, metamorphic and sedimentary. While quartz deposits are abundant, and quartz is present in some form in nearly all mining operations, high purity and commercially viable deposits occur much less frequently. The Jordan Sandstone is a proven resource of high purity, high quality industrial sand. Silica sand deposits are most commonly surface-mined in open pit operations, but dredging and underground mining are also employed. Extracted ore undergoes considerable processing to increase the silica content by reducing impurities. It is then dried and sized to produce the optimum particle size distribution for the intended application.

The chemical purity and particle size distributions within the Jordan Sandstone are aligned with several end use markets. The sand can be employed as the primary component in glass making. Chemical purity is the primary determinant of glass color, clarity, and strength. The sand can also be employed in the filtration of drinking water, the processing of wastewater, and the production of water from wells. Uniform grain sizing produces efficient filtration bed operation while the inert properties of silica keep it from degrading or reacting with acids, contaminants, volatile organics or solvents. The majority of the grain sizes within the Jordan Sandstone formation align with the specifications associated with pressure pumping gas and oil wells. The silica sand is used as a proppant in the hydraulic fracturing process to make wells more efficient and productive.

1.4. Environmental Consultants

Jordan Sands is teaming up with industry leading companies, experts and consultants to guide the mine development process. Furthermore, Jordan Sands takes their commitment and stewardship of the environment seriously. The company has focused on using existing quarries or industrial lands for its mining facilities to minimize environmental impacts. The company retained environmental specialists to lead Jordan Sands' environmental regulatory compliance and planning, and include the following:

Table 2 - Mining Engineering and Environmental Consultants

Company	Area of Expertise	Key Contacts
Sunde Engineering 10830 Nesbitt Avenue South Bloomington, MN 55437-3100	Mine Planning; and Environmental Compliance	Kirsten Pauly, PE PG
Barr Engineering Co. 4700 West 77th Street Suite 200 Minneapolis, MN 55435	Water Modeling; and Hydrogeology	James S. Aiken, PG RG Ellen Considine Jonathon Carter
Wenck Associates 1802 Wooddale Dr Suite 100 Woodbury, MN 55125	Air Modeling; Air Monitoring; and Meteorology	Lori Bartels, PE Shannon Olsen
David Braslau 1313 Fifth Street S.E., Suite 322 Minneapolis, MN 55414 P: (612) 331-4571	Noise Modeling; Noise Mitigation; and Environmental Compliance	David Braslau

Following is a more in-depth discussion of the proposed alterations and future use of the parcels, including operation details, safety, as well as local community and economic impact from the Company's operations.

2.0 Property Descriptions

2.1. Project and Project Area Information

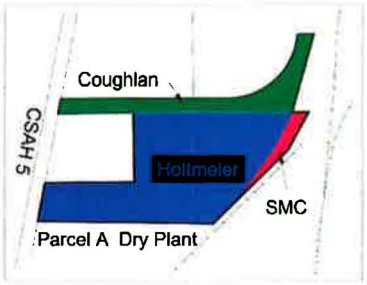
The four parcels involved in the Project will be individually referred to as Parcel A, Parcel B, Parcel C and Parcel D, and collectively referred to as the Project Area. Most of the parcels include all or portions of more than one tax parcel and some have multiple owners. *Figure 4 – Project Area Ownership and Property Tax Identification Numbers* illustrates the four parcels and associated Property Identification Numbers (PIDs). The ownership of each of these parcels and a description of proposed activity on each parcel is as follows:

Parcel A: Dry Plant (28.9 Acres)

On Parcel A, the Project Proposer will construct and operate a dry plant to dry and sort sand, store wet sand concentrate in a stockpile, store processed sand in storage silos, and construct rail sidings and rail loading areas to ship the sand via rail line to market. The parcel consists of several individual tax parcels (PID R40.04.31.200.026, R40.04.32.100.034, R40.04.30.400.012, R40.04.29.300.006, and R40.04.32.100.001). The individual tax parcels are

owned by three separate entities: Holtmeier Construction, Inc. (Holtmeier), Coughlan Quarries, LLC (Coughlan), and OMG Midwest, Inc. dba Southern Minnesota Construction Co Inc. (SMC).

All of Parcel A is zoned industrial. A dolomitic limestone quarry for crushed rock is currently operated by Holtmeier over the majority of Parcel A. The operation includes dewatering the Jordan aquifer to the base of the limestone and the subsequent blasting, crushing, stockpiling, and hauling of material to project sites. In addition, the operation engages in the recycling of bituminous and concrete material on site. On average 100 trucks per week come and go from the site. Mining activity on this parcel has been on-going for approximately seven years. A CUP for mining was granted in 2004 (CYL 10-04). The original CUP was amended in 2011 to allow for bituminous and concrete material recycling. The Coughlan and SMC portions of Parcel A are currently open space and wetlands, and agricultural fields. Parcel A has access to CSAH 5 and the UP mainline runs along the eastern boundary of the parcel.



Parcel B: Wet Plant (10.6 Acres)

On Parcel B, the Project Proposer will construct and operate a wet plant to wash and sort sand, store raw mined wet sand in a stockpile, and slurry wet concentrate to either winter stockpiling or the dry plant for stockpiling/processing. The parcel consists of two individual tax parcels that are being combined as part of the sale to Coughlan (PID R40.04.31.200.008 and R40.04.31.100.011).

Parcel B is zoned industrial. Parcel B originally included additional area, portions of which were operated as a dolomitic limestone quarry for crushed rock and then backfilled with construction debris as part of a demolition landfill. Most recently, Parcel B is used by Westman Trucking as a heavy equipment storage lot for new tractors and trailers.

Parcel C: Mining and Winter Stockpile (26.0 Acres)

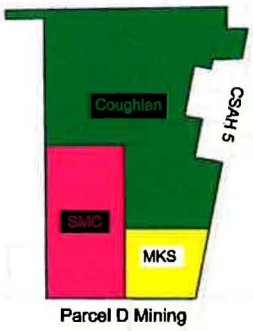
On Parcel C, the Project Proposer will mine sandstone and use a portion of the parcel to stockpile wet coarse sand concentrate. The parcel consists of several individual tax parcels (PID R40.04.31.200.005, R40.04.31.200.006, and R40.04.31.200.007). The individual tax parcels are owned by SMC.

Parcel C is zoned industrial. A previous dolomitic limestone quarry for crushed rock was operated on Parcel C. The quarry was mined under pre-existing nonconforming land use exemption status starting as early as 1938. The site is currently used by the Blue Earth County Sheriff and City of Mankato Public Safety Department as a firearms training facility and shooting range. The Project proposes to mine up to 22 acres on Parcel C.

Parcel D: Mining: (88.1 Acres)

On Parcel D, the Project Proposer will continue to mine construction aggregates and dimension stone and will further develop mining operations to also include mining of the Jordan Sandstone. Mined raw sand will be initially processed in the mine through a small crushing and screening circuit. Following this, sand will be combined with water and sent via slurry pipe to the wet plant for washing. Parcel D consists of several individual tax parcels (PID R40.04.30.400.014, R40.04.30.400.013, R40.04.30.400.006, and R40.04.30.300.005). The individual tax parcels are owned by three separate entities: Coughlan, Mankato-Kasota Stone, Inc (MKS) and SMC.

The southerly portion of Parcel D is zoned industrial (PID R40.04.30.300.005, R40.04.30.400.006, and southerly portion of R40.04.30.400.014), while the northerly portion of Parcel D is zoned rural conservation (PID R40.04.30.400.013 and the northerly portion of R40.04.30.400.014). The Coughlan and MKS property are subject to an existing CUP for construction aggregate and dimension stone mining



operations. Mining on the Coughlan and MKS properties began in 2005. Permitted mining activities include mining and processing of both construction aggregates and dimension stone.

The SMC property was mined under preexisting non-conforming land use exemption status starting as early as 1938. The SMC parcel extends beyond the twenty acres included in this Project. In 1983, the Minnesota Pollution Control Agency (MPCA) issued a permit for the construction and operation of a demolition debris land disposal facility on the entire SMC property which also includes Parcel B. The Project Area is not located within the approved waste fill limits. The SMC property within Parcel D is currently un-reclaimed with a created waterbody extending across a portion of the property. The Project proposes to mine up to 48 acres on Parcel D.

2.2. Current and Recent Land Use of the Project Area

The Project Area consists of parcels both east and west of CSAH 5. The current and recent land use of the parcels included within the Project Area is provided below.

Parcel A (Dry Plant)

The existing and past land use of this parcel includes an aggregate mining operation that was originally issued a CUP in 2004 which was later amended in 2011. The mining operation includes 14 acres of mining area as well as equipment storage areas. Permitted activities include blasting, crushing, quarry dewatering, recycling of bituminous and concrete, stockpiling and mining to a depth of 60 feet. This site has been mined into the water table and operates under an existing DNR water appropriations permit for dewatering of the active quarry and a National Pollutant Discharge Elimination Systems (NPDES) permit regulating stormwater and dewatering discharge. The site has been actively mined since 2004. The material produced at this site is hauled by truck to CSAH 5. The majority of haul trucks on CSAH 5 head south towards the City of Mankato. Current hours of operation on the property as regulated by the CUP are 6 am – 6 pm Monday through Friday and 7 am – 12 pm on Saturdays.

Parcel B (Wet Plant)

This parcel was part of a larger parcel of land that was recently split and the northern portion purchased by Coughlan Quarries for purposes of constructing the wet plant. The property is zoned industry and past land use of the larger parcel has included quarrying and landfilling activities. The portion of the parcel that was sold and will be utilized for the wet plant was not quarried or filled, rather it was cleared and used as a staging area for these other site activities in the late 1980's or early 1990's. Historical aerial photographs indicate that by 2005, a large parking area and access roads were established over previously disturbed portions of the parcel. It is currently used as a heavy equipment storage area. Agricultural fields remain in the northeastern 1/3 of the property. This parcel has two access points onto CSAH 5. One is along the southern portion of the parcel, directly across from North Industrial Road and the other is from the northern portion of the parcel onto 230th Lane east to CSAH 5.

Parcel C: (Mining and Winter Stockpile Area)

This parcel is an inactive mining operation. Based on historic aerial photographs, mining began on this parcel sometime in the late 1930s, prior to the adoption of the Lime Township Zoning Ordinance regulating mineral extraction. Mining extended below the water table to just above the top of the Jordan Sandstone over much of eastern portion of the parcel. Currently there is a seven to eight foot tall berm running along CSAH 5 with a 30-35 foot highwall on the inside of the berm that extends down to a created waterbody situated along the eastern portion of the parcel. There is a three to five foot high berm along the north edge of the property along 231st Lane with a 35 foot highwall along the backside of the berm down to the created

waterbody as well. The parcel is unreclaimed, however the Blue Earth County Sheriff's Department uses a portion of this parcel as a firearms training facility. One building is located in the southeastern corner of Parcel C. This building is currently used for parts storage by an equipment supplier.

Parcel D (Mining)

This parcel is an active mining operation. Portions of the site are subject to a CUP permit issued by the City of Mankato in August 2000. Activities allowed under the current CUP include extraction, blasting, stockpiling and processing of the Oneota Dolomite. The site is subject to an approved reclamation plan and a reclamation bond has been posted with Lime Township. The upper portion of the Oneota Dolomite is blasted and processed for construction aggregates and the lower portion is cut and quarried for use as dimension stone in the building industry. This site operates under a MPCA NPDES permit. A screening berm has been established between adjacent residential land uses and the perimeter of the approved mining area.

The southwestern portion of Parcel D (the twenty acres owned by SMC) and adjacent land to the west and distant south has been quarried since the 1880's. The Brielmaier family purchased the operations in 1951, continuing mining and processing on the property. SMC purchased the property in 1998 and has continued to mine the property since that date. Oneota Dolomite is crushed and sold to the construction and agricultural industries. Processed material is hauled to market on CSAH 5 through property to the south and west of Parcel D. Past mining to the top of sandstone resulted in the creation of a waterbody in the very southwestern portion of Parcel D that extends south of the parcel boundary.

2.3. Current and Recent Past Land Use of Adjacent Land

Surrounding land uses are predominantly industrial in nature and are zoned to support such use. The Industry District in Lime Township, as defined in the previously discussed zoning ordinance, is intended to allow for the continuation of existing industrial development and uses in Lime Township.

The Mankato City limits are located just south of the Project Area. All of the adjacent property within the northern portion of the City limits is designated Heavy Industrial on the City of Mankato's Land Use Plan (see *Figure 5 – City of Mankato Land Use Plan*). This area is also zoned M-2 Heavy Industrial District, which is intended to provide sites for a range of intensive manufacturing and industrial uses under controls that minimize any adverse effects on property in neighboring residential, business, or commercial districts."

Industrial uses near the project include the following operations (see *Figure 6 – Land Use Map*):

- Alter Metal Recycling – provides metal recycling and railcar services. There is a rail spur and several processing facilities for scrap metal preparation. Included is an approximately 60 foot tall processing tower.
- Archer Daniels Midland Company – operating a large grain storage silo and processing company. There are more than 20 grain silos approximately 60 feet tall as well as a stack approximately 120 feet tall. Additionally the processing plant includes numerous conveyor systems, storage buildings, semi-truck parking areas, loading and unloading facilities.
- Westman – is a truck sales and leasing company. Westman has a building devoted to its semi-truck tractor mechanic and maintenance facility with a large parking lot on this property.
- New Vision Feed – operating a feed storage facility and warehouse complex. There are two large grain silos and processing facility on site. The grain silos and associated structure are approximately 75 feet tall.
- Calpine Gas Peaking Energy Plant – a 375-megawatt peaking natural gas power plant. Currently in discussion to operate as a base load plant 24 hours a day 365 days a year.

- Wells Concrete Products Ready-Mix Plant – produces ready-mix concrete for construction projects. The facility stores the ready-mix supplies and delivery vehicles onsite. Additionally, the ready-mix facility has two silos approximately 40 feet tall.
- TrustServ – warehouse facilities, with more than 50 semi-truck bay doors, capable of handling 50 semi-truck deliveries at a time. Additionally, the lot is capable of storing at least that many semi-truck trailers.
- Volk Trucking Company – storage lot for more than 100 semi-trucks with trailers and maintenance facility.
- Budweiser Distribution Center – with 10 semi-truck bay doors for deliveries.
- Wilmarth Power Plant – burning nearly 425,000 tons of municipal waste each year and converting that to energy.
- Jones Metal Products – metal fabricating and processing company.
- Agristarand – fiber processor. Converts raw fiber feedstock into a number of particle board and door core products.
- Union Pacific – Mankato switching yard. Shipping industrial and agricultural products from the Mankato area to markets across the country and currently expanding their yard facilities by adding a second yard adjacent to the Project Area.
- Other uses in the Mankato industrial complex include numerous manufacturing and processing facilities, storage lots, warehouse and distribution, manufacturers, and large dimension-stone quarries.

Properties north of the Project Area include low-density rural residential and agricultural properties. There are also a few residences located west of Parcel C. The residential lots typically range in size from 1-3 acres and are served by private wells and septic systems. Section 19 Extraction, Stockpiling and Processing of Materials, of the Lime Township Zoning Ordinance establishes a 200 foot mining setback from any adjoining residential district. The August 2000 CUP allowing mining and processing activity on Parcel D contains a condition that increases the required setback distance to 500 feet from adjoining residential properties. The Project is not requesting any change to the setbacks established in the August 2000 CUP.

The property immediately south of Parcel D is owned and operated by the Pilgrim's Rest Cemetery. The southeasterly 10 acres of Parcel D was purchased from the cemetery with a buy back clause so once it is mined and reclaimed, the cemetery may expand to the north. Active mining has been occurring without incident for years adjacent to the Pilgrims Rest Cemetery, including both the current permitted operations immediately north, as well as the grandfathered SMC operations immediately west and northwest of the cemetery.

2.4. Project Compatibility with Adjacent and Nearby Land Uses

The project is compatible with the adjacent and nearby uses which are predominantly industrial uses and mining operations. The Industry District, as denoted on the township zoning map, is intended to allow for the continuation of existing industrial development and uses within Lime Township. The majority of the Project Area is within the Industry District with only the very northern portion of the Project Area within the Rural Conservation District. Industrial sand mining and processing are allowed conditional uses in both the Industry and Rural Conservation Districts under the Township's zoning ordinances as conditional uses. Mineral extraction and processing has a history in the area that extends back to the 1930's. Lime Township and the City of Mankato have planned for and approved many different industrial uses in the area.

Given the past and current uses of the Project Area and the surrounding and adjacent uses of other parcels, industrial sand mining and processing is a compatible land use. The Project will meet or exceed all of the lot standards and general regulations set forth in the Lime Township Zoning Ordinance, including the standards set forth in Section 19, Extraction, Stockpiling and Processing of Minerals and Materials. These standards have been established to minimize any adverse effects on property in the neighboring residential, business, or commercial zoning districts and protect the health and welfare of the community. The portion of the project that is adjacent to rural residential land uses, which may present a conflict in land use, has already been approved for mining activity. The Project is designed to mitigate potential land use conflicts with increased setbacks from residential

property, screening berms, compliance with State noise standards, blasting standards, groundwater monitoring and planned reclamation.

2.5. Easements and Other Encumbrances

A 50 foot pipeline easement runs through the eastern and southern portion of Parcel B. A 75 foot NSP easement runs through the northern portion of the Parcel B. A 15 foot electrical distribution easement runs through Parcel B as well. These utilities are not expected to impact the proposed operations and the Project is designed to avoid impact of the utilities.

Blue Earth County and the City of Mankato currently utilize the mined area of the McClure Quarry as a firearm training range. The annual contract between SMC and the County recently terminated and was not renewed. However, the County and City can use the facility on a month-to-month basis until another use for the property requires relocation. Jordan Sands will work with the County, the City, and the township to determine when and where the firearms training range will be relocated to another site to be determined. The possibility exists that another property owned by Coughlan Companies could be utilized short term until a permanent facility can be found.

3.0 Proposed Project and Future Use of Property

Current and past mining in the Project Area has included the production of limestone/dolomite from the Oneota Dolomite for construction aggregates and dimensional stone. The Project involves the continuation of mining these materials as well as mining silica sand in the Jordan Sandstone, which underlies the limestone deposits. The total mineable area is approximately 70 acres (Mine Site).

Market specifications for silica sand must meet strict standards, including silica content, grain size sphericity, roundness and strength, which few sandstone deposits in the United States can meet. Geologically, older sandstones of Cambrian age, like the Jordan Sandstone, seem to be the most suitable for producing industrial sand. The quartz grains of the Jordan Sandstone have been abraded through fluvial and other high energy geologic processes resulting in the correct shape, size and purity needed to meet current market specifications. The Jordan Sandstone is a proven source of high quality silica sand.

3.1. Geologic Setting

The Project Area is situated on a glacial river terrace; approximately 30 feet above the floodplain of the Minnesota River (see *Figure 7 – Site Topography*). Over most of the area, a thin layer of unconsolidated material (a mix of sand and gravel and clay) rests on top of bedrock. The lower unit of the Prairie du Chien Group, the Oneota Dolomite, makes up the first bedrock subcrop across most of the Project Area.

The Oneota Dolomite is a finely crystalline dolostone that is 60-100 feet thick as described in the Blue Earth County Geologic Atlas[1]. The Oneota Dolomite consists largely of carbonate components, characterized by thin to very thick beds of dolostone, with negligible amounts of sandstone and other silica bearing rocks. Locally a layer of siltstone 1-3 feet in thickness, informally referred to as the Blue Earth Siltstone, forms a relatively impermeable layer near the base of the Oneota Dolomite. Based on area well logs and exploratory borings on the properties, the Oneota Dolomite is typically 25-30 feet thick within the Project Area due to past erosion of the uppermost portion of this bedrock unit. The Oneota Dolomite has been entirely eroded away in the southwestern portion of the Project Area, where a buried valley downcut through the dolomite and underlying bedrock formations.

[1] Geologic Atlas of Blue Earth County, MN. Plate 2 – Bedrock Geology. County Atlas Series, Atlas C-26, Part A.

The Jordan Sandstone underlies the Oneota Dolomite over the majority of the Mine Site, and forms the bedrock subcrop in the very southwestern portions of the site. The Jordan Sandstone is approximately 80 to 100 feet thick within the Mine Site. It contains two facies, a medium-to coarse-grained quartz sandstone and fine-grained feldspathic sandstone with lenses of siltstone and shale. The upper 45-50 feet, containing the coarser portion of the Jordan Sandstone, will be mined.

Beneath the Jordan Sandstone, additional bedrock units are found. From uppermost to lowermost, the Jordan Sandstone is underlain by the St Lawrence Formation, the Tunnel City Group (formerly known as the Franconia Formation), the Wonewoc Sandstone (formerly known as the Ironton and Galesville Sandstones), and the Eau Claire Formation. The St. Lawrence Formation is a dolomite-cemented, very fine-grained sandstone and siltstone. The St. Lawrence Formation contains interbedded laminated green shale and pink to red, finely to coarsely crystalline dolostone, the latter being particularly abundant in the lower one-half of the formation. To the west of the Mine Site, the Minnesota River flows through a bedrock valley, which according to the Blue Earth County Geologic Atlas is down cut through the Jordan Sandstone and St. Lawrence Formation and into Tunnel City Group. [Details of the site stratigraphy are provided in *Figure 8 – Site Stratigraphy*].

3.2. Hydrogeologic Setting

The elevation of the water table varies from approximately 800 feet above mean sea level (msl) in the eastern portion of Parcels C and D to approximately 790 feet above msl in the along the western portion of the Project Area. Based on groundwater level data from existing on-site and adjacent wells, groundwater generally flows east to west towards the discharge region of the Minnesota River. In areas where limestone has been previously quarried, groundwater is exposed creating the present waterbodies in parcels A, C and D.

The Jordan aquifer is confined over most of the Mine Site, due to the presence of the Blue Earth siltstone. Current excavations remain dry to the top of the siltstone, but when the siltstone is penetrated, as is the case when a well is drilled, the water rises to approximately 15 feet above the top of the Jordan Sandstone. Mining the Jordan Sandstone will require dewatering to lower the water level of the Jordan aquifer to approximately 20-25 feet below the top of the Jordan Sandstone or a total dewatering depth of 35-40 feet. Dewatering will occur in cells to minimize the extent of drawdown in the Jordan aquifer. Water removed from an active cell through dewatering will be used in part to supply the water needs of the processing operation and the remainder will be directed to an infiltration gallery in the northern portion of the site, within the mining setback area. The infiltration gallery will allow the recharge of the Jordan aquifer which will minimize the effects of dewatering on private wells to the north. A detailed evaluation of the regional hydrogeology and the proposed dewatering activity is included under Item 13 of this EAW.

3.3. Mine Plan

Excavation of the Mine Site will employ open pit surface mining techniques both above and below the water table. A high wall and benching system will be maintained above the water table while cell based mining will occur below the water table. Excavation will first remove unconsolidated surface materials and stockpile them for use in the subsequent phases of reclamation. Stockpiles of unconsolidated overburden will initially be located on the floor of the existing mine. As the mine develops, and a large enough excavation has been created to accommodate reclamation backfilling without interfering with sandstone excavation, unconsolidated and consolidated overburden materials will be removed and used directly as backfill in an active reclamation phase. Scrapers, dozers, and haul trucks will be used to remove the unconsolidated overburden.

After the unconsolidated overburden is removed, consolidated overburden, or the Oneota Dolomite, will be removed. The first bench will be created by removing the dolomite down to the Jordan Sandstone. The dolomite will also be stockpiled on the floor of the existing mine and later used for reclamation in a similar manner as the unconsolidated overburden. The majority of this work will be performed using excavators and haul trucks.

It is anticipated that the majority of overburden materials will be used as reclamation fill material and that only minor amounts of dolomite will be stockpiled and used as dimension stone, or crushed and used as construction aggregates. Any processing and stockpiling of construction aggregates would occur off site on the adjacent SMC property.

Next, a mining cell of approximately five to eight acres will be delineated and dewatered 20 feet into the sandstone. At this time, the first 20 feet of sandstone will be removed. Once again, excavators and haul trucks will be the primary equipment employed; however, the use of dozers may also be required. Finally, the lower 20-30 feet of the sandstone will be blasted and excavated under water. This will require excavation equipment capable of working in water such as a long stick excavator, dredge, and/or dragline. As each cell is completed it will be backfilled to a level five feet above the water table while concurrently the next five acre cell is being opened and becomes the active cell.

A mine sequence plan has been developed (see *Figure 9 – Mine Plan*). Mining will begin adjacent to the northern property boundary along the previously described infiltration gallery. Small cell sizes and rapid backfill techniques will shield residential neighbors to the north from subsequent impacts associated with continued mining and dewatering. Mining will progress during Phase 1 from south to north and then into Phases 2-4.

Mining setbacks will be maintained as previously defined in existing CUPs and/or previous operations. These include five hundred (500) feet along residential boundaries to the north and east of Parcel D, one hundred (100) feet along the right-of-way of CSAH 5, no setback along the south and west border of Parcel D, and the existing high walls on Parcel C. The existing high wall is located along the northern and eastern portions of Parcel C and consists of an exposed face of Oneota Dolomite that extends 30-40 feet from the surrounding grade down to the current quarry floor. Typical side slopes of the high wall or active face of limestone are near vertical with slope less than 0.5:1 (horizontal to vertical). Sandstone mining will be offset approximately twenty feet from the active limestone face per Mine Safety & Health Administration (MSHA) guidance. Side slopes of the active face of the sandstone above the water table will be approximately 1.5:1 and 2:1 below the water table as illustrated in *Figure 10 – Typical Mining Cross Section*.

The Mine Site may operate year round. Sandstone mining will occur seasonally, when the wet plant is operating. Overburden and limestone removal may occur year round. It is estimated that mining will occur for 15-20 years and reclamation completed within 12 months after the cessation of extraction activities within each mine phase. This timeframe is based on current market conditions and production rates, estimated to average between 500,000-600,000 tons per year with expansion capacity capable of up to 1,000,000 tons per year production. Therefore, the actual life of the site may vary depending upon changes to market conditions and site operations. Stripping, excavation, pre-screening, conveying/pumping to the wet plant facility, and operation of other mining related equipment will operate in compliance with the existing conditions (6 a.m. to 6 p.m. Monday through Friday, and 7 a.m. – 12 p.m. Saturdays).

3.4. Blasting

The geologic resource evaluation of the Jordan Sandstone over the Mine Site indicates that there are some laterally continuous layers of tightly cemented sandstone within the upper portion of the sandstone that will be mined. Blasting will be required to loosen these zones to allow mining of the material within and below these tightly cemented layers. Blasting is currently used on Parcel D to remove the overlying Oneota Dolomite layers that are not suitable for use as dimension stone. Blasting also occurred in the past on the SMC portion of Parcel D as well as on Parcel C in conjunction with limestone removal from these quarries.

Blasting will be performed by an independent blasting specialist. Blasting of material will be required both above and below the water table. Blasting will be performed approximately 5-10 times per week depending upon the location and geology encountered in the active phase of the mining operation. A typical blast lasts approximately two to three seconds for a maximum total of 30 seconds of blasting per week. The existing blast monitoring plans, prepared for the current mining permit on Parcels A and D, has been updated and is further described in Item 24. The blast monitoring plan includes provisions for seismograph monitoring during each blast. Seismographs will be used to verify that ground vibrations and air blasts do not exceed levels established to protect structures in the vicinity. Locations of monitoring points will change as mining progresses over time to provide comprehensive monitoring of all adjacent structures. Pre-blast surveys of structures were previously performed in conjunction with the current mining activity on Parcel D. These pre-blast surveys were conducted to establish a baseline condition prior to any blasting activity. Additional surveys will be conducted, as allowed by owners, to include structures adjacent to Parcel C as well. If any structural damage should occur as a result of blasting activity associated with the Project, it will be the sole responsibility of the operator to repair such damage

as well as mitigate future occurrences. Blasting is discussed in detail under Item 24 of this EAW. The Project Proposer will review those previous blasting baseline surveys and incorporate that information into its blast monitoring protocols.

3.5. Initial Processing and Material Transfer

A limited amount of processing will occur on the Mine Site. The processing operations currently permitted in association with dolomite mining will continue (extraction, stockpiling, and processing of minerals and materials). Excavated sandstone from the Mine Site will be fed into a small crushing spread which will remove oversized materials and reduce the material to a size that is readily fed onto conveyors or wet slurry for transport to the wet plant. Existing easements between the Mine Site and the wet plant will be utilized to construct the slurry pipe system under 231st Lane, connecting the Mine Site to the wet plant. This system will also transport waste product (silts, clays, and very fine sand particles) from the wet plant to the mine for reclamation. The use of this slurry pipe system will significantly reduce the volume of trucks bringing raw sand to the wet plant. A second slurry system will be constructed to transport washed sand from the wet plant to one of two wet concentrate stockpile locations. Waste material collected by the dry plant will be contained and transported on a daily basis via truck (typically one load per hour) to the Mine Site to be incorporated directly into reclamation backfills.

3.6. Processing Facilities

The analyses conducted in this EAW reflect the maximum operating capacity of the processing facilities following any future expansion. Therefore, the analysis evaluates the maximum potential for significant environmental impacts. The following descriptions are based on maximum plant capacities. These future increases in production will only occur as market conditions allow. Sand to feed the processing plant will originate from mining activity on Parcels C and D as described above. In addition, a portion of the sand feeding the processing plants will be hauled to the Site from other sources, specifically the Jefferson Quarry, located to the south within the City of Mankato City Limits. The location of the Jefferson Quarry with respect to the Project Area is illustrated on *Figure 11 – Jefferson Quarry Location Map.*

The Jefferson Quarry is an active quarry that has been mined for the past several decades and is a pre-existing nonconforming use, and therefore a legal nonconforming use. In 2002 the limits of mining within the Jefferson Quarry were defined in an agreement between Coughlan Companies and the City of Mankato. The Jefferson Quarry encompasses approximately 55 acres, of which 41 acres are included within the approved quarry boundary area per the 2002 agreement. Sandstone mining is occurring within the northern portion of these 41 acres. The southern ten acres, more or less, of the 41 acre quarry area is currently undergoing reclamation filling and will not likely be mined for sandstone, based on current market conditions.

Because the Jefferson Quarry is a pre-existing nonconforming use, and sandstone is currently being mined within the quarry, it is not considered a part of the proposed Project and is not included in the EAW analysis. However, the EAW does include an analysis of potential impacts resulting from traffic generated from hauling sand from the Jefferson Quarry to the wet plant for further processing. Utilizing the Jefferson Quarry as the sole source of sand to the wet plant, the life of the quarry for sand production is estimated to be 3-5 years. If the wet plant is fed with sand from both the Jefferson Quarry and Parcel D, the life of the Jefferson Quarry will be greater.

3.7. Wet Plant

The wet sand processing plant performs the initial cleaning and sizing of the sand. The wet plant will process sand from the Mine Site which will be slurried or conveyed to the plant as well as sand from other active mines that will be trucked to the plant. Sand will be fed to the wet plant from both sources to reduce the amount of truck traffic associated with operation of the processing facilities. Raw sand trucked to the site will be hauled via dump trucks and/or semi-tractor trailers and off-loaded and stacked using a truck-dump and conveyed stacker system.

The wet plant operates a closed loop continuous feed water system (water is recycled and reused continuously) with cleaned and sized material transported via a slurry pipe to either the dry plant for processing or to the coarse sand concentrate stockpiles. (Wet plant water requirements are discussed below.) The process begins when a front end loader scoops material from the raw sand stockpile and feeds it onto a scalping screen to remove

oversized material (rocks, cemented sand and very coarse sand grains). The oversized material is conveyed to a waste stockpile and used as reclamation backfill. The undersized material continues on to a density separator for sizing into coarse sand concentrate. The density separator utilizes an upward flow of water at very specific velocities that allows coarser sized sand to settle to the bottom and finer particles to flow out the top. The coarse sand concentrate is pumped via a slurry pipe to either the dry plant or secondary storage site on Parcel C to allow for winter storage until the sand is ready to be processed further by the dry plant.

All remaining material is transported to the quarry as reclamation material. A fine sand slurry system will be installed to transport the fine sands to the mine for reclamation. As the water is pumped back it enters a clarifier and is combined with flocculant (similar to flocculant used in water treatment facilities) to assist with fine particle settlement and clarification of the water. The settled particles (silts, clays, and very fine sand particles) are then dewatered on a press. This material is combined with the oversize material and returned to the quarries via covered trucks (typically one load per hour) and used for reclamation.

The wet plant has been designed to maximize production capability while minimizing water requirements. The plant at maximum build out can process 1.5 Million (MM) tons of raw sand per year utilizing 5,000gallons of water per minute (gpm). The majority of the water that runs through the plant during operations is recycled and reused. Accounting for all potential water loss, approximately 95% of the water that enters the plant is recycled limiting the required makeup water to 215 gpm or less. The Project Proposer will use water from mine dewatering to supply the wet plant system makeup water, eliminating the need for a high capacity, deep aquifer production well that was proposed during the Project Proposer's initial CUP application and public hearing.

The wet plant will initially operate two 8 hour shifts per day seven days/week March – November, excluding holidays. As market conditions allow, capacity of the wet plant will increase to the total design capacity. This will be accomplished by adding a third shift and/or installing additional processing equipment.

3.8. Dry Plant

The dry sand processing plant performs the drying and final sizing of coarse sand from the wet plant. Coarse sand concentrate feed stockpiling will occur at both the dry and wet plant sites. At capacity, the proposed site allows for storage of up to 250,000 tons of coarse concentrate. The dry plant has been designed at maximum build out to process approximately 1.08 MM tons/yr of coarse concentrate.

The dry plant operates a continuous flow process with dried and sized finished product transported via conveyors and bucket elevators to storage silos for rail load-out and ultimate transportation to market. Front-end loaders and feed conveyors will be used to transport coarse sand concentrate from the on-site stockpile to the dry plant for processing. Initially, the sand will pass through a fluid bed or rotary drum dryer. Once dry, enclosed bucket elevators move the sand to the top of the screening tower. A series of screens separate the sand according to particle size and another conveyor and bucket elevator system transport the finished product to a group of storage silos (similar to agricultural operations storing grain). All finished product will be stored in enclosed silos or storage units to keep the finished product dry and contaminant free. The dry plant will be equipped with state of the art pollution control equipment. Natural gas will be brought to the dry plant as fuel for the dryer(s). Propane may serve as back up fuel to allow uninterrupted processing during peak demand periods.

The dry plant will be enclosed to control noise and dust and allow year round operations. The plant will be constructed and operated at a reduced capacity. As market conditions allow, the capacity of the dry plant will increase to the total design capacity. This will be accomplished by installing additional processing equipment. The dry plant will operate three 8 hour shifts per day seven days per week, excluding holidays.

3.9. Stockpiles

There will be stockpiling of materials located throughout the Project Area. Topsoil, overburden and wet plant wastes will be stockpiled in inactive areas of the quarry for future use in reclamation. Both unconsolidated soil overburden and dolomite overburden will be temporarily stockpiled adjacent to active mining cells and later used for backfill and slope stabilization. In addition, transition materials excavated at the top of the Jordan Sandstone as well as cemented materials separated as waste during initial processing in the mine will be stockpiled in similar

fashion. The dolomite and sandstone waste stream will only remain in stockpiles until such time as a large enough cell has been mined out to allow placement directly into the active reclamation cell. The total volume of materials to be temporarily stockpiled on the floor of the existing quarry is anticipated to range from 600,000-800,000 cy. Stockpile heights are estimated to reach 40 feet above the floor of the existing quarry (10 feet above the surrounding landscape) on 10-15 acres.

The mining activity and wet plant operations will begin prior to start-up of the dry plant. The need to stockpile waste fines from the dry plant will be minimized because by the time the dry plant starts operating a large enough excavation may have been created to allow the direct placement of the waste fines into the reclamation cell. If upon start-up of the dry plant, excavation has not opened up a large enough cell to allow direct placement of the fines into a reclamation fill, the dry wastes will be stockpiled in recessed portions of the quarry next to the wet plant fines. Up to 3,000 tons of waste materials from the dry plant may be temporarily stockpiled in this manner

The processing facilities will also require the stockpiling of material. At the wet plant there will be two stockpiles. A 40,000 ton stockpile of raw mined sand will be maintained in queue for processing. This stockpile will have a 43 foot radius and will be 33 feet tall. It will be stacked directly off of a dewatering screen and cyclone circuit used to create a stackable product from the slurry pumped from the mine or via a dump hopper and stacker system for material hauled over the road. It will stack at approximately 12% water by weight. In addition, there will be a stockpile of waste material (coarse sand as well as silts and clays from washing). This stockpile will be much smaller with a capacity of 2,000 tons. At the dry plant there will be a single stockpile of wet coarse sand concentrate from the wet plant. This stockpile will hold approximately 250,000 tons. It will have a 100 foot radius and will be 60 feet tall. Like material stacked from the mine at the wet plant, it will come off a dewatering circuit used to create a stackable product from the slurry pumped from the wet plant. Thus, it will also stack at 12% water by weight. All other product at the dry plant will be stored in enclosures.

Wet plant operations will only occur during months with temperatures above freezing, but the dry plant, screening and load-out operations will occur year round. Therefore, a winter feed pile of washed coarse sand concentrate will also be required once volumes reach a level where the volume of the stockpile at the dry plant is not sufficient to sustain operations through winter. The winter feed stockpile will be maintained on Parcel C. Once required, the volume of this stockpile will be continually added to throughout the mining season, reaching maximum volumes in mid-November. Once mining and washing shuts down for the winter, the winter feed stockpile will diminish over the course of the winter months. The maximum volume of this stockpile will be approximately 250,000 tons. It will have a 100 foot radius and will be up to 60 feet tall. Like material stacked at the wet plant and the dry plant, this too will be slurried from the wet plant to Parcel C and stacked after dewatering at 12% water by weight. The dewatering water is piped back to the clarifier at the wet plant and reused in the wet plant process.

3.10. Rail Load-out

The rail load-out will consist of construction of new spurs and infrastructure to accommodate the load-out facility, provide storage for loaded cars, and switches between the privately owned spurs and the Union Pacific (UP) mainline. This new alignment is being constructed with UP as part of their marshaling yard expansion project. The Project includes the construction of rail infrastructure capable of accommodating the storage, loading, and staging of one hundred (100) car unit trains. Details of the separation of responsibilities for the construction, permitting, and operations of the rail alignment are still being negotiated. Changes involving any existing and/or future UP assets require a series of reviews and approvals from the UP. The Project Proposer is working with the UP on the rail alignment project through the initial design and approval stages. At this time, a preliminary design has been submitted to UP for official review. This plan details the proposed rail yard alignment. In addition, the plan states the responsibilities of each party during both the construction and operations phases. The rail load-out facility will be located on Parcel A.

3.11. Beginning and End Dates of Proposed Project

Jordan Sands anticipates construction of the wet plant to begin in September 2013 and completed by March 2014 and the dry plant and railroad load-out facilities to begin August 2013 and completed by April 2014. Both construction projects will be managed by Market and Johnson, a design/build construction company providing

safe and innovative construction solutions since 1948. These plants will utilize the most technologically and environmentally sound processing equipment maximizing efficiencies and minimizing environmental impacts.

Both plants have an expected operation life of 50 years. Jordan Sands will actively maintain the plants to increase the useful life and improve efficiencies. Jordan Sands is making a large capital investment in the Mankato and Lime Township communities. Because of this large investment, Jordan Sands has the incentive to work efficiently and quickly with the communities to ensure that these facilities are approved in the shortest timeframe possible. The table below describes the proposed construction timeline.

Table 3. Preliminary Construction Timeline

Date	Task
June 2012 September 2012	CUP Applications Submitted
Oct 2012 – May 2013	EAW
Dec 2012	Dry Plant Air Quality Permit Application Submitted
Feb 2013	Water Appropriation Permit Application Submitted
May – June 2013	Conditional Use Permits Finalized
Sept 2013	Mining Phase 1
Sept 2013	Start Wet Plant Construction
Mar 2014	Start Processing at Wet Plant
Aug 2013	Start Dry Plant Construction
Apr 2014	Start Processing at Dry Plant
Apr 2014	Shipping Product From Loading Facility

4.0 Preliminary Processing Site Plan

The industrial processing facility will be located on Parcel A and B and encompass approximately 45,300 square feet of gross floor space. *Table 4* details the specific areas of the wet plant and dry plant and the associated square footage. The sandstone mining operations will occur on approximately 70 acres of property on Parcels C and D.

Indicate areas of specific uses (in square feet):

Office:	1,000	Manufacturing:	0
Retail:	0	Other Industrial:	44,300
Warehouse:	0	Institutional:	0
Light Industrial:	0	Agricultural:	0
Other Commercial:	0		

Building height:* ***If over 2 stories, compare to heights of nearby buildings:***

*Structures associated with the wet plant will reach 68 feet above ground. Stockpiles associated with the wet plant (sand feed, oversized, and fine sand reject) will be up to 40 feet in height (see *Figure 12 – Wet Plant Elevations*). The winter stockpile area that will be located on Parcel C will reach up to 60 feet in height. This stockpile area will be situated on the quarry floor which is approximately 35 feet lower in elevation than the screening berms along CSHA 5 and 231st Lane. Therefore the effective height of the winter stockpile will be 25

feet (see *Figure 13 – Stockpile Elevations*). Structures associated with the dry plant include the screening tower which will reach 143.5 feet and the sand silos which will reach 93 feet. The screening tower and storage silos will be located on the floor of the existing quarry approximately 23 feet below the elevation of CSAH 5. Therefore the effective height of these structures is 120.5 and 70 feet respectively (see *Figure 14 – Dry Plant Elevations*). Stockpiles associated with the dry plant feed will reach 60 feet in height. These will be situated on the floor of the quarry as well; approximately 23 feet below the elevation of CSAH 5 (see *Figure 13 – Stockpile Elevations*). Structures associated with the rail load-out facility will reach 116 feet in height (see *Figure 14 – Dry Plant Elevations*). In addition to using the onsite grade changes to reduce visual impacts, pursuant to the Township's ordinance, the Project Proposer will use plantings and existing trees to further reduce the visibility of its structures.

The processing facilities are located in a district that is zoned Industry. The Lime Township Zoning Code imposes no height limitations for structures within the Industry District except as regulated by airport zoning. Businesses in the immediate area include structures and silos that range in heights from 20-75+ feet.

Table 4. Gross Floor Space Calculation

Description	Square Footage
Parcel A Dry Plant	
Dry Plant	15,240
Storage Silos	12,212
Rail Load-out	6,715
Office	1,000
Maintenance Building	2,170
Dry Plant Total	37,337
Parcel B Wet Plant	
Clarifier System	5,958
Belt Press (496 sq ft/each x2)	992
Primary Concentrate Handling (@ Dry Plant)	610
Secondary Concentrate Handling (@ Winter Stockpile)	400
Wet Plant Total	7,960
Site Total	45,297

4.1. Emergency Access

If needed, emergency vehicles will be able to utilize the CSAH 5 main entrances for both the wet and dry plants. Emergency vehicle can also access the upper rail load out area from an existing service road access on CSAH 5.

4.2. Signage

The ingress/egress access point will be clearly signed in accordance with the Lime Township sign ordinances.

5.0 Civil and Environmental

5.1. Topographic Surveys of Sites

Topographic surveys of the sites have been prepared by traditional surveying methods and from aerial LiDAR data. Topographic information is shown on the proposed site plans.

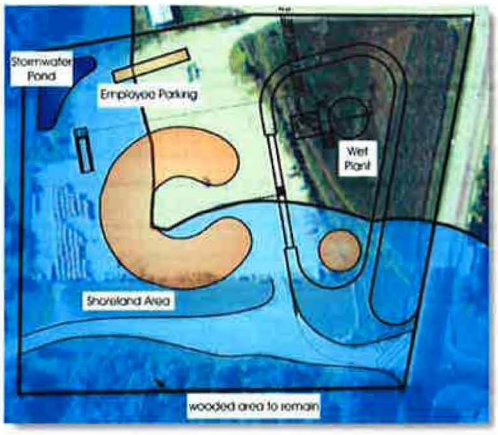
5.2. Existing and Proposed Vegetation and Ground Cover

Figure 15 – Land Cover Map (Before) and *Figure 16 – Land Cover Map (After)* illustrate before and after cover types over the Project Area.

5.3. Shoreland and Floodplain Designations

The site is located adjacent to, but entirely outside of the 100 year floodplain of the Minnesota River. According to the Federal Emergency Management Agency's flood maps for Blue Earth County, the elevation of the floodplain varies from 774 feet above msl, west of the southern limits of the Project Area to 772 feet above msl west of the northern limits of the Project Area. Based on existing conditions, the Project Area sits 20-60 feet above the 100 year floodplain. *Figure 17 – FEMA Flood Map Excerpt* illustrates the location of the 100 year floodplain with respect to the Project boundaries. There will be no filling within the floodplain or reduction in flood storage volumes as a result of the project.

An unnamed intermittent creek that is a tributary to the Minnesota River runs along the southern boundary of Parcel B and along the western boundary of Parcel C. This creek is included in the Protected Waters Inventory for Blue Earth County. The location of the unnamed creek and other protected waters in the vicinity of the Project Area are illustrated on *Figure 18 – DNR Protected Waters Inventory Map*. Land located within the 100 year floodplain as well as within 300 feet of a public water, river or stream is considered Shoreland. The Lime Township ordinance adopts the Blue Earth County Shoreland Ordinance by reference. The southern and western portions of Parcel B are located within a designated Shoreland area and development is subject to the Blue Earth County Shoreland Ordinance. *Figure 19 – Shoreland District Map* illustrates the extent of the Shoreland with respect to the Project Area.



Site development will be consistent with the regulations governing the Shoreland District. These regulations include provisions regarding alterations of vegetation and topography and a vegetation alteration permit will be required for the construction of structures, roads or parking areas. Most of the original vegetation on Parcel B has been removed as a result of previous development activity and agricultural use.

A large parking area for outside storage of equipment is located within the Shoreland area, as well as a haul road through the southern portion of the property. The very southern boundary of Parcel A is wooded and slopes down to the unnamed creek. This wooded area will remain undisturbed. Stockpiles, a stormwater management pond, loading equipment, portions of the access road and employee parking will be located within the Shoreland area. The wet plant itself will be located outside of the Shoreland area. Some grading will be required within the Shoreland area to obtain proper slopes to facilitate internal equipment requirements and proper stormwater flow, however, the grading will be minimal and not constitute a significant alteration of topography.

Stormwater management and erosion and sedimentation control practices will be utilized to protect public water from impacts. These will include stormwater best management practices such as the construction of a stormwater pond to treat stormwater runoff, use of vegetated swales to convey and filter stormwater runoff, silt fencing in appropriate areas prior to grading operations, the use of mulch or similar material for temporary cover of bare soils during construction, establishment of permanent vegetative cover within 14 days of completion of construction of the project, in areas to be vegetated. Fill or excavated materials will not be placed with any bluff impact zone and grading will not adversely affect adjacent or nearby properties. Additional erosion and sedimentation are discussed in Item 16 and as they relate to groundwater protection under Item 19.b.

Because much of the parcel has been previously disturbed, and topographic changes within the Shoreland area will be minor, the project will have no significant impacts to vegetation or topographic alterations. Stormwater

management and erosion and sedimentation control practices over the entire parcel will protect public waters from impacts.

5.4. Site Grading and Drainage Plan

A site grading and drainage plan has been prepared for the facility. Since the wet plant, sand concentrate storage area, and dry plant have unique characteristics, they will be addressed separately.

5.4.1. *Wet Plant*

The majority of the wet plant site is an existing aggregate surfaced parking lot. This area will be regraded as shown in *Figure 20 – Wet Plant Site Plan* to accommodate the loading area, stockpile, and wet processing plant.

It is estimated that approximately 2.5 acres of new impervious area will be added. To meet MPCA stormwater discharge requirements, a stormwater management pond will be constructed on the northwest portion of the site. This pond will be designed to meet all applicable requirements. Drainage from the site will generally flow from the east to the west, and will be directed to the stormwater pond through a series of vegetated swales.

5.4.2. *Sand Concentrate Storage*

The sand concentrate storage area on Parcel C will utilize existing drainage patterns and be self-contained. The grade will be modified slightly to accommodate the stockpiling equipment as shown in *Figure 21 – Parcel C Site Plan*. Stormwater runoff from the existing area will flow to the large water body in the eastern portion of the quarry, and water will be contained in its current conditions. BMPs will be employed to ensure sand will not runoff into the waterbody.

5.4.3. *Dry Plant*

The dry plant located on Parcel A will utilize existing the existing mine pit topography to provide visual and auditory screening of the operations. The quarry will be further excavated and graded from west to east in order to accommodate the operations. The existing sump pit constructed in the northeastern corner of the property will be maintained and pumped as needed.

To accommodate drainage of the proposed rail lines, ditches will be constructed parallel to the lines to convey the stormwater to outlets at the east and west ends of the rail alignments (see *Figure 22 – Dry Plant Site Plan*).

5.5. Site Screening and Landscaping

A master screening and landscaping plan has been developed for the entire Project Area *(see Figure 23 – Master Planting Plan Areas A-E* and *Figure 24 – Master Planting Plan Areas F & G)*. Berms will be established as part of initial construction and mine development activity. Currently, berms exist along the west side of CSAH 5 screening both Parcels C & D. A third berm will be established during construction of the wet plant along CSAH 5 on the east side of Parcel B. The use of berms in the master plan is to provide quick screening of construction and mining activity. Berms are intended to be used temporarily during active phases of the Project and, where applicable, will be removed as part of the reclamation process.

A more permanent component of the master screening and landscaping plan is the use of plantings. Plantings are intended to blend with the natural environment by using a mix of native coniferous and deciduous species. Plantings are a more effective long term solution because they can be utilized in close proximity to the point of visibility. Plantings currently exist at the base of the berm on the east side of Parcel C and along the western boundary of Parcel A. Permanent landscaping will continue to be established with the use of plantings along the northern boundary of Parcel D at the base of the existing berm on the east side of Parcel D, along the northern property boundary adjacent to the Proctor Residence, and on the berm to be constructed with the wet plant on the east side of Parcel B. Plantings will become a permanent fixture performing extended landscaping and screening function when temporary berms are removed and the properties are reclaimed.

5.6. Soil Erosion and Sedimentation Control Plan

The area to be graded includes 70 acres of mining area with the remaining areas to be graded in the development of the wet and dry processing plants, stockpile area and rail load-out facility. The 7.0 MM cubic yards represents material to be moved in conjunction with mining operations; topsoil, overburden, limestone and sandstone as well as material to be moved during grading operations to prepare the wet and dry processing plant sites and rail load-out area.

5.6.1. *Steep Slopes/Erodible Soils:*

Site topography across the Project Area is generally gently sloping with average elevations of approximately 820-830 feet above msl, where not previously altered by mining operations. There are some steeper slopes located along the south and western perimeter of Parcel B and the southwestern boundary of Parcel C, where the topography quickly slopes down, approximately 20 feet, to the intermittent stream running along the perimeter of these parcels. Areas where past mining have occurred have created near vertical quarry high walls around the perimeter of the mining areas.

According to the Natural Resource Conservation Service's (NRCS) Soil Survey of Blue Earth County, Minnesota,[2] the predominant soil unit within the Project Area is Lasa loamy fine sand, rock substratum, with 1 to 6 percent slopes. The NRCS describes the physical properties of this soil unit as being moderately susceptible to water sheet and rill erosion with a soil Erosion Factor (Kw) of 0.2 and very susceptible to wind erosion with a wind erodability Group (WEG) of 2. The K_W indicates the susceptibility of a soil to sheet and rill erosion by water and is ranked on a scale of 0.02-0.64. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. The Soil Erosion Factor K_W ranges from 0.05 to 0.43 for the on-site soils. The WEG describes soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to Group 1 are the most susceptible to wind erosion, and those assigned to Group 8 are the least susceptible. Soils within the Site have a WEG range from 1 to 5.

The majority of the original soils located throughout the Project Area have been removed from past mining and development activities. The exposed bedrock, while creating steep slopes in places, is not highly erodible. Original site soils are more fully described in Item 19.

Some of the stockpiled materials located throughout the Project Area may be subject to wind and water erosion. The coarse sand concentrate stockpile will be wet as a result of the wet plant processing and therefore not subject to wind erosion. The moisture content of the stockpiled coarse sand concentrate will be monitored and wetted if the moisture content drops below 2%. The fine sand concentrate will be slurried to the reclamation area and used directly as reclamation fill and will not be stockpiled except on a temporary basis at the onset of mining operations. The raw sand feed into the wet plant will typically be slurried to the plant and maintain sufficient moisture content even after dewatering to not be susceptible to wind erosion. The raw sand hauled in from the Jefferson Quarry will also have natural moisture content in excess of 2%. Stormwater runoff that contacts the raw sand and coarse sand concentrate stockpiles will be collected. This water will be used for on-site dust control activities. Any excess will be treated in a sedimentation pond and then infiltrated or discharged off-site in accordance with a NPDES permit authorizing such activity. Temporary stockpiles of overburden and waste sand that will be needed at the onset of mining operations will be kept in recessed portions of the site where any eroded material will not be able to leave the site.

5.6.2. *Erosion and Sedimentation Control Measures:*

The site will operate under a Minnesota Pollution Control Agency National Pollutant Discharge Elimination System (NPDES) / State Disposal System (SDS) General Permit MNG490000 for Nonmetallic Mining and Associated Activities. According to the MPCA, stormwater discharges associated with construction activities at nonmetallic mineral mining and associated activities sites from the above sites are also covered under this permit.

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[2] United States Department of Agriculture. *Soil Survey of Blue Earth County, Minnesota.* National Cooperative Soil Survey, 1978.

Therefore, additional coverage under the Construction Stormwater General Permit (MNR100001) is not required. Conditions of this permit require that a Stormwater Pollution Prevention Plan (SWPPP) be prepared for the project area that addresses both construction phases as well as the mining and reclamation phases. The goal of the SWPPP is to eliminate or minimize contact of stormwater with significant materials that may result in pollution of the runoff, as well as identify and correctly manage non-stormwater discharges. This is accomplished by utilizing erosion and sedimentation BMPs. BMPs to be identified in the SWPPP and incorporated into site operations to reduce or eliminate erosion and sedimentation from mining and processing areas include:

- Temporary rock construction entrances where vehicles exit the construction site;
- Water haul roads in order to minimize fugitive dust;
- Phasing of mining and reclamation activities, in order to limit the size of stripped or exposed areas;
- Preparing for future mining activities, by establishing and stabilizing perimeter berms;
- Temporary grass seed cover on all topsoil stockpiles;
- Mulching and/or erosion control blankets on seeded areas;
- Silt fencing or stormwater diversions at the perimeter of grading operations that have the potential to drain off site during stripping operations;
- Sedimentation basins;
- Infiltration areas;
- Energy dissipation devices (e.g. riprap) at pipe outlets;
- Gassed swales and diversion berms to direct stormwater runoff internally or to sedimentation basins for treatment;
- Utilizing the recessed portions of past and current quarry operations to manage stormwater internally and promote infiltration; and
- All temporary erosion and sediment control materials will be properly disposed of within 30 days after final site stabilization is achieved or after the temporary measures are no longer needed.

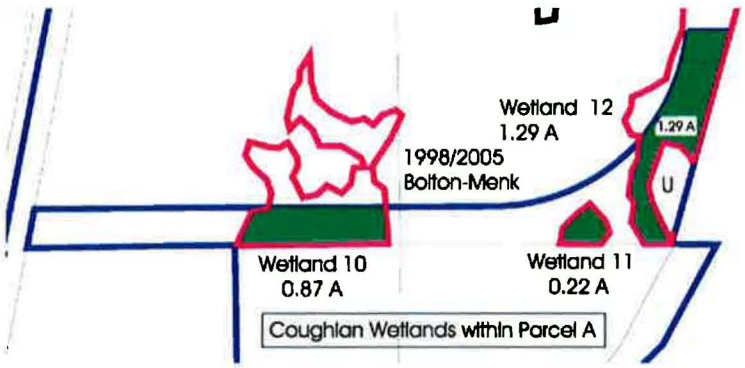
The mining process will create temporary steep slopes at the active mine face. Stormwater that contacts active mine faces or stockpiles of sand is directed to low areas located within the quarry floor. Stormwater that contacts exposed soils or sand will be treated prior to discharge or directed to internal areas where it will be infiltrated and handled internally.

The large stockpiles of wet coarse sand concentrate are composed of larger sand grains that are not subject to wind erosion. Fine sand concentrate stockpiles will be of limited size and also be wet and therefore not subject to significant wind erosion. Temporary stockpiles will be located on the floor of the existing quarry, protected from wind.

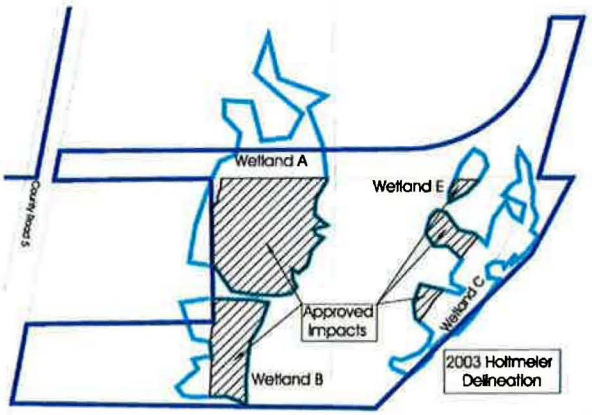
5.7. Wetlands

There are some isolated wetland basins located within the Project Area on Parcel A. *Figure 25 – Existing Wetlands,* illustrates existing wetlands on Parcel A. *Figure 26 – NWI Map Excerpt,* illustrates National Wetland Inventory (NWI) wetlands in the vicinity of the entire Project Area. There have been a number of wetland delineations performed over all or portions of Parcel A in the past. Filling, excavation, and draining of wetlands are regulated by the Wetland Conservation Act of 1991 (WCA), which is administered by a local government unit (LGU). Blue Earth County is the LGU for Lime Township. The following information describes the history of various wetland delineations over various portions of Parcel A.

In May 1998, Bolton & Menk performed wetland delineation on the Coughlan Portion of Parcel A. This delineation identified a number of wetland basins located throughout the Coughlan property, with three basins lying in part within the portion of the Coughlan property that is included in Parcel A. This delineation was field checked in May of 2005 by Blue Earth County. The 1998 delineations of wetlands 10 and 11 were verified and minor adjustments were made to the wetland 12 delineation. Approximately 2.38 acres of wetlands were identified on the Coughlan property within Parcel A.

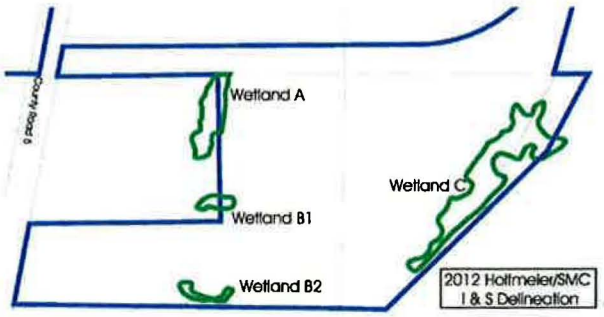


In 2003, I&S Group (I&S) performed wetland delineation on the Holtmeier portions of Parcel A. This delineation identified four isolated wetland basins. All four basins extended beyond the Holtmeier property onto adjacent parcels. Delineations included the entire wetland basin and encompassed approximately 10.30 acres of wetland area. In 2003, Blue Earth County approved a replacement plan for 5.07 acres of wetland impacts on the Holtmeier property. Portions of wetlands A, B, C and E were permitted to be replaced. The approval included requirements for additional monitoring of partially impacted wetlands in order to document whether or not the partially impacted wetlands would be further impacted by the mining activity. Any additional impacts to these wetlands that were documented would subsequently be replaced in accordance with the WCA.

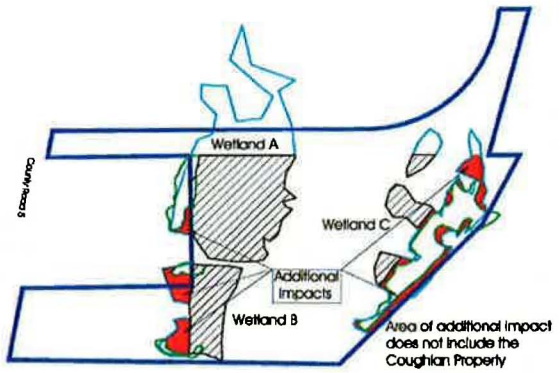


In May 2012, I & S conducted a field delineation of the wetlands on the Holtmeier and SMC portions of Parcel A. Portions of the original wetland basins that were not impacted by the past mining operation were identified and delineated. These included a portion of wetland A, two separate portions of wetland B and a portion of wetland C.

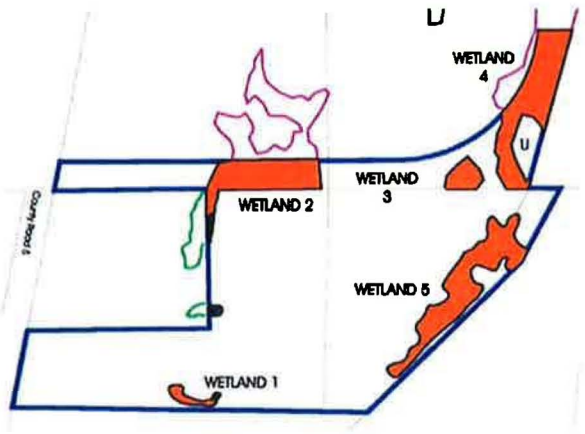
Comparing the 2012 Holtmeier/SMC delineation to the 2003 Holtmeier/SMC delineation and replacement approval, it was determined that the area of impact to the four original wetland basins was approximately 1.40 acres greater than the impacts approved in 2003 by Blue Earth County. There were also some small gains of wetland area, approximately 0.20 acres, between the two delineations. This comparison does not include any indirect impacts to wetlands that may have occurred on the Coughlan property as a result of mining on the Holtmeier property.



Dewatering activity, for quarry water level control began on the Holtmeier property sometime after 2004. The dewatering activity may have created indirect impacts to wetlands on the southern portion of the Coughlan



property. Some of these impacts may have resulted in a decrease in wetland area, while some of the activity may have resulted in an increase to wetland area, as the dewatering discharge is directed north onto wetlands in the southeast corner of the Coughlan property. Even without the impacts associated with dewatering, natural variations in delineated wetland boundaries over time is not unusual as a result of varied precipitation and evaporation rates from season to season.



The project proposes additional impacts to the remaining wetlands on Parcel A. An application for a wetland replacement plan will be submitted to Blue Earth County for these 3.76 Acres of wetlands to be impacted as well as an application for the after-the-fact replacement plan for the 1.40 Acres of additional wetland impacts from the current mining operations. The wetland replacement will likely be by wetland banking and the purchase of wetland credits.

Table 5. Proposed Additional Wetland Impacts

Wetland ID	Wetland Type	Proposed Impact (Acres)
1	Type 2	0.07
2	Type 2	0.93
3	Type 2	0.22
4	Type 3	1.28
5	Type 2	1.26
TOTAL		3.76

Wetland delineation was performed on Parcel B and Parcel C by I & S in 2012. The area of investigation extended beyond the boundaries of Parcel B and Parcel C. The investigation identified three Type 2 and one Type 3 wetland basins. This information was used by the Project Proposer in developing the final configuration of the Parcels B and C to avoid any impacts to these wetlands. As a result, all four of the delineated basins are located outside the boundaries of Parcel B and Parcel C. The four wetland basins appear to be under the jurisdiction of the US Army Corps of Engineers as there is a discernible connection to surface waters that flow into waters of the United States. A stormwater pond associated with the gravel parking area on Parcel B was also noted in the delineation. This stormwater pond is an incidental wetland created for a purpose other than creating a wetland and is exempt from mitigation under the WCA.

These wetland basins are located at the base of the bluff associated with an unnamed intermittent stream that runs through the area towards the Minnesota River. Groundwater likely feeds these wetlands basins and contributes to base flow in the creek. The water table on Parcel C is approximately 794 feet above mean sea level and then drops sharply, following the topography of the land, into the valley formed by an abandoned channel of the river.

Table 6. Wetlands Parcel B and Parcel C

Wetland ID	Wetland Type	Proposed Impact (Acres)
A	Type 2	1.71
B	Type 2	0.13
C	Type 2	0.27

Wetland ID	Wetland Type	Proposed Impact (Acres)
D	Type 3	0.03
TOTAL		3.76

A wetland delineation on Parcel D was conducted in the spring of 1998 by Bolton & Menk in conjunction with the original permitting of mining operations on this parcel. One small, 0.25 acre, partially cultivated, Type 1 wetland was identified in the northern portion of the property, outside of the proposed mining limits. As a condition of the mining permit, MKS was to provide an overflow from this wetland to the mine area. A berm and drainage channel were constructed to avoid the wetland and provide an overflow to the southwest to protect the property to the north from flooding.

Bolton & Menk was hired to perform wetland delineation on Parcel D in October 2012. During this field work, the wetland area was 100% farmed and showed no signs of drown out. The sample pit dug at the lowest point of the depression did not indicate hydric soils and it was determined that there was no wetland hydrology or wetland vegetation present. Changes in the wetland determination in this area could be due to changes in precipitation levels in the months prior to the field work.

5.8. Water Supply and Use

The Project will require a MDNR water appropriations permit for mine dewatering and industrial process water use. The Jordan Sandstone lies within the water table over the entire Mine Site. The water table must be lowered within the active mine cell far enough to allow the drilling and blasting of the sandstone to loosen cemented materials. Mine dewatering simply moves water away from the active mine cell. The Project Proposer has applied for a water appropriations permit from the MDNR for the dewatering process. Once complete, water levels within the mining cell will return to pre-pumping levels.

The wet plant operates a closed loop water system to wash and size the sand. Sand slurry is received from the mining operation and fed to the wet plant. Particle separation and cleaning is achieved by floating the sand through an up flow current of water. The current lifts the fine grain sizes to the top and allows the coarser sized sand to settle to the bottom and the finer sized sand and silt to flow out the top. After separation and cleaning, the sand slurry is then transported again to either a stockpile location or back to the mine for reclamation. Water is recycled throughout the process. Cyclones and dewatering screens recapture water from the product sands and fine waste. Recaptured water is either fed directly back into the system or pumped to the clarifier for processing. The clarifier settles out clays and silts from the processing water in the form of mud. After leaving the clarifier, water is reintroduced to the system. Clarifier mud is also reprocessed through a plate frame press in order to recapture water trapped in the mud. In all, the wash system will require approximately 5,000 gallons per minute (gpm) for processing and material handling. 4,785 gpm will be recaptured and recycled. Losses occur through the decanting of both raw and processed wet sand piles, the drying of wet sand concentrate, and evaporation. This results in an input requirement of approximately 215 gpm of make-up water (industrial use). The make-up water will come from the wet mined sand as well as the mine dewatering activity as opposed to a high capacity well (see *Figure 27 – Water Budget*).

In addition to providing make-up water for the operation, excess water from mine dewatering will be either re-introduced into the ground to recharge the aquifer and create a hydraulic barrier to protect adjacent wells from drawdown, stored in onsite holding reservoirs, or discharged offsite (see *Figure 28 – Water Budget Map*). The Project Proposer has developed a solution to help mitigate the impact of mine dewatering through the use of an infiltration gallery. An infiltration gallery will be installed at the northern end of Parcel D in order to reduce drawdown at private wells (see *Figure 29 – Infiltration Gallery Design*). An infiltration gallery is a reservoir with direct aquifer contact. This enables water within the reservoir to be re-introduced into the aquifer. In addition, the gallery generates head pressure that protects private wells from the dewatering cone of depression drawdown. The gallery will be professionally engineered consisting of a limestone base and bedrock walls. Water will be pumped into the gallery as part of the dewatering program with a constant head maintained.

A second MDNR water appropriations permit will be required to continue dewatering of surface and groundwater at the dry plant site on Parcel A. This activity is currently permitted by Holtmeier (MDNR permit #2011-0553) and

will be transferred to the Project Proposer upon project commencement. It is anticipated that the Project Proposer will continue the maintenance pumping currently done today at a rate of approximately 60 gpm. In addition, a domestic water supply well will be installed at the Project Proposer's office located on Parcel A. It is estimated that water use by employees will be between 250-700 gallons per day (gpd).

To verify the mitigating ability of the infiltration gallery as well as understand other potential impacts of the proposed water use, groundwater modeling has been performed for the site. The model was set up to analyze all phases of the mining and processing operation with the progression of mining and reclamation as well as the end condition with a 20 acre open water body. Dewatering requirements range from 5,000-10,000 gpm throughout the life of the mine. The EAW concludes that the potential impact on most private wells can be mitigated through the use of infiltration galleries, which will also serve as a means to manage dewatering discharge on the Mine Site.

5.8.1. *Well Monitoring*

A groundwater and surface water monitoring and mitigation plan has been developed to monitor for and assess changes in the groundwater levels, groundwater quality, and certain wetland changes over the life of the project. The plan also establishes criteria to which monitoring data will be compared as well as protocols for mitigating impacts, should they occur. The groundwater monitoring network was developed utilizing the results of the groundwater modeling performed by Barr Engineering that was used to predict the effect on water levels in surrounding wells as a result of the proposed mine dewatering activity. The network will consist of upgradient,downgradient, and side-gradient wells constructed in the Jordan, St. Lawrence, Tunnel City, and Wonewoc aquifers.

The monitoring well network will be able to monitor water levels and assess any potential impacts to surrounding residential wells. Minnesota Statute 103G.261 establishes domestic water use as the highest priority of the state's water when supplies are limited. Procedures for resolving well interferences are defined by Minnesota Rules 6115.0730. The Groundwater and Surface Water Monitoring and Mitigation Plan identifies a well interference protocol that responds to well interference issues in a timely manner and actions that are proposed, if needed. As presented in the mitigation plan, if well interference problems do occur, several options are available to restore water supply in a timely manner , including lowering the pump in the residential supply well, drilling a new well, or reducing permitted appropriations.

There are several wells existing throughout the Project Area. These include monitoring wells required as part of a previous CUP for dimensional limestone mining, monitoring wells required as part of the previously mentioned Holtmeier CUP and monitoring wells required as part of the permit for SMC's Pilgrim demolition landfill. In addition, there are two supply wells finished in the Franconia-Ironton-Galesville (FIG) aquifer. One of these wells is on Parcel B and the other Parcel D. These wells will be abandoned and capped according to Minnesota Statute 1031 and Minnesota Rule 4725.

To the extent possible, wells within one and a half miles of the Project Area have been identified. Well logs are not available for all of the wells, but probable well locations are based on the County's property information regarding residential and commercial/industrial building locations. As part of the appropriations process, the Project Proposer will conduct a thorough well inventory that identifies all wells within the inventory area.

There are 14 water appropriation permits from the MDNR in Lime Township that pull water from the Jordan aquifer (see *Table 7*).

Table 7. Area Jordan Well Appropriations

Permit No	Permittee	Permit Volume (MG)	Permit GPM	Well ID
1976-4354	NSP CO DBA XCEL ENERGY	80.0	545	249764
1975-4178	VETTER STONE CO	80.0	343	209379
1975-4178	VETTER STONE CO	80.0	343	423362
1975-4178	VETTER STONE CO	80.0	343	209380
1999-4027	HINIKER COMPANY	6.0	163	209946
1999-4027	HINIKER COMPANY	6.0	163	251954

Permit No	Permittee	Permit Volume (MG)	Permit GPM	Well ID
1999-4027	HINIKER COMPANY	6.0	163	251954
1979-4118	MIDWEST ELECTRIC	30.0	100	232427
1979-4118	MIDWEST ELECTRIC	30.0	100	112247
2011-0553	HOLTMEIER CONSTRUCTION INC	31.0	60	
2009-0609	KNOLLWOOD MOBILE HOME PARK LLC	6.6	42	248049
1976-4353	NSP CO DBA XCEL ENERGY	.5	25	
1987-4071	VETTER STONE CO	1.7	6	
1990-4161	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN

5.9. Solid Wastes, Hazardous Wastes, and Storage Tanks

The site may generate very small quantities of hazardous waste from maintenance activities such as carburetor and brake cleaners or petroleum based parts washer, waste oil, batteries and fluorescent lamps. Hazardous materials stored on-site will be stored in enclosed areas (for example within the maintenance shop on Parcel A or other no exposure management practices that prevent hazardous materials from contacting stormwater. Volumes are estimated at less than 220 pounds (approximately 22 gallons of liquid) per month. This will require the operator to obtain a VSQG from Blue Earth County. Items such as used fluorescent lights will be properly managed at a location such as the County Household Hazardous Waste facility which accepts these hazardous wastes from businesses.

A small amount of solid waste will be produced by the on-site employees. This volume is estimated to be 9 pounds per employee per day. At maximum plant capacity this results in a maximum solid waste generation rate of 0.18 tons/day. The Project Proposer will implement recycling programs, such as office paper recycling and regular collection and pickup of recyclable materials where practical throughout their operations.

Flocculants and coagulants (polyacrylamide and pDADMAC respectively) will be used in the wash water to enhance the settlement of very fine colloidal particles and the efficiency of the plate frame press. The flocculants will be discharged in the filter cake and used for reclamation mining. Flocculants are inert additives widely used in the mining industry to increase the efficiency of settling and clarification operations. Flocculation is a process in which individual particles of a suspension form aggregates by bridging between individual particles and/or by polymer formation or by carrying a charge that counterbalances the charge of the colloidal particle. Flocculants allow agglomeration and settling of colloidal particles. Plate frame presses require much less flocculant than typical water filtration systems. Flocculant discharges will be managed as wastewater through NPDES/SDS permits with the MPCA and is described in more detail in Item 18 of this EAW.

There is potential for exposure to respirable silica dust at the site. According to the World Health Organization, silica dust is classified by the International Agency for Research on Cancer (IARC) as a Group 1 human lung carcinogen. Silica (silicon dioxide) exists abundantly in nature, it is normally found within sand and rock where it cannot be inhaled. The most common form of silica is quartz, and it is found in a variety of rocks including sandstone where individual sand particles are predominantly composed of quartz. Beach sands are another example of abundant silica.

It is known that respirable silica dust can cause silicosis and other lung function impairments. According to the MPCA, the crystalline silica particle size of most concern is smaller than 4 microns (µm). Silica dust that is 4 µm or smaller in size is much smaller than typical grains of sand. Grains found in the Jordan Sandstone formation throughout the Project Area are typically greater than 74 µm. Smaller particle sizes are often created as a result of a mechanical breaking of the actual quartz particles, for example during stone cutting, or sand blasting where the quartz is cut, or individual sand grains are fractured releasing much smaller particles that are respirable. Industrial sand by comparison is typically processed into coarse and medium sands that compose the marketable fraction of the deposit range in size from 250-1000 µm. These particle sizes are substantially larger than what is

considered respirable silica dust. The spherical shape of the sand grain is an essential characteristic of industrial sand. Therefore, care is taken in all aspects of the processing to not fracture or break sand grains.

Construction activities, such as sand blasting, or jack hammering, can create respirable silica dust as a byproduct. Mining activities such as drilling, crushing and stone cutting can create respirable silica as a byproduct as well. Respirable silica dust may be invisible to the naked eye and is so light that it can remain airborne for a long time. The greatest potential for exposure associated with the Project is within the processing building where dried sand is screened and respirable dust can be inhaled.

Material handling associated with the wet plant will consist of saturated sands which are not subject to fugitive dust emissions. Sands that are too fine to meet specification for industrial sand will be washed and screened from the marketable material. This includes fine sands, very fine sands (62.5 μm -125 μm) as well as some silts 62.5 μm and smaller. Wet dust suppression techniques will be used to handle the reject sands from the processing operations. The reject sands, which are the finest, and therefore the most readily airborne component of the processes, will not be stockpiled outside. The reject sands will be pumped in a water/sand slurry and placed as reclamation fill directly from the initial hydrosizing process and not stockpiled on site. This will minimize the potential for fugitive dust generation, which in turn reduces the potential for ambient levels of silica concentrations from the site.

Silica dust emissions from the dry plant are controlled by enclosing all operations after the sand has been dried. Pollution control equipment such as baghouses will be utilized which provide filters for collecting fine dust in exhaust streams. Fine waste from the dry plant will be stored in an airtight containment and transported to the mine for below water reclamation in covered trucks.

Exposure levels of respirable silica dust in the workplace are regulated by the Mine Safety and Health Administration (MSHA). The permissible exposure limit or threshold limit value (TLV) for mineral dust containing respirable crystalline silica varies depending upon the composition of dust. MSHA regulations require that exposures for airborne contaminants including respirable dust and total dust be controlled insofar as feasible, by prevention of contamination, removal by exhaust ventilation, or by dilution with uncontaminated air. Adequate respiratory protection will be used by on site workers as may be required to meet the MSHA guidelines.

MSHA limits the allowable exposure to silica in the workplace. The metal and nonmetal mining industry standard is based on the 1973 American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values formula: 10 mg/m3 divided by the percentage of quartz plus 2. MSHA enforces these exposure limits and has rules requiring controls for drills, and requires air sampling in certain situations. Other relevant MSHA regulations include: respiratory protection, posting of warning signs, housekeeping, recordkeeping or reporting of occupational illnesses, personal protective equipment, and training. Although the majority of the deposit and the site operations represent no risk for respirable silica, drilling or blasting of the sandstone and processing activities, may produce small amounts of respirable silica. The Site will operate in accordance with MSHA rules. If new regulations are adopted, or worker exposure limits revised, the site will operate in compliance with any new regulations as well. The following minimum measures will be adopted to control silica dust exposure:

- Conduct air monitoring to measure worker exposure and ensure that controls are providing adequate protection for workers.
- Ongoing personal air monitoring program;
- Dust control program;
- Medical surveillance program/disease reporting;
- Training and information to workers on crystalline silica;
- Availability of air and medical surveillance data to workers;
- Equipment maintenance program;
- Respiratory protection program;
- Isolated personal hygiene facilities, eating facilities, and a clothing change area;
- Record keeping;
- Housekeeping program;
- Construction safety and health program;

- Regulated areas/warning signs;
- Provide workers with training that includes information about health effects, work practices, and protective equipment for respirable crystalline silica including:
- For other operations where respirators may be required, use a respirator approved for protection against crystalline silica-containing dust.
- Do not alter the respirator in any way.
- Do not eat, drink, use tobacco products, or apply cosmetics in areas where there is dust containing crystalline silica.
- Wash your hands and face before eating, drinking, smoking, or applying cosmetics in areas where there is dust containing crystalline silica.
- Recognize where silica dust may be generated and plan ahead to eliminate or control the dust at the source.
- Use controls and containment methods, such as wet drilling of silica containing materials, to control the hazard and protect adjacent workers from exposure.
- Routinely maintain dust control systems to keep them in good working order.
- Use adequate respiratory protection when source controls cannot keep silica exposures below the permissible exposure limit (PEL).

The Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for particulate matter (PM) for both PM less than 10 microns (PM_{10}) and PM less than 2.5 microns ($PM_{2.5}$). In addition, Minnesota has established its own Minnesota Ambient Air Quality Standards (MAAQS) in Minn. Rule 7709.0080 for Total suspended particle (TSP), PM10 and $PM_{2.5}$. However, while there are standards for occupational exposures to silica dust, no ambient air standards have been established by either the EPA or by the State of Minnesota.

The Project Proposer is proposing ambient air monitoring for PM, PM10 and silica. A copy of the proposed monitoring plan is included in the EAW Data collected by the ambient air monitors regarding silica emissions from the facility and nearby sources will be for informational purposes. This information will be submitted to the MPCA and Minnesota Department of Health (MDH) to evaluate strategies to minimize public health risk.

Diesel fuel will be used to operate on-site equipment. Above ground tanks will be constructed on site, most likely on Parcel D. Tanks will be double walled or have appropriate secondary containment in accordance with MPCA fuel storage regulations. Mining equipment will primarily be fueled utilizing a mobile fueling truck. Alternatively, equipment will be fueled using a fueling service.

Electricity and natural gas are available to run processing equipment. Backup generators may be used during periods of peak electrical demand. Propane will be used during periods of peak demand for natural gas in the winter.

A propane tank may be installed Parcel A to provide backup fuel during periods of peak demand for natural gas which may occur during the winter months.

6.0 Traffic Impacts/Mitigation Plan

The Project Proposer has completed a traffic study to understand the potential traffic impacts related to the Project. The study was completed in October of 2012 and is attached to the EAW. The study utilized existing data as well as collected additional traffic data in order to:

- Determine current volumes
- Analyze measures of effectiveness (MOEs) for vehicle delay, level of service (LOS), and queues
- Model future volumes
- Predict warranted improvement thresholds to mitigate service level and safety impacts

Project operations would be spread out along CSAH 5 between Cleveland Street to approximately ¼ mile north of Industrial Road. The analysis includes a total of six intersections along CSAH 5, the following are the study intersections analyzed:

- CSAH 5 at Cleveland Street
- CSAH 5 at Eastbound TH 14 (South Ramp) Ramp Terminal
- CSAH 5 at Westbound TH 14 (North Ramp) Ramp Terminal
- CSAH 5 at Industrial Road (wet plant)
- CSAH 5 at 230th Lane (mining and winter stockpile)
- CSAH 5 at dry plant access

6.1.1. *Existing Conditions*

CSAH 5 runs north-south between downtown Mankato and the City of Kasota; the posted speed limit is 40 mph; CSAH 5 is posted at 50 mph north of Industrial Road. Between Cleveland Street and north of the TH 14 interchange, CSAH 5 is a four-lane divided roadway. North of the interchange to Industrial Road, CSAH 5 is a four-lane undivided roadway. North of Industrial Road, CSAH 5 is a two-lane undivided roadway.

Intersections along the Project corridor are serviced with various configurations. The north and south ramp terminal intersection with TH 14 and the Cleveland Street intersection currently have left and/or right turn lanes along CSAH 5 where the movements are allowed. The Industrial Road intersection is currently configured with two through lanes for both CSAH 5 approaches. The current configuration at the dry plant access is connected to a bypass/turnlane configuration at 231st Lane. There is a northbound left turn bypass lane for demolition landfill traffic at 231st Lane, located approximately 250 feet south of the proposed dry plant access, which ends just north of the dry plant access. All intersections are currently controlled by stop signs for the minor street approaches with CSAH 5 operating uncontrolled.

Total traffic volume collected in June 2012 showed an average daily traffic (ADT) on CSAH 5 of 6,046 vehicles per day (vpd) and 1,317 vpd on Industrial Road. In addition, turning movement traffic counts were collected at four of the intersections in October 2012; CSAH 5 at Cleveland Street, both ramp terminal intersections and Industrial Road. The other two intersections currently are either not used or have very low traffic demands. All existing intersections operate at a LOS A during the AM peak hour and a LOS B or better during the PM peak hour. Turning lanes currently exist along CSAH 5 on the north and south ramp terminal intersection with TH 14 as well as at the Cleveland Street intersection. In addition, turn lanes warrants are met for both the northbound right and southbound left at Industrial Road.

6.1.2. *Proposed Operations*

The Project is assumed to be operational during the year 2013; therefore traffic forecasts were developed for the year 2013 and a 20-year projection. An annual growth rate of 1.1% percent per year was applied to the existing 2012 turning movement counts to develop the 2013 and 2033 background traffic volumes; this growth is based on Mankato Area Transportation and Planning Study (MATAPS)[3] medium growth scenario.

Trip generation estimates were calculated at maximum plant capacity and are deemed to be a worst case or maximum number. There are two possible truck routes to complete operations between the four facility locations. The first includes trucks traveling between the Jefferson Quarry and Parcel B, the wet plant, a maximum of approximately 300 loads per day or 600 truck trips per day. The second route would be between Parcel C, the mining and winter stockpile area, and Parcel A, the dry plant, a maximum of approximately 67 loads per day or 134 truck trips per day.

It should be noted that the hauling between the Jefferson Quarry and the wet plant would only operate between approximately March and December. The hauling between the mining and winter stockpile area and the dry plant

[3] http://www.mataps.com/

would only occur during winter months, November to March, when the material could not be slurried between the facilities.

As a conservative measure, this analysis will assume traffic during the month of November when both truck routes are in operation. Another conservative assumption is that the peak hour splits during the AM and PM peaks would be 10% of the daily truck traffic.

Employee trips are estimated to be approximately 30 trips inbound and 30 trips outbound. The trips will be split between the wet plant and dry plant facilities and different shifts.

6.1.3. *Potential Impacts & Effects*

Level of service impacts were analyzed to determine operational impacts from the increased traffic as were turn lane warrants to determine the potential safety impacts. The study concluded that at maximum trucking volumes, the Project Proposer's facility will not have an adverse impact on the operations of the intersections included in this study. All intersections continue to operate at a LOS of C or better with the exception of the pm approach delay at the southbound TH 14 ramp, which exists today. Additionally, at maximum predicted traffic levels, turn lane warrants indicate impacts to the system due to the following movements:

- Northbound right turn into Parcel A, the dry plant;
- Southbound right turn into Parcel C, the mining and winter stockpile area; and
- Northbound left turn and southbound right turn from CSAH 5 to Parcel B, the wet plant.

In addition to turn lane warrants and service levels, sight distances were assessed by the study and no issues were found.

6.1.4. *Mitigation*

While the development does not have a big impact on overall traffic operations, there are some volume considerations and/or improvements to the intersections that could provide a safer experience for all users. To determine the impact of volume, the traffic study assessed the volume thresholds at which safer operating conditions exist. At the wet plant, this condition is met if there are 280 or fewer trucks per day; likewise, for traffic moving between Parcel C, the mining and winter stockpile area, and Parcel A, the dry plant, the condition is met when the volume is reduced to less than 100 trips per day. It was also concluded that the following improvements may provide a safer user experience:

- Prior to initiating the haul between the Jefferson Quarry and the wet plant at Parcel B, configure northbound left and southbound right turn lanes at the intersection of CSAH 5 and Industrial Rd into and out of the wet plant at Parcel B. These turn lanes can be constructed by reconfiguring the existing street width by restriping.
- Prior to initiating the haul between Parcel C, the mining and winter stockpile area, and the dry plant at Parcel A, construct a southbound right turn lane on CSAH 5at 230th lane into Parcel C the mining and winter stockpile area, and reconstructing the northbound right turn lane on CSAH into the Dry plant by reconfiguring the existing passing lane.

The Project Proposer has worked with the City of Mankato and Blue Earth County traffic engineers to develop required improvements to the adjacent roadways. *Figure 30 – Traffic Improvements* shows the proposed planned improvements. The Project Proposer will continue to work with Lime Township and the City of Mankato on including a plan that incorporates volume concessions and warranted improvements in the CUP. Critical to this plan will be the phased build out of operations. The traffic study is based on building and operating at full plant capacity starting in 2013 in order to study worst case scenarios within the EAW. However, initial construction and operation will be at less than ultimate design capacity and initial processing volumes will not require the storage of material in Parcel C. Therefore, turn lane improvements are not immediately required at either the mining and winter stockpile area or dry plant intersections because trucks will not haul between these sites. Timing of recommended improvements that relate to the growth of the Project will be necessary and cooperative planning between Lime Township, the City of Mankato and Blue Earth County will allow the Project Proposer to make

critical business decisions over time. Once the decision is made to begin utilizing Parcel C for winter storage, the recommended improvements will be completed.

Another major impact mitigating opportunity is possible with the inclusion of mining within the Project Area. If mining is approved on Parcels C and D, sources of sand feeding the wet plant can be adjusted to include sand from both the Jefferson Quarry via over-the-road trucks, and from within the Project Area, via slurry pipe. This will reduce the rate at which sand is brought to wet plant at Parcel B from the Jefferson Quarry, thus reducing the number of truck trips required per day. The reduction in trucking volume will be based on a product mass balance analysis. The Project Proposer will work with Lime Township in the CUP process to further define this mitigation strategy.

7.0 End Use Planning and Reclamation

Reclamation will be on-going once processing begins, thereby limiting the number of open acres at any given time. Reclamation activities include backfilling and grading to create slopes with long term stability. Shot limestone removed to expose sandstone reserves will create the structural fill. Fine sand waste will be utilized as an interlocking hydraulic fill. Once filling has progressed above the groundwater table, filter cake will be mixed with unconsolidated overburden and layered on top of the limestone/sand fill. Initially, the water associated with both the fine waste sand and the filter cake will have higher concentrations of acrylamide and DADMAC monomers than allowed by the drinking water standards. However, as described in the EAW, biodegradation will reduce concentrations to levels below the standards before they enter the groundwater. Perimeter slopes and upland areas established as part of reclamation will be seeded and mulched to establish a vegetative cover and minimize or eliminate erosion and sedimentation. Reclamation details are can be seen in *Figure 31 – Parcel D Reclamation* and *Figure 32 – Parcel C Reclamation.* Reclamation is also further discussed in the reclamation plan attached to the EAW.

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[i] JS_Amended_EAW.pdf (http://www.mediafire.com/view/f5han2mrr2pab5l/JS_Amended_EAW.pdf)
[ii] JS_EAW_ROD.pdf (http://www.mediafire.com/view/3ot5vio5dcetwe5/JS_EAW_ROD.pdf)

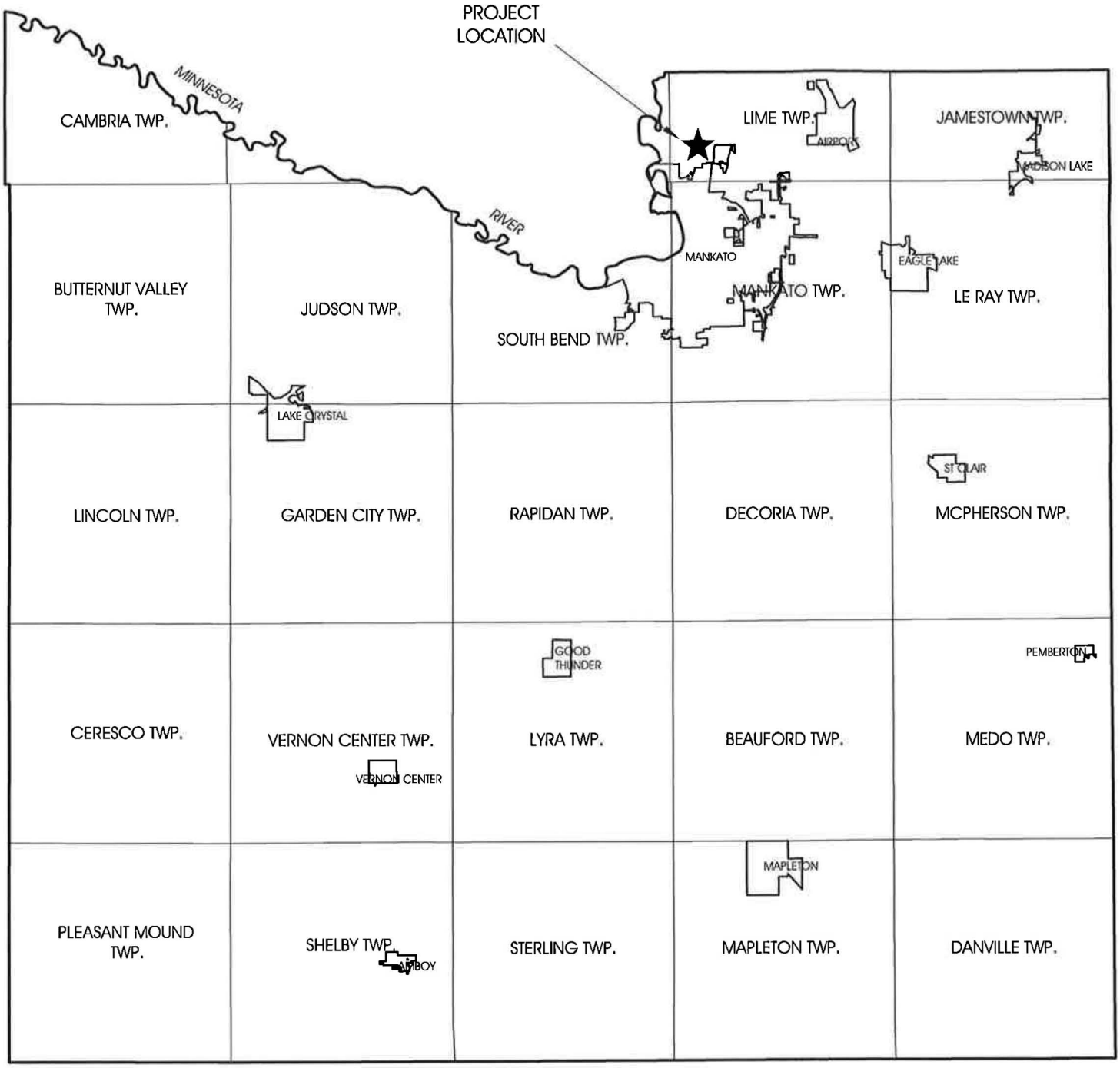

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Figure 1
Blue Earth County
General Location Map

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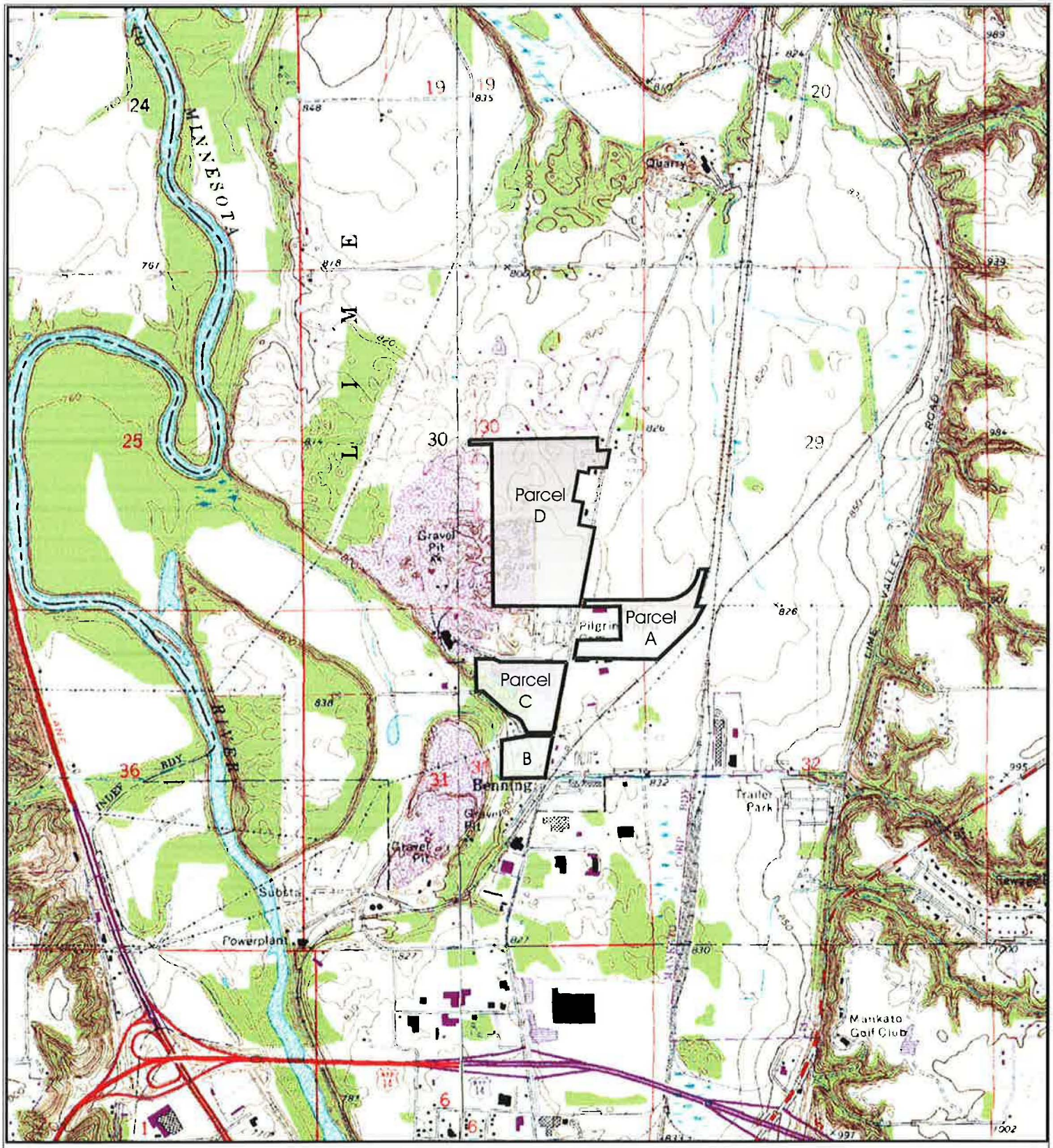

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SCALE IN FEET

Figure 2
USGS Quad Map Excerpt

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DRAWING: \\shrinkwrap\DWGS\Jordan Sands\2012 EAW\Fig 3 - Site Plan.dwg LAYOUT: 11X17

Sunde Engineering, PLLC.

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JORDAN SANDS, LLC

Lime Township
Blue Earth County,
Minnesota

DATE	REVISION

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P.E. NAME
DATE: 9-10-12 REG. NO. 21942

INFORMATION
PROJECT NO.
DRAWN BY:
CHECKED BY:
APPROVED BY:
SCALE:
DATE:

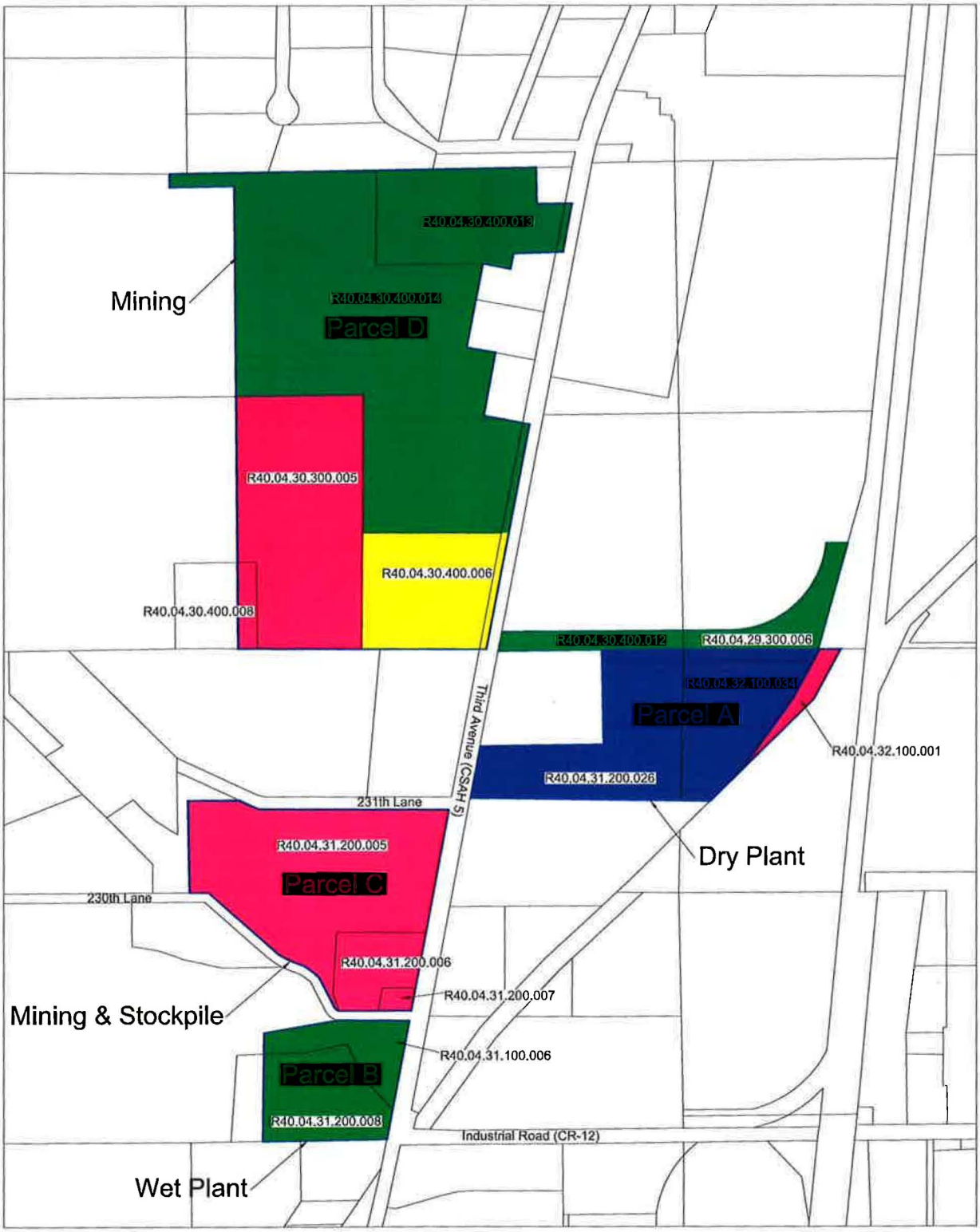
DESCRIPTION:

SITE PLAN

SHEET NO.

Figure 3

of



KEY:

- Coughlan Property
- Holtmeier Property
- MKS Property
- SMC Property

Figure 4
Project Area Ownership and Property Tax Identification Numbers

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SCALE IN FEET

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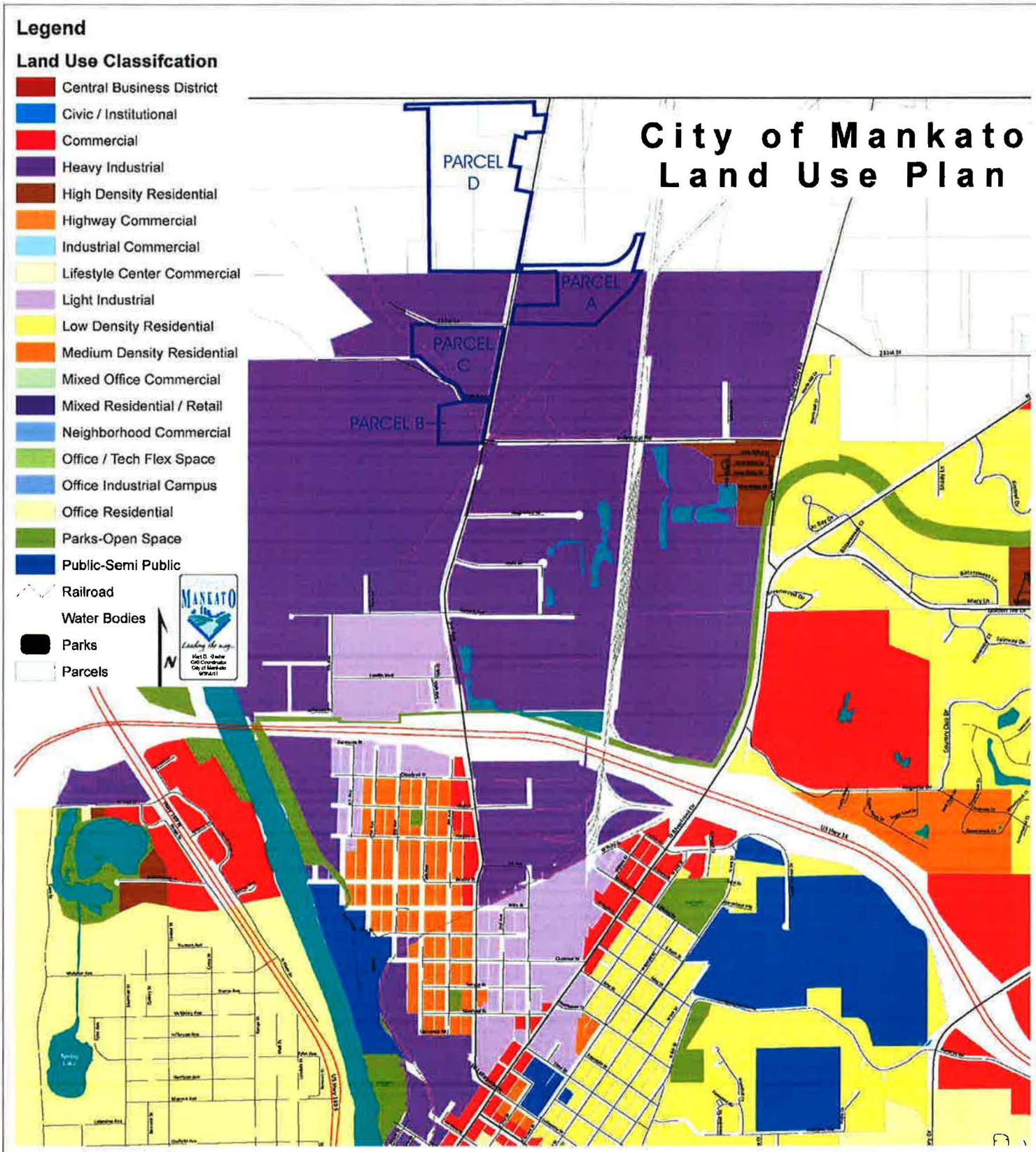

Figure 5
City of Mankato Land Use Plan

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N

0 600 1200

SCALE IN FEET

Figure 6
Land Use Map

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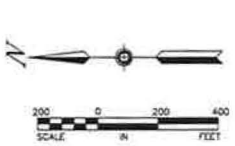
Topography from the Minnesota Geospatial Information Office. LiDAR dataset flown for Blue Earth County in 2005.



DRAWING: G:\DWGS\Jordan Sands\2012 CUP\Fig 4 Site Topography.dwg LAYOUT: 11X17 XREF: Basemap_Blue Earth County

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Conditional Use Permit

Lime Township
Blue Earth County,
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Kirsten Pauly
DATE: 9-19-12 REG. NO. 21442

INFORMATION

PROJECT NO. 12-033
DRAWN BY
CHECKED BY
APPROVED BY
SCALE
DATE

DESCRIPTION

SITE TOPOGRAPGHY

SHEET NO.

Figure 7

of

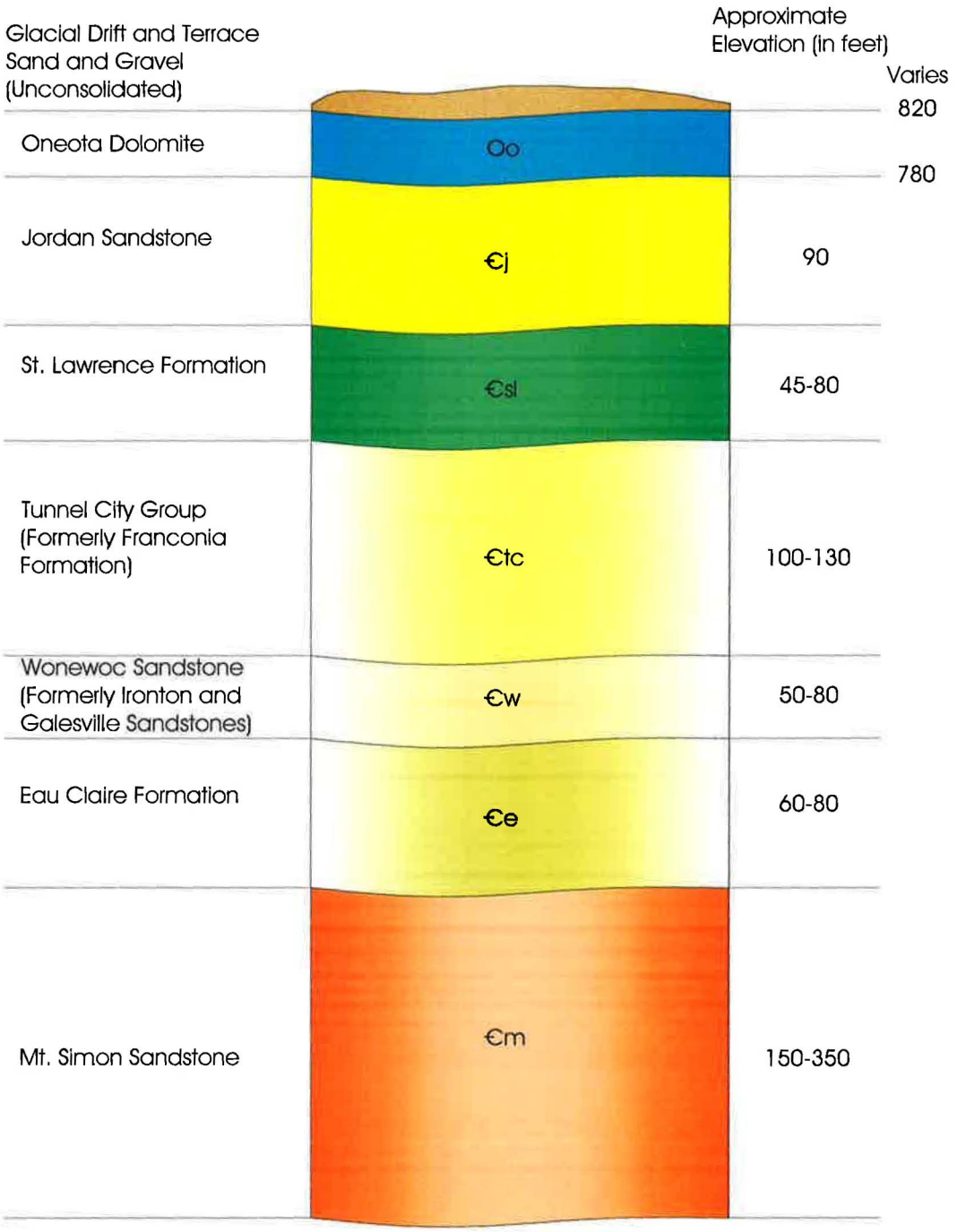

Figure 8
Generalized Stratigraphic Column

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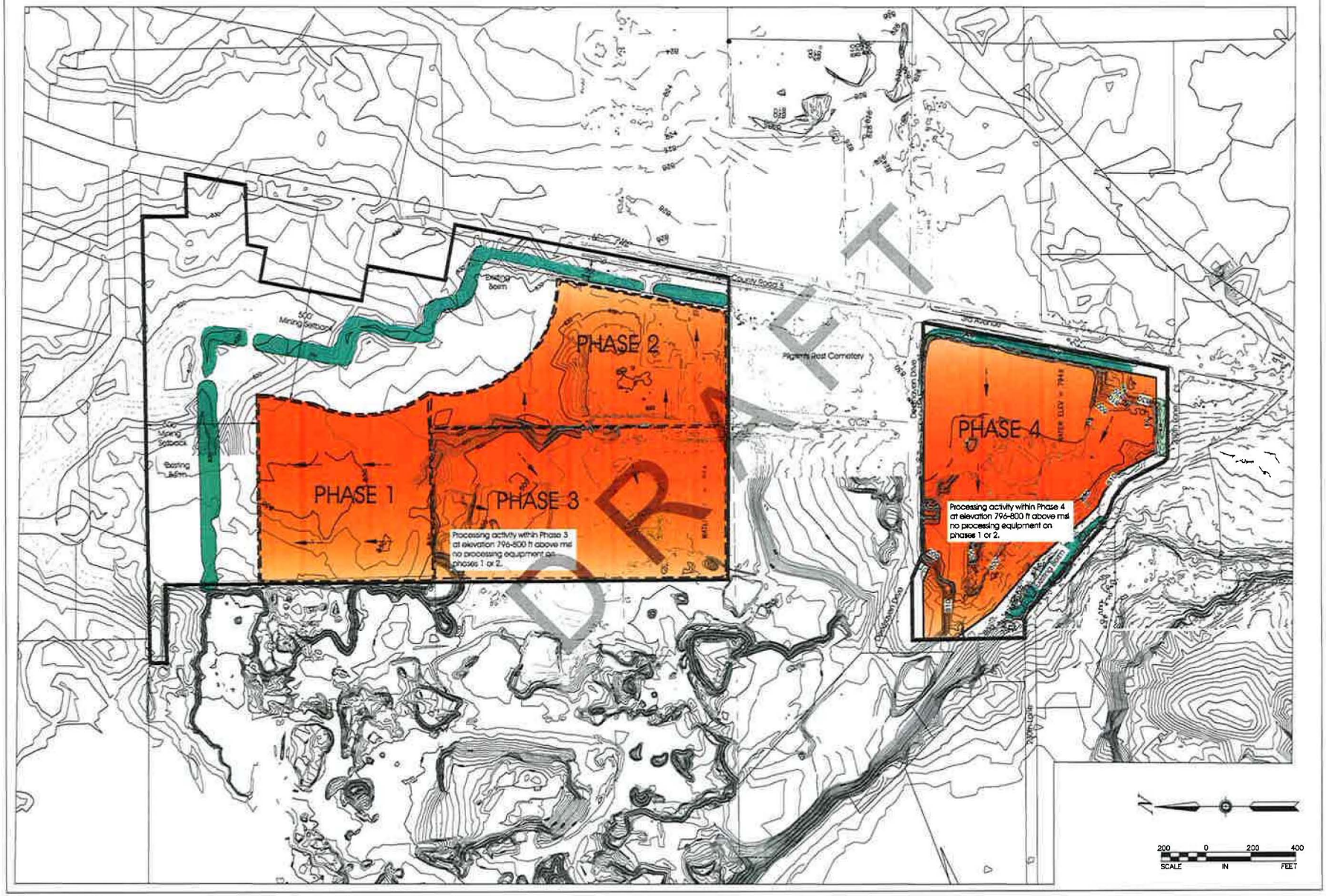

DRAWING C:\DEC\Jordan Sands\2012 EAW\Fig 6 – Concept Mine Plan Phasing.dwg LAYOUT: 11X17

Sunde Engineering, inc.

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P.E. NAME
DATE REG. NO. 21940

INFORMATION:
PROJECT NO.:
DRAWN BY:
CHECKED BY:
APPROVED BY:
SCALE:
DATE:

DESCRIPTION:

CONCEPT MINE PLAN

SHEET NO:

Figure 9

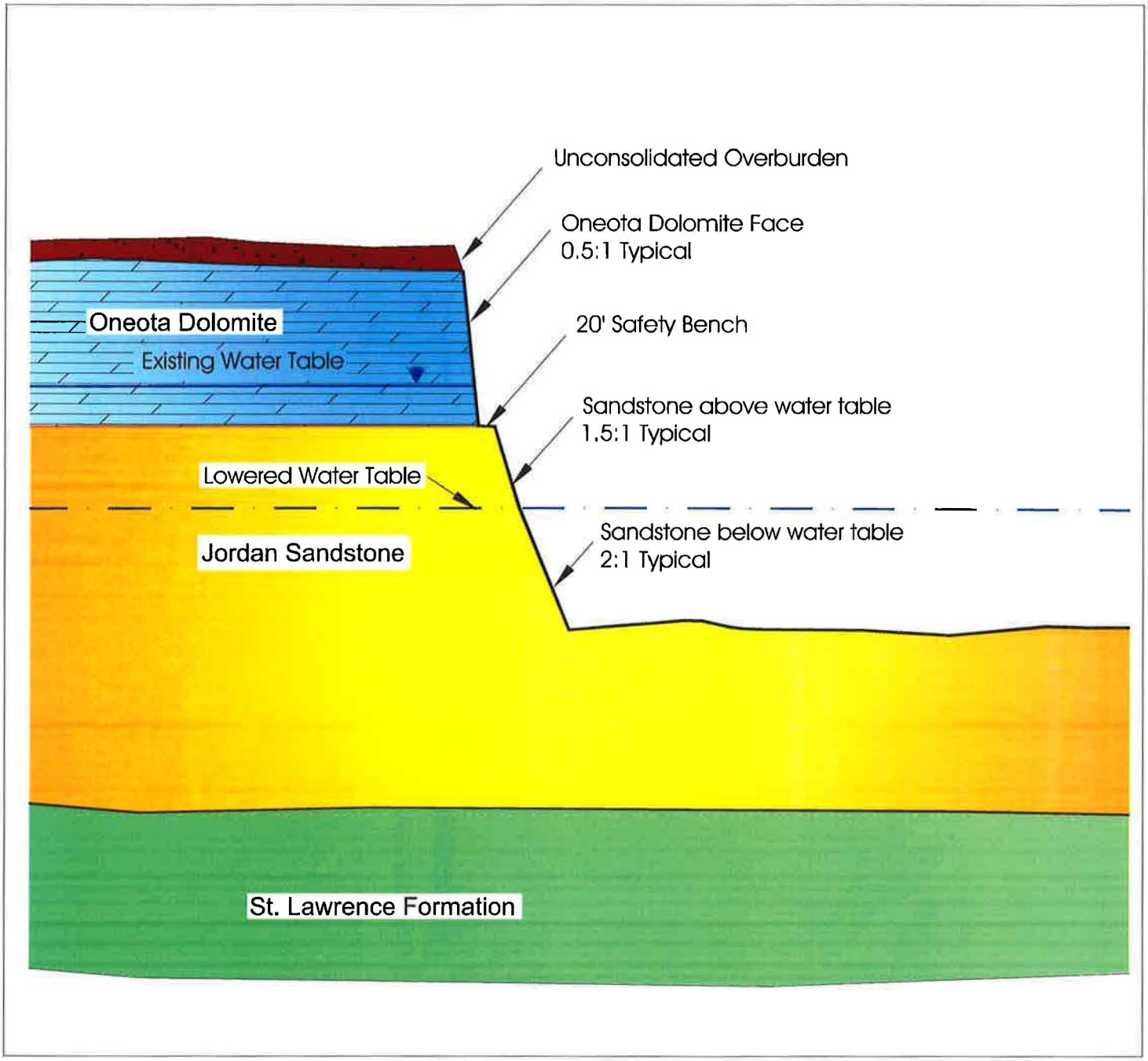

Figure 10
Typical Mining Cross Section

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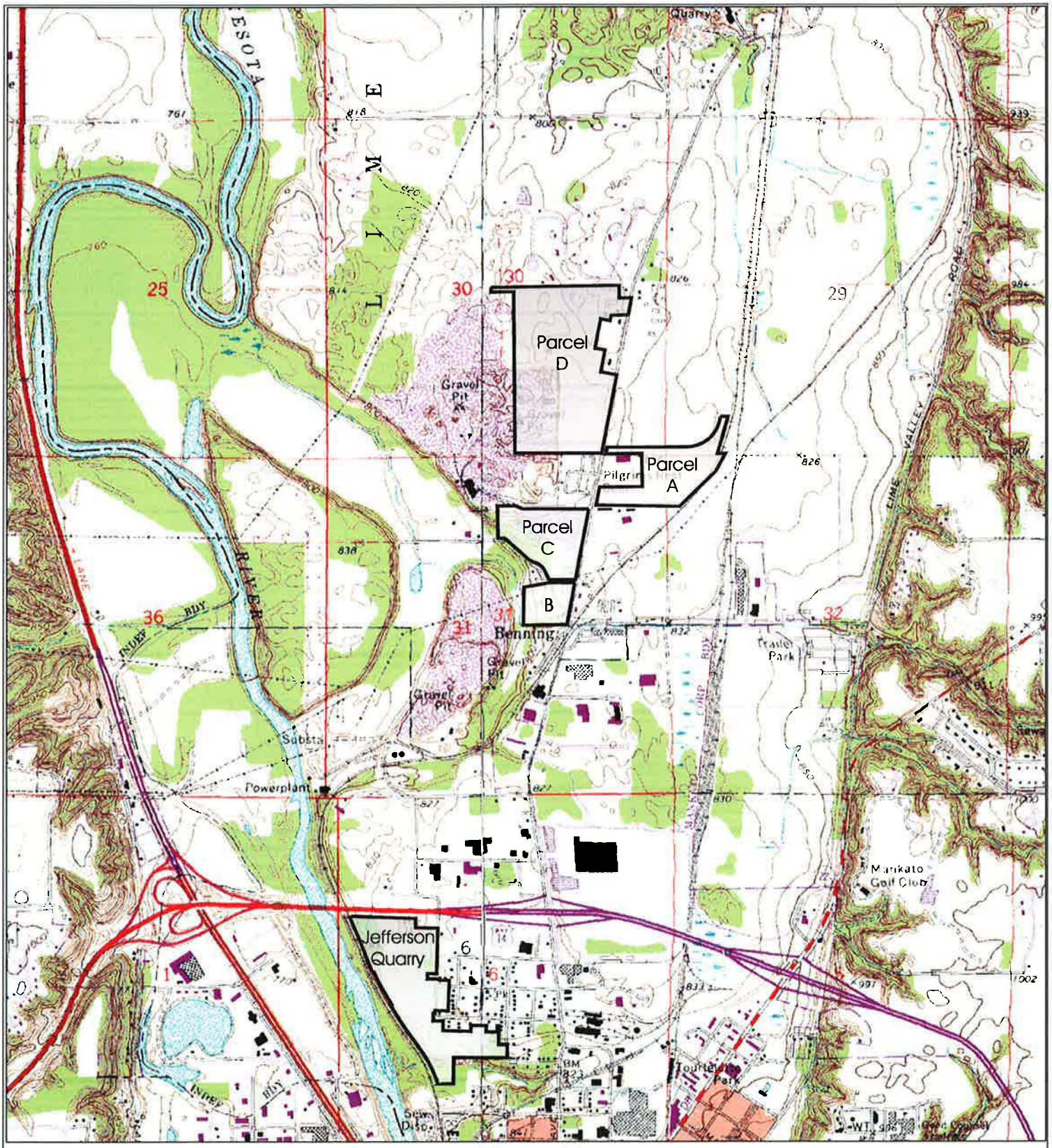

Figure 11
Jefferson Quarry Location Map

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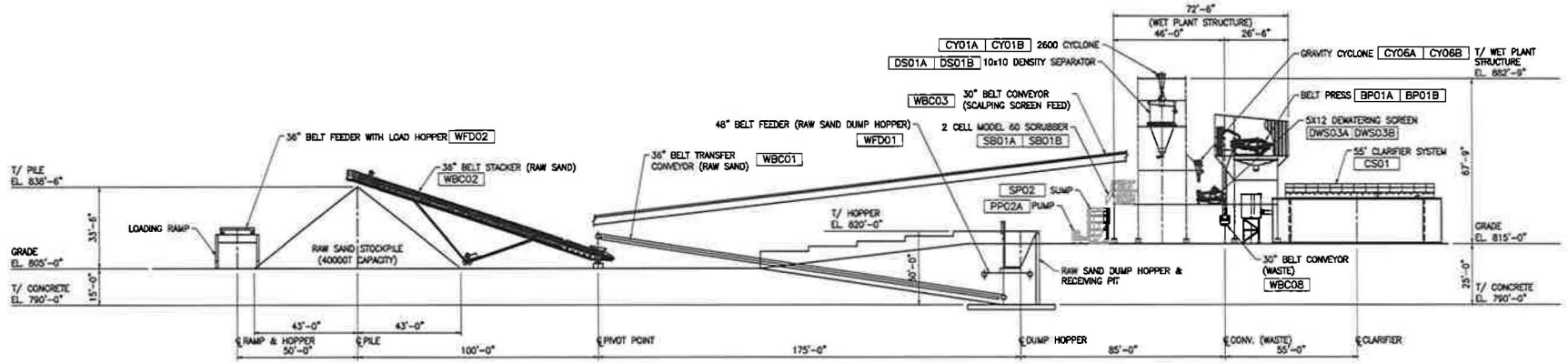
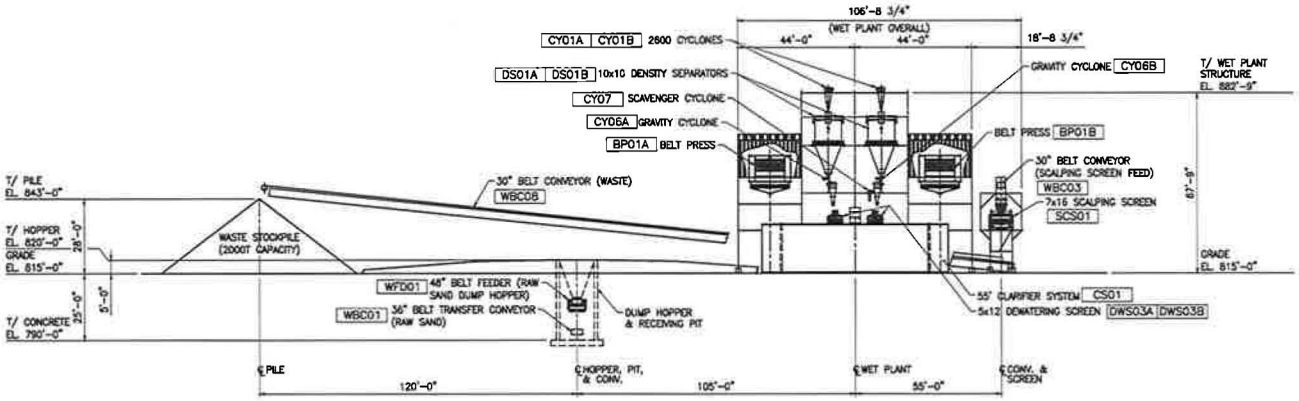


ELEVATION VIEW – RAW UNLOADING SYSTEM
& WET SAND PLANT
(LOOKING NORTH)



ELEVATION VIEW – RAW UNLOADING SYSTEM
& WET SAND PLANT
(LOOKING WEST)

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6-13-12

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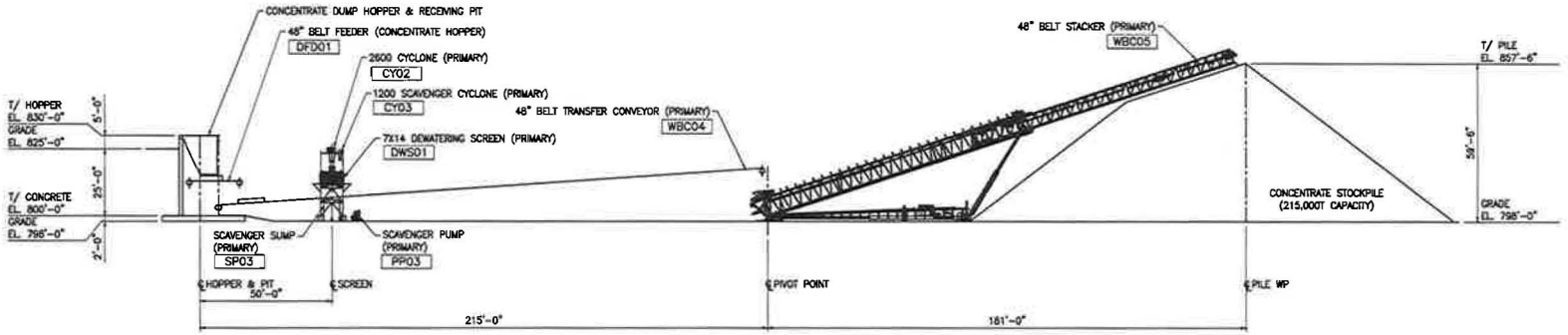
MANKATO, MN

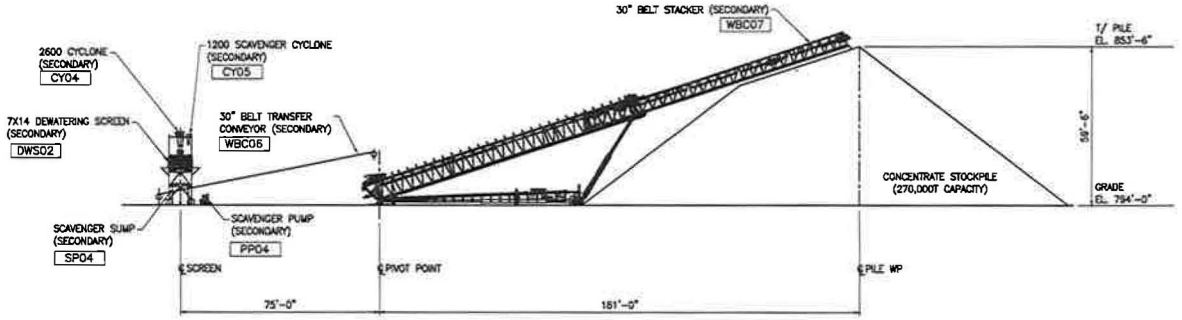
RAW UNLOADING SYSTEM
& WET SAND PLANT
ELEVATION VIEWS

D	6-13-12	ISSUED FOR CUP REVIEW	BLR	BLR	5-24-12	1015
				BLR	5-24-12	FIG 12

SCALE: 1"=20'-0"



ELEVATION VIEW – CONCENTRATE STOCKPILING SYSTEM (PRIMARY) (LOOKING SOUTHWEST)



ELEVATION VIEW – CONCENTRATE STOCKPILING SYSTEM (SECONDARY) (LOOKING SOUTHWEST)

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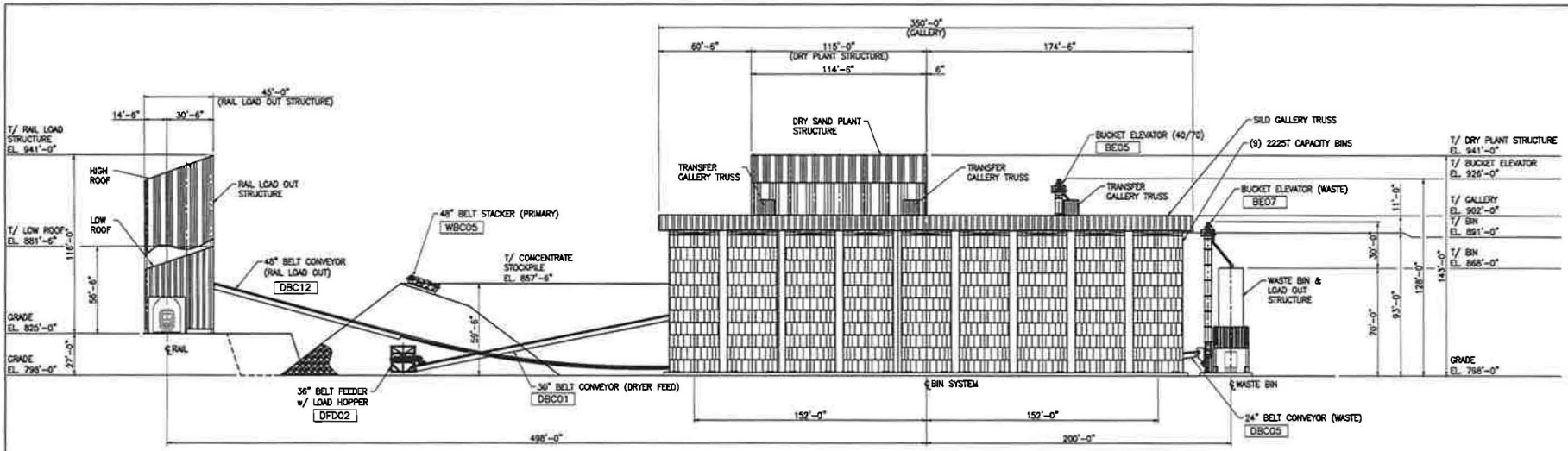
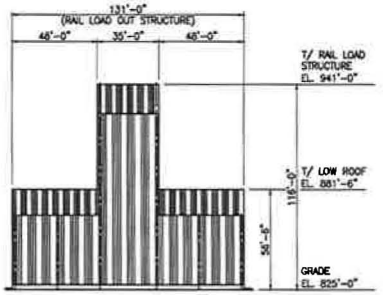
CONCENTRATE STOCKPILING SYSTEM
PRIMARY & SECONDARY
ELEVATION VIEWS

				BLR	5-24-12	1015
D	6-13-12	ISSUED FOR CUP REVIEW	BLR	BLR	5-24-12	FIG 13

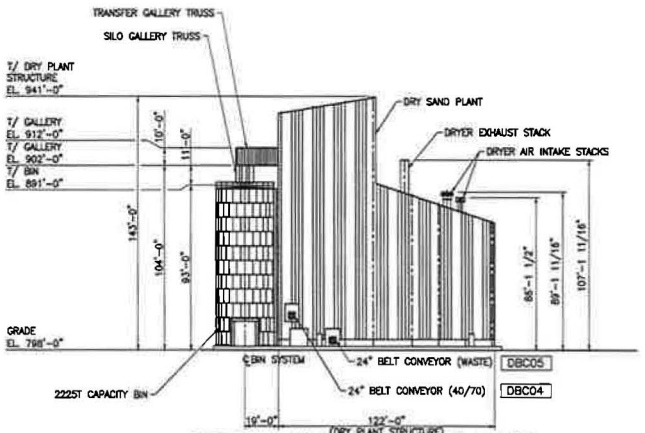
1"=20'-0"



ELEVATION VIEW – DRY SAND PLANT
& RAIL LOAD OUT
(LOOKING EAST)



ELEVATION VIEW – RAIL LOAD OUT
(LOOKING SOUTH)



ELEVATION VIEW – DRY SAND PLANT
(LOOKING NORTH)

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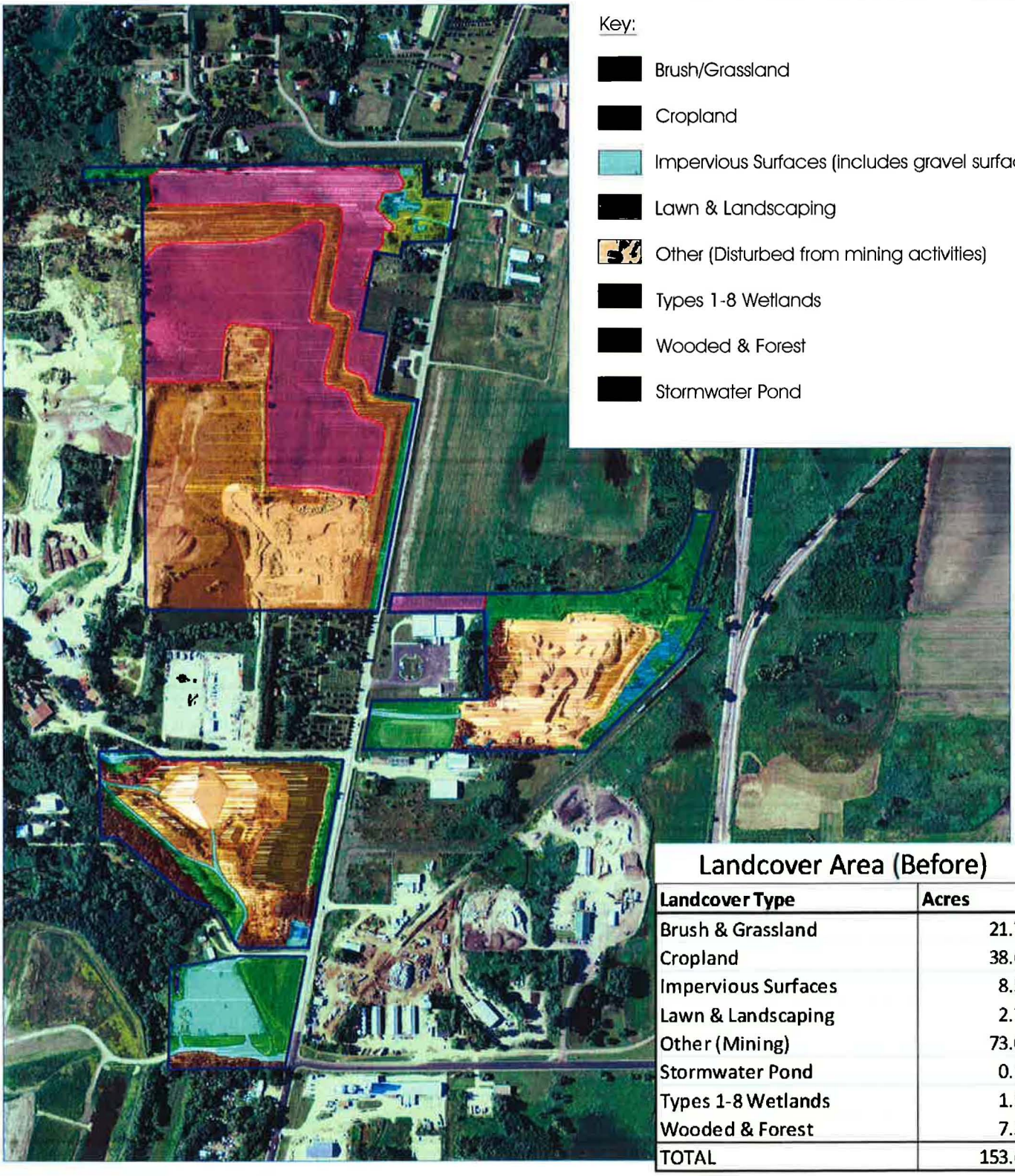
DRY SAND PLANT
& RAIL LOADO SYSTEM
ELEVATION VIEWS

				BLR	5-24-12	1015
D	6-13-12	ISSUED FOR CUP REVIEW	BLR	BLR	5-24-12	FIG 14

1"=30'-0"



Landcover Area (Before)

Landcover Type	Acres
Brush & Grassland	21.7
Cropland	38.6
Impervious Surfaces	8.5
Lawn & Landscaping	2.7
Other (Mining)	73.0
Stormwater Pond	0.1
Types 1-8 Wetlands	1.5
Wooded & Forest	7.5
TOTAL	153.6

N

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SCALE IN FEET

Figure 15
Land Cover Map (Before)

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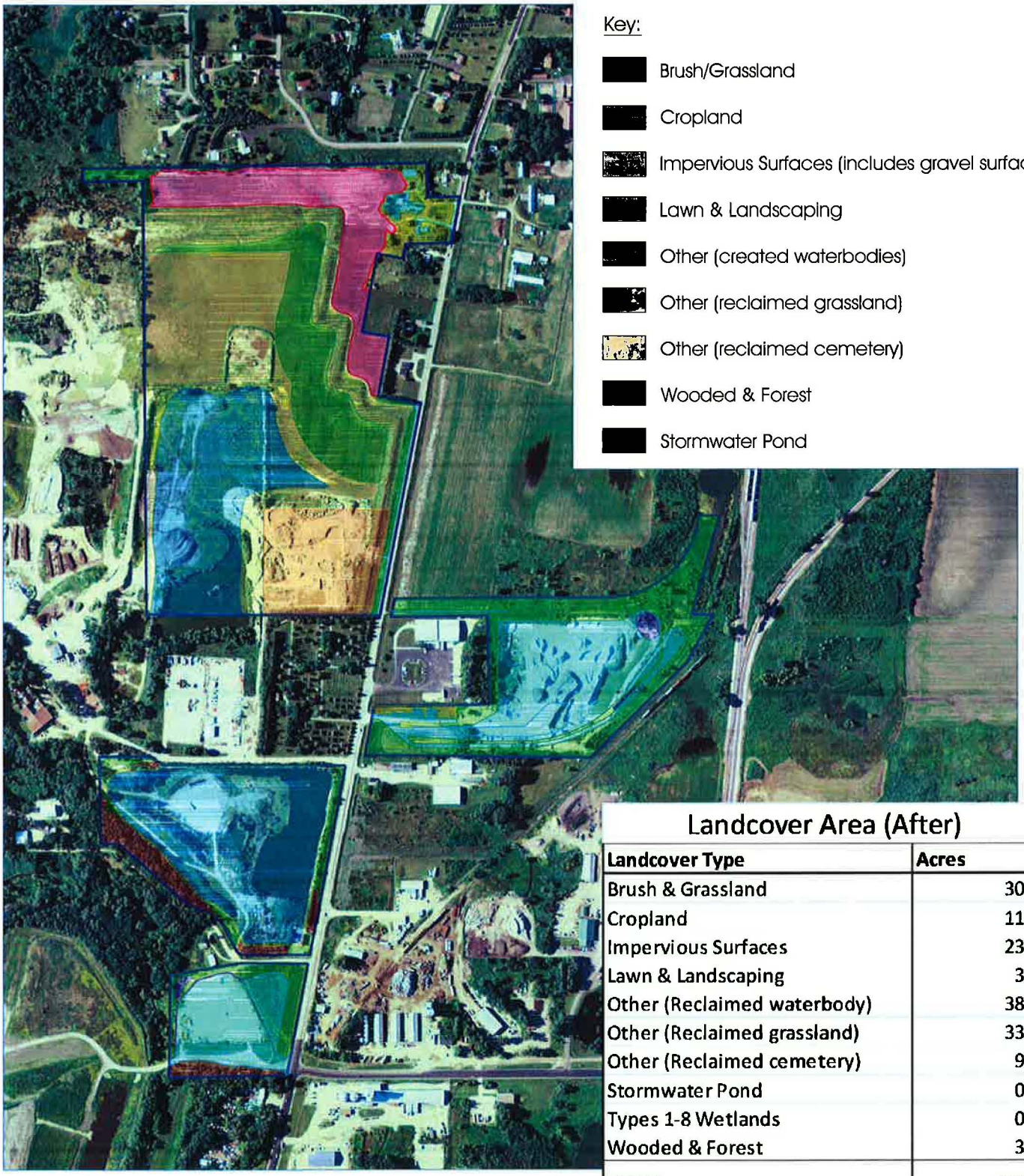

Landcover Area (After)

Landcover Type	Acres
Brush & Grassland	30.2
Cropland	11.3
Impervious Surfaces	23.6
Lawn & Landscaping	3.4
Other (Reclaimed waterbody)	38.1
Other (Reclaimed grassland)	33.4
Other (Reclaimed cemetery)	9.3
Stormwater Pond	0.5
Types 1-8 Wetlands	0.0
Wooded & Forest	3.8
TOTAL	153.6

N

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SCALE IN FEET

Figure 16
Land Cover Map (After)

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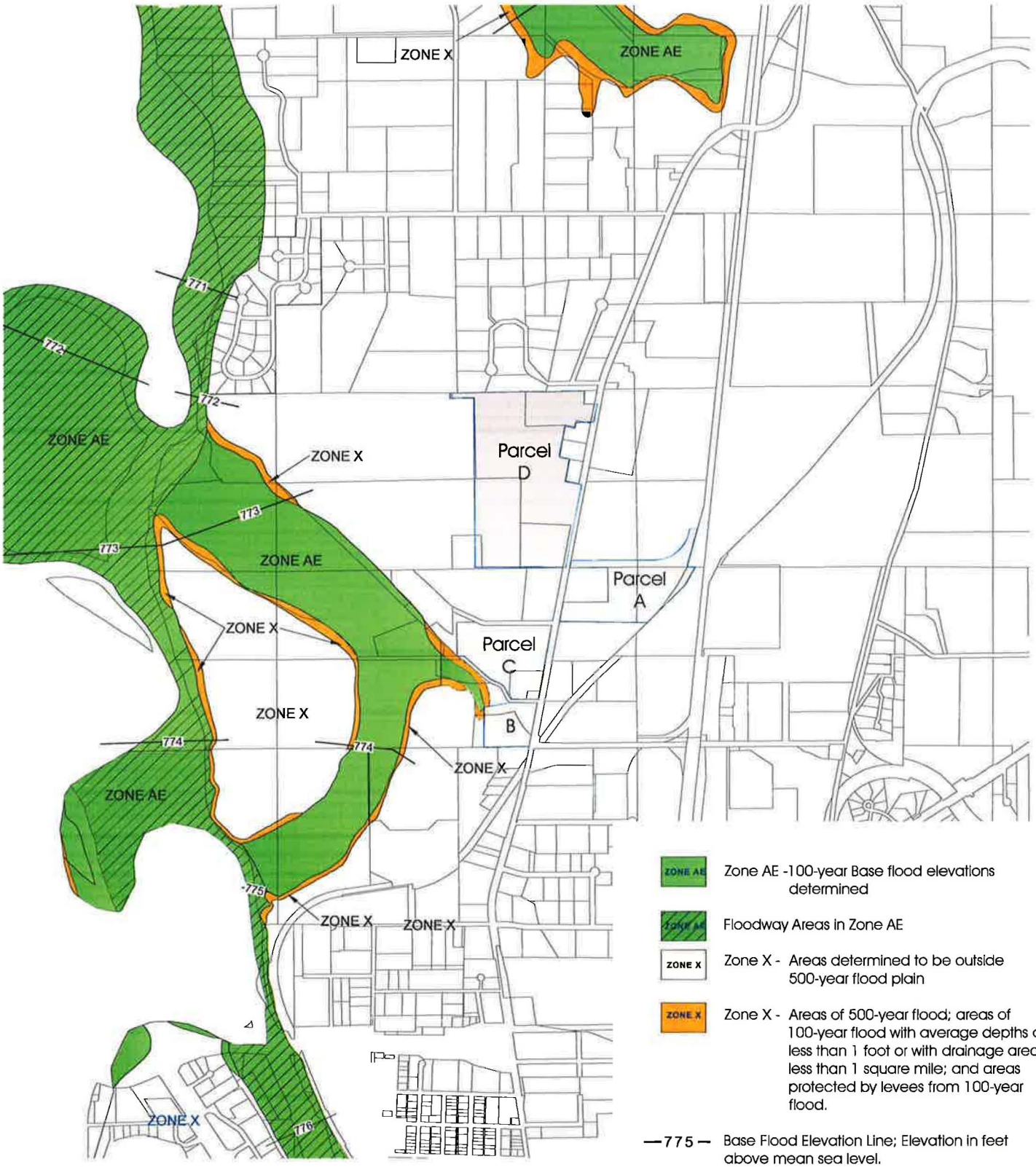

Figure 17
FEMA Flood Map

Excerpted From Panels 275231 0045 D, 275231 0050 E and 275242 0001 D

Blue Earth County, Minnesota

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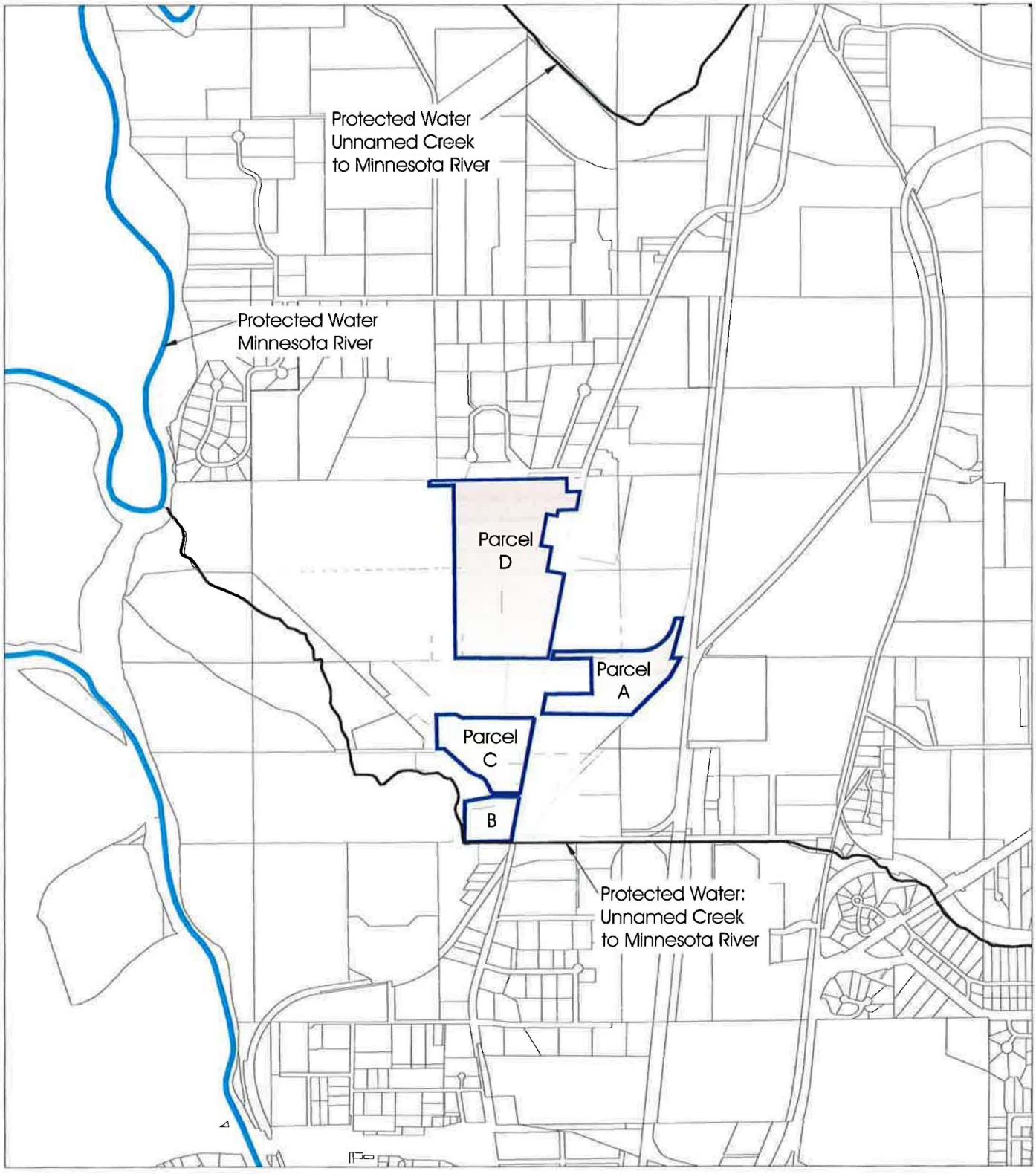

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SCALE IN FEET

Figure 18

DNR Protected Waters Inventory Map

Excerpted from the Minnesota Department of Natural Resources' Protected Waters and Wetlands Map of Blue Earth County, Minnesota, Sheet 1 of 1, Revised 1996

Sunde Engineering, PLLC.
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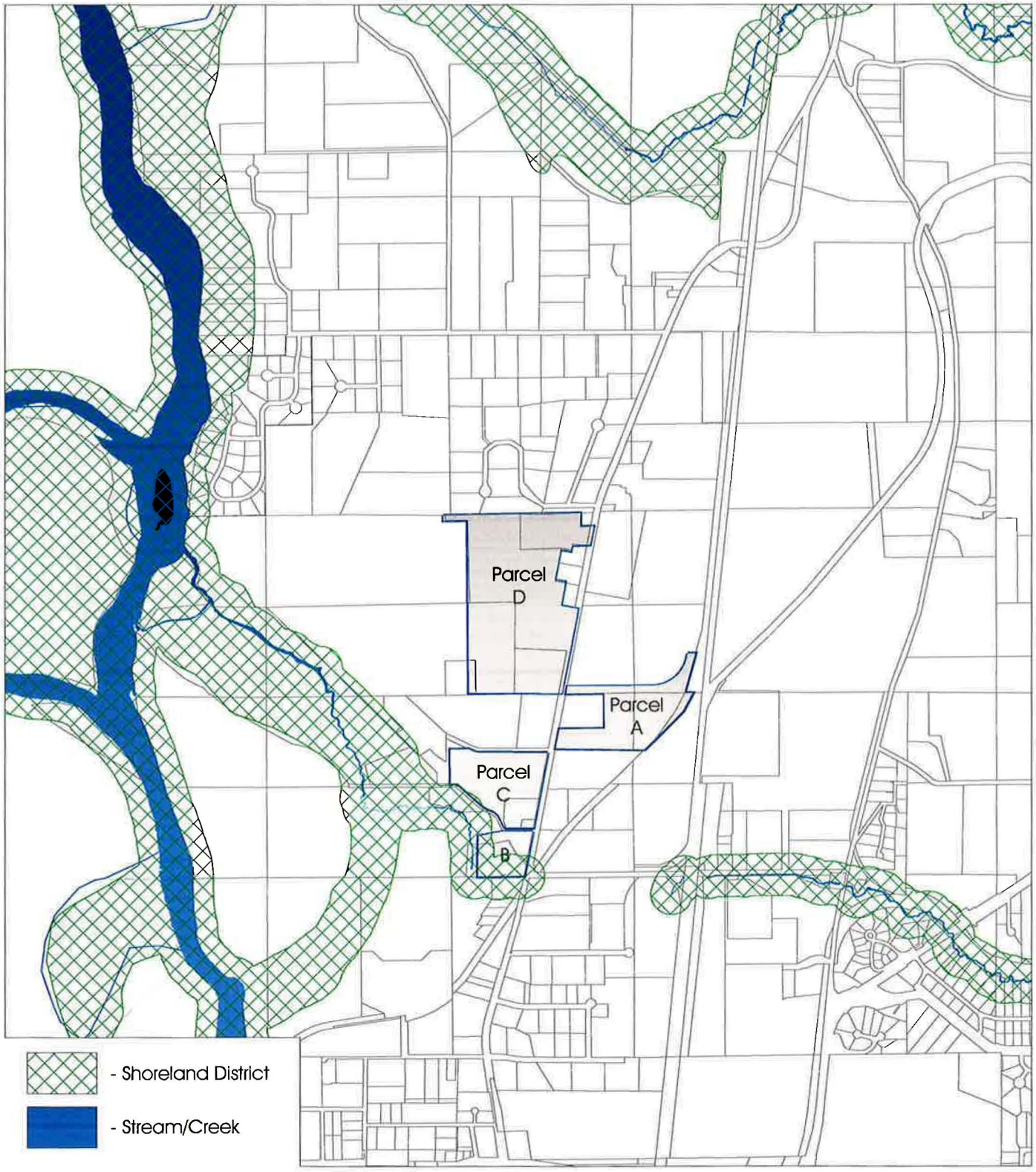

Figure 19
Shoreland District Map

Sunde Engineering, PLLC.
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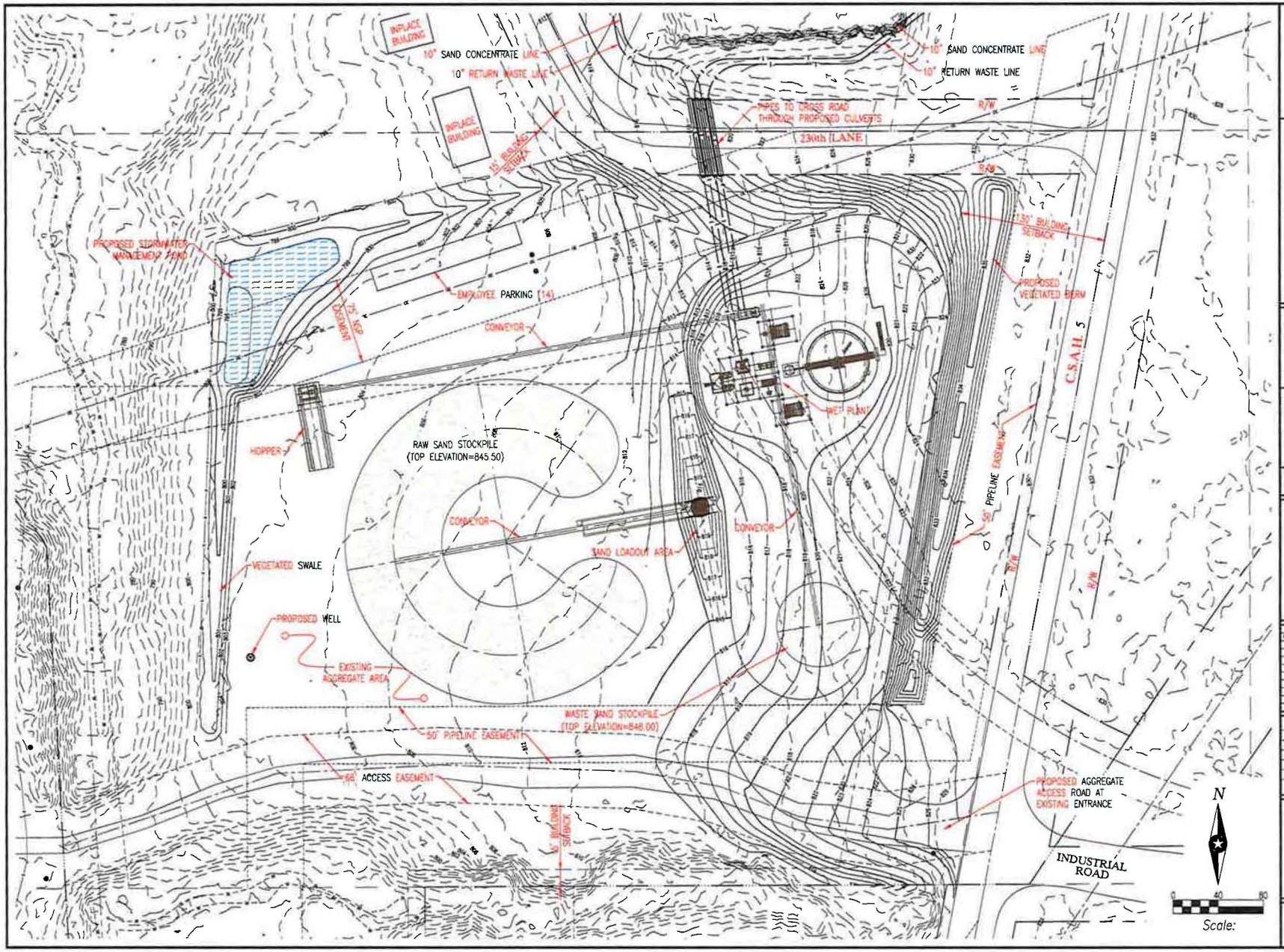

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PRELIMINARY

KEY PLAN

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

MATTHEW S. BRAND

DATE _____ LIC. NO. 45001

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DATE _____ LIC. NO. _____

PROJECT

JORDAN SANDS

LIME TOWNSHIP MINNESOTA

Revision Schedule		
Mark	Date	Description

PROJECT NO.	11-13479
FILE NAME	13479.SITE
DRAWN BY	SDT
DESIGNED BY	MSB
REVIEWED BY	MSB
ISSUE DATE	06/04/12
CLIENT PROJECT NO.	

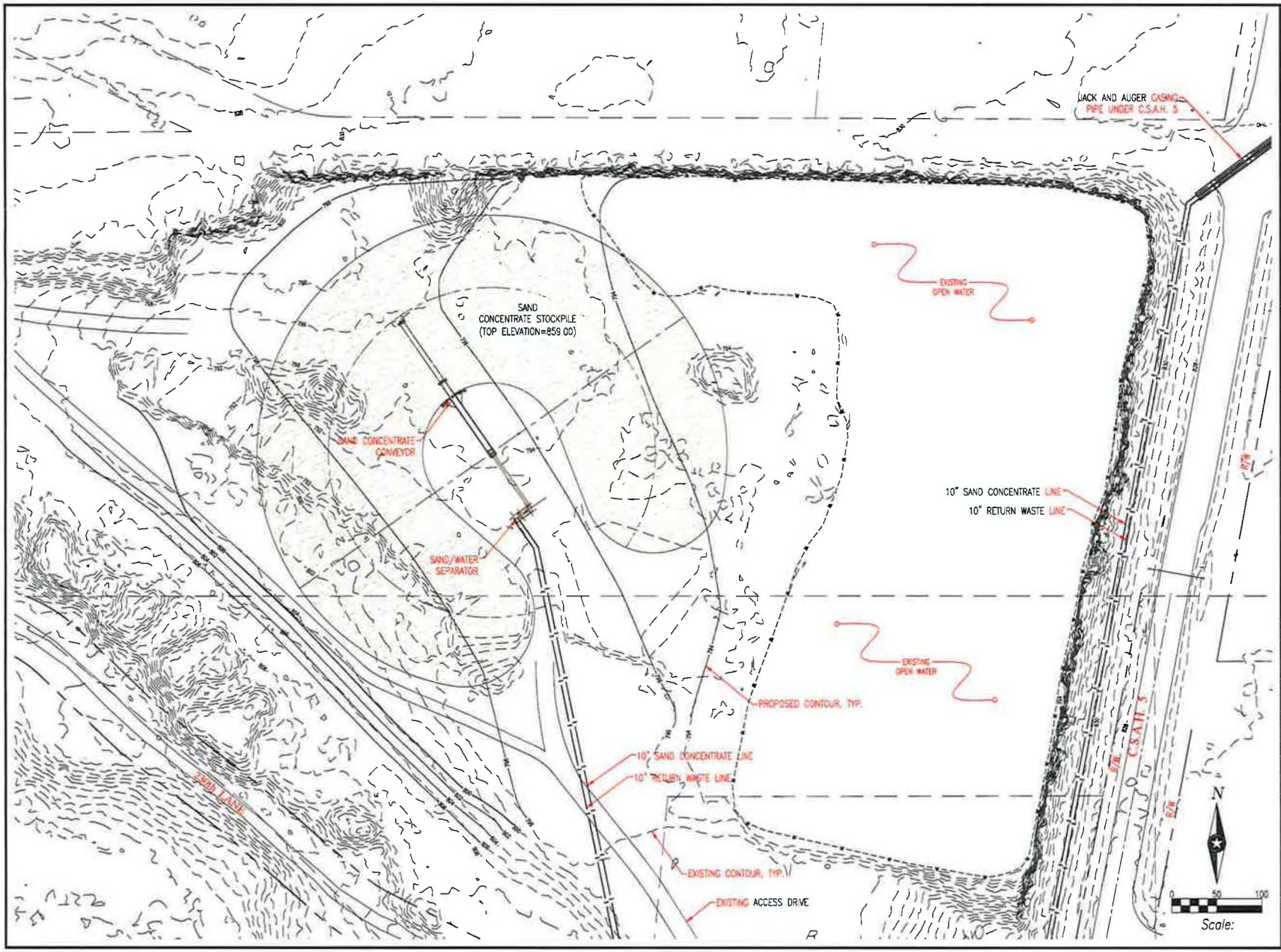
TITLE

WET PLANT

OVERALL SITE PLAN

SHEET

FIGURE • • • •



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MATTHEW S. BRAND

DATE _____ LIC. NO. 45001

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DATE _____ LIC. NO. _____

PROJECT

JORDAN SANDS

LIME TOWNSHIP MINNESOTA

Revision Schedule		
Mark	Date	Description

PROJECT NO.	11-13479
FILE NAME	13479 SITE
DRAWN BY	SDT
DESIGNED BY	MSB
REVIEWED BY	MSB
ISSUE DATE	05-18-12
CLIENT PROJECT NO.	

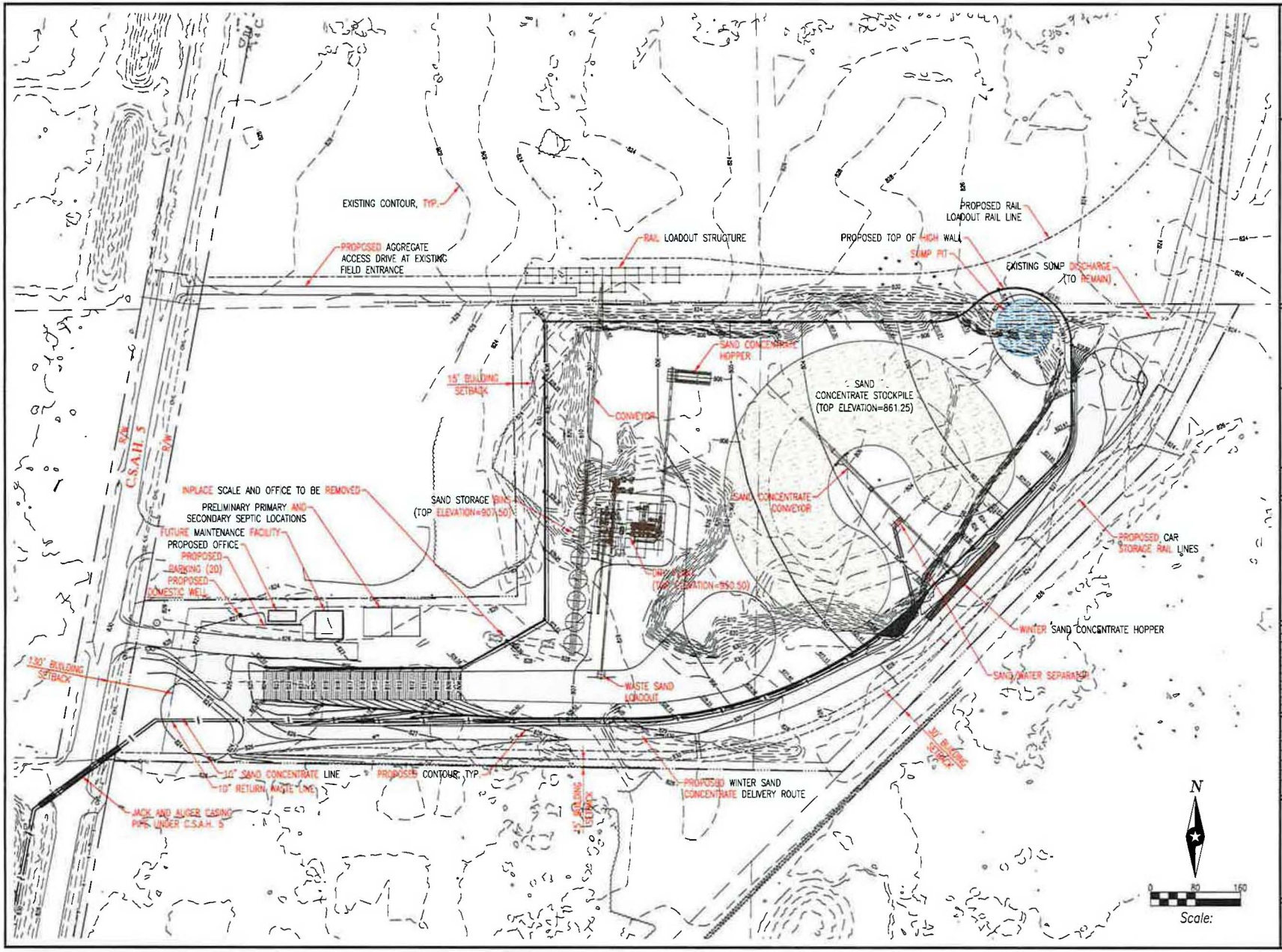
TITLE

SAND CONCENTRATE STOCKPILE

SITE PLAN

SHEET

FIGURE • • •



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PRELIMINARY

KEY PLAN

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MATTHEW S. BRAND

DATE _____ LIC. NO. 45001

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DATE _____ LIC. NO. _____

PROJECT

JORDAN SANDS

LIME TOWNSHIP MINNESOTA

Revision Schedule

Mark	Date	Description

PROJECT NO.	11-13479
FILE NAME	13479 SITE
DRAWN BY	SDT
DESIGNED BY	MSB
REVIEWED BY	MSB
ISSUE DATE	06-18-12
CLIENT PROJECT NO.	

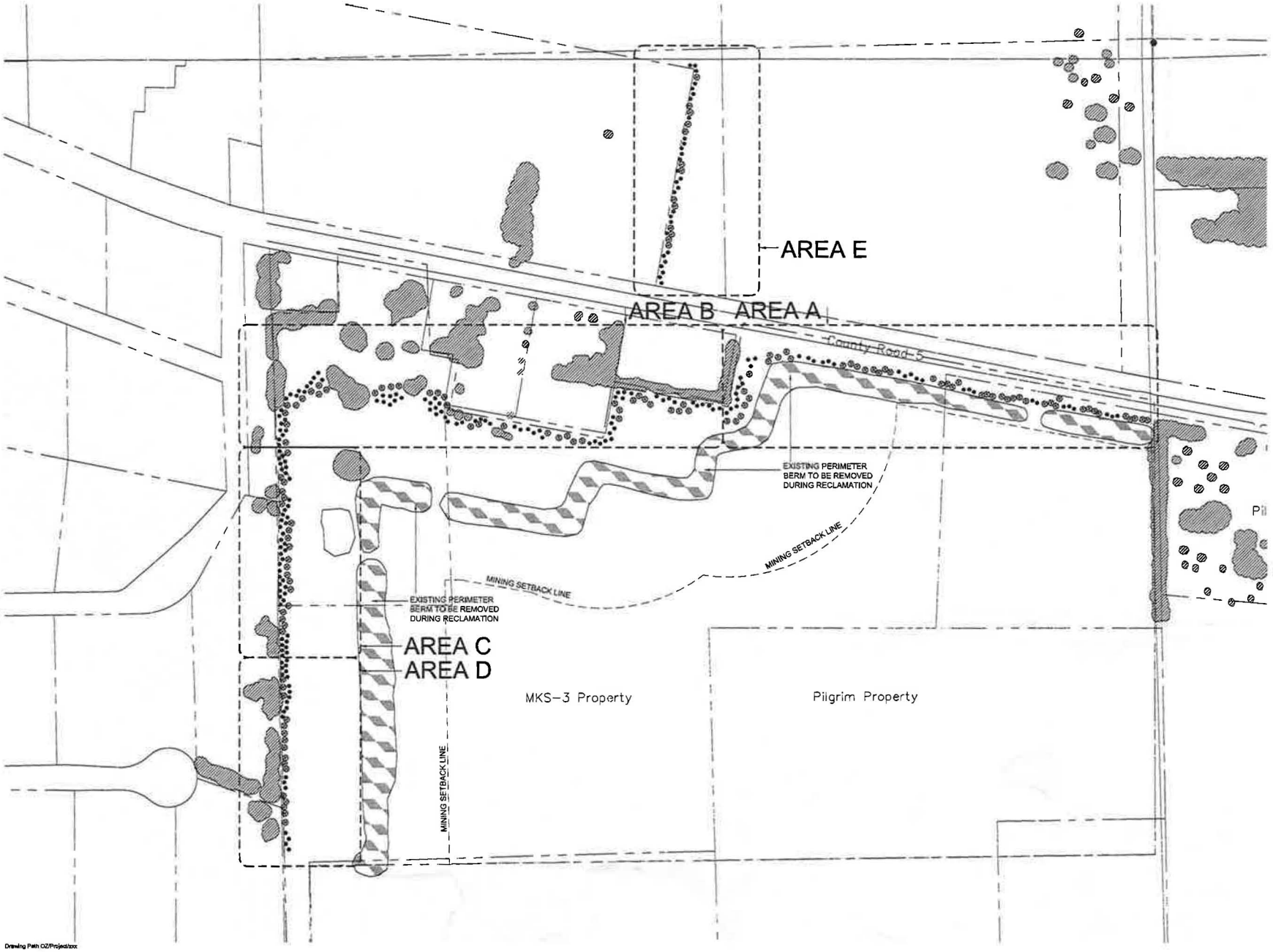
TITLE

DRY PLANT

OVERALL SITE PLAN

SHEET

FIGURE • • •



Jordan Sands, LLC
1710 Roe Crest Drive
North Mankato, MN

CONDITIONAL USE PERMIT

LIME TOWNSHIP
BLUE EARTH COUNTY
MINNESOTA

LANDSCAPE ARCHITECTURE
EARTER PLANNING
ENVIRONMENTAL DESIGN
115 WASHINGTON AVE N
SUITE 200
MINNEAPOLIS, MN 55401
TEL 612.338.0144
FAX 612.359.9825

Revision Date

DRAFT

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the State of Minnesota.

Reg. No. Number: 24582

MASTER PLANTING PLAN AREAS A-E

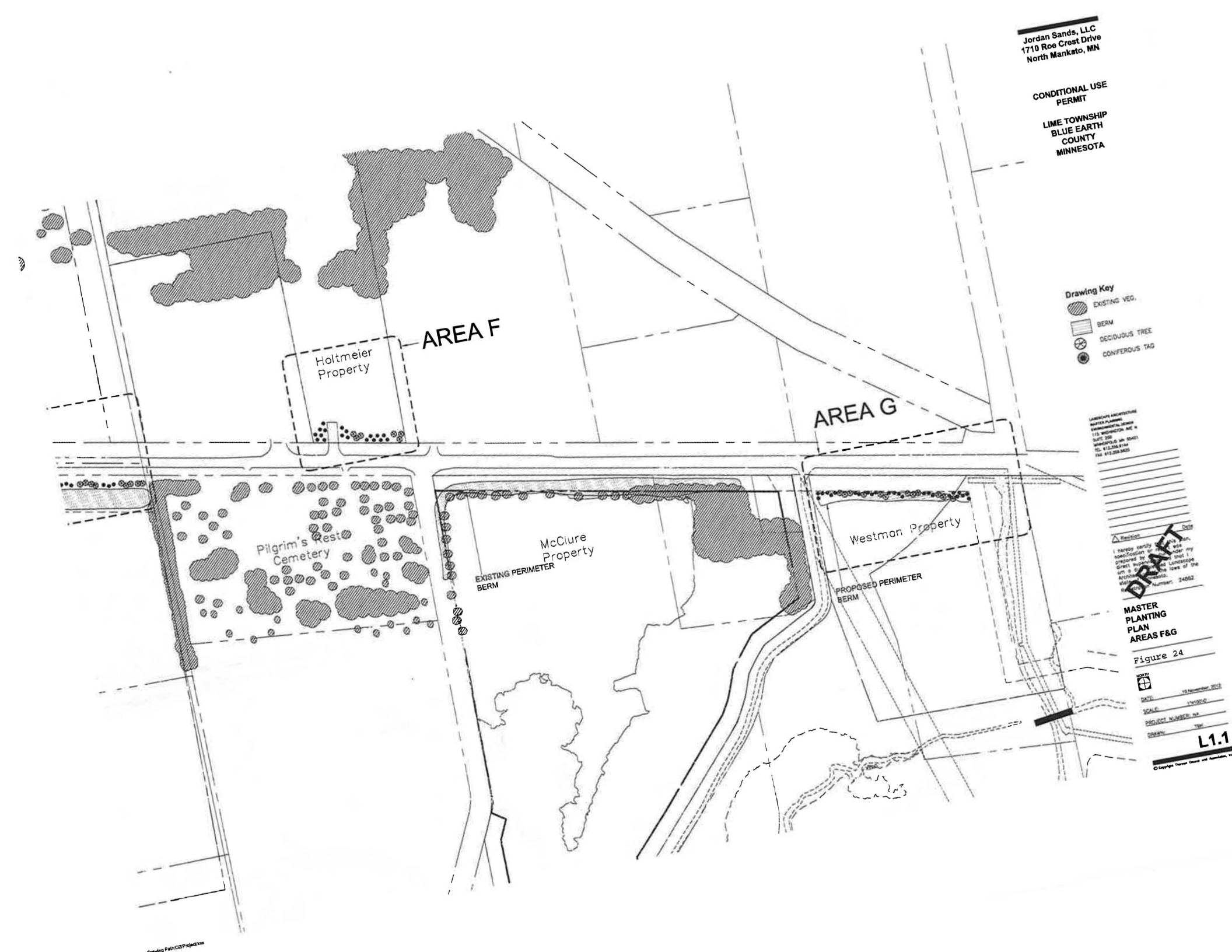
Figure 23

NORTH

DATE: 19 November, 2012
SCALE: 1"=120'-0"
PROJECT NUMBER: NA
DRAWN: TBK

L1.0

Drawing Path OZ/Project/xxx


Jordan Sands, LLC
1710 Roe Crest Drive
North Mankato, MN
CONDITIONAL USE PERMIT
LIME TOWNSHIP
BLUE EARTH COUNTY
MINNESOTA
AREA F
AREA G
Holtmeier Property
Pilgrim's Rest Cemetery
McClure Property
Westman Property
EXISTING PERIMETER BERM
PROPOSED PERIMETER BERM
Drawing Key
EXISTING VEG.
BERM
DECIDUOUS TREE
CONIFEROUS TAG
DRAFT
MASTER PLANTING PLAN AREAS F&G
Figure 24
L1.1

Note: Wetland locations represent results of various wetland delineations. Parcels B-D do not contain wetlands within their parcel boundaries.

Figure 25
Existing Wetlands

Sunde Engineering, PLLC.
CONSULTING CIVIL ENGINEERS

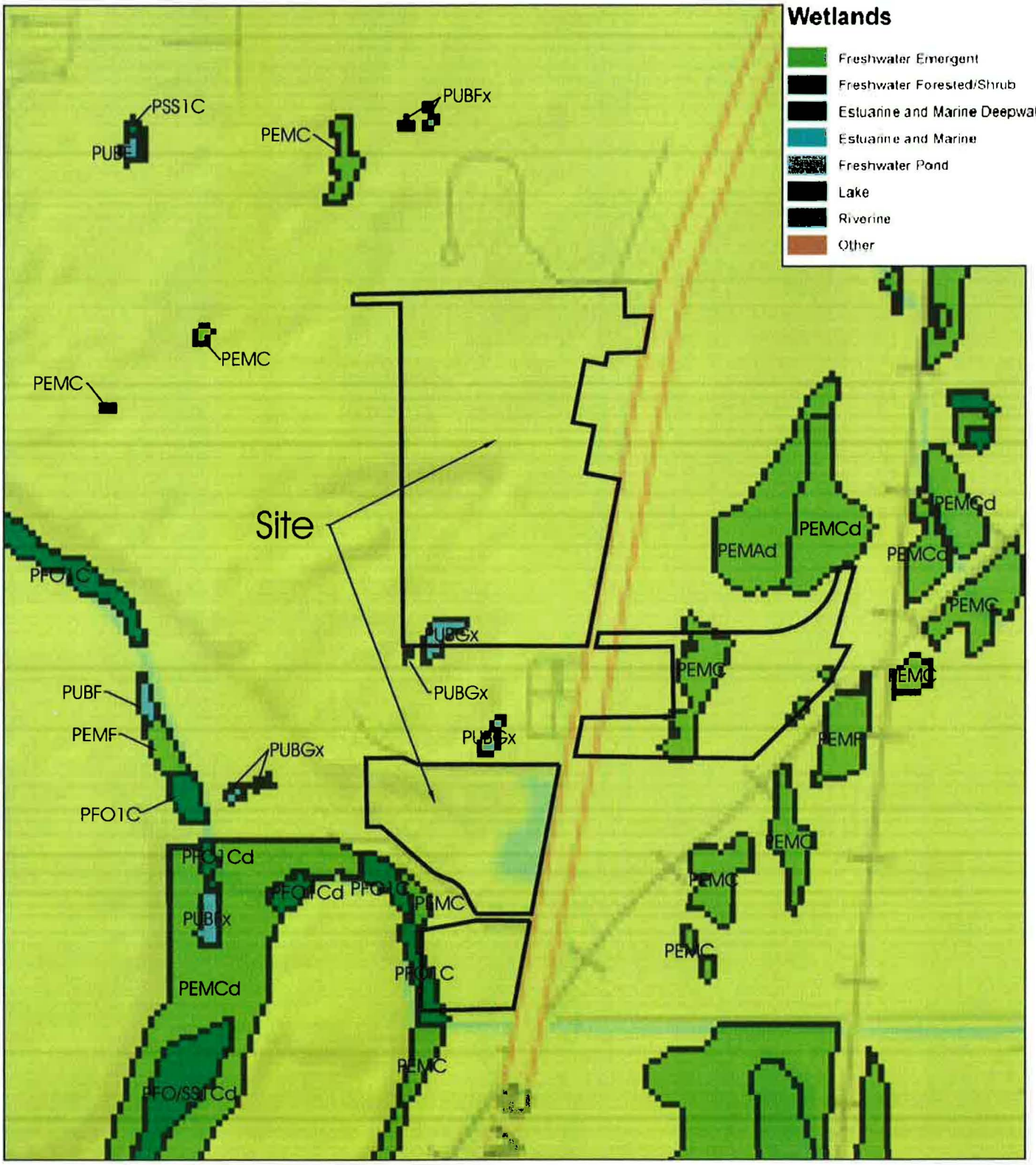


Figure 26
NWI Map Excerpt

Sunde Engineering, PLLC.
CONSULTING CIVIL ENGINEERS
10830 NESBITT AVENUE SOUTH
BLOOMINGTON, MINNESOTA 55437
(952) 881-3344 TELEPHONE
(952) 881-1913 FAX
www.sundecivil.com

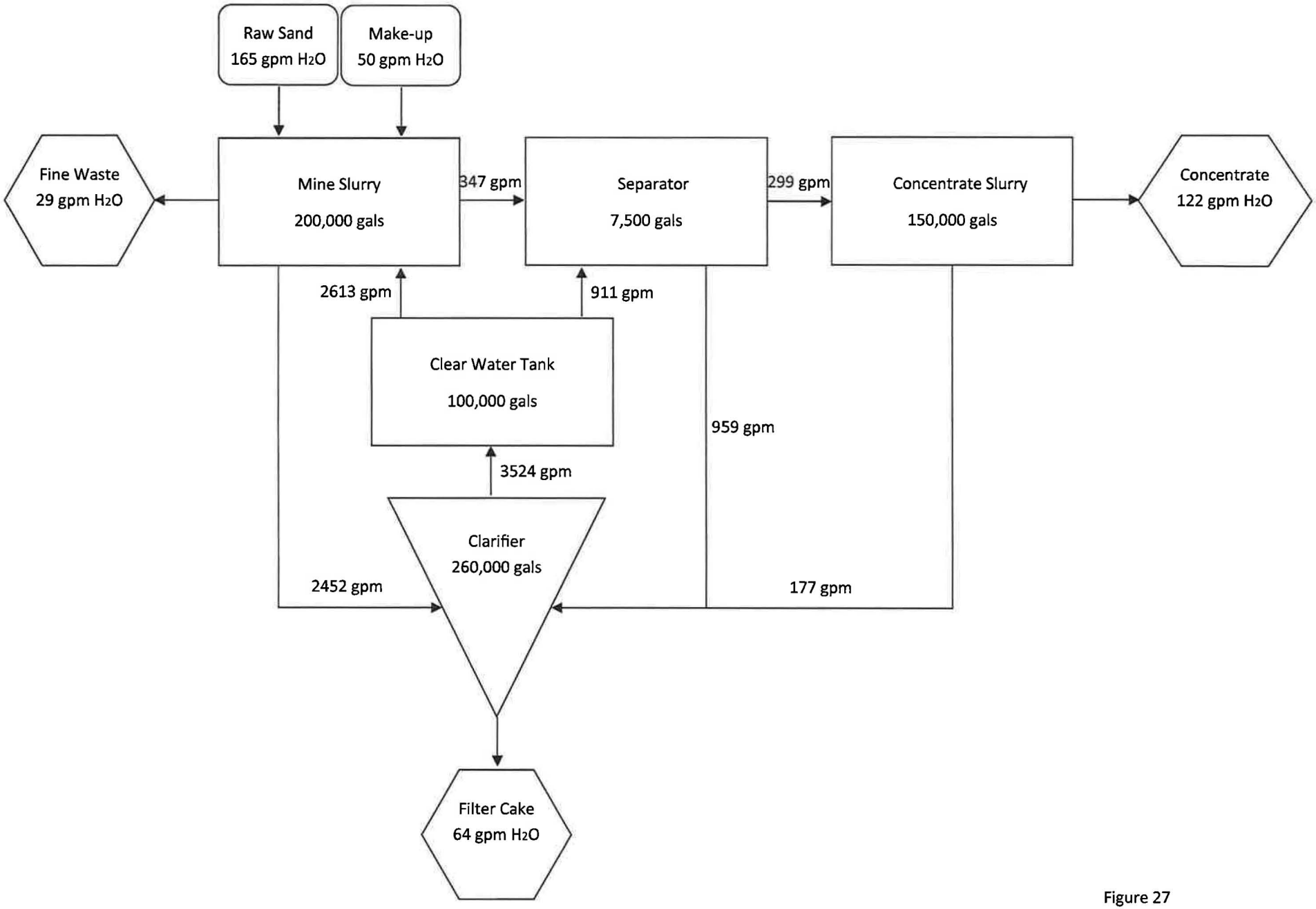


Figure 27
Water Budget
Jordan Sands, LLC

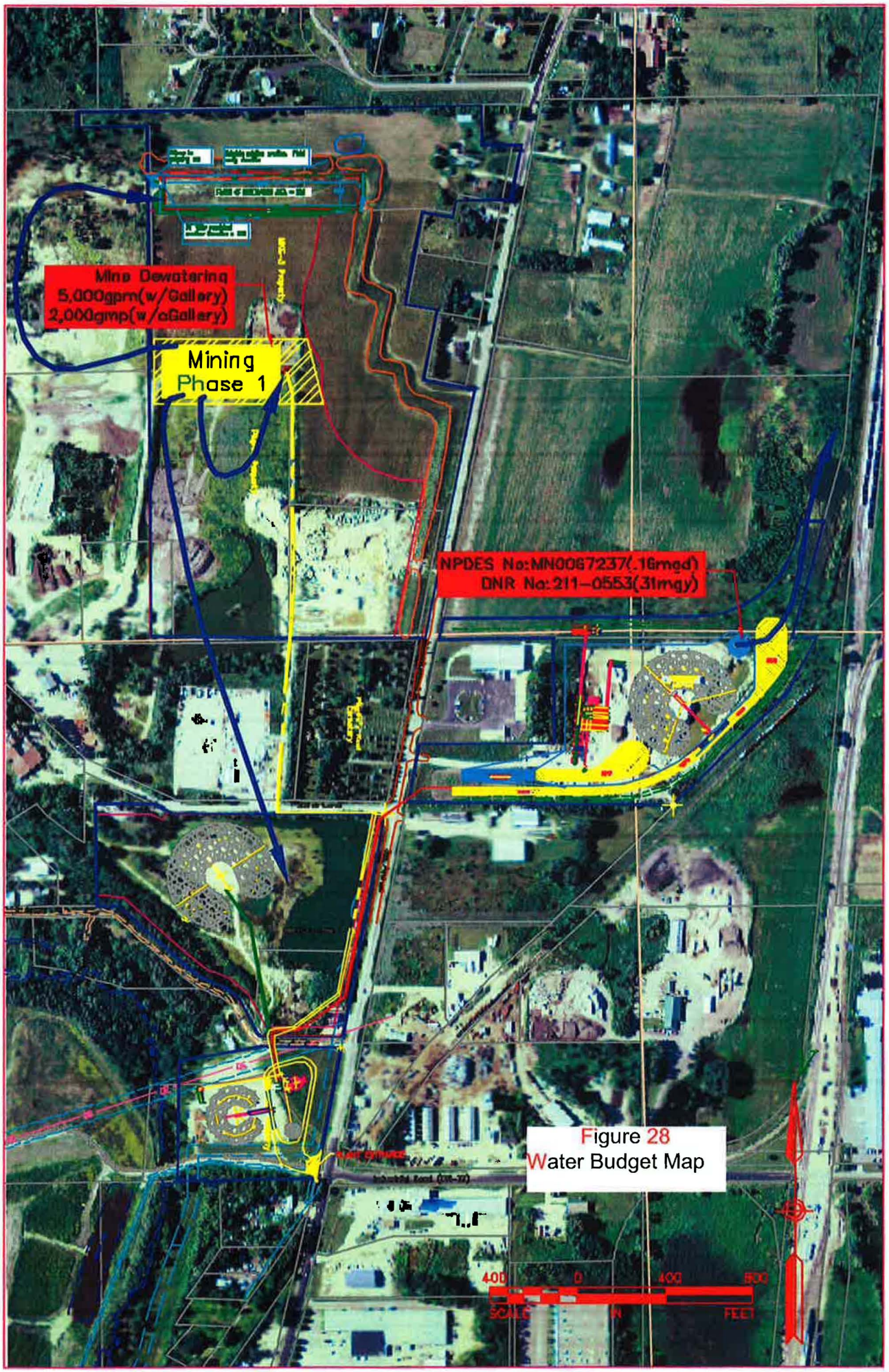
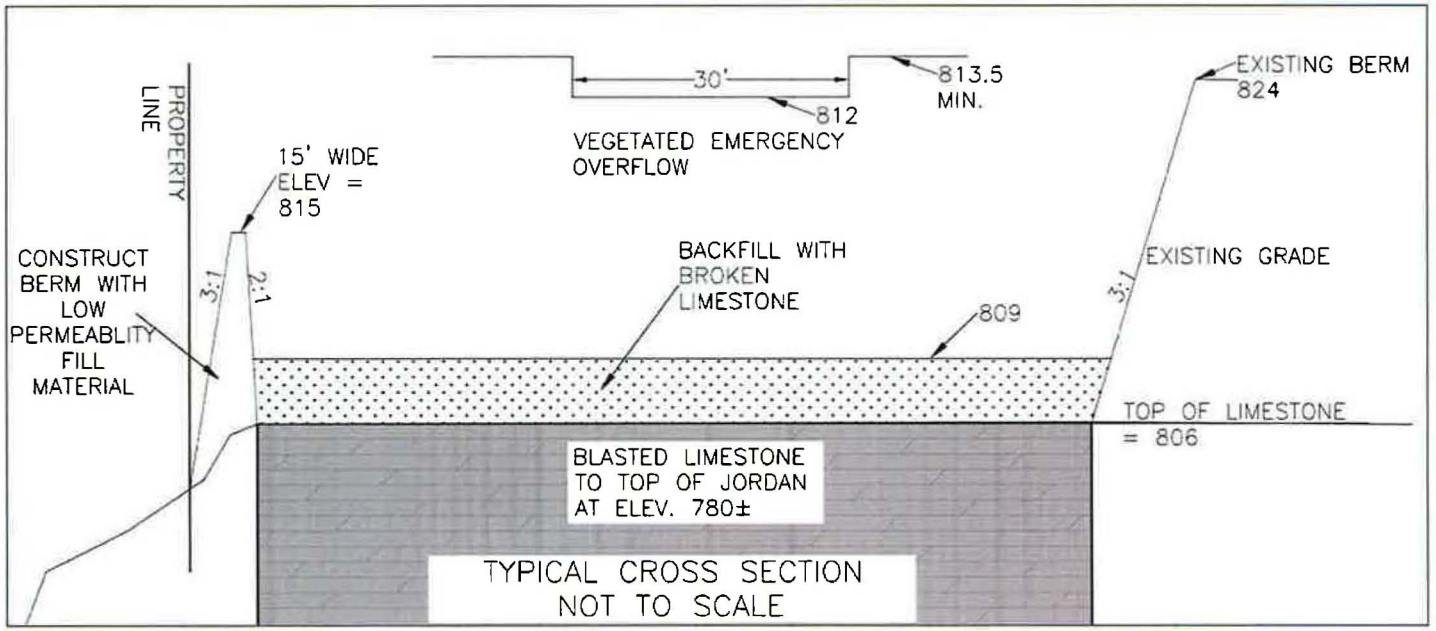


Figure 28
Water Budget Map



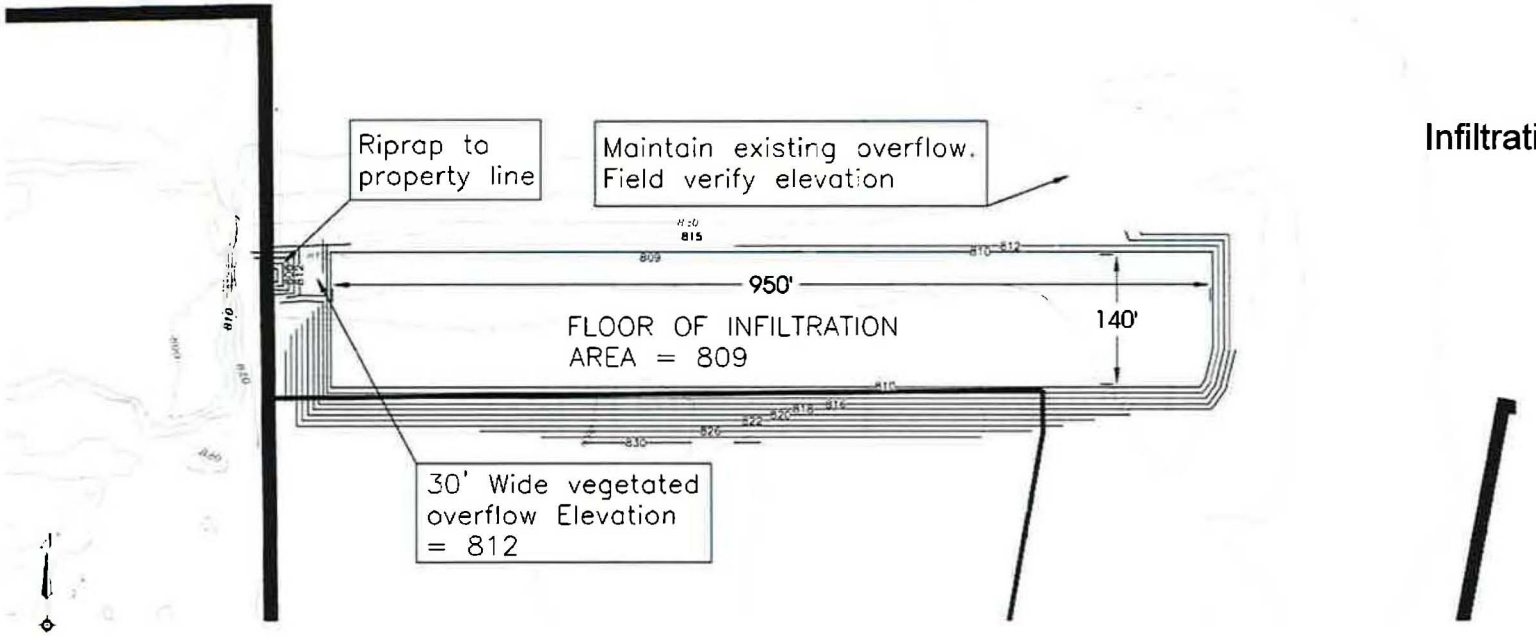


Figure 29
Infiltration Gallery Design

Sunde
CONSULTING CIVIL ENGINEERS
10830 NESBITT AVENUE SOUTH
BLOOMINGTON, MINNESOTA 55437
(952) 881-3344 TELEPHONE
(952) 881-1913 FAX

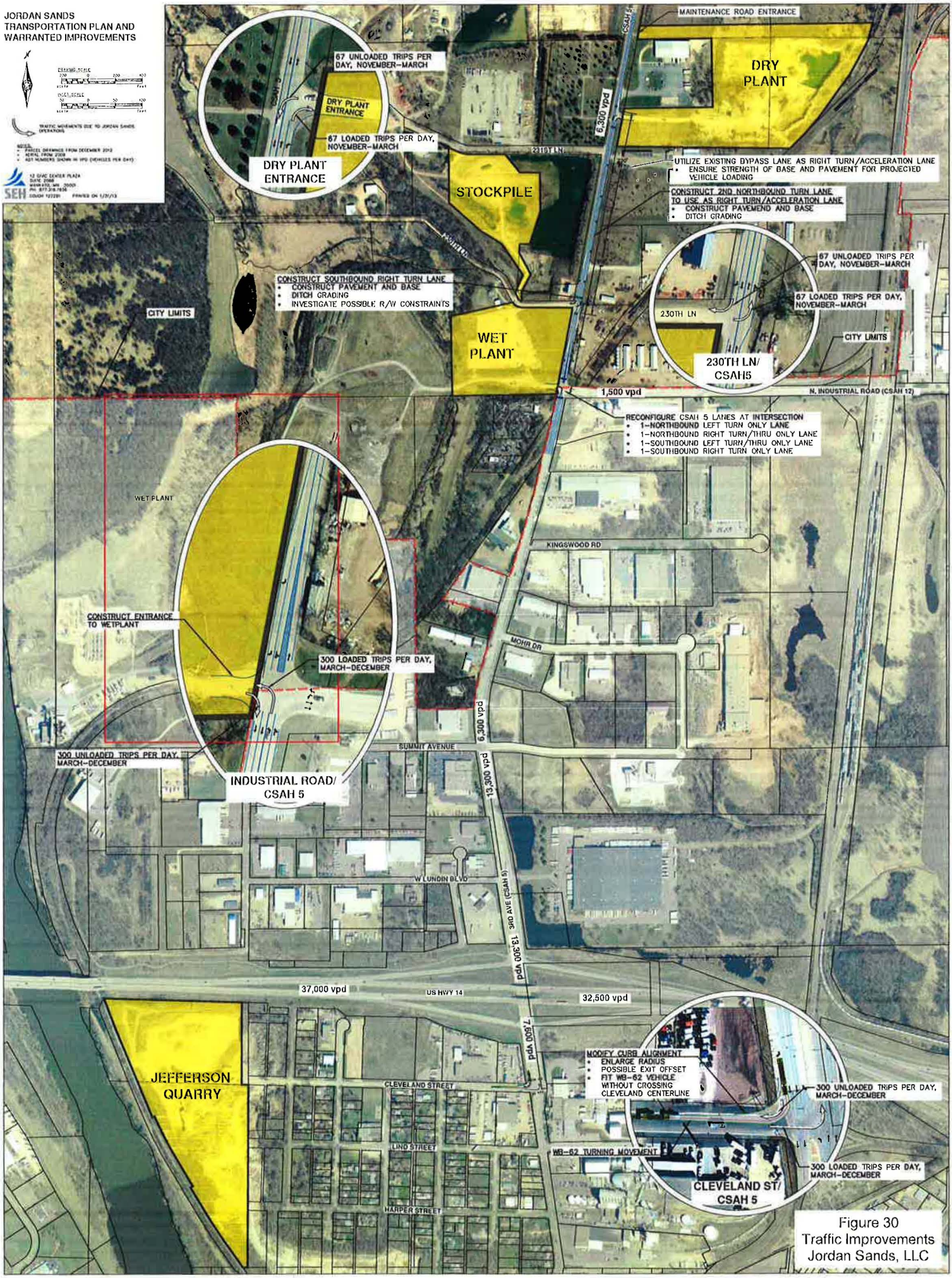
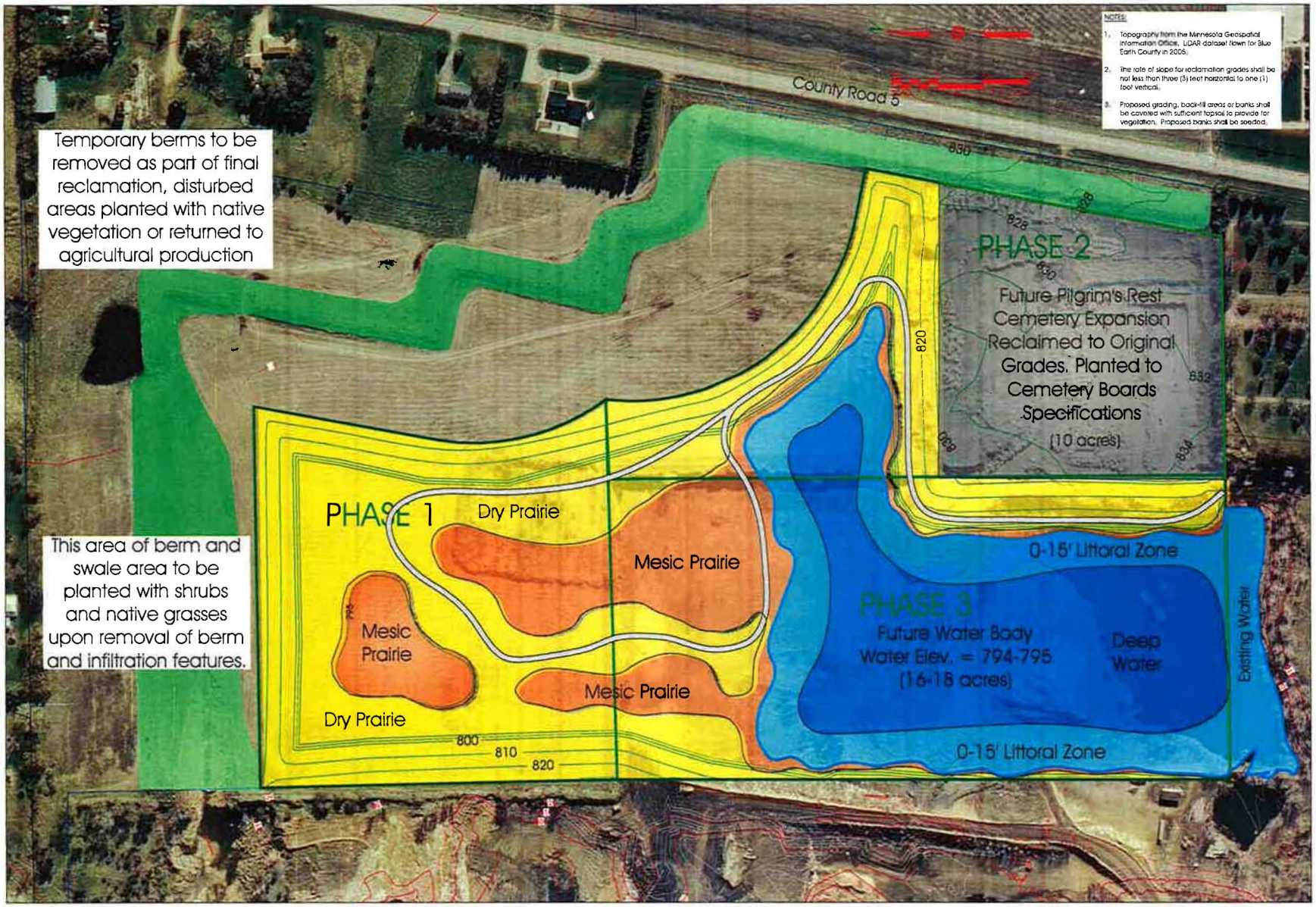


Figure 30
Traffic Improvements
Jordan Sands, LLC



T. 106N R. 25W S.

DRAWING: G:\DWGS\Jordan Sands\Reclamation plans\Current reclamation plan.dwg LAYOUT: 11X17 (ANSI-B)

Sunde

CONSULTING CIVIL ENGINEERS
10320 RESSITT AVENUE SOUTH
BLOOMINGTON, MINNESOTA 55437
(952) 829-0034 TELEPHONE
(952) 829-1913 FAX
www.sundeeng.com

JORDAN SANDS, LLC

Conditional Use Permit

Lime Township
Blue Earth County,
Minnesota

DATE	REVISION

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

KRISTEN FAULY
DATE: 4/12/2013 REG. NO. 21442

INFORMATION

PROJECT NO.	12453
DRAWN BY	KP
CHECKED BY	KP
APPROVED BY	KP
SCALE	GRAPHIC
DATE	4/12/2013

DESCRIPTION

PARCEL D CONCEPT RECLAMATION PLAN:

SHEET NO

Figure 31

T. 109N R. 26W S. DRAWING: G:\DWGS\Jordan Sands\Reclamation plans\Current reclamation plan.dwg LAYOUT: 11X17 (MoDure)

CONSULTING CIVIL ENGINEERS
10830 NESBITT AVENUE SOUTH
BLOOMINGTON, MINNESOTA 55437

JORDAN SANDS, LLC

Conditional Use Permit

Lime Township
Blue Earth County,
Minnesota

DATE	REVISION

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

KRISTEN PAULY
DATE: 4/12/2013 REG. NO. 21942

INFORMATION:

PROJECT NO.:	12-033
DRAWN BY	KP
CHECKED BY:	KP
APPROVED BY:	KP
SCALE	GRAPHIC
DATE:	4/12/2013

DESCRIPTION:

PARCEL C CONCEPT
RECLAMATION PLAN:

SHEET NO.

Figure 32

ATTACHMENT C

Lime Township Conditional Use Permit Application
Jordan Sands, LLC

PARCEL INFORMATION & LEGAL DESCRIPTIONS

Parcel Information & Legal Description (the letter id corresponds to the letter id on Figure 5 Property Location map)

The following parcel numbers are associated with the project and described below:

MAP ID A: Coughlan Quarries, LLC

Parcel No. (s)	Parcel Acreage
R40.04.30.400.012	26.95 acres
Owner	**Address**
Coughlan Quarries, LLC PO Box 1358 Mankato, MN 56002-1358	None
Legal Description	
See Figure C-2	
Sketch of Survey	
See Figure C-8	

MAP ID B: Coughlan Quarries, LLC

Parcel No. (s)	Parcel Acreage
R40.04.29.300.006	27.050 acres
Owner	**Address:**
Coughlan Quarries, LLC PO Box 1358 Mankato, MN 56002-1358	None
Legal Description	
See Figure C-2	
Sketch of Survey	
See Figure C-8	

MAP ID C: Holtmeier Property

Parcel No. (s)	Parcel Acreage
R40.04.31.200.026	13.17 acres
Owner	**Address**
Holtmeier Construction Inc. 3301 Third Ave Mankato, MN 56001	3799 Third Ave Mankato, MN 56001
Legal Description	
See Figure C-10	
Sketch of Survey	
See Figure C-8	

MAP ID D: Holtmeier Property

Parcel No. (s)	Parcel Acreage
R40.04.32.100.034	8.69 acres
Owner	**Address**
Holtmeier Construction Inc. 3301 Third Ave Mankato, MN 56001	None
Legal Description	
See Figure C-10	
Sketch of Survey	
See Figure C-8	

MAP ID E: SMC Triangle

Parcel No. (s)	Parcel Acreage
R40.04.32.100.001	1.90 acres
Owner	**Address**
OMG Midwest, Inc dba Southern Minnesota Const Co Inc. 3490 3rd Ave Mankato, MN 56001	None
Legal Description	
See Figure C-5	
Sketch of Survey	
See Figure C-5	

MAP ID F: McClure Property

Parcel No. (s)	Parcel Acreage
R40.04.31.200.005	24.64 acres
Owner	**Address**
OMG Midwest, Inc dba Southern Minnesota Const Co Inc. 3490 3rd Ave Mankato, MN 56001	57150 230th Ln Mankato, MN 56001
Legal Description	
See Figure C-4	
Sketch of Survey	
See Figure C-9	

MAP ID G: McClure Property

Parcel No. (s)	Parcel Acreage
R40.04.31.200.006	3.52 acres
Owner	**Address**
OMG Midwest, Inc dba Southern Minnesota Const Co Inc. 3490 3rd Ave Mankato, MN 56001	Unknown
Legal Description	
See Figure C-6	
Sketch of Survey	
See Figure C-9	

MAP ID H: McClure Property

Parcel No. (s)	Parcel Acreage
R40.04.31.200.007	0.6 acres
Owner	**Address**
OMG Midwest, Inc dba Southern Minnesota Const Co Inc. 3490 3rd Ave Mankato, MN 56001	Unknown
Legal Description	
See Figure C-6	
Sketch of Survey	
See Figure C-9	

MAP ID I: Westman Property

Parcel No. (s)	Parcel Acreage
R40.04.31.100.006	95.38 acres
Owner	**Address**
Coughlan Quarries, LLC PO Box 1358 Mankato, MN 56002-1358	57151 230th Ln Mankato MN 56001
Legal Description	
See Figure C-3	
Sketch of Survey	
See Figure C-7	

MAP ID J: Westman Property

Parcel No. (s)	Parcel Acreage
R40.04.31.200.008	7.14 acres
Owner	**Address**
Coughlan Quarries, LLC PO Box 1358 Mankato, MN 56002-1358	Unknown
Legal Description	
See Figure C-3	
Sketch of Survey	
See Figure C-7	

Figure C-1 – SMC McClure Parcels Legal Description (R40 04 31 100 006, R40 03 36 200 004, and R40 04 31 200 005)

DESCRIPTION

TRACT I. The South Half (S 1/2) of the Northwest Quarter (NW 1/4) of Section Thirty-one (31), Township One Hundred Nine (1 09) North, Range Twenty-six (26) West, excepting a tract of land described as follows: Beginning at the One-eighth (1/8) Section comer North of the center of said Section Thirty-one (31), running thence West Four (4) chains and Thirty-seven (37) links, thence South Four (4) chains and Twenty-five (25) links to Chapman Creek, thence Easterly along said creek to the East line of said Northwest Quarter (NW 1/4), and thence North on said East line to the point of beginning.

TRACT II. The South Half (S 1/2) of the South Half (S 1/2) of the Northeast Quarter (NE 1/4) of Section Thirty-one (31), Township One Hundred Nine (109) North, Range Twenty-six (26) West; excepting from the above all that part which lies Easterly of the right-of-way of the Chicago, Great Western Railway Company; and also excepting a tract of land described as follows: Commencing at the point of intersection of the center line of CSAH No. 5 with the North right- of-way line of the Chicago, St. Paul, Minneapolis & Omaha Railway spur track, said point being 1088 feet East and 188 feet North of the center of said Section 31, thence running Northeasterly along the center line of CSAH No. 5 a distance of 484 feet, thence at an angle of 100° 20' to the Northeast a distance of 411 feet to the Westerly right-of-way line of the Chicago, Great Western Railway, thence Southwesterly along the said Westerly right-of-way line a distance of 656.5 feet to the Northerly right-of-way line of the Chicago, St. Paul, Minneapolis & Omaha Railway Spur track, thence Northwesterly along said Northerly right-of-way line a distance of I 08.4 feet to the place of beginning, and also excepting, the tract of land described in the deed recorded at Book 122 of Blue Earth County Deeds, page 467; and also excepting the tract of land described in the deed recorded at Book 166 of Blue Earth County Deeds, page 505; but excluding from said Parcel21 exceptions the two tracts of land described in the deed to A. B. Chapman, recorded at Book 166 of Blue Earth County Deeds, page 506.

TRACT III. Commencing 9 chains and 93 links North of the center of Section Thirty-one (31), Township One Hundred Nine (109) North, Range Twenty-six (26) West; thence East 11 chains and 50 links, more or less, to the creek; thence Northerly and West, following down the channel of said creek to a point on the center line of said Section 315 chains and 81 links, more or less, North of the place of beginning; thence South to the place of beginning, containing 297 square rods of land, more or less.

TRACT IV. Government Lot Three (3) of Section Thirty-six (36), Township One Hundred Nine (109) North, Range Twenty-seven (27) West. All of the above land being subject to existing railroad rights-of-way and public highways.

APPLICATION NO.: ORTE738288N

5. The land referred to in this Commitment is described as follows:

That part of the Southeast Quarter of the Southeast Quarter of Section 30 and that part of the Southwest Quarter of the Southwest Quarter of Section 29, all in Township 109 North, Range 26 West, Blue Earth County, Minnesota, described as: Beginning at the Southeast corner of Section 30; thence North 89 degrees 42 minutes 43 seconds West (Assumed Bearing) along the South line of Section 30, a distance of 1047.10 feet to the centerline of County Road No. 5; thence North 10 degrees 42 minutes 45 seconds East, along the centerline of County Road No. 5, a distance of 1300.00 feet; thence South 89 degrees 42 minutes 43 seconds East, 782.03 feet to the East line Of Section 30; thence South 89 degrees 50 minutes 42 seconds East, 1048 feet more or less to the westerly right of way line of the abandoned Chicago, Milwaukee, St. Paul and Pacific Railway; thence southerly along said right of way line, 1319 feet more or less to the south line of Section 29; thence North 89 degrees 50 minutes 42 seconds West along said South line, 718 feet more or less to the point of beginning, according to the United States Government Survey thereof and situate in Blue Earth County, Minnesota.

Abstract Property

Figure C-3 - Westman Parcel Legal Description

DESCRIPTION

That part of the Northeast Quarter of the Southwest Quarter and that part of the Northwest Quarter of the Southeast Quarter and that part of the Southwest Quarter of the Southeast Quarter and that part of the Southwest Quarter of the Northeast Quarter and that part of Southeast Quarter of the Northwest Quarter, all in Section 31, Township 109 North Range 26 West, Blue Earth County, Minnesota, described as:

Commencing at the northeasterly corner of Power Creek Addition, according to the plat thereof on file and of record with the Blue Earth County Recorder; thence South 89 degrees 51 minutes 23 seconds West, (Minnesota County Coordinate System - Blue Earth County Zone - NAD83 - 1986), along the northerly line of said Power Creek Addition, 144.39 feet; thence North 26 degrees 00 minutes 00 seconds East, 250.00 feet; thence North 19 degrees 00 minutes 00 seconds East, 200.00 feet; thence North 30 degrees 00 minutes 00 seconds East, 250.00 feet; thence North 19 degrees 00 minutes 00 seconds East, 350.00 feet; thence North 03 degrees 00 minutes 00 seconds West, 430.00 feet; thence North 33 degrees 00 minutes 00 seconds West, 600.00 feet to the point of beginning; thence South 33 degrees 00 minutes 00 seconds East, back along the previously described course, 600.00 feet; thence South 03 degrees 00 minutes 00 seconds East, 430.00 feet; thence South 19 degrees 00 minutes 00 seconds West, 350.00 feet; thence South 30 degrees 00 minutes 00 seconds West, 250.00 feet; thence South 19 degrees 00 minutes 00 seconds West, 200.00 feet; thence South 26 degrees 00 minutes 00 seconds West, 250.00 feet to a point on the northerly line of said Power Creek Addition; thence North 89 degrees 51 minutes 23 seconds East, along said northerly line, 144.39 feet to the northeasterly corner of said Power Creek Addition; thence South 00 degrees 09 minutes 13 seconds East, along the easterly line of said Power Creek Addition, 644.56 feet to the point of intersection with the southeasterly right of way line of the abandoned Chicago, Milwaukee, St. Paul & Pacific Railroad, being 50.00 feet southeasterly of the center line of said abandoned railroad, said point being on a circular curve which center of radius bears North 41 degrees 16 minutes 33 seconds West; thence northeasterly, along said right of way line, along a 1482.69 foot radius curve, central angle = 14 degrees 33 minutes 28 seconds, an arc distance 376.72 feet to the point of tangency of said curve; thence North 34 degrees 10 minutes 00 seconds East, along said right of way line, along the tangent of said curve, 1349.75 feet to the point of intersection with the center line of Third Avenue, said point being on a circular curve which center of radius bears North 77 degrees 25 minutes 55 seconds West; thence northeasterly, along said center line, along a 10000.00 foot radius curve, central angle = 01 degrees 30 minutes 24 seconds, an arc distance 262.96 feet to the point of intersection with the northwesterly right of way line of said abandoned railroad; thence South 34 degrees 10 minutes 00 seconds West, not radially to said curve, along said right of way line, 301.74 feet to the point of intersection with the south line of the North 330.00 feet of the Northwest Quarter of the Southeast Quarter of said Section 31; thence continuing South 34 degrees 10 minutes 00 seconds West, along said abandoned railroad right of way line, 314.00 feet; thence North 87 degrees 04 minutes 30 seconds West, 299.01 feet; thence North 34 degrees 10 minutes 00 seconds East, 293.76 feet to a point on the south line of the North 330.00 feet of the Northwest Quarter of the Southeast Quarter of said Section 31, being 310.00 feet westerly of the point of intersection of said south line with the northwesterly right of way line of said abandoned railroad as measured along said south line; thence North 00 degrees 16 minutes 30 seconds West, perpendicular with the north line of the Northwest Quarter of the Southeast Quarter of said Section 31, a distance of 330.00 feet to the point of intersection with said north line; thence North 89 degrees 43 minutes 30 seconds East, along said north line, 536.30 feet to the point of intersection with the northwesterly right of way line of the abandoned Chicago, Milwaukee, St. Paul & Pacific Railroad; thence North 34 degrees 10 minutes 00 seconds East, along said right of way line, 148.06 feet to the point of curvature of a circular curve to the right; thence northeasterly, along said right of way line, along a 5779.87 foot radius curve, central angle = 00 degrees 06 minutes 23 seconds, an arc distance 10.74 feet to the point of intersection with the northeasterly right of way line of the Chicago, St. Paul, Minneapolis and Omaha Railroad spur track, said point being on a circular curve which center of radius bears North 23 degrees 52 minutes 28 seconds East; thence northwesterly, along said northeasterly right of way line, along a 547.97 foot radius curve, central angle = 11 degrees 17 minutes 32 seconds, an arc distance 108.00 feet to the point of intersection with the center line of Third Avenue; thence North 10 degrees 44 minutes 36 seconds East, along said center line, not radially to said curve, 487.53 feet to the point of intersection with the south line of the North Half of the Southwest Quarter of the Northeast Quarter of said Section 31; thence South 89 degrees 51 minutes 16 seconds West, along said south line, 461.00 feet; thence northwesterly 63 degrees 27 minutes to the right bearing North 26 degrees 41 minutes 44 seconds West, 251.00 feet; thence South 89 degrees 51 minutes 16 seconds West, along a line parallel with the south line of the North Half of the Southwest Quarter of the Northeast Quarter of said Section 31, a distance of 470 feet, more or less, to the point of intersection with the center line of the creek; thence northwesterly and westerly, along said creek center line, 560 feet, more or less, to the point of intersection with the west line of the East 300.00 feet of the Southeast Quarter of the Northwest Quarter of said Section 31; thence South 00 degrees 09 minutes 13 seconds East, along said west line, 130 feet, more or less, to the point of intersection with a line which bears North 76 degrees 00 minutes 00 seconds West from the point of beginning; thence South 76 degrees 00 minutes 00 seconds East, 232.09 feet to the point of beginning.

Said parcel contains 37.5 acres, more or less, subject to an easement for Third Avenue purposes over and across the easterly boundary. ALSO subject to any other easements of record.

DESCRIPTION (access easement)

An easement for access purposes 66.00 feet in width lying over and across that part of the Southwest Quarter of the Northeast Quarter of Section 31, Township 109 North Range 26 West, Blue Earth County, Minnesota, the center line of which is described as:

Commencing at the northeasterly corner of Power Creek Addition, according to the plat thereof on file and of record with the Blue Earth County Recorder; thence South 89 degrees 51 minutes 23 seconds West, (assumed bearing), along the northerly line of said Power Creek Addition, 144.39 feet; thence North 26 degrees 00 minutes 00 seconds East, 250.00 feet; thence North 19 degrees 00 minutes 00 seconds East, 200.00 feet; thence North 30 degrees 00 minutes 00 seconds East, 250.00 feet; thence North 19 degrees 00 minutes 00 seconds East, 350.00 feet; thence North 03 degrees 00 minutes 00 seconds West, 165.00 feet to the point of beginning; thence North 71 degrees 00 minutes 00 seconds East, 200.00 feet; thence North 87 degrees 00 minutes 00 seconds East, 145.00 feet; thence South 88 degrees 00 minutes 00 seconds East, 175.00 feet; thence South 80 degrees 00 minutes 00 seconds East, 75.00 feet; thence South 69 degrees 00 minutes 00 seconds East, 75.00 feet; thence South 82 degrees 00 minutes 00 seconds East, 80.00 feet; thence North 81 degrees 00 minutes 00 seconds East, 98.70 feet to a point on the center line of Third Avenue and there terminating.

FIGURE C-4 R40.04.31.200.005

Form No. 9-M – WARRANTY DEED — Minnesota Uniform Conveyancing Blanks (1978) · Miller-Davis Co., St. Paul

Corporation or Partnership to Corporation or Partnership

No delinquent taxes and transfer entered; Certificate of Real Estate Value (X) filed ( ) not required
Certificate of Real Estate Value No. 7229
March 23, 1999 (Year)
Sandra K. King County Auditor
by LB Deputy

Office of County Recorder 60114
COUNTY of BLUE EARTH, MN
I hereby certify that the within instrument was filed in this office for record on the 26th day of MARCH, 19 99, at 2 o'clock P. M. and was duly recorded in Book 52 - 269 of Torrens Records, Cert. # 20,232
Residue:
E. WILLIAM JAMES Registrar of Titles
By Patricia A. Bergeman Deputy

(reserved for recording data)

STATE DEED TAX DUE HEREON: $660.00
Date: February 1, 1999

FOR VALUABLE CONSIDERATION, The Brielmaier Corporation, a corporation under the laws of Minnesota, Grantor, hereby conveys and warrants to Southern Minnesota Construction Company, Inc., Grantee, a corporation under the laws of Minnesota, real property in Blue Earth County, Minnesota, described as follows:

See Exhibit A, attached hereto and incorporated herein.

NO. 2021 DATE 3-23-99
County Deed Tax of $660.00 hereon paid.
Sandra K. King
Land Records

SELLER CERTIFIES THAT SELLER KNOWS OF NO WELLS ON THE DESCRIBED PREMISES.

(If more space is needed, continue on back)

together with all hereditaments and appurtenances belonging thereto, subject to the following exceptions:

SELLER CERTIFIES THAT SELLER KNOWS OF NO WELLS ON THE DESCRIBED PREMISES.

Affix Deed Tax Stamp Here

The Brielmaier Corporation
By Mark Brielmaier
Its President
By
Its

STATE OF MINNESOTA }
COUNTY OF BLUE EARTH } ss.

The foregoing was acknowledged before me on February 1, 1999 (Date)
by Mark Brielmaier and
the President and
of The Brielmaier Corporation, a corporation
under the laws of Minnesota, on behalf of the Board of Directors

Howard F. Haugh
SIGNATURE OF PERSON TAKING ACKNOWLEDGMENT

NOTARIAL STAMP OR SEAL (OR OTHER TITLE OR RANK):
HOWARD F. HAUGH
NOTARY PUBLIC - MINNESOTA
BLUE EARTH COUNTY
My Comm. Exp. Expires 1-31-2000

THIS INSTRUMENT WAS DRAFTED BY (NAME AND ADDRESS):
Howard F. Haugh
FARRISH, JOHNSON & MASCHKA
201 North Broad Street, Suite 200
P.O. Box 550
Mankato, MN 56002-0550
507-387-3002
42377

Tax Statements for the real property described in this instrument should be sent to (include name and address of Grantee):
Southern Minnesota Construction
Attn: Larry Nurre
P.O. Box 3069
Mankato, MN 56002-3069

WELL CERTIFICATE
☐ Received
☒ Not Required
Blue Earth County Recorder

Exhibit A - Legal Description

The West 957 feet of the South 1365½ feet of the SE¼ of Sec. 30-109-26 West and all that part of the N½ of NW¼ Sec. 31 and the S½ of SW¼ Sec. 30 which lies northeast of a straight line drawn from the southeast corner of the NE¼ of the NW¼ of Sec. 31 to the northwest corner of the SW¼ of the SW¼ of Sec. 30, being a triangular piece of land containing 80 acres, EXCEPT Tract A, Registered Land Survey No. 100.

The west 16.92 acres of the North 24 acres of the NW¼ NE¼ of Sec. 31.

The west 1½ acres of the south 2 acres of the north 50 acres of the N½ of NE¼ of said Sec. 31 and the following triangular piece or parcel of land: Beginning at the southeast corner of the N½ of the NW¼ of said Sec. 31; thence running west 175 feet, thence running north 171.7 feet, thence running south 44° and 25 minutes East 244.8 feet to the place of beginning, all of the above parcels of land lying and being in Township 109 Range 26.

Beginning at the northwest corner of the SW¼ NE¼ of Sec. 31-109-26 West; thence north on the north and south 1/4 line of said Sec. 495 feet; thence north 89°54 minutes east 1434.16 feet to the center of the highway between Mankato and St. Peter (now known as Blue Earth County Aid Road No. 123); thence southwesterly 1177.10 feet down the center line of said highway to the north line of the S½ of said SW¼ of the NE¼; thence on said north line south 89°54 minutes west 461 feet; thence northwesterly 63°27 minutes to the right 251 feet; thence South 89° 54 minutes west 116 feet; thence north 44°30 minutes west 290 feet; thence North 50°16 minutes west 288.5 feet; thence north 63°57 minutes west 100 feet to the point of beginning, except all existing highways and cartways.
EXCEPT a strip of land 1 rod in width adjacent to the South line of Pilgrim's Rest Cemetery and extending the length of said Cemetery, all located in the NE¼ Sec. 31-109-26 West, more particularly described as follows: Commencing at an iron pipe at the intersection of the West line of the Mendota and Big Sioux Road, also known as the Mankato St. Peter Highway, and the North line of Sec. 31-109-26 West, said iron being approximately 1087 feet West of the northeast corner of said Section 31; thence running West a distance of 585 feet, thence South 3°45' West a distance of 792 feet to the place of beginning; thence continuing along the same line a distance of 16.5 feet, thence East and parallel to the North line of said Section 31 a distance of 485.2 feet to the West line of the Mendota and Big Sioux Road, thence North 10°38' East along the West line of said Mendota and Big Sioux Road a distance of 16.0 feet, thence West and parallel to the North line of said Section 31, a distance of 488.3 feet to the place of beginning.
EXCEPT Tracts A & B, Registered Land Survey No. 36.
EXCEPT Beginning at a point on the North line of Section 31-T109W R-26W, 1998.8 feet East of the N.W. corner of said section, thence west on said section line 312.0 feet, thence South 3°03' West 195.0 feet, thence South 44°55' East 142.5 feet, thence South 46°00' East 250.0 feet, thence North 86°56' East 213.0 feet, thence North 0°07' West 41.15 feet, thence North 15°43' East 60.0 feet, thence North 20°52' East 40.0 feet, thence North 32°19' East 38.0 feet, thence North 44°26' West 258.7 feet to the point of beginning and containing 3.64 acres more or less.
EXCEPT plat of a tract of land in the NE¼ of the NW¼ of Section 31 Twp. 109 N. Range 26 W. Beginning at a point 2179.8 feet East of the NW corner and 184.6 feet South of North line of said Section 31, thence South 44°26 minutes East 520.5 feet, thence South 0 degrees 30 minutes West 414.75 feet, thence North 53 degrees 32 minutes West 61 feet thence North 49 degrees 26 minutes West 100 feet, thence North 47 degrees 14 minutes West 50 feet, thence North 42 degrees West 56 feet, thence North 36 degrees 10 minutes West 45.2 feet, thence South 56 degrees 59 minutes West 165.15 feet, thence North 45 degrees 35 minutes West 458.05 feet, thence North 56 degrees 56 minutes East 327 feet, thence North 0 degrees 7 minutes West 41.15 feet, thence North 15 degrees 43 minutes East 60 feet thence North 20 degrees 52 minutes East 40 feet, thence North 32 degrees 19 minutes East 38 feet to the point of beginning, said tract containing 6.149 acres more or less.

And an easement in and to a roadway over the following described property:
A road 20 feet in width 10 feet on either side of a line described as follows: Commencing at the intersection of the centerline of County Highway No. 5 and the North line of a tract of land described as follows: "The North 70 acres of the South 110 acres, West of County Highway No. 5, in the Northeast quarter of Section 31, Township 109 North, Range 26 West"; thence West along said North line approximately 1100 feet; thence Northwesterly approximately 340 feet to a point on the West line of a tract of land described as follows: "The West 16.92 acres of the North 24 acres of the Northwest Quarter of the Northeast Quarter of Section 31, Township 109 North, Range 26 west"; said point being approximately 100 feet North of the Southwest corner of said last described tract; thence continuing Westerly across the Northeast quarter of the Northwest quarter of said Section 31, approximately 100 feet to a point of termination, said terminal point being located as follows: commencing at a point on the North line of Section 31, Township 109 North, Range 26 West, 2179.8 feet East of the Northwest corner of said Section 31; thence South 184.6 feet; thence South 44 degrees 26 minutes East 520.5 feet; thence south 0 degrees 30 minutes West, 147.3 feet to said point of termination.
In the event that should a survey of the above described roadway as it now exists show the above description to be inaccurate the vendor agrees at the request of the vendee to execute and deliver a Quit Claim Deed transferring to said vendee the road area in accordance with such survey.
The covenants of warranty in this instrument shall be deemed not to apply to the last above described tract, said tract being the roadway conveyed hereby.

Except easements and restrictions of record; rights of tenants including McCree & Company, Carney and Associates, Inc., and the occupants of the dwelling houses on the premises; and the right of Carney and Associates, Inc. to use the roadway as described in the description herein.

Subject to an easement for access purposes over and across the existing roadway lying within the North Half of the Northeast Quarter of Section 31, Township 109 North, Range 26 West and extending from County State Aid Highway No. 5 in generally westerly and northwesterly direction to the South line of Registered Land Survey No. 100.

The above described real property is subject to the reservation of an easement in the grantor for perpetual use in common with the grantee of the railroad as exists on the property being conveyed herein.
Said land is subject to the rights and obligations arising out of and pursuant to the following easement for railroad right of way purposes and agreements providing for the construction, maintenance, operation and use of certain railway spur tracks providing industrial trackage facilities upon said premises:

(a) Easement and right of way for railroad purposes granted by The Carney Company, a corporation, to Chicago, Saint Paul, Minneapolis and Omaha Railway Company, a corporation, by Indenture dated July 18, 1939, and recorded in the office of the Register of Deeds of Blue Earth County, Minnesota, on Aug. 9, 1939, in Book 7 of Bonds on page 293.

(b) Agreement providing for railroad trackage facilities entered into on April 26, 1938, between Chicago, Saint Paul, Minneapolis, and Omaha Railway Company, a Wisconsin corporation, and The Carney Company, a Minnesota corporation.

(c) Supplemental agreement providing for additional railroad trackage facilities entered into on March 12, 1940, between Chicago, Saint Paul, Minneapolis and Omaha Railway Company, a Wisconsin corporation, and The Carney Company, a Minnesota corporation.

AFFIDAVIT OF AGENT OF TRANSFEREE OF REGISTERED LAND

STATE OF MINNESOTA)
) ss.
COUNTY OF BLUE EARTH)

Affiant Howard F. Haugh being first duly sworn, on oath, states that he is the attorney for Southern Minnesota Construction Company, Inc., a corporation organized and existing under the laws of Minnesota, with a principal place of business at 1905 Third Avenue, in the City of Mankato, County of Blue Earth, State of Minnesota.

That said corporation is the purchaser of registered land, situated in Blue Earth County, Minnesota, from the holder of Certificate of Title No. 14,829.

Howard F. Haugh
Affiant

Subscribed and sworn to before me
this 25th day of March, 1999.

Paulette M Grams
Notary Public

PAULETTE M. GRAMS
NOTARY PUBLIC-MINNESOTA
MY COMMISSION EXPIRES 1-31-2000

FIGURE C-5

R40.04.32.100.001

Form No. 31.01 QUIT CLAIM DEED — Minnesota Uniform Conveyancing Blanks (1/1997) — Miller-Davis Co., St. Paul, MN

Corporation, Partnership or Limited Liability Company to Corporation, Partnership or Limited Liability Company

No delinquent taxes and transfer entered: Certificate of Real Estate Value (X) filed ( ) not required.
Certificate of Real Estate Value No. 7233
March 23, 1999
Date
Linda K. King
County Auditor
by: LB
R40-04-32-100-001 Deputy

DEED TAX DUE: $6.60

Date: February 1, 1999

Office of County Recorder
COUNTY OF BLUE EARTH, MINNESOTA

I hereby certify that the within instrument was filed for record

in this office at 11:20 A.M.
on 29 MARCH 1999
and was duly recorded as document
No. 384CR870
E. William James, County Recorder
by Virginia M. Jaeger Deputy

Fee $ 6.00 (reserved for recording data)

FOR VALUABLE CONSIDERATION, The Brielmaier Corporation, a corporation under the laws of Minnesota, Grantor, hereby conveys and quitclaims to Southern Minnesota Construction Company, Inc., Grantee, a corporation under the laws of Minnesota, real property in Blue Earth County, Minnesota, described as follows:

That portion of the abandoned right-of-way of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company lying within the Northwest Quarter of the Northwest Quarter (NW 1/4 NW 1/4) of Section 32 - T109N - R26W, and shown as Tract "A" on the drawing attached as Exhibit "A".

NO. 20878 DATE 3-23-99
County Deed Tax of $ 6.60 hereon paid.
Linda K. King
Deputy

together with all hereditaments and appurtenances.

Check box if applicable:
☒ The Seller certifies that the seller does not know of any wells on the described real property.
☐ A well disclosure certificate accompanies this document.
☐ I am familiar with the property described in this instrument and I certify that the status and number of wells on the described real property have not changed since the last previously filed well disclosure certificate.

SELLER CERTIFIED THAT SELLER KNOWS OF NO WELLS ON THE DESCRIBED PREMISES.

Affix Deed Tax Stamp Here

The Brielmaier Corporation

By Mark Brielmaier
Its President

By
Its

STATE OF MINNESOTA
COUNTY OF BLUE EARTH } ss.

This instrument was acknowledged before me on February 19th 1999 (Date)

by Mark Brielmaier and
the President and
of The Brielmaier Corporation
under the laws of Minnesota
, a corporation
, on behalf of the Board of Directors

NOTARIAL STAMP OR SEAL (OR OTHER TITLE OR RANK)

SIGNATURE OF NOTARIAL OFFICER

Check here if part or all of the land is Registered (Torrens) ☐

Tax Statements for the real property described in this instrument should be sent to: Name and Address of Grantee:

Southern Minnesota Construction
Attn: Larry Nutre
P.O. Box 3069
Mankato, MN 56002-3069

WELL CERTIFICATE
☐ Received
☒ Not Required
Blue Earth County Recorder

THIS INSTRUMENT WAS DRAFTED BY (NAME AND ADDRESS)

Howard F. Haugh
FARRISH, JOHNSON & MASCHKA
201 North Broad Street, Suite 200
P.O. Box 550
Mankato, MN 56002-0550
507-387-3002
42377

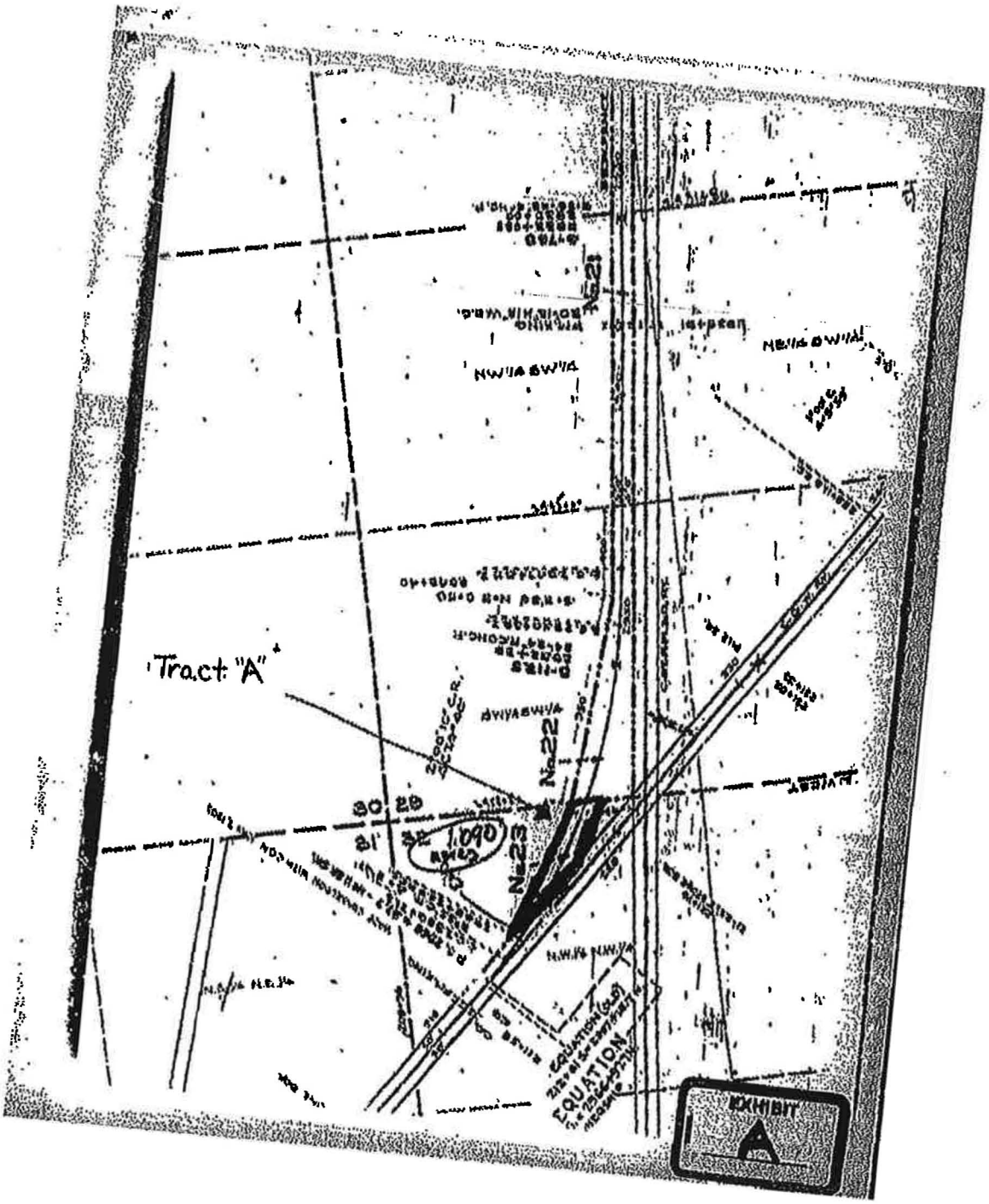

Tract "A"
EXHIBIT
A

FIGURE C-6

R40.04.31.200.006
R40.0431.200.007

MID Form No. 9-M – WARRANTY DEED — Minnesota Uniform Conveyancing Blanks (1978) — Miller-Davis Co., St. Paul

Corporation or Partnership to Corporation or Partnership

No delinquent taxes and transfer entered; Certificate of Real Estate Value (X) filed ( ) not required
Certificate of Real Estate Value No. 7231
March 23, 1999 (Year)
Sandra K. King
County Auditor
by AB Deputy
R40-04-31-200-006.
200-007.

STATE DEED TAX DUE HEREON: $22.70

Date: February 1, 1999

Office of County Recorder 60116
COUNTY of BLUE EARTH, MN
I hereby certify that the within instrument was filed in this office for record on the 26th day of MARCH, 19 99 at 2 o'clock P. M. and was duly recorded in Book 52-271 of Torrens Records, Cert. # 20,239
Residue:
E. WILLIAM JAMES
Registrar of Titles
By Patricia A Bergemann Deputy

(reserved for recording data)

Lt. A+B RLS # 36

FOR VALUABLE CONSIDERATION, The Brielmaier Corporation, a corporation under the laws of Minnesota, Grantor, hereby conveys and warrants to Southern Minnesota Construction Company, Inc., Grantee, a corporation under the laws of Minnesota, real property in Blue Earth County, Minnesota, described as follows:

Lots A & B, Registered Land Survey No. 36, according to the plat thereof and on file in the office of the Register of Deeds.

The Seller certifies that the Seller knows of no wells on the property.
(If more space is needed, continue on back)

together with all hereditaments and appurtenances belonging thereto, subject to the following exceptions:

NO. 20274 DATE 3-03-99
County Deed Tax of $22.70 hereon paid.
Sandra K. King
Land Records

Affix Deed Tax Stamp Here

The Brielmaier Corporation
By Mark Brielmaier
Its President
By
Its

STATE OF MINNESOTA }
COUNTY OF BLUE EARTH } ss.

The foregoing was acknowledged before me on February 1, 1999 (Date)
by Mark Brielmaier and
the President and
of The Brielmaier Corporation, a corporation
under the laws of Minnesota, on behalf of the Board of Directors.

Howard F. Haugh
SIGNATURE OF PERSON TAKING ACKNOWLEDGMENT

NOTARIAL STAMP OR SEAL (OR OTHER TITLE OR RANK):

HOWARD P. HAUGH
NOTARY PUBLIC - MINNESOTA
BLUE EARTH COUNTY
My Commission Expires 1-31-2000

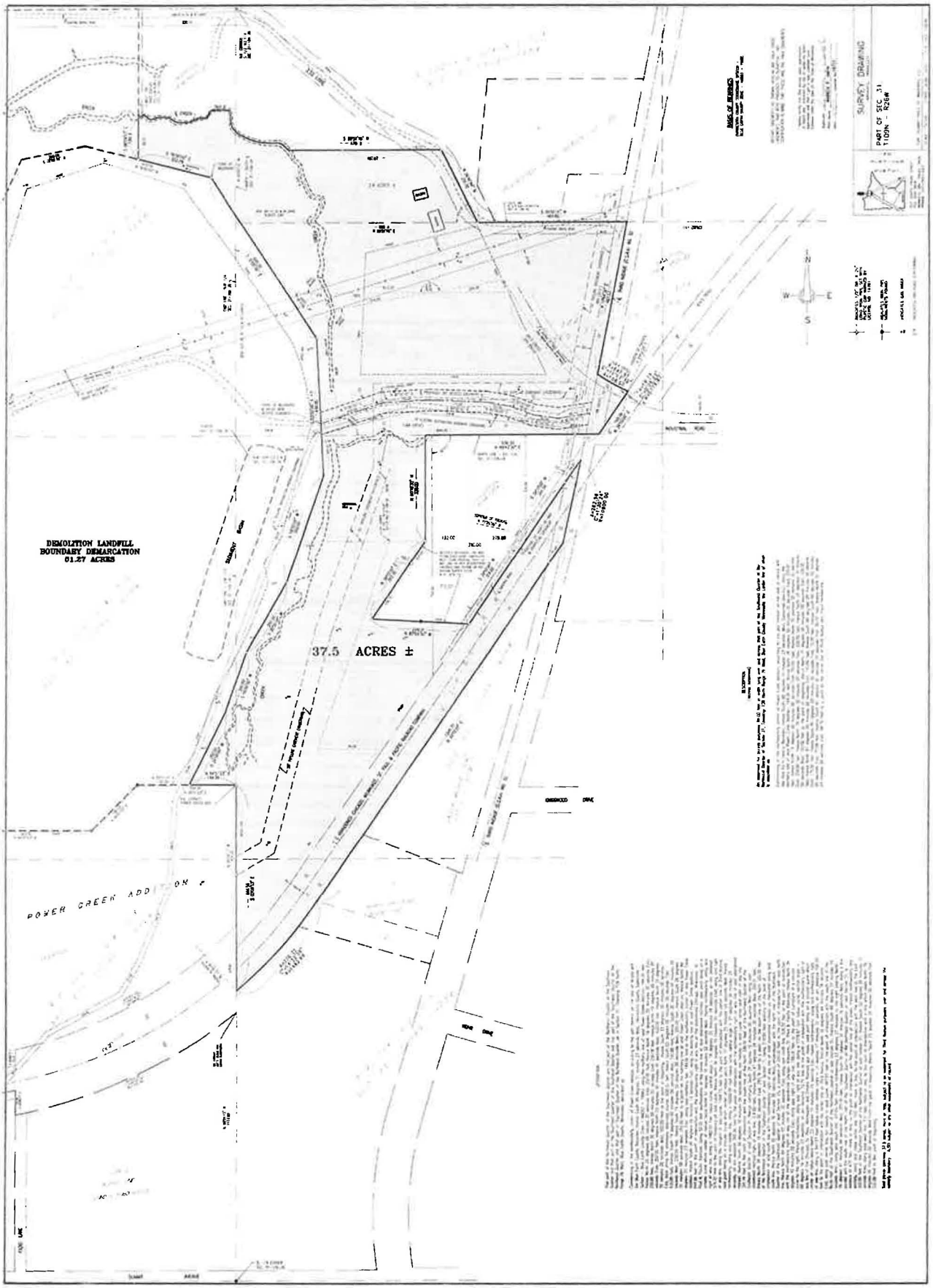
THIS INSTRUMENT WAS DRAFTED BY (NAME AND ADDRESS):

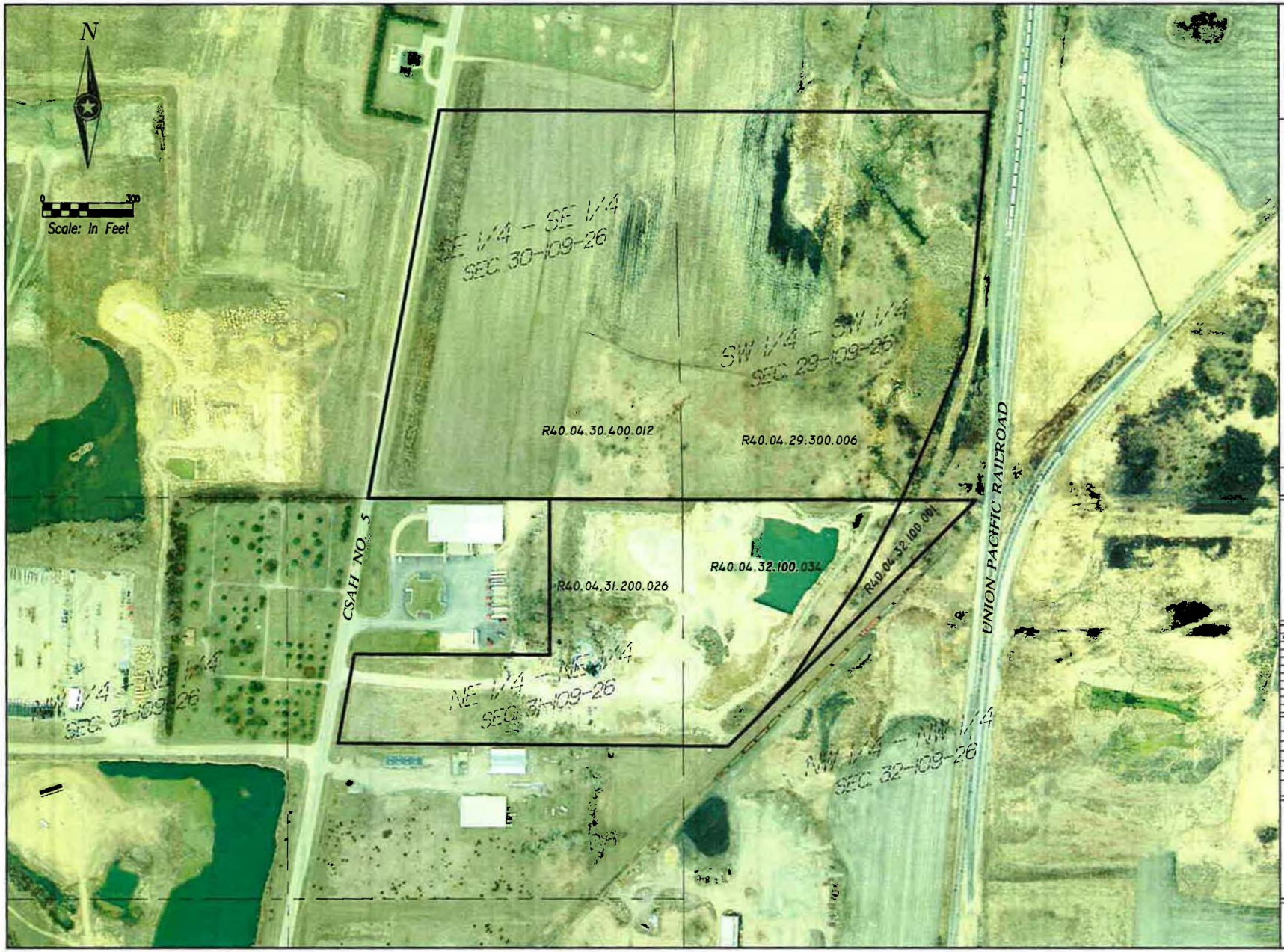
Howard F. Haugh
FARRISH, JOHNSON & MASCHKA
201 North Broad Street, Suite 200
P.O. Box 550
Mankato, MN 56002-0550
507-387-3002
42377

Tax Statements for the real property described in this instrument should be sent to (include name and address of Grantee):

Southern Minnesota Construction
Attn: Larry Nurre
P.O. Box 3069
Mankato, MN 56002-3069

WELL CERTIFICATE
☐ Received
☒ Not Required
Blue Earth County Recorder


DEMOLITION LANDFILL
BOUNDARY DEMARCATION
01.27 ACRES
37.5 ACRES ±
POWER CREEK ADDITION
SURVEY DRAWING
PART OF SEC 31
T10N - R6W



I&S GROUP
One firm - start to finish

ARCHITECTS • ENGINEERS • PLANNERS
LAND SURVEYORS • SCIENTISTS
Minnesota: Mankato • Faribault
Iowa: Storm Lake • Algona • Sac City
Web: www.is-grp.com

PROJECT

JORDAN SANDS

Revision Schedule		
Mark	Date	Description

PROJECT NO.	11-13479
FILE NAME	13479 JS EX
DRAWN BY	KH
DESIGNED BY	
REVIEWED BY	
ISSUE DATE	
CLIENT PROJECT NO.	

TITLE

PARCEL EXHIBIT

SHEET

FIGURE C-8

I&S GROUP
One firm - start to finish.

ARCHITECTS • ENGINEERS • PLANNERS
LAND SURVEYORS • SCIENTISTS
Minnesota: Mankato • Faribault
Iowa: Storm Lake • Algona • Sac City
Web: www.is-grp.com

PROJECT

JORDAN SANDS

Revision Schedule		
Mark	Date	Description

PROJECT NO.	11-13479
FILE NAME	13479 JS EX
DRAWN BY	KH
DESIGNED BY	
REVIEWED BY	
ISSUE DATE	
CLIENT PROJECT NO.	

TITLE

PARCEL EXHIBIT

SHEET

FIGURE C-9

ATTACHMENT D

Lime Township Conditional Use Permit Application
Jordan Sands, LLC

MINING PARCEL INFORMATION & LEGAL DESCRIPTIONS

The following parcel numbers are associated with the project and described below:

MKS-3: North

Parcel No. (s)	Parcel Acreage
R40.04.30.400.014, R40.04.30.400.013	56 acres
Owner	**Address**
Coughlan Quarries, LLC PO Box 1358 Mankato, MN 56002-1358	None
Legal Description	
See Figure D-1	
Sketch of Survey	
See Figure D-1	

MKS-3: South

Parcel No. (s)	Parcel Acreage
R40.04.30.400.006	10 acres
Owner	**Address:**
Mankato-Kasota Stone, Inc. 818 N Willow Street Mankato, MN 56001	None
Legal Description	
See Figure D-2	
Sketch of Survey	
See Figure D-2	

McClure

Parcel No. (s)	Parcel Acreage
R40.04.31.200.005, R40.04.31.200.006, R40.04.31.200.007	28.76 acres
Owner	**Address:**

OMG Midwest, Inc dba Southern Minnesota Construction Co Inc. 3490 3rd Ave Mankato, MN 56001	57150 230th Ln Mankato, MN 56001
Legal Description	
See Figure D-3	
Sketch of Survey	
See Figure D-3	

Pilgrim

Parcel No. (s)	Parcel Acreage
Portion of R40.04.30.300.005	Approx 20 acres
Owner	**Address:**
OMG Midwest, Inc dba Southern Minnesota Construction Co Inc. 3490 3rd Ave Mankato, MN 56001	Unknown
Legal Description	
See Figure D-4	
Sketch of Survey	
See Figure D-4	

February 21, 1996

Loeffler

Loeffler Description

Balance of property in Sec. 30 Township 109 North Range 26 West.

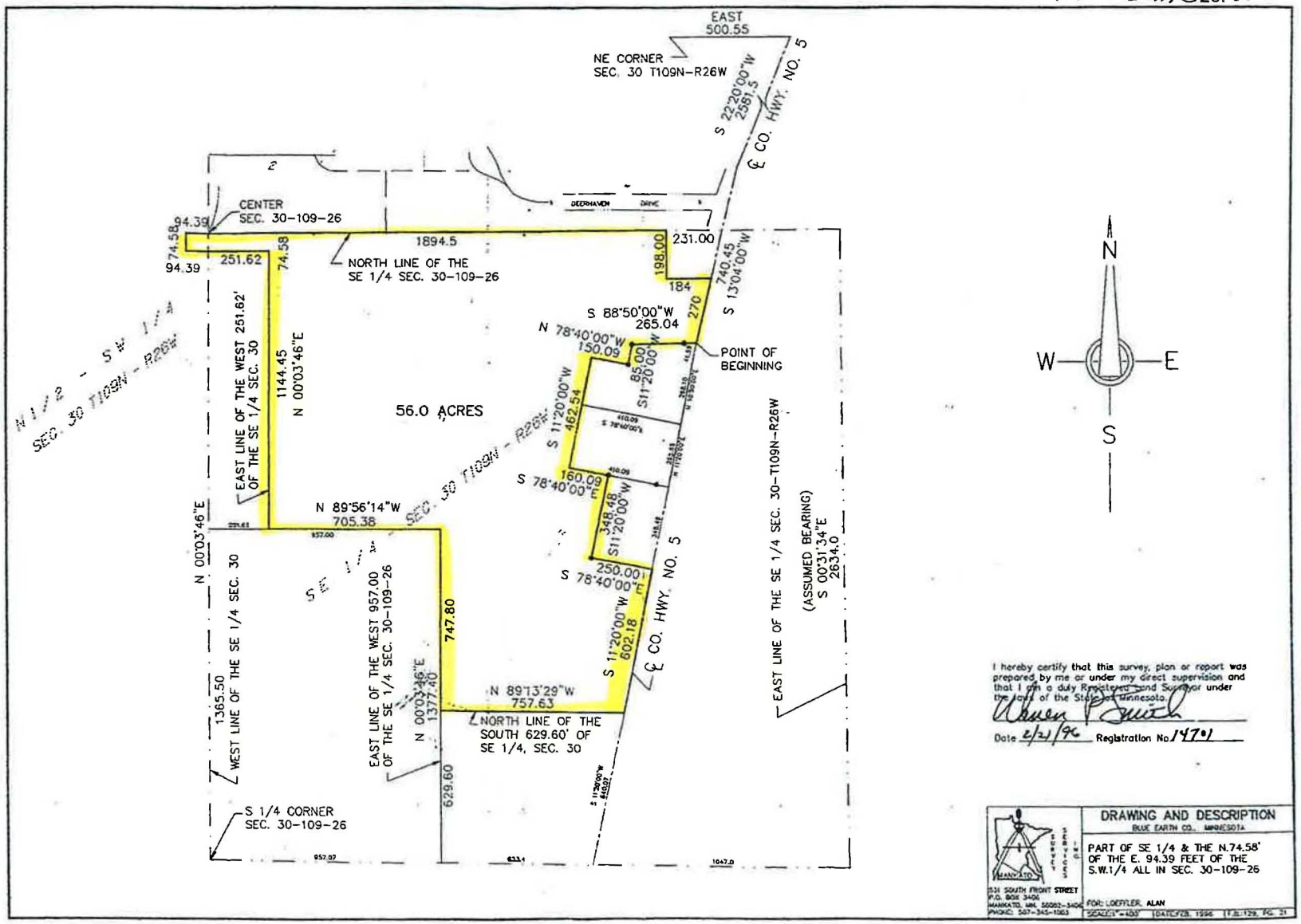
The North 74.58 feet of the East 94.39 feet of the North Half of the Southwest Quarter of Section 30 and that part of the Southeast Quarter of Section 30 lying west of the center line of County Highway No. 5, all in Township 109 North Range 26 West, Blue Earth County, Minnesota all more particularly described as:

Commencing at the Northeast Corner of Section 30; (the east line of the Southeast Quarter of Section 30 to have an assumed bearing of South 00 degrees 31 minutes 34 seconds East) thence East a distance of 500.55 feet to a point on the center line of County Highway No. 5; thence South 22 degrees 20 minutes 00 seconds West, along said highway center line, 2581.5 feet; thence South 13 degrees 04 minutes 00 seconds West, a distance of 740.45 feet to the point of beginning; thence South 88 degrees 50 minutes 00 seconds West, 265.04 feet to an iron pipe monument; thence South 11 degrees 20 minutes 00 seconds West, 85.00 feet to an iron pipe monument; thence North 78 degrees 40 minutes 00 seconds West, 150.09 feet; thence South 11 degrees 20 minutes 00 seconds West, 462.54 feet; thence South 78 degrees 40 minutes 00 seconds East, 160.09 feet to an iron pipe monument; thence South 11 degrees 20 minutes 00 seconds West, 348.48 feet to an iron pipe monument; thence South 78 degrees 40 minutes 00 seconds East, 250.00 feet to a point on the center line of County Highway No. 5; thence South 11 degrees 20 minutes 00 seconds West, along said Highway center line, 602.18 feet to the point of intersection with the north line of the South 629.60 feet of the Southeast Quarter of Section 30; thence North 89 degrees 13 minutes 29 seconds West, along said North line, 757.63 feet to the point of intersection with the East line of the West 957.00 feet of the Southeast Quarter of Section 30; thence North 00 degrees 03 minutes 46 seconds East, along said East line, 747.80 feet to the point of intersection with a line drawn at right angles to the West line of the Southeast Quarter of Section 30 at a point distant 1365.50 feet north of the South Quarter Corner of Section 30 as measured along the West line of the Southeast Quarter of Section 30; thence North 89 degrees 56 minutes 14 seconds West, along said line, 705.38 feet to the point of intersection with the East line of the West 251.62 feet of the Southeast Quarter of Section 30; thence North 00 degrees 03 minutes 46 seconds East, along said East line, 1144.45 feet to a point on the South line of the North 74.58 feet of the Southeast Quarter of Section 30; thence westerly along said South line, 251.62 feet to a point on the West line of the Southeast Quarter of Section 30; thence continuing westerly along the South line of the North 74.58 feet of the Southwest Quarter of Section 30 a distance of 94.39 feet; thence North 00 degrees 03 minutes 46 seconds East, along a line parallel with the East line of the Southwest Quarter of Section 30 a distance of 74.58 feet to a point on the North line of the Southwest Quarter of Section 30; thence easterly along said North line, 94.39 feet to the Northwest Corner of the Southeast Quarter of Section 30; thence continuing easterly along the North line of the Southeast Quarter of Section 30 a distance of 1894.5 feet to a point distant 231.00 feet westerly of the intersection of said North line with the center line of County Highway No. 5; thence southerly at right angles to said north line, 198.00 feet; thence easterly along a line parallel with the North line of the Southeast Quarter of Section 30 a distance of 184 feet to a point on the center line of County Highway No. 5; thence South 13 degrees 04 minutes 00 seconds West, a long said Highway center line, 270 feet to the point of beginning.

Said tract contains 56.0 acres, subject to an easement for highway purposes over and across the easterly 50.00 feet; Also subject to any other easements of record.

EXHIBIT A

T109N-R26W, SEC. 30



I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Registered Land Surveyor under the laws of the State of Minnesota.

Date 2/21/96 Registration No. 14701

DRAWING AND DESCRIPTION

BLUE EARTH CO., MINNESOTA

PART OF SE 1/4 & THE N.74.58' OF THE E. 94.39 FEET OF THE S.W.1/4 ALL IN SEC. 30-109-26

FOR: LOEFFLER, ALAN

SCALE: 1"=400' DATE: FEB. 1996 F.B.: 129, PG. 21

534 SOUTH FRONT STREET
P.O. BOX 3406
MANKATO, MN. 56002-3406
PHONE: 507-345-1063

Limited Warranty Deed - Corporation to Corporation

STATE DEED TAX DUE HEREON: $66.00 Date: Feb. 15, 1998

FOR VALUABLE CONSIDERATION, Immanuel Evangelical Lutheran Church of Mankato, Minnesota, a Minnesota religious corporation, Seller, hereby conveys and warrants to Mankato-Kasota Stone, Inc., a Minnesota corporation, Buyer, real property in Blue Earth, County Minnesota, described as follows:

All that part of the Southeast Quarter of Section 30, Township 109, North, Range 26 West, described as follows: Commencing at the Southeast Corner of said Section 30, thence due West (assumed bearing) along the South line of said Section 30, 1047.00 feet to the point of intersection of said South line with the center line of Highway No. 5, said point being the point of beginning, thence continuing due West along the South line of said Section 30, 633.40 feet, thence North 0° - 46.5' West, 629.60 feet, thence due East, and parallel to the South line of said Section 30, 757.63 feet, to a point on the center line of said Highway #5, thence South 10° - 25' West along said Highway center line 640.07 feet to the point of beginning. Said tract contains 10.0 acres of land, more or less and is subject to a 50 foot roadway easement adjacent to and across the Easterly boundary thereof containing 0.73 acres of land, more or less.

THE SELLER CERTIFIES THAT THE SELLER DOES NOT KNOW OF ANY WELLS ON THE DESCRIBED REAL PROPERTY.

together will all hereditaments and appurtenances belonging thereto, **subject to the following exceptions and restrictions:**

1. Covenants and restrictions of record.

2. Mankato-Kasota Stone, Inc. [Mankato-Kasota] shall, upon receiving 24 hours advance notice of a funeral or burial at the adjoining Pilgrims Rest Cemetery [Cemetery], make every effort to conduct its business on the above described property in a manner which will not interfere with or disturb the services at the time they are occurring in the Cemetery.

3. In the event Mankato-Kasota is unable to secure the required permits from Blue Earth County, or any other government agency, for the removal of quarry rock from the property, Immanuel Evangelical Lutheran Church of Mankato, Minnesota [Church] shall have the right to buy the above described property back from Mankato-Kasota, as described below.

4. Quarrying of the above described property shall begin as soon as practical, and shall be performed on this property prior to any quarrying on property owned by Mankato-Kasota lying north or east of the property. Mankato-Kasota will make every effort to begin and proceed with quarrying from the southerly boundary of the above described property toward the northerly boundary of the property.

5. When quarry rock has been removed, Mankato-Kasota shall make reclamation of all areas quarried by filling in at least the top 7-8 feet with soil and properly grading the area to its elevation as of the date of this deed. At least the top 4 inches of the reclaimed property shall be non-clay black dirt capable of sustaining the growth of grass and other vegetation. None of the fill below the top 7-8 feet shall be garbage, hazardous waste, or similar materials.

6. Quarrying and reclamation of the above described property shall be completed within 20 years from the date of this deed. As soon as Mankato-Kasota has quarried and reclaimed the property, as described in the above paragraphs, the Church shall have the right to buy the property back from Mankato-Kasota for the sum of . The Church, at its option, may offer to buy back the property for at any time if the quarrying and reclamation are completed prior to 20 years from the date of this deed. In the event quarrying and reclamation are completed prior to 20 years from the date of this deed, the Church shall be required to buy back the property for within 120 days of a written request from Mankato-Kasota.

7. In the event the Church informs Mankato-Kasota in writing that it does not wish to repurchase the above described property, Mankato-Kasota shall have the right to sell the property to any person or entity it so chooses. Otherwise, the above described property may not be sold or transferred by Mankato-Kasota Stone, Inc.

Immanuel Evangelical Lutheran Church of Mankato, Minnesota

By: _____
Its President

By: _____
Its Secretary

ACKNOWLEDGMENT

STATE OF MINNESOTA)
)ss:
COUNTY OF Blue Earth)

The foregoing instrument was acknowledged before me this 15th day of Feb., 1998, by Charles Bode and Lowell Schreyer, the President and Secretary, respectively, of Immanuel Evangelical Lutheran Church of Mankato, Minnesota, Seller.

Notary Public

KARL O. FRIEDRICHS
NOTARY PUBLIC—MINNESOTA
MY COMMISSION EXPIRES 1-31-2000

THIS INSTRUMENT DRAFTED BY:

FRIEDRICHS & MARSH
237 Belgrade Avenue, Suite 200
North Mankato, MN 56003
(507)345-7503

Statements for real estate taxes on the real property described herein should be sent to:

Mankato-Kasota Stone, Inc.
P.O. Box 1358
Mankato, MN 56002-1358


R40.04.30.400.014
R40.04.30.400.005
R40.04.3
PIN R40.04.30.400.006
Acreage 10.00
Owner MANKATO-KASOTA STONE INC
Class Industrial
View in new window
R40.0
R40.04.30.400.006
R40.04.31.200.027
R40.04.31.200.030
1.200.001

northeast corner of Lot 7, Fort Voyageur Subdivision, said point being the center line of Minnesota Trunk Highway #66; thence south 11 degrees 16 minutes 05 seconds west along said highway center line a distance of 314.52 feet; thence south 13 degrees 24 minutes 02 seconds west along said center line 21.60 feet; thence south 12 degrees 51 minutes 26 seconds west along said center line 277.19 feet to the point of beginning; thence north 90 degrees 00 minutes 00 seconds east 450.64 feet to the westerly right of way line of Blue Earth County Highway #90; thence southeasterly along said highway right of way 250 feet; thence south 90 degrees 00 minutes 00 seconds west to the center line of Minnesota Trunk Highway #66; thence northeasterly along said center line to the point of beginning, and containing approximately 2.7 acres, more or less.

together with all hereditaments and appurtenances belonging thereto, and sut only to existing roadways and easements of record, if any.

Parcel 20

Parcel IDs R40 04 31 100 006 & R40 03 36 200 004 (Rock Island Ranch) & R40 04 31 200 005 (Pilgrims)

TRACT I. The South Half (S ½) of the Northwest Quarter (NW ¼) of Section Thirty-one (31), Township One Hundred Nine (109) North, Range Twenty-six (26) West, excepting a tract of land described as follows: Beginning at the One-eighth (1/8) Section corner North of the center of said Section Thirty-one (31), running thence West Four (4) chains and Thirty-seven (37) links, thence South Four (4) chains and Twenty-five (25) links to Chapman Creek, thence Easterly along said creek to the East line of said Northwest Quarter (NW ¼), and thence North on said East line to the point of beginning.

TRACT II. The South Half (S ½) of the South Half (S ½) of the Northeast Quarter (NE ¼) of Section Thirty-one (31), Township One Hundred Nine (109) North, Range Twenty-six (26) West; excepting from the above all that part which lies Easterly of the right-of-way of the Chicago, Great Western Railway Company; and also excepting a tract of land described as follows: Commencing at the point of intersection of the center line of CSAH No. 5 with the North right-of-way line of the Chicago, St. Paul, Minneapolis & Omaha Railway spur track, said point being 1088 feet East and 188 feet North of the center of said Section 31, thence running Northeasterly along the center line of CSAH No. 5 a distance of 484 feet, thence at an angle of 100° 20' to the Northeast a distance of 411 feet to the Westerly right-of-way line of the Chicago, Great Western Railway, thence Southwesterly along the said Westerly right-of-way line a distance of 656.5 feet to the Northerly right-of-way line of the Chicago, St. Paul, Minneapolis & Omaha Railway Spur track, thence Northwesterly along said Northerly right-of-way line a distance of 108.4 feet to the place of beginning, and also excepting, the tract of land described in the deed recorded at Book 122 of Blue Earth County Deeds, page 467; and also excepting the tract of land described in the deed recorded at Book 166 of Blue Earth County Deeds, page 505; but excluding from said

exceptions the two tracts of land described in the deed to A. B. Chapman, recorded at Book 166 of Blue Earth County Deeds, page 506.

TRACT III. Commencing 9 chains and 93 links North of the center of Section Thirty-one (31), Township One Hundred Nine (109) North, Range Twenty-six (26) West; thence East 11 chains and 50 links, more or less, to the creek; thence Northerly and West, following down the channel of said creek to a point on the center line of said Section 31 5 chains and 81 links, more or less, North of the place of beginning; thence South to the place of beginning, containing 297 square rods of land, more or less.

Blue Earth County, Minnesota

TRACT IV. Government Lot Three (3) of Section Thirty-six (36), Township One Hundred Nine (109) North, Range Twenty-seven (27) West.

All of the above land being subject to existing railroad rights-of-way and public highways.

Blue Earth County, Minnesota

Parcel 21

Parcel ID R48 13 13 100 006

All that part of the Southeast Quarter of the Northwest Quarter (SE ¼ NW ¼) of Section 13, and all that part of the West Half of the Northeast Quarter (W ½ NE ¼) of Section 13, all in Township 107 North, Range 27 West described as: Beginning at the center of Section 13 (The North-South centerline of Section 13, to have an assumed bearing of North 0 degrees 08 minutes 41 seconds West); thence North 89 degrees 21 minutes 53 seconds West along the South line of the Southeast Quarter of the Northwest Quarter of Section 13, a distance of 1313.26 feet to the Southwest corner of the Southeast Quarter of the Northwest Quarter of Section 13; thence North 0 degrees 01 minutes 19 seconds West along the West line of the Southeast Quarter of the Northwest Quarter of Section 13, a distance of 780.00 feet to a point on the centerline of the Maple River; thence south 68 degrees 30 minutes 00 seconds East, along said centerline 145.00 feet; thence South 46 degrees 00 minutes 00 seconds East, along the centerline, 360.00 feet; thence south 89 degrees 00 minutes East, along said centerline 150.00 feet; thence North 60 degrees 00 minutes East, along said centerline, 150.00 feet; thence North 30 degrees 00 minutes East, along said centerline, 150.00 feet; thence North 20 degrees 00 minutes West, along said centerline, 100.00 feet; thence North 34 degrees 00 minutes West, along said centerline, 399.95 feet; thence North 7 degrees 00 minutes East, along said centerline 208.04 feet to the point of intersection of said Maple River centerline with the North line of the Southeast Quarter of the Northwest Quarter of Section 13; thence South 89 degrees 32 minutes 01 seconds East along said North line 794.03 feet to the Northeast corner of the Southeast Quarter of the Northwest Quarter of Section 13; thence North 0

road for a distance of 22 rods, thence following diagonally across said land to the place of beginning;

(b) All that part of Government Lot 3, in Sec. 26-108-27, lying west of the Le Sueur River and South of the Blue Earth River; and

(c) That part of Government Lot 3 lying within the following described tract of land:

Commencing at a point 483.80 feet East and 1,235.00 feet North of the Southwest corner of the Southwest quarter of Section 26, Township 108 North, Range 27 West; thence North, 409.75 feet; thence North 22 degrees 35 Minutes East, 488.70 feet; thence North 45 degrees 34 Minutes East, 78.0 feet; Thence North 30 degrees 26 Minutes East, 182.20 feet; thence South 88 degrees 10 minutes East, 146.20 feet; thence South 88 degrees 03 minutes East, 302.75 feet; thence South 57 degrees 14 Minutes East, 39.70 feet; thence South 24 degrees 56 minutes East 64.60 feet; thence South 20 degrees 10 minutes East 97.70 feet; thence South 13 degrees 00 minutes East, 183.60 feet; thence South 06 degrees 18 minutes East, 74.95 feet; thence South 22 degrees 23 minutes West, 95.20 feet; thence Sou degrees 08 minutes West, 388.15 feet; thence South 11 degrees 17 minutes 400.20 feet; thence South 13 degrees 25 minutes West 418.10 feet; thence N 43 degrees 21 minutes West, 254.55 feet; thence North 32 degrees 49 mi West, 147.20 feet; thence North 54 degrees 59 minutes West, 194.75 feet; th North 47 degrees 10 minutes West, 122.10 feet; thence North 38 degree minutes West, 158.45 feet to the point of beginning.

Parcel 31

Parcel ID R40 04 32 100 001

That portion of the abandoned right-of-way of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company lying within the Northwest Quarter of the Northwest Quarter (NW ¼ NW ¼) of Section 32 - T109N - R26W, and shown as Tract "A" on the drawing attached as Exhibit "A", to that certain Quit Claim Deed dated February 1, 1999 and recorded on March 28, 1999 at Document No. 384CR870 in the office of the County Recorder of Blue Earth County.

Parcel 32

Parcel ID R50 08 28 200 012

The East 4.40 acres of the South 40 acres of Government Lot 6, Section 28, Township 108 North, Range 27 West, County of Blue Earth, State of Minnesota, save and except the East 1.56 acres thereof. Together with an Access Easement over the South 40 acres of Government Lot 6 in Section 28, Township 108 North, Range 27 West, Blue Earth County, Minnesota, for purposes of moving equipment, trucks, quarry materials, to and from Blue Earth County Highway No. 33. This Access Easement shall expire on April 1, 2006, unless extended.

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The North half of the Southwest quarter of Section 30, Township 109 North, Range 26 West, excepting therefrom the North 74.58 feet of the East 94.39 feet.

The West 251.62 feet of the Southeast quarter of Section 30, Township 109 North, Range 26 West, excepting therefrom the North 74.58 feet, and except the South 1365.50 feet.

Blue Earth County, Minnesota.

Parcel 26

Parcel ID R40 04 30 400 008 (Pilgrims)

Tract A, Registered Land Survey No. 108. Together with an easement for access purposes over and across the existing roadway lying within the North Half of the Northeast Quarter of Section 31, Township 109 North, Range 26 West and extending from the County State Aid Highway No. 5 in generally westerly and northwesterly direction to the South line of the above described parcel.

Except easements and restrictions of record; rights of tenants including McCree & Company, Carney and Associates, Inc. and the occupants of the dwelling houses on the premises.

Parcel 27

Parcel IDs R40 04 30 300 005 & R40 04 31 200 001 (Pilgrims)

The West 957 feet of the South 1365 ½ feet of the SE ¼ of Sec. 30-109-26 West and all that part of the N ½ of the NW ¼ of Sec. 31 and the S ½ of SW ¼ Sec. 30 which lies northeast of a straight line drawn from the southeast corner of the NE ¼ of the NW ¼ of Sec. 31 to the northwest corner of the SW ¼ of the SW ¼ of Sec. 30, being a triangular piece of land containing 80 acres, EXCEPT Tract A, Registered Land Survey No. 108.

The West 16.92 acres of the North 24 acres of the NW ¼ NE ¼ of Sec. 31.

The west 1 ½ acres of the south 2 acres of the north 50 acres of the N ½ of the NE ¼ of Sec. 31, and the following triangular piece or parcel of land: Beginning at the southeast corner of the N ½ of the NW ½ of said Sec. 31, thence running west 175 feet, thence running north 171.7 feet, thence running south 44° and 25 minutes East 244.8 feet to the place of beginning, all of the above parcels of land lying and being in Township 109 Range 26.

Beginning at the northwest corner of the SW ¼ NE ¼ of Sec. 31-109-26 West; thence north on the north and south ¼ line of said Sec. 495 feet; thence north 89°54 minutes east 1434.16 feet to the center of the highway between Mankato

and St. Peter (now known as Blue Earth County Aid Road No. 123); thence southwesterly 1177.10 feet down the center line of said highway to the north line of the S ½ of said SW ¼ of the NE ¼; thence on said north line south 89°54 minutes west 461 feet; thence northwesterly 63°27 minutes to the right 251 feet; thence South 89°54 minutes west 116 feet; thence north 44°38 minutes west 290 feet; thence North 50°16 minutes west 288.5 feet thence North 63°57 minutes west 100 feet to the point of beginning, except all existing highways and cartways, EXCEPT a strip of land 1 rod in width adjacent to the South line of Pilgrim's Rest Cemetery and extending the length of said Cemetery, all located in the NE ¼ Sec. 31-109-26 West, more particularly described as follows: Commencing at an iron pipe at the intersection of the West line of the Mendota and Big Sioux Road, also known as the Mankato St. Peter Highway, and the North line of Sec. 31-109-26 West, said iron being approximately 1087 feet West of the northeast corner of said Section 31; thence running West a distance of 585 feet, thence South 3°45' West a distance of 792 feet to the place of beginning; thence continuing along the same line a distance of 16.5 feet, thence East and parallel to the North line of said Section 31 a distance of 485.2 feet to the West line of the Mendota and Big Sioux Road, thence North 10°38' East along the West line of said Mendota and Big Sioux Road a distance of 16.8 feet, thence West and parallel to the North line of said Section 31, a distance of 488.3 feet to the place of beginning.

EXCEPT Tracts A & B, Registered Land Survey No. 36.

EXCEPT Beginning at a point on the North line of Section 31-T109N R-26W, 1998.8 feet East of the N.W. corner of said section, thence west on said section line 312.8 feet, thence south 3°03' West 195.0 feet, thence South 44°55' East 142.5 feet, thence South 46°00' East 250.0 feet, thence North 56°56' East 213.0 feet, thence North 0°07' West 41.15 feet, thence North 15°43' East 60.0 feet, thence North 20°52' East 40.0 feet, thence North 32°19' East 38.0 feet, thence North 44°26' West 258.7 feet to the point of beginning and containing 3.64 acres, more or less.

EXCEPT plat of a tract of land in the NE ¼ of the NW ¼ of Section 31, Twp. 109 N. Range 26 W. Beginning at a point 2179.8 feet East of the NW corner and 184.6 feet South of North line of said Section 31, thence South 44°26 minutes East 520.5 feet, thence South 0 degrees 30 minutes West 414.75 feet, thence North 53 degrees 32 minutes West 61 feet thence North 49 degrees 26 minutes West 100 feet, thence North 47 degrees 14 minutes West 50 feet, thence North 42 degrees West 56 feet, thence North 36 degrees 10 minutes West 45.2 feet, thence South 56 degrees 59 minutes West 165.15 feet, thence North 45 degrees 35 minutes West 458.85 feet, thence North 56 degrees 56 minutes East 327 feet, thence North 0 degrees 7 minutes West 41.15 feet, thence North 15 degrees, 43 minutes East 60 feet thence North 20 degrees 52 minutes East 40 feet, thence North 32 degrees 19 minutes East 38 feet to the point of beginning, said tract containing 6.149 acres more or less.

And an easement in and to a roadway over the following described property:

A road 20 feet in width 10 feet on either side of a line described as follows:

Commencing at the intersection of the centerline of County Highway No. 5 and the North line of a tract of land described as follows: "The North 70 acres of the South 110 acres, West of County Highway No. 5, in the Northeast quarter of Section 31, Township 109 North, Range 26 West"; thence West along said North line approximately 1100 feet; thence Northwesterly approximately 340 feet to a point on the West line of a tract of land described as follows: "The West 16.92 acres of the North 24 acres of the Northwest Quarter of the Northeast Quarter of Section 31, Township 109 North, Range 26 West"; said point being approximately 100 feet North of the Southwest corner of said last described tract; thence continuing Westerly across the Northeast quarter of the Northwest quarter of said Section 31, approximately 100 feet to a point of termination, said terminal point being located as follows: commencing at a point on the North line of Section 31, Township 109 North, Range 26 West, 2179.8 feet East of the Northwest corner of said Section 31; thence South 184.6 feet; thence South 44 degrees 26 minutes East 520.5 feet; thence south 0 degrees 30 minutes West, 147.3 feet to said point of termination. In the event that should a survey of the above described roadway as it now exists show the above description to be inaccurate the vendor agrees at the request of the vendee to execute and deliver a Quit Claim Deed transferring to said vendee the road area in accordance with such survey.

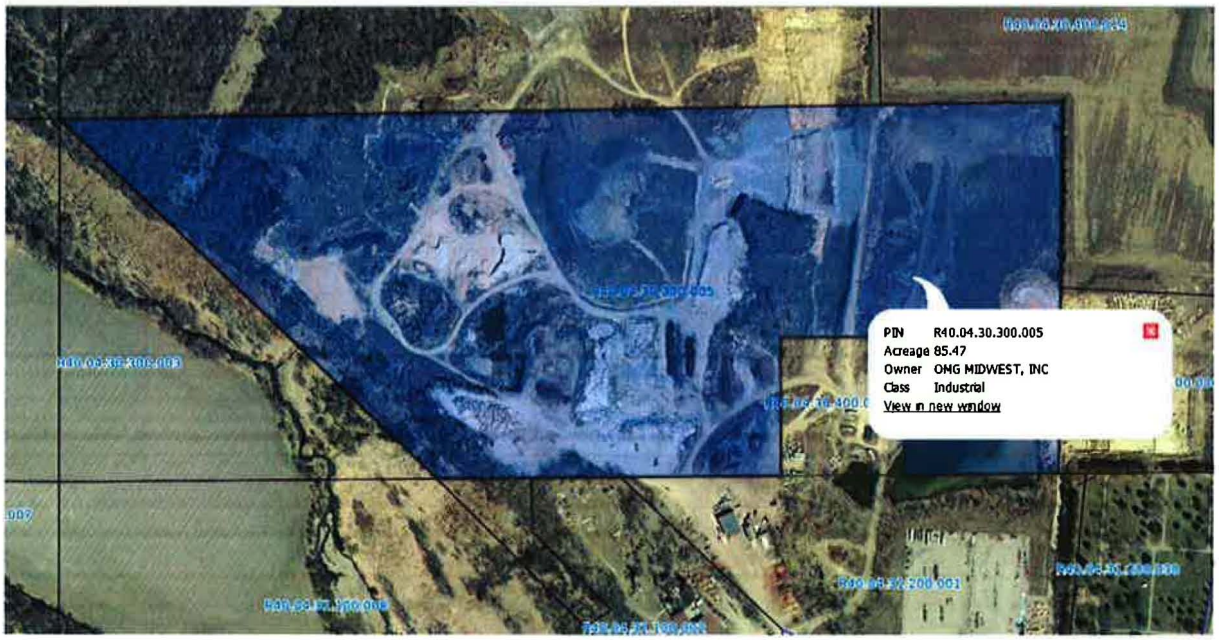
The covenants of warranty in this instrument shall be deemed not to apply to the last above described tract, said tract being the roadway conveyed hereby.

Except easements and restrictions of record; rights of tenants including McCree & Company, Carney and Associates, Inc., and the occupants of the dwelling houses on the premises; and the right of Carney and Associates, Inc. to use the roadway as described in the description herein.

Subject to an easement for access purposes over and across the existing roadway lying within the North Half of the Northeast Quarter of Section 31, Township 109 North, Range 26 West and extending from County State Aid Highway No. 5 in generally westerly and northwesterly direction to the South line of Registered Land Survey No. 108.

The above described real property is subject to the reservation of an easement in the grantor for perpetual use in common with the grantee of the railroad as exists on the property being conveyed herein. Said land is subject to the rights and obligations arising out of and pursuant to the following easement for railroad right of way purposes and agreements providing for the construction, maintenance, operation and use of certain railway spur tracks providing industrial trackage facilities upon said premises:

(a) Easement and right of way for railroad purposes granted by The Carney Company, a corporation, to Chicago, Saint Paul, Minneapolis and Omaha Railway Company, a corporation, by indenture dated July 18, 1939, and


PIN R40.04.30.300.005
Acreage 85.47
Owner ONG MIDWEST, INC
Class Industrial
View in new window