ADEM
Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE:	Stoned, LLC 801 Franklin Street, S.E. Huntsville, AL 35801
FACILITY LOCATION:	Project Crossroads 7440 Mooresville Road Belle Mina, AL 35615 Limestone County T4S, R3W, Sec 29
PERMIT NUMBER:	AL0084480

DSN & RECEIVING STREAM:	001 - 1	Unnamed Tributary to Limestone Creek
	002 - 1	Unnamed Tributary to Limestone Creek
	003 - 1	Limestone Creek
	004 - 1	Limestone Creek
	005 - 1	Limestone Creek

In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1388 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-17, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

Draft

Alabama Department of Environmental Management

MINING AND NATURAL RESOURCE SECTION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

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PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is authorized to discharge from each point source identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfalls have been constructed and certified. Discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements	
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency[1]
pH 00400	6.0 s.u.	-------	8.5 s.u.	Grab	2/Month
Solids, Total Suspended 00530	-------	25.0 mg/L	45.0 mg/L	Grab	2/Month
Flow, In Conduit or Thru Treatment Plant[2] 50050	-------	Report MGD	Report MGD	Instantaneous	2/Month

B. REQUIREMENTS TO ACTIVATE A PROPOSED MINING OUTFALL

1. Discharge from any point source identified on Page 1 of this Permit which is a proposed outfall is not authorized by this Permit until the outfall has been constructed and certification received by the Department from a professional engineer, registered in the State of Alabama, certifying that such facility has been constructed according to good engineering practices and in accordance with the Pollution Abatement and/or Prevention (PAP) Plan.

2. Certification required by Part I.B.1. shall be submitted on a completed ADEM Form 432. The certification shall include the latitude and longitude of the constructed and certified outfall.

3. Discharge monitoring and Discharge Monitoring Report (DMR) reporting requirements described in Part I.C. of this Permit do not apply to point sources that have not been constructed and certified.

4. Upon submittal of the certification required by Part I.B.1. to the Department, all monitoring and DMR submittal requirements shall apply to the constructed and certified outfall.

C. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Sampling Schedule and Frequency

a. The Permittee shall collect at least one grab sample of the discharge to surface waters from each constructed and certified point source identified on Page 1 of this Permit and described more fully in the Permittee's application twice per month at a rate of at least every other week if a discharge occurs at any time during the two week period, but need not collect more than two samples per calendar month. Each sample collected shall be analyzed for each parameter specified in Part I.A. of this Permit.

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[1] See Part I.C.2. for further measurement frequency requirements.

[2] Flow must be determined at the time of sample collection by direct measurement, calculation, or other method acceptable to the Department.

b. If the final effluent is pumped in order to discharge (e.g. from incised ponds, old highwall cuts, old pit areas or depressions, etc.), the Permittee shall collect at least one grab sample of the discharge from each point source identified on Page 1 of this Permit and described more fully in the Permittee's application each quarterly (three month) monitoring period if a discharge occurs at any time during the quarterly monitoring period which results from direct pumped drainage. Each sample collected shall be analyzed for each parameter specified in Part I.A. of this Permit.

c. The Permittee may increase the frequency of sampling listed in Parts I.C.1.a and I.C.1.b; however, all sampling results must be reported to the Department and included in any calculated results submitted to the Department in accordance with this Permit.

2. Measurement Frequency

Measurement frequency requirements found in Part I.A. shall mean:

a. A measurement frequency of one day per week shall mean sample collection on any day of discharge which occurs every calendar week.

b. A measurement frequency of two days per month shall mean sample collection on any day of discharge which occurs every other week, but need not exceed two sample days per month.

c. A measurement frequency of one day per month shall mean sample collection on any day of discharge which occurs during each calendar month.

d. A measurement frequency of one day per quarter shall mean sample collection on any day of discharge which occurs during each calendar quarter.

e. A measurement frequency of one day per six months shall mean sample collection on any day of discharge which occurs during the period of January through June and during the period of July through December.

f. A measurement frequency of one day per year shall mean sample collection on any day of discharge which occurs during each calendar year.

3. Monitoring Schedule

The Permittee shall conduct the monitoring required by Part I.A. in accordance with the following schedule:

a. MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY shall be conducted during the first full month following the effective date of coverage under this Permit and every month thereafter. More frequently than monthly and monthly monitoring may be done anytime during the month, unless restricted elsewhere in this Permit, but the results should be reported on the last Discharge Monitoring Report (DMR) due for the quarter (i.e., with the March, June, September, and December DMRs).

b. QUARTERLY MONITORING shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The Permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this Permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring may be done anytime during the quarter, unless restricted elsewhere in this

Permit, but the results should be reported on the last DMR due for the quarter (i.e., with the March, June, September, and December DMRs).

c. SEMIANNUAL MONITORING shall be conducted at least once during the period of January through June and at least once during the period of July through December. The Permittee shall conduct the semiannual monitoring during the first complete semiannual calendar period following the effective date of this Permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this Permit, but it should be reported on the last DMR due for the month of the semiannual period (i.e., with the June and December DMRs).

d. ANNUAL MONITORING shall be conducted at least once during the period of January through December. The Permittee shall conduct the annual monitoring during the first complete calendar annual period following the effective date of this Permit and is then required to monitor once during each annual period thereafter. Annual monitoring may be done anytime during the year, unless restricted elsewhere in this Permit, but it should be reported on the December DMR.

4. Sampling Location

Unless restricted elsewhere in this Permit, samples collected to comply with the monitoring requirements specified in Part I.A. shall be collected at the nearest accessible location just prior to discharge and after final treatment, or at an alternate location approved in writing by the Department.

5. Representative Sampling

Sample collection and measurement actions taken as required herein shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this Permit.

6. Test Procedures

For the purpose of reporting and compliance, Permittees shall use one of the following procedures:

a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136, guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h), and ADEM Standard Operating Procedures. If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance, however should EPA approve a method with a lower minimum level during the term of this Permit the Permittee shall use the newly approved method.

b. For pollutant parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the

Department, and may be developed by the Permittee during permit issuance, reissuance, modification, or during compliance schedule.

In either case the measured value should be reported if the analytical result is at or above the ML and "0" reported for values below the ML.

c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit using the most sensitive EPA approved method. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures identified in Parts I.C.6.a. and b. shall be reported on the Permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

7. Recording of Results

For each measurement or sample taken pursuant to the requirements of this Permit, the Permittee shall record the following information:

a. The facility name and location, point source number, date, time, and exact place of sampling or measurements;

b. The name(s) of person(s) who obtained the samples or measurements;

c. The dates and times the analyses were performed;

d. The name(s) of the person(s) who performed the analyses;

e. The analytical techniques or methods used including source of method and method number; and

f. The results of all required analyses.

8. Routine Inspection by Permittee

a. The Permittee shall inspect all point sources identified on Page 1 of this Permit and described more fully in the Permittee's application and all treatment or control facilities or systems used by the Permittee to achieve compliance with the terms and conditions of this Permit at least as often as the applicable sampling frequency specified in Part I.C.1 of this Permit.

b. The Permittee shall maintain a written log for each point source identified on Page 1 of this Permit and described more fully in the Permittee's application in which the Permittee shall record the following information:

(1) The date and time the point source and any associated treatment or control facilities or systems were inspected by the Permittee;

(2) Whether there was a discharge from the point source at the time of inspection by the Permittee;

(3) Whether a sample of the discharge from the point source was collected at the time of inspection by the Permittee;

(4) Whether all associated treatment or control facilities or systems appeared to be in good working order and operating as efficiently as possible, and if not, a description of the problems or deficiencies; and

(5) The name and signature of the person performing the inspection of the point source and associated treatment or control facilities or systems.

9. **Records Retention and Production**

a. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Permit, and records of all data used to complete the above reports or the application for this Permit, for a period of at least three (3) years from the date of the sample collection, measurement, report, or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA, AEMA, and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director, the Permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records should not be submitted unless requested.

b. All records required to be kept for a period of three (3) years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

10. **Monitoring Equipment and Instrumentation**

All equipment and instrumentation used to determine compliance with the requirements of this Permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. The Permittee shall develop and maintain quality assurance procedures to ensure proper operation and maintenance of all equipment and instrumentation. The quality assurance procedures shall include the proper use, maintenance, and installation, when appropriate, of monitoring equipment at the plant site.

D. DISCHARGE REPORTING REQUIREMENTS

1. **Requirements for Reporting of Monitoring**

a. Monitoring results obtained during the previous three (3) months shall be summarized for each month on a Discharge Monitoring Report (DMR) Form approved by the Department, and submitted to the Department so that it is received by the Director no later than the 28th day of the month following the quarterly reporting period (i.e., on the 28th day of January, April, July, and October of each year).

b. The Department utilizes a web-based electronic reporting system for submittal of DMRs. **Except as allowed by Part I.D.1.c. or d., the Permittee shall submit all DMRs required by Part I.D.1.a. by utilizing the Department's current electronic reporting system.** The Department's current reporting system, Alabama Environmental Permitting and Compliance System (AEPACS), can be found online at https://aepacs.adem.alabama.gov/nviro/ncore/external/home.

c. If the electronic reporting system is down (i.e. electronic submittal of DMR data is unable to be completed due to technical problems originating with the Department's system; this could include entry/submittal issues with an entire set of DMRs or individual parameters), permittees are not relieved of their obligation to submit DMR data to the Department by the required submittal date. However, if the electronic reporting system is down on the 28th day of the month or is down for an extended period of time as determined by the Department when a DMR is required to be submitted, the facility may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within five calendar days of the electronic reporting system resuming operation, the Permittee shall enter the data into the reporting system unless an alternate timeframe is approved by the Department. An attachment should be included with the electronic DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date).

d. The permittee may submit a request to the Department for a temporary electronic reporting waiver for DMR submittals. The waiver request should include the permit number; permittee name; facility/site name; facility address; name, address, and contact information for the responsible official or duly authorized representative; a detailed statement regarding the basis for requesting such a waiver; and the duration for which the waiver is requested. Approved electronic reporting waivers are not transferrable. Permittees with an approved electronic reporting waiver for DMRs may submit hard copy DMRs for the period that the approved electronic reporting waiver request is effective. The Permittee shall submit the Department-approved DMR forms to the address listed in Part I.D.1.i.

e. If the Permittee, using approved analytical methods as specified in Part I.C.6., monitors any discharge from a point source identified on Page 1 of this Permit and describe more fully in the Permittee's application more frequently than required by this Permit; the results of such monitoring shall be included in the calculation and reporting of values on the DMR Form, and the increased frequency shall be indicated on the DMR Form.

f. In the event no discharge from a point source identified on Page 1 of this Permit and described more fully in the Permittee's application occurs during a monitoring period, the Permittee shall report "No Discharge" for such period on the appropriate DMR Form.

g. Each DMR Form submitted by the Permittee to the Department in accordance with Part I.D.1. must be legible and bear an original signature or electronic signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this Permit.

h. All reports and forms required to be submitted by this Permit, the AWPCA, and the Department's rules and regulations, shall be signed by a "responsible official" of the Permittee as defined in ADEM Admin. Code r. 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Admin. Code r. 335-6-6-.09 and shall bear the following certification:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

i. All DMRs, reports, and forms required to be submitted by this Permit, the AWPCA and the Department's rules and regulations, shall be submitted through the Department's electronic reporting system, AEPACS, or, if in hardcopy, shall be addressed to:

Alabama Department of Environmental Management
Water Division, Mining and Natural Resource Section
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail shall be addressed to:

Alabama Department of Environmental Management
Water Division, Mining and Natural Resource Section
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059

j. Unless authorized in writing by the Department, approved reporting forms required by this Permit or the Department are not to be altered, and if copied or reproduced, must be consistent in format and identical in content to the ADEM approved form. Unauthorized alteration, falsification, or use of incorrectly reproduced forms constitutes noncompliance with the requirements of this Permit and may significantly delay processing of any request, result in denial of the request, result in permit termination, revocation, suspension, modification, or denial of a permit renewal application, or result in other enforcement action.

k. If this Permit is a reissuance, then the Permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.D.1.

2. Noncompliance Notification

a. The Permittee must notify the Department if, for any reason, the Permittee's discharge:

(1) Potentially threatens human health or welfare;

(2) Potentially threatens fish or aquatic life;

(3) Causes an in-stream water quality criterion to be exceeded;

(4) Does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. §1317(a);

(5) Contains a quantity of a hazardous substance which has been determined may be harmful to the public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. §1321(b)(4); or

(6) Exceeds any discharge limitation for an effluent parameter as a result of an unanticipated bypass or upset.

The Permittee shall orally or electronically report any of the above occurrences, describing the circumstances and potential effects of such discharge to the Director within 24-hours after the Permittee becomes aware of the occurrence of such discharge. In addition to the oral or electronic report, the Permittee shall submit to the Director a written report as

provided in Part I.D.2.c., no later than five (5) days after becoming aware of the occurrence of such discharge.

b. If for any reason, the Permittee's discharge does not comply with any limitation of this Permit, the Permittee shall submit a written report to the Director as provided in Part I.D.2.c. This report must be submitted with the next Discharge Monitoring Report required to be submitted by Part I.D.1. of this Permit after becoming aware of the occurrence of such noncompliance.

c. Any written report required to be submitted to the Director in accordance with Parts I.D.2.a. and b. shall be submitted using a Noncompliance Notification Form (ADEM Form 421) available on the Department's website (http://adem.alabama.gov/DeptForms/Form421.pdf) and include the following information:

(1) A description of the discharge and cause of noncompliance;

(2) The period of noncompliance, including exact dates and times, or if not corrected, the anticipated time the noncompliance is expected to continue; and

(3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

3. Reduction, Suspension, or Termination of Monitoring and/or Reporting

a. The Director may, with respect to any point source identified on Page 1 of this Permit and described more fully in the Permittee's application, authorize the Permittee to reduce, suspend, or terminate the monitoring and/or reporting required by this Permit upon the submission of a written request for such reduction, suspension, or termination by the Permittee provided:

(1) All mining, processing, or disturbance in the drainage basin(s) associated with the discharge has ceased and site access is adequately restricted or controlled to preclude unpermitted and unauthorized mining, processing, transportation, or associated operations/activity;

(2) Permanent, perennial vegetation has been re-established on all areas mined or disturbed for at least one year since mining has ceased in the drainage basin(s) associated with the surface discharge, or all areas have been permanently graded such that all drainage is directed back into the mined pit to preclude all surface discharges;

(3) Unless waived in writing by the Department, the Permittee has been granted, in writing, a 100% Bond Release, if applicable, by the Alabama Department of Industrial Relations and, if applicable, by the Surface Mining Commission for all areas mined or disturbed in the drainage basin(s) associated with the discharge;

(4) Unless waived in writing by the Department, the Permittee has submitted inspection reports prepared and certified by a Professional Engineer (PE) registered in the State of Alabama or a qualified professional under the PE's direction which certify that the facility has been fully reclaimed or that water quality remediation has been achieved. The first inspection must be conducted approximately one year prior to and the second inspection must be conducted within thirty days of the Permittee's request for termination of monitoring and reporting requirements;

(5) All surface effects of the mining activity such as fuel or chemical tanks, preparation plants or equipment, old tools or equipment, junk or debris, etc., must be removed and disposed of according to applicable state and federal regulations;

(6) The Permittee's request for termination of monitoring and reporting requirements contained in this Permit has been supported by monitoring data covering a period of at least six consecutive months or such longer period as is necessary to assure that the data reflect discharges occurring during varying seasonal climatological conditions;

(7) The Permittee has stated in its request that the samples collected and reported in the monitoring data submitted in support of the Permittee's request for monitoring termination or suspension are representative of the discharge and were collected in accordance with all Permit terms and conditions respecting sampling times (e.g., rainfall events) and methods and were analyzed in accordance with all Permit terms and conditions respecting analytical methods and procedures;

(8) The Permittee has certified that during the entire period covered by the monitoring data submitted, no chemical treatment of the discharge was provided;

(9) The Permittee's request has included the certification required by Part I.D.1.e. of this Permit; and

(10) The Permittee has certified to the Director in writing as part of the request, its compliance with (1) through (9) above.

b. It remains the responsibility of the Permittee to comply with the monitoring and reporting requirements of this Permit until written authorization to reduce, suspend, or terminate such monitoring and/or reporting is received by the Permittee from the Director.

E. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

The Permittee shall give the Director written advance notice of any planned changes or other circumstances regarding a facility which may result in noncompliance with permit requirements.

2. Termination of Discharge

The Permittee shall notify the Director, in writing, when all discharges from any point source(s) identified on Page 1 of this Permit and described more fully in the Permittee's application have permanently ceased.

3. Updating Information

a. The Permittee shall inform the Director of any change in the Permittee's mailing address or telephone number or in the Permittee's designation of a facility contact or officer(s) having the authority and responsibility to prevent and abate violations of the AWPCA, the AEMA, the Department's rules and regulations, and the terms and conditions of this Permit, in writing, no later than ten (10) days after such change. Upon request of the Director, the

Permittee shall furnish the Director with an update of any information provided in the permit application.

b. If the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

4. Duty to Provide Information

a. The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, suspending, terminating, or revoking and reissuing this Permit, in whole or in part, or to determine compliance with this Permit. The Permittee shall also furnish to the Director upon request, copies of records required to be maintained by this Permit.

b. The Permittee shall furnish to the Director upon request, within a reasonable time, available information (name, phone number, address, and site location) which identifies offsite sources of material or natural resources (mineral, ore, or other material such as iron, coal, coke, dirt, chert, shale, clay, sand, gravel, bauxite, rock, stone, etc.) used in its operation or stored at the facility.

F. SCHEDULE OF COMPLIANCE

The Permittee shall achieve compliance with the discharge limitations specified in Part I.A. of this Permit in accordance with the following schedule:

Compliance must be achieved by the effective date of this Permit.

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Management

The Permittee shall at all times operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities only when necessary to achieve compliance with the conditions of this Permit.

2. Pollution Abatement and/or Prevention Plan

a. The Pollution Abatement and/or Prevention (PAP) Plan shall be prepared and certified by a registered Professional Engineer (PE), licensed to practice in the State of Alabama, and shall include at a minimum:

(1) The information indicated in ADEM Admin Code r. 335-6-9-.03 and ADEM Admin. Code ch. 335-6-9 and its Appendices A and B;

(2) A description of methods which will be implemented to prevent offsite vehicle tracking onto roadways and/or into ditches at the entrances and/or exits of the Permittee's operations;

(3) A description of setbacks from waters of the State in units of linear feet on the horizontal plane; a description of the methods taken to visibly delineate setbacks from waters of the State; and a description of any other actions taken to prevent encroachment upon setbacks;

(4) A description of the methods used to delineate the boundaries of coverage under this Permit such that the boundaries are readily visible during the life of the operation;

(5) A description of any other Best Management Practices (BMPs) which will be implemented to provide control of all nonpoint source pollution that is or may be associated with the Permittee's operations;

b. The PAP Plan shall become a part of this Permit and all requirements of the PAP Plan shall become requirements of this Permit pursuant to ADEM Admin Code r. 335-6-9-.05(2). The PAP Plan shall be amended if the Department determines that the existing sediment control measures, erosion control measures, or other site management practices are ineffective or do not meet the requirements of this Permit.

c. For existing sources, the PAP Plan shall be updated to include all requirements of this section within 180 days of the effective date of this permit. New sources shall submit the PAP plan with the NPDES Individual Permit application prior to coverage under this Permit.

3. Best Management Practices (BMPs)

a. Unless otherwise authorized in writing by the Director, the Permittee shall provide a means of subsurface withdrawal for any discharge from each point source identified on Page 1 of this Permit and described more fully in the Permittee's application. Notwithstanding the above provision, a means of subsurface withdrawal need not be provided for any discharge caused by a 24-hour precipitation event greater than a 10-year, 24-hour precipitation event.

b. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director has granted prior written authorization for dilution to meet water quality requirements.

c. The Permittee shall minimize the contact of water with overburden, including but not limited to stabilizing disturbed areas through grading, diverting runoff, achieving quick growing stands of temporary vegetation, sealing acid-forming and toxic-forming materials, and maximizing placement of waste materials in back-fill areas.

d. The Permittee shall prepare, submit to the Department for approval, and implement a Best Management Practices (BMPs) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a potential for discharge, if so required by the Director. When submitted and approved, the BMP Plan shall become a part of this Permit and all requirements of the BMP Plan shall become requirements of this Permit.

e. Spill Prevention, Control, and Management

The Permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan acceptable to the Department that is prepared and certified by a Professional Engineer (PE), registered in the State of Alabama, for all onsite petroleum product or other pollutant storage tanks or containers as provided by ADEM Admin. Code r. 335-6-6-.08(j)5. The Plan shall describe and the Permittee shall implement appropriate structural and/or non-structural spill prevention, control, and/or management pursuant to ADEM Admin. Code r. 335-6-6-.12 (r) sufficient to prevent any spills of pollutants from entering a ground or surface water of the State or a publicly or privately owned treatment works. The Plan shall include at a minimum, the engineering requirements provided in 40 C.F.R. §§112.1. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and shall prevent the contamination of groundwater. Such containment systems shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided. The Plan shall list any materials which the Permittee may utilize to contain and to absorb fuel and chemical spills and leaks. The Permittee shall maintain sufficient amounts of such materials onsite or have sufficient amounts of such materials readily available to contain and/or absorb fuel and chemical spills and leaks. Soil contaminated by chemical spills, oil spills, etc., must be immediately cleaned up or be removed and disposed of in a manner consistent with all State and federal regulations.

f. All surface drainage and storm water runoff which originate within or enters the Permittee's premises and which contains any pollutants or other wastes shall be discharged, if at all, from a point source identified on Page 1 of this Permit and described more fully in the Permittee's application.

g. The Permittee shall take all reasonable precautions to prevent any surface drainage or storm water runoff which originates outside the Permittee's premises and which contains any pollutants or other wastes from entering the Permittee's premises. At no time shall the Permittee discharge any such surface drainage or storm water runoff which enters the Permittee's premises if, either alone or in combination with the Permittee's effluent, the

discharge would exceed any applicable discharge limitation specified in Part I.A. of this Permit.

4. Biocide Additives

a. The Permittee shall notify the Director in writing not later than sixty (60) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in any cooling or boiler system(s) regulated by this Permit. Notification is not required for additives that should not reasonably be expected to cause the cooling water or boiler water to exhibit toxicity as determined by analysis of manufacturer's data or testing by the Permittee. Such notification shall include:

(a) Name and general composition of biocide or chemical;

(b) 96-hour median tolerance limit data for organisms representative of the biota of the water(s) which the discharge(s) enter(s);

(c) Quantities to be used;

(d) Frequencies of use;

(e) Proposed discharge concentrations; and

(f) EPA registration number, if applicable.

b. The use of any biocide or chemical additive containing tributyl tin, tributyl tin oxide, zinc, chromium, or related compounds in any cooling or boiler system(s) regulated by the Permit is prohibited except as exempted below. The use of a biocide or additive containing zinc, chromium or related compounds may be used in special circumstances if (1) the permit contains limits for these substances, or (2) the applicant demonstrates during the application process that the use of zinc, chromium or related compounds as a biocide or additive will not pose a reasonable potential to violate the applicable State water quality standards for these substances. The use of any additive, not identified in this Permit or in the application for this Permit or not exempted from notification under this Permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

5. Facility Identification

The Permittee shall clearly display prior to commencement of any regulated activity and until permit coverage is properly terminated, the name of the Permittee, entire NPDES permit number, facility or site name, and other descriptive information deemed appropriate by the Permittee at an easily accessible location(s) to adequately identify the site, unless approved otherwise in writing by the Department. The Permittee shall repair or replace the sign(s) as necessary upon becoming aware that the identification is missing or is unreadable due to age, vandalism, theft, weather, or other reason.

6. Removed Substances

Solids, sludges, filter backwash, or any other pollutants or other wastes removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department rules and regulations.

7. Loss or Failure of Treatment Facilities

Upon the loss or failure of any treatment facility, including but not limited to the loss or failure of the primary source of power of the treatment facility, the Permittee shall, where necessary to maintain compliance with the discharge limitations specified in Part I.A. of this Permit or any other terms or conditions of this Permit, cease, reduce, or otherwise control production and/or discharges until treatment is restored.

8. Duty to Mitigate

The Permittee shall promptly take all reasonable steps to minimize or prevent any violation of this Permit or to mitigate and minimize any adverse impact to waters resulting from noncompliance with any discharge limitation specified in Part I.A. of this Permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as is necessary to determine the nature and impact of the noncomplying discharge.

B. BYPASS AND UPSET

1. Bypass

a. Any bypass is prohibited except as provided in Parts II.B.1.b. and c.

b. A bypass is not prohibited if:

(1) It does not cause any applicable discharge limitation specified in Part I.A. of this Permit to be exceeded;

(2) The discharge resulting from such bypass enters the same receiving water as the discharge from the permitted outfall;

(3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system; and

(4) The Permittee monitors the discharge resulting from such bypass at a frequency, at least daily, sufficient to prove compliance with the discharge limitations specified in Part I.A. of this Permit.

c. A bypass is not prohibited and need not meet the discharge limitations specified in Part I.A. of this Permit if:

(1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the Permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The Permittee submits a written request for authorization to bypass to the Director at least ten (10) days, if possible, prior to the anticipated bypass or within 24 hours

of an unanticipated bypass, the Permittee is granted such authorization, and Permittee complies with any conditions imposed by the Director to minimize any adverse impact to waters resulting from the bypass.

d. The Permittee has the burden of establishing that each of the conditions of Parts II.B.1.b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in Part II.B.1.a. and an exemption, where applicable, from the discharge limitations specified in Part I.A. of this Permit.

2. Upset

a. The Permittee may seek to demonstrate that noncompliance with technology-based effluent limits occurred as a result of an upset if the conditions of Part II.B.2.b are met and if the Permittee complies with the conditions provided in Part II.B.2.c.

b. If the Permittee wishes to establish the affirmative defense of an upset for technology-based effluent limit noncompliance, the Permittee must demonstrate through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the Permittee can identify the specific cause(s) of the upset;

(2) The wastewater treatment facility was at the time being properly operated in accordance with Part II.B.d.

(3) The Permittee submitted notice of the noncompliance during the upset as required by Part II.B.2.c; and

(4) The Permittee complied with any remedial measures required under Part II.A.7. of this Permit.

c. If the Permittee wishes to establish the affirmative defense of an upset for technology-based effluent limit noncompliance, the Permittee shall:

(1) No later than 24-hours after becoming aware of the occurrence of the upset, orally report the occurrence and circumstances of the upset to the Director in accordance with Part I.G.2.; and

(2) No later than five (5) days after becoming aware of the occurrence of the upset, furnish the Director with evidence, including properly signed, contemporaneous operating logs, design drawings, construction certification, maintenance records, weir flow measurements, dated photographs, rain gauge measurements, or other relevant evidence, demonstrating that:

(i) An upset occurred;

(ii) The Permittee can identify the specific cause(s) of the upset;

(iii) The Permittee's treatment facility was being properly operated at the time of the upset; and

(iv) The Permittee promptly took all reasonable steps to minimize any adverse impact to waters resulting from the upset.

d. A discharge which is an overflow from a treatment facility or system, or an excess discharge from a point source associated with a treatment facility or system and which results from a 24-hour precipitation event larger than a 10-year, 24-hour precipitation event is not eligible to be considered as a result of an upset unless:

(1) The treatment facility or system is designed, constructed, and maintained to contain the maximum volume of wastewater which would be generated by the facility during a 24-hour period without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event or to treat the maximum flow associated with these volumes. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event, the volume which would result from all areas contributing runoff to the individual treatment facility must be included (i.e., all runoff that is not diverted from the mining area and runoff which is not diverted from the preparation plant area); and

(2) The Permittee takes all reasonable steps to maintain treatment of the wastewater and minimize the amount of overflow or excess discharge.

e. The Permittee has the burden of proof in defense of any enforcement action as a result of noncompliance of technology-based effluent limits the Permittee proposes to attribute to an upset.

C. PERMIT CONDITIONS AND RESTRICTIONS

1. Prohibition against Discharge from Facilities Not Certified

a. Notwithstanding any other provisions of this Permit, if the permitted facility has not obtained or is not required to obtain a permit from the Alabama Surface Mining Commission, any discharge(s) from any point or nonpoint source(s) from the permitted facility which was not certified to the Department on a form approved by the Department by a professional engineer, registered in the State of Alabama, as being designed, constructed, and in accordance with plans and specifications reviewed by the Department is prohibited; or

b. Notwithstanding any other provisions of this Permit, if the permitted facility has obtained or is required to obtain a permit from the Alabama Surface Mining Commission, any discharge(s) from any point or nonpoint source(s) from the permitted facility which is associated with a treatment facility which was not constructed and certified to the Alabama Surface Mining Commission pursuant to applicable provisions of said Commission's regulations, is prohibited until the Permittee submits to the Alabama Surface Mining Commission, certification by a professional engineer, registered in the State of Alabama, certifying that such facility has been constructed in accordance with plans and specifications approved by the Alabama Surface Mining Commission. This requirement shall not apply to pumped discharges from the underground works of underground coal mines where no surface structure is required by the Alabama Surface Mining Commission, provided the Department is notified in writing of the completion or installation of such facilities, and the pumped discharges will meet permit effluent limits without treatment.

2. Permit Modification, Suspension, Termination, and Revocation

a. This Permit may be modified, suspended, terminated, or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:

(1) The violation of any term or condition of this Permit;

(2) The obtaining of this Permit by misrepresentation or the failure to disclose fully all relevant facts;

(3) The submission of materially false or inaccurate statements or information in the permit application or reports required by the Permit;

(4) The need for a change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

(5) The existence of any typographical or clerical errors or of any errors in the calculation of discharge limitations;

(6) The existence of material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;

(7) The threat of the Permittee's discharge on human health or welfare; or

(8) Any other cause allowed by ADEM Admin. Code ch. 335-6-6.

b. The filing of a request by the Permittee for modification, suspension, termination, or revocation and reissuance of this Permit, in whole or in part, does not stay any Permit term or condition of this Permit.

c.

3. Automatic Expiration of Permits for New or Increased Discharges

a. Except as provided by ADEM Admin. Code r. 335-6-6-.02(h) and 335-6-6-.05, if this Permit was issued for a new discharger or new source, it shall expire eighteen months after the issuance date if construction has not begun during that eighteen month period.

b. Except as provided by ADEM Admin. Code r. 335-6-6-.02(h) and 335-6-6-.05, if any portion of this Permit was issued or modified to authorize the discharge of increased quantities of pollutants to accommodate the modification of an existing facility, that portion of this Permit shall expire eighteen months after this Permit's issuance if construction of the modification has not begun within eighteen month period.

c. Construction has begun when the owner or operator has:

(1) Begun, or caused to begin as part of a continuous on-site construction program:

(i) Any placement, assembly, or installation of facilities or equipment; or

(ii) Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or

(2) Entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under the paragraph. The entering into a lease with the State of Alabama for exploration and production of hydrocarbons shall also be considered beginning construction.

d. The automatic expiration of this Permit for new or increased discharges if construction has not begun within the eighteen month period after the issuance of this Permit may be tolled by administrative or judicial stay.

4. Transfer of Permit

This Permit may not be transferred or the name of the Permittee changed without notice to the Director and subsequent modification or revocation and reissuance of this Permit to identify the new Permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership, or control of the Permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership, or control of the Permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership, or control, he may decide not to modify the existing Permit and require the submission of a new permit application.

5. Groundwater

Unless authorized on page 1 of this Permit, this Permit does not authorize any discharge to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem, and the Director may require that the Permittee undertake measures to abate any such discharge and/or contamination.

6. Property and Other Rights

This Permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of Federal, State, or local laws or regulations, nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the State or of the United States.

D. RESPONSIBILITIES

1. Duty to Comply

a. The Permittee must comply with all terms and conditions of this Permit. Any permit noncompliance constitutes a violation of the AWPCA, AEMA, and the FWPCA and is grounds for enforcement action, for permit termination, revocation and reissuance, suspension, modification, or denial of a permit renewal application.

b. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the FWPCA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Permit has not yet been modified to incorporate the effluent standard, prohibition or requirement.

c. For any violation(s) of this Permit, the Permittee is subject to a civil penalty as authorized by the AWPCA, the AEMA, the FWPCA, and Code of Alabama 1975, §§22-22A-1 et. seq., as amended, and/or a criminal penalty as authorized by Code of Alabama 1975, §22-22-1 et. seq., as amended.

d. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of this Permit shall not be a defense for a Permittee in an enforcement action.

e. Nothing in this Permit shall be construed to preclude or negate the Permittee's responsibility or liability to apply for, obtain, or comply with other ADEM, federal, state, or local government permits, certifications, licenses, or other approvals.

f. The discharge of a pollutant from a source not specifically identified in the permit application for this Permit and not specifically included in the description of an outfall in this Permit is not authorized and shall constitute noncompliance with this Permit.

g. The Permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this Permit or to minimize or prevent any adverse impact of any permit violation.

2. Change in Discharge

a. The Permittee shall apply for a permit modification at least 180 days in advance of any facility expansion, production increase, process change, or other action that could result in the discharge of additional pollutants, increase the quantity of a discharged pollutant, or that could result in an additional discharge point. This requirement also applies to pollutants that are not subject to discharge limitations in this Permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.

b. The Permittee shall notify the Director as soon as it knows or has reason to believe that it has begun or expects to begin to discharge any pollutant listed as a toxic pollutant pursuant to Section 307(a) of the FWPCA, 33 U.S.C. §1317(a), any substance designated as a hazardous substance pursuant to Section 311(b)(2) of the FWPCA, 33 U.S.C. §1321(b)(2), any waste listed as a hazardous waste pursuant to Code of Alabama 1975, §22-30-10, or any other pollutants or other wastes which is not subject to any discharge limitations specified in Part I.A. of this Permit and was not reported in the Permittee's application, was reported in the Permittee's application in concentrations or mass rates lower than that which the Permittee expects to begin to be discharged, or has reason to believe has begun to be discharged.

3. Compliance with Toxic or Other Pollutant Effluent Standard or Prohibition

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Sections 301(b)(2)(C),(D),(E) and (F) of the FWPCA, 33 U.S.C. §1311(b)(2)(C),(D),(E), and (F); 304(b)(2) of the FWPCA, 33 U.S.C. §1314(b)(2); or 307(a) of the FWPCA, 33 U.S.C. §1317(a), for a toxic or other pollutant discharged by the Permittee, and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Part I.A. of this Permit or controls a pollutant not limited in Part I.A. of this Permit, this Permit shall be modified to conform to the toxic or other pollutant effluent standard or prohibition and the Permittee shall be notified of such modification. If this Permit has not been modified to conform to the toxic or other pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the authorization to discharge in this Permit shall be

void to the extent that any discharge limitation on such pollutant in Part I.A. of this Permit exceeds or is inconsistent with the established toxic or other pollutant effluent standard or prohibition.

4. Compliance with Water Quality Standards and Other Provisions

a. On the basis of the Permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this Permit will assure compliance with applicable water quality standards. However, this Permit does not relieve the Permittee from compliance with applicable State water quality standards established in ADEM Admin. Code ch. 335-6-10, and does not preclude the Department from taking action as appropriate to address the potential for contravention of applicable State water quality standards which could result from discharges of pollutants from the permitted facility.

b. Compliance with Permit terms and conditions notwithstanding, if the Permittee's discharge(s) from point source(s) identified on Page 1 of this Permit cause(s) or contribute(s) to a condition in contravention of State water quality standards, the Department may require abatement action to be taken by the Permittee, modify the Permit pursuant to the Department's rules and regulations, or both.

c. If the Department determines, on the basis of a notice provided pursuant to Part II.C.2. of this Permit or any investigation, inspection, or sampling, that a modification of this Permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the noticed act until the Permit has been modified.

5. Compliance with Statutes and Rules

a. This Permit has been issued under ADEM Admin. Code div. 335-6. All provisions of this division, that are applicable to this Permit, are hereby made a part of this Permit. A copy of this division may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36110-2059.

b. This Permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

6. Right of Entry and Inspection

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the Permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

7. **Duty to Reapply or Notify of Intent to Cease Discharge**

a. If the Permittee intends to continue to discharge beyond the expiration date of this Permit, the Permittee shall file with the Department a complete permit application for reissuance of this Permit at least 180 days prior to its expiration. **Applications must be submitted electronically via the Department's current electronic permitting system. The Department's current online permitting system, Alabama Environmental Permitting and Compliance System (AEPACS), can be found online at https://aepacs.adem.alabama.gov/nviro/ncore/external/home.**

b. If the Permittee does not desire to continue the discharge(s) allowed by this Permit, the Permittee shall notify the Department at least 180 days prior to expiration of this Permit of the Permittee's intention not to request reissuance of this Permit. This notification must include the information required in Part I.D.4.a. and be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Admin. Code r. 335-6-6-.09.

c. Failure of the Permittee to submit to the Department a complete application for reissuance of this Permit at least 180 days prior to the expiration date of this Permit will void the automatic continuation of this Permit provided by ADEM Admin. Code r. 335-6-6-.06; and should this Permit not be reissued for any reason, any discharge after the expiration of this Permit will be an unpermitted discharge.

PART III ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under this Permit shall, upon conviction, be subject to penalties and/or imprisonment as provided by the AWPCA and/or the AEMA.

2. False Statements

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished as provided by applicable State and Federal law.

3. Permit Enforcement

This NPDES Permit is a Permit for the purpose of the AWPCA, the AEMA, and the FWPCA, and as such all terms, conditions, or limitations of this Permit are enforceable under State and Federal law.

4. Relief From Liability

Except as provided in Part II.B.1. (Bypass) and Part II.B.2. (Upset), nothing in this Permit shall be construed to relieve the Permittee of civil or criminal liability under the AWPCA, AEMA, or FWPCA for noncompliance with any term or condition of this Permit.

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this Permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under Section 311 of the FWPCA, 33 U.S.C. §1321.

C. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Code of Alabama 1975, §22-22-9(c), all reports prepared in accordance with the terms of this Permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential. Knowingly making any false statement in any such report may result in the imposition of criminal penalties as provided for in Section 309 of the FWPCA, 33 U.S.C. §1319, and Code of Alabama 1975, §22-22-14.

D. DEFINITIONS

1. Alabama Environmental Management Act (AEMA) - means Code of Alabama 1975, §§22-22A-1 et. seq., as amended.

2. Alabama Water Pollution Control Act (AWPCA) - means Code of Alabama 1975, §§22-22-1 et. seq., as amended.

3. Average monthly discharge limitation - means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar

month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

4. Arithmetic Mean - means the summation of the individual values of any set of values divided by the number of individual values.

5. BOD - means the five-day measure of the pollutant parameter biochemical oxygen demand

6. Bypass - means the intentional diversion of waste streams from any portion of a treatment facility.

7. CBOD - means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.

8. Controlled Surface Mine Drainage – means any surface mine drainage that is pumped or siphoned from the active mining area.

9. Crushed stone mine - means an area on or beneath land which is mined, quarried, or otherwise disturbed in activity related to the extraction, removal, or recovery of stone from natural or artificial deposits, including active mining, reclamation, and mineral storage areas, for production of crushed stone.

10. Daily discharge - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.

11. Daily maximum - means the highest value of any individual sample result obtained during a day.

12. Daily minimum - means the lowest value of any individual sample result obtained during a day.

13. Day - means any consecutive 24-hour period.

14. Department - means the Alabama Department of Environmental Management.

15. Director - means the Director of the Department or his authorized representative or designee.

16. Discharge - means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other waste into waters of the state." Code of Alabama 1975, §22-22-1(b)(8).

17. Discharge monitoring report (DMR) - means the form approved by the Director to accomplish monitoring report requirements of an NPDES Permit.

18. DO - means dissolved oxygen.

19. E. coli – means the pollutant parameter Escherichia coli.

20. 8HC - means 8-hour composite sample, including any of the following:

    a. The mixing of at least 5 equal volume samples collected at constant time intervals of not more than 2 hours over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

21. EPA - means the United States Environmental Protection Agency.

22. Federal Water Pollution Control Act (FWPCA) - means 33 U.S.C. §§1251 et. seq., as amended.

23. Flow – means the total volume of discharge in a 24-hour period.

24. Geometric Mean - means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).

25. Grab Sample - means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.

26. Indirect Discharger - means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.

27. Industrial User - means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category "Division D – Manufacturing" and such other classes of significant waste producers as, by regulation, the Director deems appropriate.

28. mg/L - means milligrams per liter of discharge.

29. MGD - means million gallons per day.

30. Monthly Average - means, other than for E. coli bacteria, the arithmetic mean of all the composite or grab samples taken for the daily discharges collected in one month period. The monthly average for E. coli bacteria is the geometric mean of daily discharge samples collected in a one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period. (Zero discharges shall not be included in the calculation of monthly averages.)

31. New Discharger - means a person owning or operating any building, structure, facility or installation:

a. From which there is or may be a discharge of pollutants;

b. From which the discharge of pollutants did not commence prior to August 13, 1979, and which is not a new source; and

c. Which has never received a final effective NPDES Permit for dischargers at that site.

32. New Source - means:

a. A new source as defined for coal mines by 40 CFR Part 434.11 (1994); and

b. Any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(1) After promulgation of standards of performance under Section 306 of FWPCA which are applicable to such source; or

(2) After proposal of standards of performance in accordance with Section 306 of the FWPCA which are applicable to such source, but only if the standards are promulgated in accordance with Section 206 within 120 days of their proposal.

33. NH3-N - means the pollutant parameter ammonia, measured as nitrogen.

34. 1-year, 24-hour precipitation event - means the maximum 24-hour precipitation event with a probable recurrence interval of once in one year as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.

35. Permit application - means forms and additional information that are required by ADEM Admin. Code r. 335-6-6-.08 and applicable permit fees.

36. Point Source - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. §1362(14).

37. Pollutant - includes for purposes of this Permit, but is not limited to, those pollutants specified in Code of Alabama 1975, §22-22-1(b)(3) and those effluent characteristics, excluding flow, specified in Part I.A. of this Permit.

38. Pollutant of Concern - means those pollutants for which a water body is listed as impaired or which contribute to the listed impairment.

39. Pollution Abatement and/or Prevention Plan (PAP Plan) – mining operations plan developed to minimize impacts on water quality to avoid a contravention of the applicable water quality standards as defined in ADEM Admin. Code r. 335-6-9-.03

40. Preparation, Dry - means a dry preparation facility within which the mineral/material is cleaned, separated, or otherwise processed without use of water or chemical additives before it is shipped to the customer or otherwise utilized. A dry preparation plant includes all ancillary operations and structures necessary to clean, separate, or otherwise process the mineral/material, such as storage areas and loading facilities. Dry preparation also includes minor water spray(s) used solely for dust suppression on equipment and roads to minimize dust emissions.

41. Preparation, Wet - means a wet preparation facility within which the mineral/material is cleaned, separated, or otherwise processed using water or chemical additives before it is shipped to the customer or otherwise utilized. A wet preparation plant includes all ancillary operations and structures necessary to clean, separate, or otherwise process the mineral/material, such as storage areas and loading facilities. Wet preparation also includes mineral extraction/processing by dredging, slurry pumping, etc.

42. Privately Owned Treatment Works - means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a "POTW".

43. Publicly Owned Treatment Works (POTW) - means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.

44. Receiving Stream - means the "waters" receiving a "discharge" from a "point source".

45. Severe property damage - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

46. 10-year, 24-hour precipitation event - means that amount of precipitation which occurs during the maximum 24-hour precipitation event with a probable recurrence interval of once in ten years as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.

47. TKN - means the pollutant parameter Total Kjeldahl Nitrogen.

48. TON - means the pollutant parameter Total Organic Nitrogen.

49. TRC - means Total Residual Chlorine.

50. TSS – means the pollutant parameter Total Suspended Solids

51. Treatment facility and treatment system - means all structures which contain, convey, and as necessary, chemically or physically treat mine and/or associated preparation plant drainage, which remove pollutants limited by this Permit from such drainage or wastewater. This includes all pipes, channels, ponds, tanks, and all other equipment serving such structures.

52. 24HC - means 24-hour composite sample, including any of the following:

    a. The mixing of at least 12 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;

    b. A sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or

    c. A sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.

53. 24-hour precipitation event - means that amount of precipitation which occurs within any 24-hour period.

54. 2-year, 24-hour precipitation event - means the maximum 24-hour precipitation event with a probable recurrence interval of once in two years as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.

55. Upset - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate facilities, lack of preventive maintenance, or careless or improper operation.

56. Waters - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the State, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership, or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, §22-22-1(b)(2). "Waters" include all "navigable waters" as defined in §502(7) of the FWPCA, 33 U.S.C. §1362(7), which are within the State of Alabama.

57. Week - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.

58. Weekly (7-day and calendar week) Average – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

E. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit, shall not be affected thereby.

F. PROHIBITIONS AND ACTIVIES NOT AUTHORIZED

1. Discharges from disposal or landfill activities as described in ADEM Admin. Code div. 335-13 are not authorized by this Permit unless specifically approved by the Department.

2. Relocation, diversion, or other alteration of a water of the State is not authorized by this Permit unless specifically approved by the Department.

3. Lime or cement manufacturing or production and discharge of process waters from such manufacturing or production is not authorized by this Permit unless specifically approved by the Department.

4. Concrete or asphalt manufacturing or production and discharge of process waters from such manufacturing or production is not authorized by this Permit unless specifically approved by the Department.

5. The discharge of wastewater, generated by any process, facility, or by any other means not under the operational control of the Permittee or not identified in the application for this Permit or not identified specifically in the description of an outfall in this Permit is not authorized by this Permit.

G. DISCHARGES TO IMPAIRED WATERS

1. This Permit does not authorize new sources or new discharges of pollutants of concern to impaired waters unless consistent with an EPA-approved or EPA-established Total Maximum Daily Load (TMDL) and applicable State law, or unless compliance with the limitations and requirements of the Permit ensure that the discharge will not contribute to further degradation of the receiving stream. Impaired waters are those that do not meet applicable water quality standards and are identified on the State of Alabama's §303(d) list or on an EPA-approved or EPA-established TMDL. Pollutants of concern are those pollutants for which the receiving water is listed as impaired or contribute to the listed impairment.

2. Facilities that discharge into a receiving stream which is listed on the State of Alabama's §303(d) list of impaired waters, and with discharges that contain the pollutant(s) for which the waters are impaired, must within six (6) months of the Final §303(d) list approval, document in its BMP plan how the BMPs will control the discharge of the pollutant(s) of concern, and must ensure that there will be no increase of the pollutants of concern. A monitoring plan to assess the effectiveness of the BMPs in achieving the allocations must also be included in the BMP plan.

3. If the facility discharges to impaired waters as described above, it must determine whether a TMDL has been developed and approved or established by EPA for the listed waters. If a TMDL is approved or established during this Permit cycle by EPA for any waters into which the facility discharges, the facility must review the applicable TMDL to see if it includes requirements for control of any water discharged by the Permittee. Within six (6) months of the date of TMDL approval or establishment, the facility must notify the Department on how it will modify its BMP plan to include best management practices specifically targeted to achieve the allocations prescribed by the TMDL, if necessary. Any revised BMP plans must be submitted to the Department for review. The facility must include in the BMP plan a monitoring component to assess the effectiveness of the BMPs in achieving the allocations.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION

NPDES INDIVIDUAL PERMIT RATIONALE

Company Name:	Stoned, LLC
Facility Name:	Project Crossroads
County:	Limestone
Permit Number:	AL0084480
Prepared by:	Robert Glover
Date:	November 7, 2023 – Amended January 23, 2024
Receiving Waters:	Limestone Creek, Unnamed Tributary of Limestone Creek
Permit Coverage:	Limestone Quarry, Dirt and/or Chert Mine, Wet and Dry Preparation, Transportation and Storage and Associated Areas
SIC Code:	1422, 1499

The Department has made a tentative determination that the available information is adequate to support the issuance of this permit.

This proposed permit covers a limestone quarry, dirt and/or chert mine, wet and dry preparation, transportation and storage, and associated areas which discharge to surface waters of the state.

The proposed permit authorizes treated discharges from a total of five outfalls. The first two outfalls 001-1 and 002-1 discharge into an unnamed tributary to Limestone Creek classified as Fish and Wildlife (F&W), and the last three outfalls 003-1, 004-1, and 005-1 discharge into Limestone Creek classified as Fish and Wildlife (F&W) per ADEM Admin. Code ch. 335-6-11. If the requirements of the proposed permit are fully implemented, the facility will not discharge pollutants at levels that will cause or contribute to a violation of the F&W classification.

Full compliance with the proposed permit terms and conditions is expected to be protective of instream water quality and ensure consistency with applicable instream State water quality standards (WQS) for the receiving stream.

Technology Based Effluent Limits (TBELs) for dirt and/or chert facilities have not yet been developed by the EPA.

Technology Based Effluent Limits (TBELs) for crushed stone mining facilities can be found in 40 CFR 436.22(1) and (2) for facilities that recycle wastewater for use in processing and mine dewatering, respectively. The TBELs were promulgated for existing dischargers using the Best Practicable Control Technology Available (BPT). New Source Performance Standards (NSPS) have not yet been developed by the EPA for the Crushed Stone Subcategory.

40 CFR 436.22 includes the TBEL of 6.0 – 9.0 s.u. for pH. However, the applicable State water quality criteria for pH in streams classified as F&W is 6.0 – 8.5 s.u. per ADEM Admin. Code r. 335-6-10-.09. The information in the Permittee's application indicates that discharges may occur during low flow conditions when the discharge stream ratio may be high. Therefore, the pH limitation of 6.0 – 8.5 s.u. is used at all outfalls. Under no circumstances may the discharge from any outfall cause the in-stream pH to deviate more than 1.0 s.u. from the normal or natural pH, nor be less than 6.0 s.u. nor greater than 8.5 s.u.

The TBELs for 40 CFR 436 Subpart B do not include limitations for Total Suspended Solids (TSS). TSS is classified as a conventional pollutant in 40 CFR 401.16 and is expected to be discharged from this type of facility. Therefore, monthly average and daily maximum effluent limitations for TSS are those proposed by the EPA for crushed stone mine drainage in the *Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Mineral Mining and Processing Pont Source Category (July 1979).*

The applicant has requested, in accordance with 40 CFR Part 122.21 and their NPDES permit application, a waiver from testing for the Part A, B, and C pollutants listed in the EPA Form 2C and 2D that are not addressed in their application. They have also certified that due to the processes involved in their mining activity these pollutants are believed to be not present in the waste stream.

The Pollution Abatement/Prevention (PAP) plan for this facility has been prepared by a professional engineer (PE) registered in the State of Alabama and is designed to ensure reduction of pollutants in the waste stream to a level that, if operated properly, the discharge will not contribute to or cause a violation of applicable State WQS. The proposed permit terms and conditions are predicated on the basis of ensuring a reduction of pollutants in the discharge to a level that reduces the potential of contributing to or causing a violation of applicable State WQS.

In accordance with ADEM Admin. Code r. 335-6-3-.07 the design PE, as evidenced by their seal and/or signature on the application, has accepted full responsibility for the effectiveness of the waste treatment facility to treat the Permittee's effluent to meet NPDES permit limitations and requirements, and to fully comply with Alabama's WQS, when such treatment facilities are properly operated.

If there is a reasonable potential that a pollutant present in the treated discharges from a facility could cause or contribute to a contravention of applicable State WQS above numeric or narrative criteria, 40 CFR Part 122 requires the Department to establish effluent limits using calculated water quality criterion, establish effluent limits on a case-by-case basis using criteria established by EPA, or establish effluent limits based on an indicator parameter. Based on available information, potential pollutants discharged from this facility, if discharged within the concentrations allowed by this permit, would not have a reasonable potential to cause or contribute to a contravention of applicable State WQS.

Pursuant to ADEM Admin. Code r. 335-6-6-.12(r) this permit requires the Permittee to design and implement a Spill Prevention Control and Countermeasures (SPCC) plan for all stored chemicals, fuels and/or stored pollutants that have the potential to discharge to a water of the State. This plan must meet the minimum engineering requirements as defined in 40 CFR Part 112 and must provide for secondary containment adequate to control a potential spill.

The applicant is not proposing new discharges of pollutant(s) to an ADEM identified Tier I water.

The applicant is not proposing discharges into a stream segment or other State water that is included on Alabama's current CWA §303(d) list. However, the receiving streams flow into Limestone Creek (Wheeler Lake), a State water that is included on the current CWA §303(d) list for Metals (Mercury). Monitoring and reporting requirements for the Metals (Mercury) are not being imposed by the Department. The

Department believes these pollutants will not be present in the discharge at levels of concern and or the facility will not discharge this pollutant at levels that will cause or contribute to a violation of applicable State water quality standards in the receiving water.

The proposed permit action authorizes new discharges of pollutants to receiving waters determined by the Department to be waters where the quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water (Tier II). Pursuant to ADEM Admin. Code r. 335-6-10 (Antidegradation Policy and Implementation of the Antidegradation Policy), the applicant has submitted and the Department has reviewed and considered information regarding (1) demonstration of necessity/importance, (2) alternatives analysis, and (3) calculations of total annualized costs for technically feasible treatment alternatives regarding the proposed new discharges to Tier II waters. The Department has determined, based on the applicant's demonstration, that the proposed new discharges to the Tier II waters are necessary for important economic or social development in the area in which the waters are located.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION

ANTIDEGRADATION RATIONALE

Company Name: Stoned, LLC

Facility Name: Project Crossroads

County: Limestone

Permit Number: AL0084480

Prepared by: Robert Glover

Date: January 23, 2024

Receiving Waters: Limestone Creek, Unnamed Tributary of Limestone Creek

Stream Category: Tier II as defined by ADEM Admin. Code 335-6-10-.12

Discharge Description: This proposed permit covers a limestone quarry, dirt and/or chert mine, wet and dry preparation, transportation and storage and associated areas which discharge to surface waters.

The following preliminary determination was prepared in accordance with ADEM Admin. Code 335-6-10-.12 (7) (c):

The Department has reviewed the information submitted by applicant in accordance with ADEM Admin. Code 335-6-10-.12(9). The applicant has demonstrated that there are no technically or economically viable treatment options in its alternatives analysis that would completely eliminate a direct discharge.

The permit applicant has indicated that the following economic and social benefits will result from this project:

1. The Permittee submits that the proposed discharger will pay approximately $136,000 per year in state and local taxes.
2. The Permittee submits that the proposed discharge processed through this facility will be used primarily in the production of asphalt and concrete, which are to be used in public works projects such as roads. These locally supplied materials reduce the cost of these public projects and save taxpayers money.
3. The Permittee submits the discharger will employ approximately sixteen full-time employees at this facility. Additional jobs will be created as a result of supplying services to the facility and hauling products from the site.

The Department has determined that the discharge proposed by the permit applicant is necessary for important economic and social development in the area of the outfall location in the receiving water.

Reviewed By: William McClimans

Date: January 23, 2024

NPDES Individual Application - Mining (Form 315)

version 3.4

(Submission #: HPV-GVEB-WVDGV, version 4)

Details

Submission ID HPV-GVEB-WVDGV

Form Input

Processing Information

Is this a coalbed methane operation?
No

Please indicate the purpose of this application:
Initial Permit Application for New Facility

General Instructions

NPDES Individual Permit Application ◆ Mining Operations (Form 315)

This form should be used to submit an application for an NPDES individual permit to authorize discharges from surface & underground mineral, ore, or mineral product mining, quarrying, excavation, borrowing, hydraulic mining, storage, processing, preparation, recovery, handling, loading, storing, or disposing activities, and associated areas including pre-mining site development, construction, excavation, clearing, disturbance, and reclamation.

Incomplete or incorrect answers or missing signatures will delay processing. Attach additional comments or information as needed. Commencement of activities applied for as detailed in this application are not authorized until permit coverage has been issued by the Department.
For assistance, please click here to determine the permit staff responsible for the site or call (334) 394-4372.

Please click here for the Alabama 303(d) list of Impaired Waters

Please click here for Information on Alabama TMDLs

Permittee Information

Permittee

Permittee Name
Stoned, LLC

Mailing Address

801 Franklin Street, S.E.

Huntsville, AL 35801

Responsible Official

Prefix
Mr.

First Name	Last Name
Keith	*Sharp*

Title
Owner

Organization Name
Stoned, LLC

Phone Type	Number	Extension
Business	256-534-8188	

Email
keith@sharpcompanies.com

Mailing Address

801 Franklin Street, S.E.

Huntsville, AL 35801

Facility/Operations Information

Facility/Operations Name
Project Crossroads

Permittee Organization Type
LLC

Parent Corporation and Subsidiary Corporations of Applicant, if any:
NONE PROVIDED

Landowner(s) Name, Address and Phone Number:
Elephants R Us, LLC
801 Franklin Street, SE
Huntsville, AL 35801
256-534-8188

Landquest Properties, LLC
801 Franklin Street, SE
Huntsville, AL 35801
256-534-8188

Sub-contractor(s)/Operator(s), if known:
NONE PROVIDED

Is the "Company/Permittee" properly registered and in good standing with the Alabama Secretary of State's office?
Yes

Facility/Operations Address or Location Description

7440 Mooresville Road

From the intersection of US Hwy 65 and US Hwy 565, travel East approximately 1.2 miles to the Mooresville exit. Travel North approximately 2 miles to the project site entrance located on the right.

Belle Mina, AL 35615

Facility/Operations County (Front Gate)
Limestone

Do the operations span multiple counties?
No

Detailed Directions to the Facility/Operations
From the intersection of US Hwy 65 and US Hwy 565, travel East approximately 1.2 miles to the Mooresville exit. Travel North approximately 2 miles to the project site entrance located on the right.

Please refer to the link below for Lat/Long map instruction help:
Map Instruction Help

Facility/Operations Front Gate Latitude and Longitude
34.6604,-86.8791

Township(s), Range(s), Section(s) (Note: If you are submitting multiple TRSs, please separate each TRS by a semicolon. Example: T19S,R1E,S15; T20S,R2E,S16)
Section 29, Township 4 South, Range 3 West

SIC Code(s) [Please select your primary SIC code first]:
1422-Crushed and Broken Limestone

NAICS Code(s) [Please select your primary NAICS code first]:
212312-Crushed and Broken Limestone Mining and Quarrying

CORRECTION REQUEST *(APPROVED)*
Correction NAICS Codes

Need correction from NAICS Code 327410 - Lime Manufacturing to 212312 Crushed and Broken Limestone Mining and Quarrying.
Created on 8/15/2023 3:08 PM by **Robert Glover**

Facility/Operations Contact

Prefix
Mr.

First Name	Last Name
Keith	*Sharp*

Title
Owner

Organization Name
Stoned, LLC

Phone Type	Number	Extension
Business	256-534-8188	

Email
keith@sharpcompanies.com

Member Information

Identify the name, title/position, and unless waived in writing by the Department, the resident address of every officer (a PO Box is not acceptable), general partner, LLP partner, LLC member, investor, director, or person performing a function similar to a director, of the applicant, and each person who is the record or beneficial owner of 10 percent or more of any class of voting stock of the applicant, or any other responsible official(s) of the applicant with legal or decision making responsibility or authority for the facility/operations:

List of Names/Titles/Addresses, as described in the instructions above, will be entered by:
Manually Entering in Table

Name	Title/Position	Physical Address of Residence
James Keith Sharp	Managing Member	4 Asbury Road, Huntsville, AL 35801

Other than the "Company/Permittee", identify the name of each corporation, partnership, association, and single proprietorship for which any individual identified above is or was an officer, general partner, LLP partner, LLC member, investor, director, or individual performing a function similar to a director, or principal (10% or more) stockholder, that had an Alabama NPDES permit at any time during the five year (60 month) period immediately preceding the date on which this form is signed (if this

does not apply, then enter N/A after selecting "Manually Enter in Table"):

List of Corporations/Partnerships/etc, Names and Titles, as described in the instructions above, will be entered by:
Manually Entering in Table

Name of Corporation, Partnership, Association, or Single Proprietorship	Name of Individual	Title/Position in Corporation, Partnership, Association, or Single Proprietorship
None	None	None

Additional Contacts (1 of 1)

ADDITIONAL CONTACTS:

Contact Type
NONE PROVIDED

Contact

First Name
NONE PROVIDED

Last Name
NONE PROVIDED

Title
NONE PROVIDED

Organization Name
NONE PROVIDED

Phone Type **Number** **Extension**
NONE PROVIDED

Email
NONE PROVIDED

Address
[NO STREET ADDRESS SPECIFIED]
[NO CITY SPECIFIED], AL [NO ZIP CODE SPECIFIED]

Compliance History

Has the applicant ever had any of the following:

Event	Apply?
An Alabama NPDES, SID, or UIC permit suspended or terminated	No
An Alabama or federal environmental permit suspended/terminated	No
An Alabama State Oil Gas Board permit or other approval suspended or terminated	No
An Alabama or federal performance/environmental bond, or similar security deposited in lieu of a bond, or portion thereof, forfeited	No

Has the applicant, parent corporation, subsidiary, general partner, LLP partner, or LLC Member had any Warning Letters, Notice of Violations (NOVs), Administrative Actions, or litigation filed by ADEM or EPA during the three year (36 month) period preceding the date on which this form is signed?
No

For this facility, list any other NPDES or other environmental permits (including permit numbers), authorizations, or certifications that have been applied for or issued within the State by ADEM, EPA, Alabama Department of Labor (ADOL), US Army Corp of Engineers (USACE), or other agency, to the applicant, parent corporation, subsidiary, or LLC member whether presently effective, expired, suspended, revoked, or terminated:
None

For other facilities, list any other NPDES or other ADEM permits (including permit numbers), authorizations, or certifications that have been applied for or issued within the State by ADEM, EPA, ASMC, ADOL, or USACE, to the applicant, parent corporation, subsidiary, or LLC member whether presently effective, expired, suspended, revoked, or terminated:
None

Anti-Degradation Evaluation

Pursuant to ADEM Admin. Code ch. 335-6-10-.12(9), responses to the following questions must be provided by the applicant requesting NPDES permit coverage for new or expanded discharges of pollutant(s) to Tier 2 waters (except discharges eligible for coverage under general permits). As part of the permit application review process, the Department is required to consider, based on the applicant's demonstration, whether the proposed new or increased discharge to Tier 2 waters is necessary for important economic or social development in the area in which the waters are located. Do you have new or increased discharges?
Yes

NOTE

If the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete questions below, ADEM Form 311-Alternatives Analysis, and either ADEM Form 312 or ADEM Form 313- Calculation of Total Annualized Project Costs (Public-Sector or Private-Sector Projects, whichever is applicable). ADEM Form 312 or ADEM Form 313, whichever is applicable, must be provided for each treatment discharge alternative considered technically viable.
ADEM forms can be found on the Department's website here.

What environmental or public health problem will the discharger be correcting?
None

How much will the discharger be increasing employment (at its existing facility or as the result of locating a new facility)?
Stoned, LLC will employ approximately sixteen (16) full time employees at this facility. Additional jobs are created as the result of supplying services to this facility and hauling product from this site.

How much reduction in employment will the discharger be avoiding?
Sixteen (16) full time jobs

How much additional state or local taxes will the discharger be paying?
Stoned, LLC will average approximately $136,000 per year in state and local taxes. The taxes generated are as follows: State severance tax for product produced is approximately $84,000/yr, employee payroll tax is approximately $48,000/yr and county sales tax is approximately $24,000/yr. Fuel taxes are approximately $16,800/yr. The property at this site is leased from individual landowners. Therefore, property taxes are not applicable.

What public service to the community will the discharger be providing?
The materials processed through this facility will be used primarily in the production of asphalt and concrete. Many of these materials are used in public works projects such as roads. Locally supplied materials reduce the cost of these public projects and save taxpayers money.

What economic or social benefit will the discharger be providing to the community?
Stoned, LLC will provide a variety of jobs to the local community. These jobs range from laborers to professional. A variety of taxes are paid into the local, state and federal governments. A portion of this money is used in the local school system.

Attach Form 311 (Alternative Analysis)
Stoned LLC - Project Crossroads - Form 311 - Signed.pdf - 06/19/2023 01:46 PM
Comment
NONE PROVIDED

Please attach Form 312 (Public Sector Projects) or Form 313 (Private Sector Projects).
Stoned LLC - Project Crossroads - Form 313.pdf - 06/19/2023 01:46 PM
Comment
NONE PROVIDED

Activity Description & Information

Narrative description of activity(s):
Quarry mining of limestone, washing and screening. Product will be stored onsite until transported by truck.

Total Facility/Operations Area (acres)
199.00

Total Disturbed Area (acres)
199.00

Anticipated Commencement Date
11/01/2023

Anticipated Completion Date
10/31/2075

Please identify which of the following apply to this operation:

Activity/Condition	Appy?
An existing facility/operation which currently results in discharges to State waters?	No
A proposed facility/operation which will result in a discharge to State waters?	Yes
Be located within any 100-year flood plain?	Yes
Discharge to Municipal Separate Storm Sewer?	No
Discharge to waters of or be located in the Coastal Zone?	No
Need/have ADEM UIC permit coverage?	No
Be located on Indian/historically significant lands?	No
Need/have ADEM SID permit coverage?	No
Need/have ASMC permit coverage?	No
Need/have State Oil & Gas Board permit coverage?	No
Need/have ADOL permit coverage?	Yes
Generate, treat, store, or dispose of hazardous or toxic waste?	No
Be located in or discharge to a Public Water Supply (PWS) watershed or be located within ◆ mile of any PWS well?	No
Incised pit	Yes

Does your facility/operation use cooling water?
No

Material to be Removed, Processed, or Transloaded

Material To Be Removed, Processed, Or Transloaded (Note: Sum must equal 100.)

Mineral(s)/Mineral product(s)	%
Limestone, crushed limestone and dolomite	91
Dirt and/or Chert	9
	Sum: 100

Proposed Activity To Be Conducted

Type(s) of activity presently conducted at applicant's existing facility or proposed to be conducted at facility (Select Yes or No)):

Activity	Apply?
Adjacent/associated asphalt/concrete plant(s)	No
Alternative fuels operation	No
Auger mining	No
Cement production	No

Activity	Apply?
Chemical processing or leaching	No
Chemicals used in process or wastewater treatment (coagulant, biocide, etc.)	No
Construction related temporary borrow pits/areas	Yes
Creek/stream crossings	No
Dredging	No
Excavation	Yes
Grading, clearing, grubbing, etc.	Yes
Hydraulic mining	No
Hydraulic mining, dredging, instream or between stream-bank mining	No
Lime production	No
Low volume sewage treatment package plant	No
Mineral dry processing (crushing & screening)	Yes
Mineral loading	Yes
Mineral storing	Yes
Mineral transportation	Yes
Mineral wet preparation	Yes
Onsite construction debris or equipment storage/disposal	Yes
Onsite mining debris or equipment storage/disposal	No
Other beneficiation & manufacturing operations	No
Pre-construction ponded water removal	Yes
Pre-mining logging or land clearing	Yes
Preparation plant waste recovery	No
Quarrying	Yes
Reclamation of disturbed areas	Yes
Solution mining	No
Surface mining	Yes
Synthetic fuel production	No
Underground mining	No
Waterbody relocation or other alteration	No
Within-bank mining	No

If the operation will include activities other than those listed above, please describe them below:
NONE PROVIDED

If the type of activity presently conducted or proposed is Mineral Transportation, please indicate which of the following apply:

Method	Apply?
Barge	No
Rail	No
Truck	Yes

Fuel - Chemical Handling, Storage, & Spill Prevention Control & Countermeasures (SPCC) Plan

Will fuels, chemicals, compounds, or liquid waste be used or stored onsite?
Yes

Please identify the fuel, chemicals, compounds, or liquid waste and indicate the volume of each:

Volume (gallons)	Contents
10,000	Diesel Fuel
500	Hydraulic Oil
500	Waste Oil
500	Motor Oil

SPCC Plan

Stoned LLC - Project Crossroads - SPCC Plan.pdf - 07/12/2023 09:42 AM

Comment

NONE PROVIDED

ASMC Regulated Entities

Is this a coal mining operation regulated by ASMC?

No

Topographic Map Submittal

Topographic Map

Attach to this application a 7.5 minute series U.S.G.S. topographic map(s) or equivalent map(s) no larger than, or folded to a size of 8.5 by 11 inches (several pages may be necessary), of the area extending to at least one mile beyond property boundaries. The topographic or equivalent map(s) must include a caption indicating the name of the topographic map, name of the applicant, facility name, county, and township, range, & section(s) where the facility are located. Unless approved in advance by the Department, the topographic or equivalent map(s), at a minimum, must show: a) An accurate outline of the area to be covered by the permit (b) An outline of the facility (c) All existing and proposed disturbed areas (d) Location of intake and discharge areas (e) Proposed and existing discharge points (f) Perennial, intermittent, and ephemeral streams (g) Lakes, springs, water wells, wetlands (h) All known facility dirt/improved access/haul roads (i) All surrounding unimproved/improved roads (j) High-tension power lines and railroad tracks (k) Contour lines, township-range-section lines (l) Drainage patterns, swales, washes (m) All drainage conveyance/treatment structures (ditches, berms, etc.) (n) Any other pertinent or significant feature.

Topographic Map

NPDES Permit Map 2000 Scale.pdf - 06/19/2023 04:42 PM

Comment

NONE PROVIDED

Detailed Facility Map Submittal

Detailed Facility Map

Stoned LLC - Project Crossroads - NPDES Permit Map.pdf - 10/04/2023 03:28 PM

Stoned LLC - Project Crossroads - Facility Layout Map.pdf - 10/04/2023 03:35 PM

Comment

NONE PROVIDED

Outfalls (1 of 5)

Outfall Identifier: 001

Feature Type

Outfall (External)

Outfall Identifier

001

Outfall Status

Proposed

Please be aware that you should only mark an outfall status as existing if (1) the Department has been previously notified that it was constructed as proposed or (2) it began discharge prior to this application. A proposed outfall is one that is being newly added to the permit OR one that has never discharged or has never been authorized by the Department to discharge. Should you have any questions about which status to select, please contact the Department's permit engineer for this site.

Receiving Water
Limestone Creek

Check below if the discharge enters the receiving water via an unnamed tributary.
Unnamed Tributary

Location of Outfall
34.6675,-86.875

303(d) Segment?
No

TMDL Segment?
No

Outfalls (2 of 5)

Outfall Identifier: 002

Feature Type
Outfall (External)

Outfall Identifier
002

Outfall Status
Proposed

Please be aware that you should only mark an outfall status as existing if (1) the Department has been previously notified that it was constructed as proposed or (2) it began discharge prior to this application. A proposed outfall is one that is being newly added to the permit OR one that has never discharged or has never been authorized by the Department to discharge. Should you have any questions about which status to select, please contact the Department's permit engineer for this site.

Receiving Water
Limestone Creek

Check below if the discharge enters the receiving water via an unnamed tributary.
Unnamed Tributary

Location of Outfall
34.663056,-86.871944

303(d) Segment?
No

TMDL Segment?
No

Outfalls (3 of 5)

Outfall Identifier: 003

Feature Type
Outfall (External)

Outfall Identifier
003

Outfall Status
Proposed

Please be aware that you should only mark an outfall status as existing if (1) the Department has been previously notified that it was constructed as proposed or (2) it began discharge prior to this application. A proposed outfall is one that is being newly added to the permit OR one that has never discharged or has never been authorized by the Department to discharge. Should you have any questions about which status to select, please contact the Department's permit engineer for this site.

Receiving Water
Limestone Creek

Check below if the discharge enters the receiving water via an unnamed tributary.
NONE PROVIDED

Location of Outfall
34.659167,-86.873611

303(d) Segment?
No

TMDL Segment?
No

Outfalls (4 of 5)

Outfall Identifier: 004

Feature Type
Outfall (External)

Outfall Identifier
004

Outfall Status
Proposed

Please be aware that you should only mark an outfall status as existing if (1) the Department has been previously notified that it was constructed as proposed or (2) it began discharge prior to this application. A proposed outfall is one that is being newly added to the permit OR one that has never discharged or has never been authorized by the Department to discharge. Should you have any questions about which status to select, please contact the Department's permit engineer for this site.

Receiving Water
Limestone Creek

Check below if the discharge enters the receiving water via an unnamed tributary.
NONE PROVIDED

Location of Outfall
34.656944,-86.875

303(d) Segment?
No

TMDL Segment?
No

Outfalls (5 of 5)

Outfall Identifier: 005

Feature Type
Outfall (External)

Outfall Identifier
005

Outfall Status
Proposed

Please be aware that you should only mark an outfall status as existing if (1) the Department has been previously notified that it was constructed as proposed or (2) it began discharge prior to this application. A proposed outfall is one that is being newly added to the permit OR one that has never discharged or has never been authorized by the Department to discharge. Should you have any questions about which status to select, please contact the Department's permit engineer for this site.

Receiving Water
Limestone Creek

Check below if the discharge enters the receiving water via an unnamed tributary.
NONE PROVIDED

Location of Outfall
34.657778,-86.879167

303(d) Segment?
No

TMDL Segment?
No

Discharge Characterization

EPA Form 2C, EPA Form 2D, and/or ADEM Form 567 Submittal
Yes, pursuant to 40 CFR 122.21, the applicant requests a waiver for completion of EPA Form 2C, EPA Form 2D, and ADEM Form 567 and certifies that the operating facility will discharge treated stormwater only; that chemical/compound additives are not used (unless waived in writing by the Department on a programmatic, categorical, or individual compound/chemical basis); that there are no process, manufacturing, or other industrial operations or wastewaters, including but not limited to lime or cement production and synfuel operations; and that coal and coal products are not mined nor stored onsite.

CORRECTION REQUEST *(APPROVED)*
EPA 2C form requirement

Due to the proposal of The Asphalt Plant a complete EPA 2C Form will be required. Also, we will need a detailed description of the wastewater streams and where they come from.
Created on 8/15/2023 3:29 PM by **Robert Glover**

1 COMMENT
Robert Glover (robert.glover@adem.alabama.gov) (8/29/2023 3:52 PM)
At this time a complete EPA 2C form is not required.

Please download the following Excel file to enter your information. Once complete, please attach to the below control.
Download spreadsheet here.

Required attachment:
Form315TableB.xlsx - 06/19/2023 04:52 PM
Comment
NONE PROVIDED

Please download the following Excel file to enter your information. Once complete, please attach to the below control.
Download spreadsheet here.

Required attachment:
Form315TableC-v1.xlsx - 06/20/2023 08:56 AM
Comment
NONE PROVIDED

Discharge Structure Description & Pollutant Source

Please download the following Excel file to enter your information. Once complete, please attach to the below control.
Download spreadsheet here.

Required attachment:
Form315DischargeStructure.xlsx - 10/04/2023 03:29 PM
Comment
NONE PROVIDED

CORRECTION REQUEST *(CORRECTED)*
Description of Origin of Pollutants

For all the outfalls where you have a (10) need a description. Especially we need a description(s) to which outfall the asphalt plant is going to.
Created on 9/7/2023 3:02 PM by **Robert Glover**

Variance Request

Do you intend to request or renew one or more of the CWA technology variances authorized at 40 CFR 122.21(m)?
No

Pollution Abatement & Prevention (PAP) Plan Summary (1 of 2)

Outfall(s):
All Outfalls

Outfall Questions:	Please select one:
Runoff from all areas of disturbance is controlled	Yes
Drainage from pit area, stockpiles, and spoil areas directed to a sedimentation pond	Yes
Sedimentation basin at least 0.25 acre/feet for every acre of disturbed drainage	Yes
Sedimentation basin cleaned out when sediment accumulation is 60% of design capacity	Yes
Trees, boulders, and other obstructions removed from pond during initial construction	Yes
Width of top of dam greater than 12'	Yes
Side slopes of dam no steeper than 3:1	Yes
Cutoff trench at least 8' wide	Yes
Side slopes of cutoff trench no less than 1:1	Yes
Cutoff trench located along the centerline of the dam	Yes
Cutoff trench extends at least 2' into bedrock or impervious soil	Yes
Cutoff trench filled with impervious material	Yes
Embankments and cutoff trench 95% compaction standard proctor ASTM	Yes
Embankment free of roots, tree debris, stones >6" diameter, etc.	Yes
Embankment constructed in lifts no greater than 12"	Yes
Spillpipe sized to carry peak flow from a one year storm event	Yes
Spillpipe will not chemically react with effluent	Yes
Subsurface withdrawal	Yes

Outfall Questions:	Please select one:
Anti-seep collars extend radially at least 2' from each joint in spillpipe	No
Splashpad at the end of the spillpipe	Yes
Emergency Spillway sized for peak flow from 25-yr 24-hr event if discharge not into PWS classified stream	Yes
Emergency spillway sized for peak flow from 50-yr 24-hr event if discharge is into PWS classified stream	N/A
Emergency overflow at least 20' long	Yes
Side slopes of emergency spillway no steeper than 2:1	Yes
Emergency spillway lined with riprap or concrete	Yes
Minimum of 1.5' of freeboard between normal overflow and emergency overflow	Yes
Minimum of 1.5' of freeboard between max. design flow of emergency spillway and top of dam	Yes
All emergency overflows are sized to handle entire drainage area for ponds in series	Yes
Dam stabilized with permanent vegetation	Yes
Sustained grade of haul road <10%	Yes
Maximum grade of haul road <15% for no more than 300'	Yes
Outer slopes of haul road no steeper than 2:1	Yes
Outer slopes of haul road vegetated or otherwise stabilized	Yes
Detail drawings supplied for all stream crossings	N/A
Short-Term Stabilization/Grading And Temporary Vegetative Cover Plans	Yes
Long-Term Stabilization/Grading And Permanent Reclamation or Water Quality Remediation Plans	Yes

Identify and provide detailed explanation for any ⊡N⊡ or ⊡N/A⊡ response(s):
None of the receiving waters are classified as PWS. No stream crossings are proposed for this facility. See Further explanations on next page. Not Enough Room

Pollution Abatement & Prevention (PAP) Plan Summary (2 of 2)

Outfall(s):
All Outfalls

Outfall Questions:	Please select one:
Runoff from all areas of disturbance is controlled	Yes
Drainage from pit area, stockpiles, and spoil areas directed to a sedimentation pond	Yes
Sedimentation basin at least 0.25 acre/feet for every acre of disturbed drainage	Yes
Sedimentation basin cleaned out when sediment accumulation is 60% of design capacity	Yes
Trees, boulders, and other obstructions removed from pond during initial construction	Yes
Width of top of dam greater than 12'	Yes
Side slopes of dam no steeper than 3:1	Yes
Cutoff trench at least 8' wide	Yes
Side slopes of cutoff trench no less than 1:1	Yes
Cutoff trench located along the centerline of the dam	Yes
Cutoff trench extends at least 2' into bedrock or impervious soil	Yes
Cutoff trench filled with impervious material	Yes
Embankments and cutoff trench 95% compaction standard proctor ASTM	Yes
Embankment free of roots, tree debris, stones >6" diameter, etc.	Yes

Outfall Questions:	Please select one:
Embankment constructed in lifts no greater than 12"	Yes
Spillpipe sized to carry peak flow from a one year storm event	Yes
Spillpipe will not chemically react with effluent	Yes
Subsurface withdrawal	Yes
Anti-seep collars extend radially at least 2' from each joint in spillpipe	No
Splashpad at the end of the spillpipe	Yes
Emergency Spillway sized for peak flow from 25-yr 24-hr event if discharge not into PWS classified stream	Yes
Emergency spillway sized for peak flow from 50-yr 24-hr event if discharge is into PWS classified stream	N/A
Emergency overflow at least 20' long	Yes
Side slopes of emergency spillway no steeper than 2:1	Yes
Emergency spillway lined with riprap or concrete	Yes
Minimum of 1.5' of freeboard between normal overflow and emergency overflow	Yes
Minimum of 1.5' of freeboard between max. design flow of emergency spillway and top of dam	Yes
All emergency overflows are sized to handle entire drainage area for ponds in series	Yes
Dam stabilized with permanent vegetation	Yes
Sustained grade of haul road <10%	Yes
Maximum grade of haul road <15% for no more than 300'	Yes
Outer slopes of haul road no steeper than 2:1	Yes
Outer slopes of haul road vegetated or otherwise stabilized	Yes
Detail drawings supplied for all stream crossings	N/A
Short-Term Stabilization/Grading And Temporary Vegetative Cover Plans	Yes
Long-Term Stabilization/Grading And Permanent Reclamation or Water Quality Remediation Plans	Yes

Identify and provide detailed explanation for any ◆N◆ or ◆N/A◆ response(s):
No anti seep collars are proposed along the discharge pipe as a result of the experience in the design and construction of impoundments of this nature by the designer. It has been the designer's experience that the addition of anti-seep collars requires the over excavation of the discharge structure trench for their installation. This over excavation and direct areas around the devices produce areas where compaction during the filling of the trench is difficult to achieve. This results in areas of weakness where potential seeps could occur resulting in areas of impoundment instability and possible failure. The designer has designed and overseen construction of numerous impoundments of similar nature without the use of anti-seep collars. To date no areas of seepage or instability has occurred as a result of the deletion of the anti-seep collars. With the above in mind no anti seep collars are proposed in this design.

Pollution Abatement & Prevention (PAP) Plan Review Checklist

General Information:	Please select one:
PE Seal with License #	Yes
Name and Address of Operator	Yes
Legal Description of Facility	Yes
Name of Company	Yes
Number of Employees	Yes
Products to be Mined	Yes
Hours of Operation	Yes
Water Supply and Disposition	Yes

Maps:	Please select one:
Topographic Map including Information from Part XIII (a) ◆ (o) of this Application	Yes
1◆ ◆ 500◆ or Equivalent Facility Map including Information from Part XIV of this Application	Yes

Detailed Design Diagrams:	Please select one:
Plan Views	Yes
Cross-section Views	Yes
Method of Diverting Runoff to Treatment Basins	Yes
Line Drawing of Water Flow through Facility with Water Balance or Pictorial Description of Water Flow	Yes

Narrative of Operations:	Please select one:
Raw Materials Defined	Yes
Processes Defined	Yes
Products Defined	Yes

Schematic Diagram:	Please select one:
Points of Waste Origin	Yes
Collection System	Yes
Disposal System	Yes

Post Treatment Quantity and Quality of Effluent:	Please select one:
Flow	Yes
Suspended Solids	Yes
Iron Concentration	Yes
pH	Yes

Description of Waste Treatment Facility:	Please select one:
Pre-Treatment Measures	Yes
Recovery System	Yes
Expected Life of Treatment Basin	Yes
Measures for Ensuring Access to All Treatment Structures and Related Appurtenances including Outfall Locations	Yes
Schedule of Cleaning and/or Abandonment	Yes

Other:	Please select one:
Precipitation/Volume Calculations/Diagram Attached	Yes
BMP Plan for Haul Roads	Yes
Measures for Minimizing Impacts to Adjacent Stream (e.g., Buffer Strips, Berms)	Yes
Measures for Ensuring Appropriate Setbacks are Maintained at All Times	Yes
Methods for Minimizing Nonpoint Source Discharges	Yes
If Chemical Treatment Used, Methods for Ensuring Appropriate Dosage	Yes
Facility Closure Plans	Yes
PE Rationale(s) For Alternate Standards, Designs or Plans	N/A

Identify and provide detailed explanation for any "N" or "N/A" response(s):
No anti seep collars are proposed along the discharge pipe as a result of the experience in the design and construction of impoundments of this nature by the designer. It has been the designer's experience that the addition of anti-seep collars requires the over excavation of the discharge structure trench for their installation. This over excavation and direct areas around the devices produce areas where compaction during the filling of the trench is difficult to achieve. This results in areas of weakness where potential seeps could occur resulting in areas of impoundment instability and possible failure. The designer has designed and overseen construction of numerous impoundments of similar nature without the use of anti-seep collars. To date no areas of seepage or instability has occurred as a result of the deletion of the anti-seep collars. With the above in mind no anti seep collars are proposed in this design.

Pollution Abatement & Prevention (PAP) Plan

Is this a coal mining operation regulated by ASMC?
No

For non-coal mining facilities, has a PAP Plan in accordance with ADEM Admin. Code r. 335-6-9-.03 been completed?
Yes

PAP Plan (non-coal mining facilities)
Stoned LLC - Project Crossroads - PAP.pdf - 10/04/2023 03:29 PM
Comment
NONE PROVIDED

Professional Engineer (PE)

Registration License Number
37129

Professional Engineer

Prefix
Mr.

First Name	Last Name
Jordan	*McGehee*

Title
Professional Engineer

Organization Name
McGehee Engineering Corp

Phone Type	Number	Extension
Business	205-221-0686	

Email
jordan@mcgehee.org

Address
450 19th Street West
Jasper, Alabama 35501

Information for the Applicant

Please read the following information and acknowledge below:
Contact the Department prior to submittal with any questions or to request acceptable alternate content/format.

Be advised that you are not authorized to commence regulated activity until this application can be processed, publicly noticed, and approval to proceed is received in writing from the Department.

EPA Form(s) 1 and 2F need not be submitted unless specifically required by the Department. EPA Form(s) 2C and/or 2D are required to be submitted unless the
applicant is eligible for a waiver and the Department grants a waiver, or unless the relevant information required by EPA Form(s) 2C and/or 2D are submitted to the Department in an alternative format acceptable to the Department.

Planned/proposed mining sites that are greater than 5 acres, that mine/process coal or metallic mineral/ore, or that have wet or chemical processing, must apply for and obtain coverage under an Individual or General NPDES Permit prior to commencement of any land disturbance. Such Individual NPDES Permit coverage may be requested via this ADEM Form 315.

The applicant is advised to contact:
(1) The Alabama Surface Mining Commission (ASMC) if coal, coal fines, coal refuse, or other coal related materials are mined, transloaded, processed, etc.;
(2) The Alabama Department of Labor (ADOL) if conducting non-coal mining operations;
(3) The Alabama Historical Commission for requirements related to any potential historic or culturally significant sites;
(4) The Alabama Department of Conservation and Natural Resources (ADCNR) for requirements related to potential presence of threatened/endangered species;
(5) The US Army Corps of Engineers, Mobile or Nashville Districts, if this project could cause fill to be placed in federal waters or could interfere with navigation.

The Department must be in receipt of a completed version of this form, including any supporting documentation, and the appropriate processing fee [including Greenfield Fee and Biomonitoring & Toxicity Limits fee(s), if applicable], prior to development of a draft NPDES permit.

Acknowledgement
I acknowledge I have read and understand the information above.

Additional Attachments

Additional Attachments
NONE PROVIDED
Comment
NONE PROVIDED

Application Preparer

Application Preparer

Prefix
NONE PROVIDED

First Name	Last Name
NONE PROVIDED	*NONE PROVIDED*

Title
NONE PROVIDED

Organization Name
NONE PROVIDED

Phone Type	Number	Extension
NONE PROVIDED		

Email
NONE PROVIDED

Address
[NO STREET ADDRESS SPECIFIED]
[NO CITY SPECIFIED], AL [NO ZIP CODE SPECIFIED]

Fees Assessed

The following itemized fees have been assessed in accordance with Fee Schedule D and 335-1-6-.04(a) of ADEM Admin. Code Division 1 regulations based on the information provided in this application.

Wet Preparation, Processing, Beneficiation:
6860

Greenfield Site Fee:
1610

Fee

Fee
8470

Revisions

Revision	Revision Date	Revision By
Revision 1	6/19/2023 10:41 AM	Anthony McGehee
Revision 2	8/24/2023 12:52 PM	Anthony McGehee
Revision 3	9/8/2023 10:20 AM	Anthony McGehee
Revision 4	10/4/2023 3:23 PM	Anthony McGehee

Agreements and Signature(s)

SUBMISSION AGREEMENTS

- ☑ I am the owner of the account used to perform the electronic submission and signature.
- ☑ I have the authority to submit the data on behalf of the facility I am representing.
- ☑ I agree that providing the account credentials to sign the submission document constitutes an electronic signature equivalent to my written signature.
- ☑ I have reviewed the electronic form being submitted in its entirety, and agree to the validity and accuracy of the information contained within it to the best of my knowledge.

Professional Engineer

A detailed, comprehensive Pollution Abatement & Prevention (PAP) Plan must be prepared, signed, and certified by a professional engineer (PE), registered in the State of Alabama, and the PE must certify as follows: I certify on behalf of the applicant, that I have completed an evaluation of discharge alternatives for any proposed newor increased discharges of pollutant(s) to Tier 2 waters and reached the conclusions indicated. I certify under penalty of lawthat technical information and data contained in this application, and a comprehensive PAP Plan including any attached SPCC plan, maps, engineering designs, etc. acceptable to ADEM, for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff has been prepared under my supervision for this facility utilizing effective, good engineering and pollution control practices and in accordance with the provisions of ADEM Admin. Code Division 335-6 , including Chapter 335-6-9 and Appendices A & B. If the PAP Plan is properly implemented and maintained by the Permittee, discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable and according to permit discharge limitations and other permit requirements. The applicant has been advised that appropriate pollution abatement/prevention facilities and structural & nonstructural management practices or Department approved equivalent management practices as detailed in the PAP Plan must be fully implemented and regularly maintained as needed at the facility in accordance with good sediment, erosion, and other pollution control practices, permit requirements, and other ADEM requirements to ensure protection of groundwater and surface water quality.

Signed By Anthony McGehee on 10/04/2023 at 3:54 PM

Responsible Official

This application must be signed and initialed by a Responsible Official of the applicant pursuant to ADEM Admin. Code Rule 335-6-6-.09 who has overall responsibility for the operation of the facility. I certify under penalty of lawthat this document, including technical information and data, the PAP Plan, including any SPCC plan, maps, engineering designs, and all other attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the PE and other person or persons under my supervision who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment for knowing violations. A comprehensive PAP Plan to prevent and minimize discharges of pollution to the maximum extent practicable has been prepared at my direction by a PE for this facility utilizing effective, good engineering and pollution control practices and in accordance with the provisions of ADEM Admin. Code Division 335-6, including Chapter 335-6-9 and Appendices A & B, and information contained in this application, including any attachments. I understand that regular inspections must be performed by, or under the direct supervision of, a PE and all appropriate pollution abatement/prevention facilities and structural & nonstructural management practices or Department approved equivalent management practices identified by the PE must be fully implemented prior to and concurrent with commencement of regulated activities and regularly maintained as needed at the facility in accordance with good sediment, erosion, and other pollution control practices and ADEM requirements. I understand that the PAP Plan must be fully implemented and regularly maintained so that discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable and according to permit discharge limitations and other requirements to ensure protection of groundwater and surface water quality. I understand that failure to fully implement and regularly maintain required management practices for the protection of groundwater and surface water quality may subject the Permittee to appropriate enforcement action. I certify that this form has not been altered, and if copied or reproduced, is consistent in format and identical in content to the ADEM approved form. I further certify that the discharges described in this application have been tested or evaluated for the presence of non-stormwater discharges and any non-mining associated beneficiation/process pollutants and wastewaters have been fully identified. I acknowledge my understanding that if coal, coal fines, coal refuse, or other coal related materials are mined, transloaded, processed, etc., that I may be required to obtain a permit from the ASMC. I acknowledge my understanding that if non-coal, non-limestone materials are mined, transloaded, processed, etc., that I may be required to obtain a permit from the ADOL. I acknowledge my understanding that if the proposed activities will be conducted in or potentially impact waters of the state or waters of the US (including wetlands), that I may be required to obtain a permit from the USACE.

Responsible Official

Signed By James Sharp on 10/04/2023 at 4:06 PM

Calculation of Total Annualized Project Costs for Private-Sector Projects

Capital Costs to be Financed (Supplied by applicant)	$ 600,000 (1)
Interest rate for Financing (Expressed as a decimal)	.10 (i)
Time Period of Financing (Assume 10 years*)	10 years (n)
Annualization Factor = $\frac{i}{(1+i)^{10} - 1} + i$	0.16275 (2)
Annualized Capital Cost [Calculate: (1) x (2)]	$ 97,650 (3)
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	$ 150,000 (4)
Total Annual Cost of Pollution Control Project [(3) + (4)]	$ 247,650 (5)

* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.

** For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

Attachment 1 to Supplementary Form
ADEM Form 311

Alternatives Analysis

Applicant/Project: Stoned, LLC / Project Crossroads

All new or expanded discharges (except discharges eligible for coverage under general permits) covered by the NPDES permitting program are subject to the provisions of ADEM's antidegradation policy. Applicants for such discharges to Tier 2 waters are required to demonstrate " . . . that the proposed discharge is necessary for important economic or social development." As a part of this demonstration, the applicant must complete an evaluation of the discharge alternatives listed below, including a calculation of the total annualized project costs for each technically feasible alternative (using ADEM Form 312 for public-sector projects and ADEM Form 313 for private-sector projects). Alternatives with total annualized project costs that are less than 110% of the total annualized project costs for the Tier 2 discharge proposal are considered viable alternatives.

Alternative	Viable	Non-Viable	Comment
1 Land Application		X	Water quantity to great
2 Pretreatment/Discharge to POTW		X	Water quantity to great
3 Relocation of Discharge		X	Topography does not support/allow this alternative
4 Reuse/Recycle	X		Will recycle whenever possible
5 Process/Treatment Alternatives		X	Settling, oxidation, surface discharge best treatment alternative
6 On-site/Sub-surface Disposal	X		
(other project-specific alternatives considered by the applicant; attach additional sheets if necessary)			
7			
8			
9			

Pursuant to ADEM Administrative Code Rule 335-6-3-.04, I certify on behalf of the applicant that I have completed an evaluation of the discharge alternatives identified above, and reached the conclusions indicated.

Signature: Jordan McGehee Digitally signed by Jordan McGehee Date: 2023.06.19 13:43:30 -05'00'

(Professional Engineer)

Date: 06/19/23

(Supporting documentation to be attached, referenced, or otherwise handled as appropriate.)

The applicant is required to supply outfall number(s) as it appears on the map(s) required by this application [if this application is for a modification to an existing permit do not change the numbering sequence of the permitted outfalls], describe each, (e.g., pipe, spillway, channel, tunnel, conduit, well, discrete fissure, or container), and identify the origin of pollutants. The response must be precise for each outfall. If the discharge of pollutants from any outfall is the result of commingling of waste streams from different origins, each origin must be completely described.

Description of Origin of Pollutants – typical examples: (1) Discharge of drainage from the underground workings of an underground coal mine, (2) Discharge of drainage from a coal surface mine, (3) Discharge of drainage from a coal preparation plant and associated areas, (4) Discharge of process wastewater from a gravel-washing plant, (5) Discharge of wastewater from an existing source coal preparation plant, (6) Discharge of drainage from a sand and gravel pit, (7) Pumped discharge from a limestone quarry, (8) Controlled surface mine drainage (pumped or siphoned), (9) Discharge of drainage from mine reclamation, (10) Other (please describe):

Outfall	Discharge structure Description	Description of Origin of pollutants	Surface Discharge	Groundwater Discharge	Wet Prep -Other Production Plant	Pumped or Controlled Discharge	Low Volume STP
001P	Pipe and/or Channel	7,8,9 & 10(Dirt/Chert Pit)	X		X		
002P	Pipe and/or Channel	7,8,9 & 10(Dirt/Chert Pit)	X		X		
003P	Pipe and/or Channel	7,8,9 & 10(Dirt/Chert Pit)	X		X		
004P	Pipe and/or Channel	7,8,9 & 10(Dirt/Chert Pit)	X		X		
005P	Pipe and/or Channel	7,8,9 & 10(Dirt/Chert Pit)	X		X		

The applicant is required to supply the following information separately for every proposed (P) or existing (E) outfall. List expected average daily discharge flow rate in cfs and gpd; frequency of discharge in hours per day and days per month; average summer and winter temperature of discharge(s) in degrees centigrade; average pH in standard units; and average daily discharges in pounds per day of BOD5, Total Suspended Solids, Total Iron, Total Manganese, and Total Aluminum (if bauxite or bauxitic clay or if otherwise believed present):

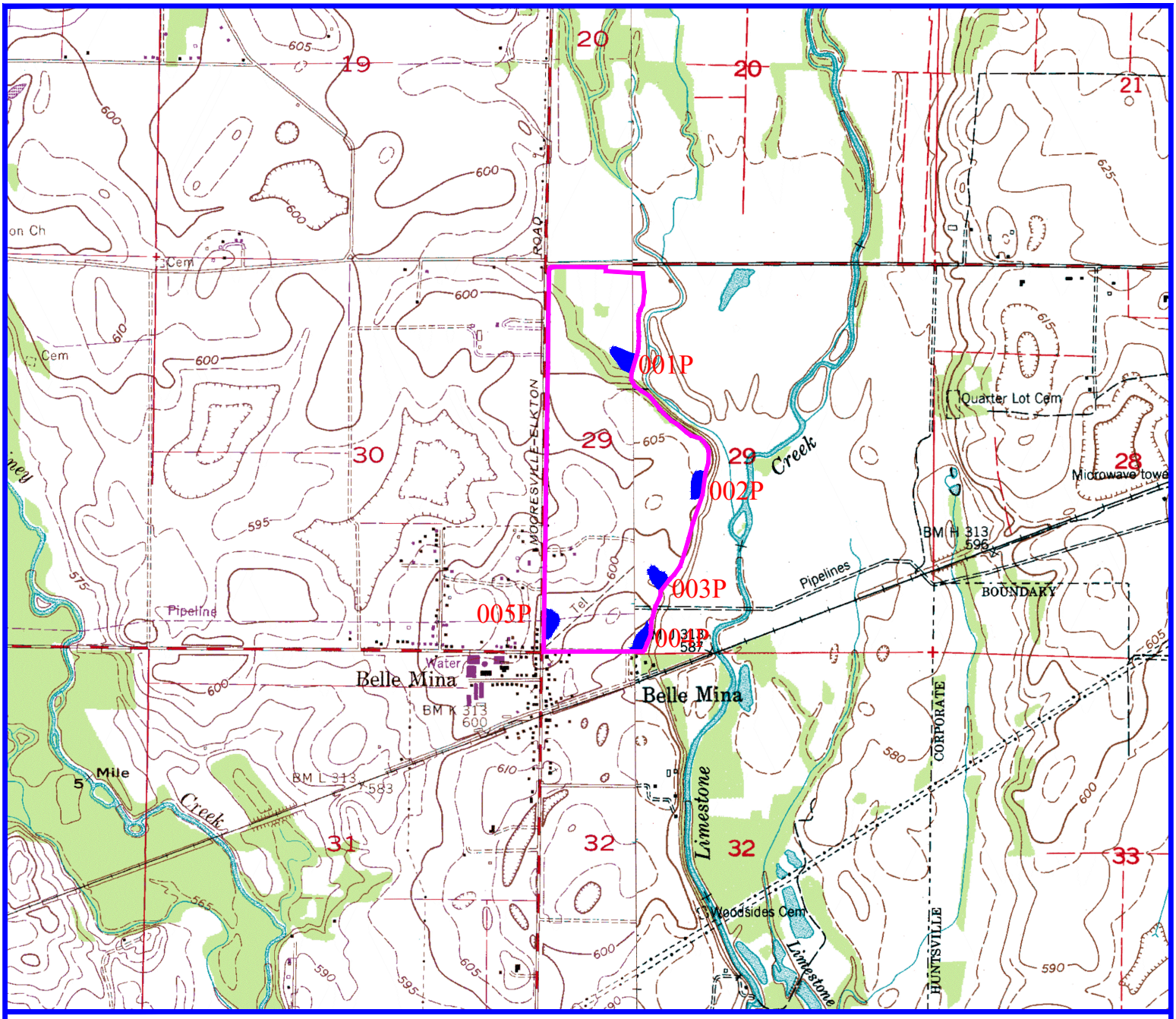
Outfall E/P	Information Source - # of Samples	Flow (cfs)	Flow (gpd)	Frequency (hours/day)	Frequency (days/month)	Sum/Win Temp, (°C)	pH (s.u.)	BOD5 (lbs/day)	TSS (lbs/day)	Tot Fe (lbs/day)	Tot Mn (lbs/day)	Tot Al (lbs/day)
001P	B.P.E.	0.06	39000	Precipitation	Precipitation	26/7	7	N/A	6.5	N/A	N/A	N/A
002P	B.P.E.	0.064	41000	Precipitation	Precipitation	26/7	7	N/A	6.9	N/A	N/A	N/A
003P	B.P.E.	0.035	23000	Precipitation	Precipitation	26/7	7	N/A	3.8	N/A	N/A	N/A
004P	B.P.E.	0.008	5000	Precipitation	Precipitation	26/7	7	N/A	0.9	N/A	N/A	N/A
005P	B.P.E.	0.017	11000	Precipitation	Precipitation	26/7	7	N/A	1.8	N/A	N/A	N/A

The applicant is required to supply the following information separately for every proposed
of any other pollutant(s) listed in EPA Form 2C Tables A, B, C, D, and E that are not refere
is present or have reason to believe could be present in the discharge(s) at levels of concern:

Outfall E/P	Reason Believed Present	Information Source - # of Samples		
			lbs/day	mg/L
	None Believed Present			

or existing outfall. Identify and list expected average daily discharge
nced in Part XVI.B. or otherwise submitted elsewhere, that you know

lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L



STONED, LLC
PROJECT CROSSROADS

NPDES PERMIT MAP

SECTION 29
TOWNSHIP 4 SOUTH, RANGE 3 WEST,
ALL IN LIMESTONE COUNTY, ALABAMA
BASE MAPS: TANNER & GREENBRIER U.S.G.S. QUADS.
SCALE: 1" = 2000'

NPDES PERMIT BOUNDARY

PROPOSED OUTFALL

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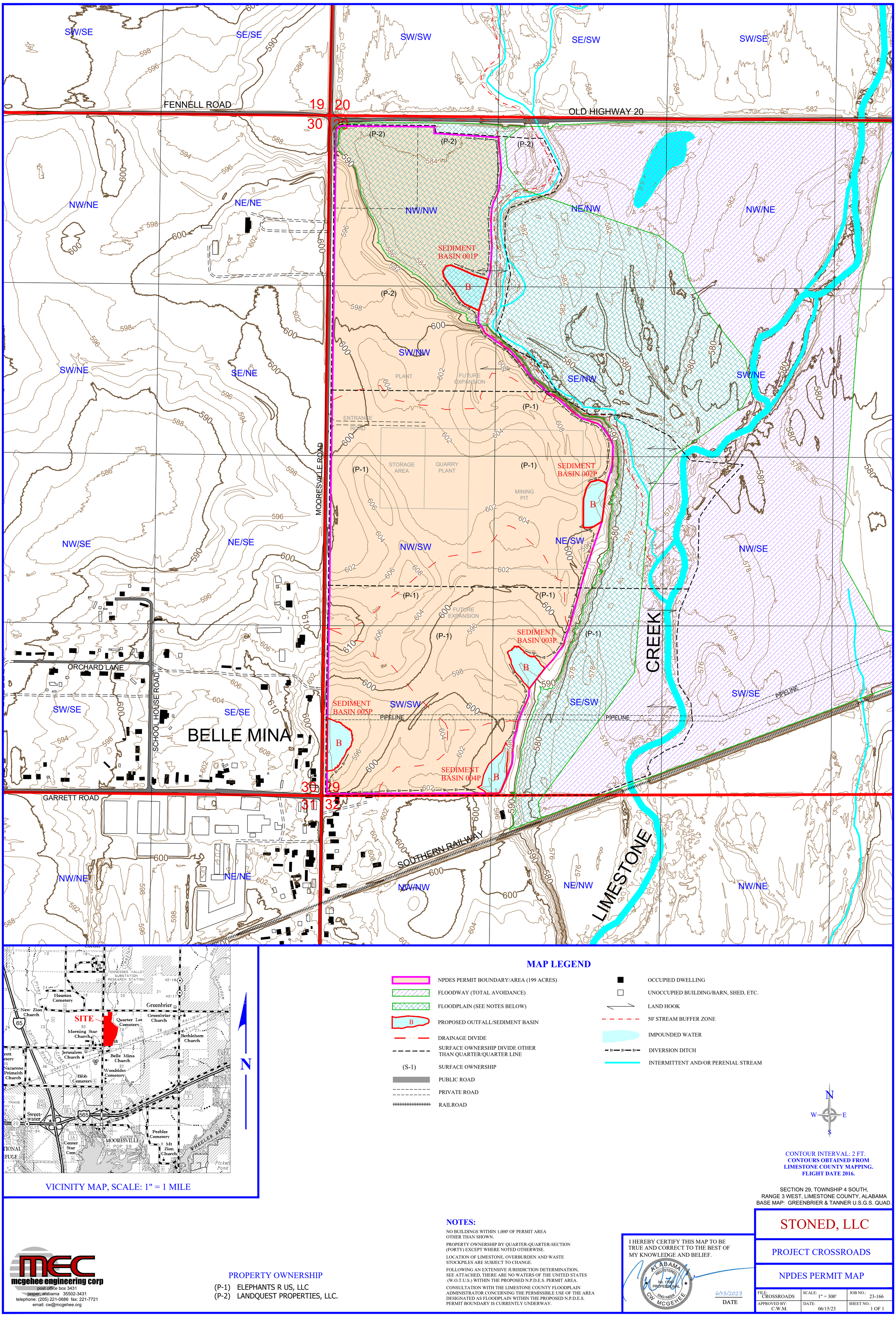
S

mcgehee engineering corp
post office box 3431 - 450 19th street
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: staff@mcgehee.org



VICINITY MAP, SCALE: 1" = 1 MILE

MAP LEGEND

- NPDES PERMIT BOUNDARY/AREA (199 ACRES)
- FLOODWAY (TOTAL AVOIDANCE)
- FLOODPLAIN (SEE NOTES BELOW)
- B — PROPOSED OUTFALL/SEDIMENT BASIN
- DRAINAGE DIVIDE
- SURFACE OWNERSHIP DIVIDE OTHER THAN QUARTER/QUARTER LINE
- (S-1) SURFACE OWNERSHIP
- PUBLIC ROAD
- PRIVATE ROAD
- RAILROAD
- OCCUPIED DWELLING
- UNOCCUPIED BUILDING/BARN, SHED, ETC.
- LAND HOOK
- 50' STREAM BUFFER ZONE
- IMPOUNDED WATER
- DIVERSION DITCH
- INTERMITTENT AND/OR PERENIAL STREAM

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CONTOUR INTERVAL: 2 FT.
CONTOURS OBTAINED FROM LIMESTONE COUNTY MAPPING. FLIGHT DATE 2016.

SECTION 29, TOWNSHIP 4 SOUTH, RANGE 3 WEST, LIMESTONE COUNTY, ALABAMA
BASE MAP: GREENBRIER & TANNER U.S.G.S. QUAD.

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: cw@mcgehee.org

PROPERTY OWNERSHIP

(P-1) ELEPHANTS R US, LLC
(P-2) LANDQUEST PROPERTIES, LLC.

NOTES:

NO BUILDINGS WITHIN 1,000' OF PERMIT AREA OTHER THAN SHOWN.

PROPERTY OWNERSHIP BY QUARTER-QUARTER-SECTION (FORTY) EXCEPT WHERE NOTED OTHERWISE.

LOCATION OF LIMESTONE, OVERBURDEN AND WASTE STOCKPILES ARE SUBJECT TO CHANGE.

FOLLOWING AN EXTENSIVE JURISDICTION DETERMINATION, SEE ATTACHED, THERE ARE NO WATERS OF THE UNITED STATES (W.O.T.U.S.) WITHIN THE PROPOSED N.P.D.E.S. PERMIT AREA.

CONSULTATION WITH THE LIMESTONE COUNTY FLOODPLAIN ADMINISTRATOR CONCERNING THE PERMISSIBLE USE OF THE AREA DESIGNATED AS FLOODPLAIN WITHIN THE PROPOSED N.P.D.E.S. PERMIT BOUNDARY IS CURRENTLY UNDERWAY.

I HEREBY CERTIFY THIS MAP TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

ALABAMA REGISTERED No. 17067 PROFESSIONAL ENGINEER C.W. MCGEHEE

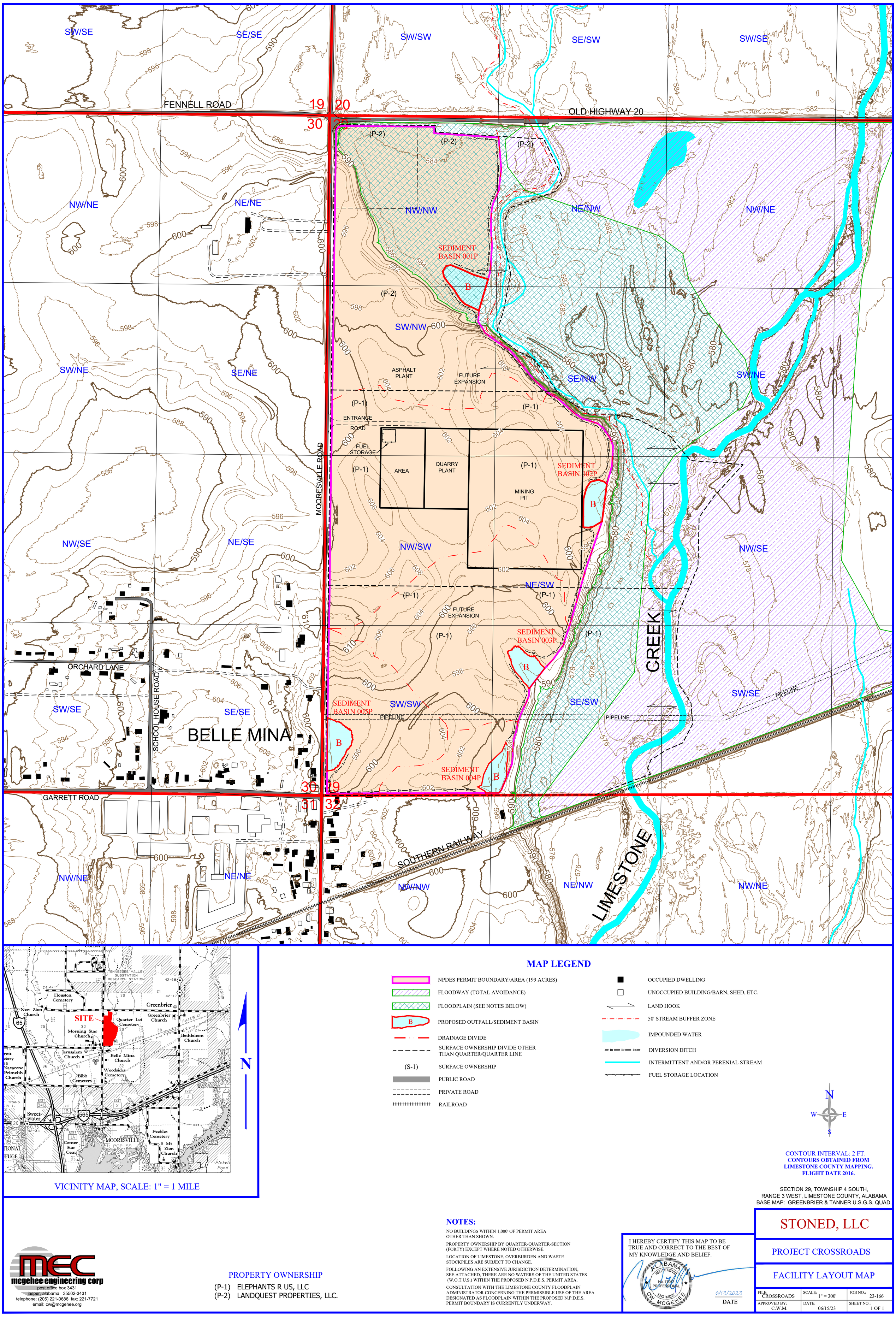
6/13/2023
DATE

STONED, LLC

PROJECT CROSSROADS

NPDES PERMIT MAP

FILE: CROSSROADS	SCALE: 1" = 300'	JOB NO.: 23-166
APPROVED BY: C.W.M.	DATE: 06/15/23	SHEET NO.: 1 OF 1



VICINITY MAP, SCALE: 1" = 1 MILE

MAP LEGEND

- NPDES PERMIT BOUNDARY/AREA (199 ACRES)
- FLOODWAY (TOTAL AVOIDANCE)
- FLOODPLAIN (SEE NOTES BELOW)
- B — PROPOSED OUTFALL/SEDIMENT BASIN
- DRAINAGE DIVIDE
- SURFACE OWNERSHIP DIVIDE OTHER THAN QUARTER/QUARTER LINE
- (S-1) SURFACE OWNERSHIP
- PUBLIC ROAD
- PRIVATE ROAD
- RAILROAD
- OCCUPIED DWELLING
- UNOCCUPIED BUILDING/BARN, SHED, ETC.
- LAND HOOK
- 50' STREAM BUFFER ZONE
- IMPOUNDED WATER
- DIVERSION DITCH
- INTERMITTENT AND/OR PERENIAL STREAM
- FUEL STORAGE LOCATION

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CONTOUR INTERVAL: 2 FT.
CONTOURS OBTAINED FROM LIMESTONE COUNTY MAPPING. FLIGHT DATE 2016.

SECTION 29, TOWNSHIP 4 SOUTH, RANGE 3 WEST, LIMESTONE COUNTY, ALABAMA
BASE MAP: GREENBRIER & TANNER U.S.G.S. QUAD.

NOTES:

NO BUILDINGS WITHIN 1,000' OF PERMIT AREA OTHER THAN SHOWN.

PROPERTY OWNERSHIP BY QUARTER-QUARTER-SECTION (FORTY) EXCEPT WHERE NOTED OTHERWISE.

LOCATION OF LIMESTONE, OVERBURDEN AND WASTE STOCKPILES ARE SUBJECT TO CHANGE.

FOLLOWING AN EXTENSIVE JURISDICTION DETERMINATION, SEE ATTACHED, THERE ARE NO WATERS OF THE UNITED STATES (W.O.T.U.S.) WITHIN THE PROPOSED N.P.D.E.S. PERMIT AREA.

CONSULTATION WITH THE LIMESTONE COUNTY FLOODPLAIN ADMINISTRATOR CONCERNING THE PERMISSIBLE USE OF THE AREA DESIGNATED AS FLOODPLAIN WITHIN THE PROPOSED N.P.D.E.S. PERMIT BOUNDARY IS CURRENTLY UNDERWAY.

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: cw@mcgehee.org

PROPERTY OWNERSHIP

(P-1) ELEPHANTS R US, LLC
(P-2) LANDQUEST PROPERTIES, LLC.

I HEREBY CERTIFY THIS MAP TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

ALABAMA REGISTERED No. 17067 PROFESSIONAL ENGINEER C.W. MCGEHEE

6/13/2023
DATE

STONED, LLC

PROJECT CROSSROADS

FACILITY LAYOUT MAP

FILE: CROSSROADS	SCALE: 1" = 300'	JOB NO.: 23-166
APPROVED BY: C.W.M.	DATE: 06/15/23	SHEET NO.: 1 OF 1

POLLUTION ABATEMENT PLAN

Prepared for:

Alabama Department of Environmental Management

STONED, LLC

Project Crossroads

NPDES Permit Application

Prepared by:

MCGEHEE ENGINEERING CORP.
P. O. Box 3431 Jasper, Alabama 35502-3431
Telephone: (205) 221-0686
Fax: (205) 221-7721

INTRODUCTION

This document is an application for a proposed N.P.D.E.S. Permit. Stoned, LLC, Project Crossroads is located in Section 29, Township 4 South, Range 3 West, Limestone County, Alabama. This application was prepared in accordance with the rules and regulations of the Alabama Department of Environmental Management.

The "Pollution Abatement Plan" is presented in two parts, which include a brief narrative and the "Pollution Abatement Plan" both presented herein. The narrative is intended to address the format as outlined by the ADEM Water Division - Water Quality and Control Program, rules and regulations, as well as present the basis for the design as further detailed in the "Pollution Abatement Plan". The drawings as presented in the "Pollution Abatement Plan" were derived from rules and regulations from ADEM as well as from other generally accepted design data sources primarily from the U.S. Department of Agriculture Soil Conservation Service. Generally, the narrative will follow the outline of Chapter 6 - 9 - .03, Surface Mining Rules and Regulations from the ADEM rules and regulations.

OPERATOR

The operator of this limestone operation is Stoned, LLC which will have its home office as follows:

Stoned, LLC
801 Franklin Street, S.E.
Huntsville, Alabama 35801

GENERAL INFORMATION

Stoned, LLC proposes to operate a limestone, dirt and chert quarry and processing facility. As part of these operations, the limestone, dirt and chert will be mined & processed, loaded on trucks, and transported. All surface drainage will be drained into one of the five proposed outfalls/sedimentation ponds. Water from these basins will then be discharged into an U.T. to Limestone Creek and directly into Limestone Creek. **See NPDES Permit Maps.**

Design plans submitted with this document provide an existing contour map taken from Tanner and Greenbrier U.S.G.S., 7-1/2 minute, Quadrangles. The map shows the layout of the limestone, dirt and chert mining facility, drainage patterns and proposed outfalls. All surface drainage from the mining area drains naturally into the sedimentation ponds, permitted outfalls 001-005.

There is a potential for an asphalt plant in the future at the site described in this permit application. If or when this decision is made to move forward on the asphalt plant, Stoned, LLC plans on applying for a stand alone NPDES General Stormwater asphalt permit.

FACILITY ENTRANCE

There will be only one entrance road to the proposed Project Crossroads Facility, as shown on the NPDES Permit Map. Any existing entrances to the permit area will be blocked or barricaded to prevent unauthorized access into the facility. Due to the anticipated traffic entering and existing the facility, the Limestone County Commission requested a detailed design for the proposed entrance road including both left and right hand turn lanes entering the facility. Enclosed, please find Exhibit F. Exhibit F is an excerpt from the Entrance Road design plans (Sheet Number 13, Page 21 of 28) submitted to the Limestone County Engineer for approval. The attached excerpt clearly indicates that the entrance road will be asphalt paved for the first 400 feet into the permit area. After the first 400 feet, the entrance road will be surfaced with a sufficient thickness and width of non-erodible sandstone or limestone gravel. The combination asphalt/gravel roadway surface of the proposed entrance road will ensure that onsite vehicles will not track mud and debris off of the permitted site onto the adjacent public roadways and/or into existing ditches. The attached excerpt also includes the manner in which Best Management Practices (BMPs) will be implemented, constructed and/or installed to contain and minimize erosion and sedimentation during the construction of the proposed entrance road. BMPs will be implemented, constructed and/or installed along the entire permit boundary as needed to prevent erosion and sedimentation from existing the permitted area. All disturbed surface drainage will gravity drain through natural drainage courses or constructed diversion ditches to the outfalls/sediment basins.

PERMIT BOUNDARY

The proposed NPDES Permit boundary is clearly depicted on the attached NPDES Permit Map. The Permittee shall ensure that the ADEM NPDES permitted boundary is clearly identified in the field with a sufficient number of permanent boundary markers that are at least visible from one marker to the next. The Permittee will inspect (no less than yearly) the permit boundary to ensure the permanent boundary markers are in place and in good condition. Boundary markers that are missing or found to be in poor condition will be replaced.

SURFACE WATER DIVERSIONS

The enclosed topographic map shows the contour of the land and general drainage patterns. All disturbed surface drainage will gravity drain through natural drainage courses or diversion ditches to the outfalls/sediment basins.

In the event that diversion ditch construction is necessary, diversion ditches will be constructed in accordance with the "Attached Diversion Ditch Criteria".

QUALITY AND CHARACTERISTICS OF WASTE PRODUCTS

The only waste products produced at the limestone, dirt and chert quarry will be silts from

processing operations. The silts will be trapped and settle when passing through the sediment basins. Each sediment basin will be cleaned out as needed to provide adequate sediment retention volume for incoming materials. The pH, total iron and manganese, because of the nature of the operation, should pose no problem and should remain in compliance with the N.P.D.E.S. parameter requirements.

SOLID OR LIQUID WASTE DISPOSAL PLAN

The sediment basins will be cleaned out when the capacity of said basins reach sixty (60%) percent of their design capacity. The sediment basins will be cleaned out in an environmentally safe manner (loader, backhoe, etc.). Sediment removed from the sediment basins will be disposed of in the adjacent existing pit.

SEDIMENT CONTROL FOR HAULROADS AND INCIDENTALS

Haul roads, existing or created for this operation, will be ditched and stabilized by planting a grass mixture suitable for seasonal conditions, fertilizing and mulching all cut, fill, and borrow areas to minimize erosion and enhance re-stabilization. In small areas where incidental drainage cannot be diverted through the sediment basins, silt fences will be constructed to control runoff. Silt fences will be constructed in accordance with the attached "Silt Fence Design and Construction Specifications".

LOCATION OF ADJACENT STREAMS

After obtaining airspace authorization from the Federal Aviation Administration (FAA), on June 26, 2023, McGehee Engineering Corp. flew (Sensefly EBEE X RTK Drone) the proposed site to establish and document current conditions and planimetric. On June 28, 2023, qualified personnel from McGehee Engineering Corp. performed an on-site wetland delineation and stream assessment of the entire proposed NPDES permit area. At the time of the aerial flight and on-site inspection, the site was an active wheat and soybean plantation. At the time of the on-site wetland delineation and stream assessment, it was determined that no jurisdictional Waters of the United States (WOTUS)/Waters of the State were present within the proposed permit boundary.

Included in the preceding N.P.D.E.S. Application are maps (Scale: 1" = 300' and 1" = 2,000') showing the location of all adjacent streams and the receiving water (Waters of the State) of this operation. The adjacent streams and the receiving water (Waters of the State) are clearly depicted on the attached NPDES Permit Map. A minimum fifty (50’) feet setback or stream buffer zone will be observed from all Waters of the State. This fifty (50’) feet setback or stream buffer zone is clearly depicted on the attached NPDES Permit Map. The Permittee shall ensure that the fifty (50’) feet setback or stream buffer zone from all Waters of the State is clearly identified in the

field with a sufficient number of permanent boundary markers that are at least visible from one marker to the next in areas where the permit boundary comes in close proximity to the fifty (50') feet setback or stream buffer zone. The Permittee shall frequently train, instruct and educate all employees, subcontractors, other authorized personnel, etc., of the importance of the prohibition of any type land disturbances within fifty (50') feet of Waters of the State. The Permittee will inspect (no less than yearly) the fifty (50') feet setback or stream buffer zone to ensure the permanent boundary markers are in place and in good condition. Boundary markers that are missing or found to be in poor condition will be replaced.

NON-POINT SOURCE DISCHARGE CONTROL

Because all disturbed areas are graded in such a manner as to route all drainage through the sediment basins, all drainage from the Project Crossroads should carry all sediment (silts, clay, etc.) into the approved point source discharge outfalls. See the attached Sediment Basin Detail Design Plans for Sediment Basins 001-005. Sediment Basins 001-005 will control the runoff from the crushing, screening and processing areas.

PUBLIC WATER SUPPLIES

The receiving waters from the proposed facility are an unnamed tributary to Limestone Creek and Limestone Creek. The receiving water is not a public water supply.

APPENDIX A

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS

Proposed sediment basins (temporary or permanent) will be designed and constructed using the following as minimum specifications:

1. EMBANKMENT REQUIREMENTS

A) The minimum width of the top of the embankment will under no circumstance be less than twelve (12) feet.

B) The embankment will have a minimum front and back slope no steeper than 3 horizontal to 1 vertical.

C) The foundation area of the embankment will be cleared and grubbed of all organic matter with no surface slope steeper than 1 horizontal to 1 vertical.

D) A core will be constructed in a cutoff trench along the centerline of the embankment. The cutoff trench will be at least eight (8) feet wide with the side slope steepness to be no greater than 1 horizontal to 1 vertical. The material placed in the cutoff trench will be compacted to ninety-five (95%) percent of the standard proctor density, as set forth in ASTM.

E) The embankment construction material will be free of sod, roots, stumps, rocks, etc., which exceed six (6") inches in diameter. The embankment material will be placed in layers of twelve (12") inches or less and compacted to ninety-five (95%) percent of the standard proctor density, as set forth in ASTM.

F) The embankment, foundation and abutments will be designed and constructed to be stable under normal construction and operating conditions, with a minimum static safety factor of 1.5 and a minimum seismic safety factor of 1.2, at normal pool level with steady seepage saturation conditions.

G) The actual constructed height of the embankment will be a minimum of five (5%) percent higher than the design height to allow for settling over the life of the embankment.

H) All basins will have a minimum of 1.5 feet of freeboard between the normal overflow and the emergency spillway and a minimum 1.5 feet of freeboard between the height of the maximum design flow and the top of the dam anticipated from a 25 Year - 24 Hour precipitation event.

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS (continued)

I) For embankments constructed as point source discharges, the embankment will be constructed and abutments keyed into undisturbed, virgin, ground if at all possible. In the event that this cannot be achieved, additional design and construction specifications will be submitted in the Detailed Basin Design Plans.

J) The embankment and all areas disturbed in the construction of the embankment will be seeded with a mixture of perennial and annual grasses, fertilized and mulched to prevent erosion and ensure re-stabilization. Hay dams, silt fences, and rock check dams, etc. will be installed, where deemed necessary, as additional erosion prevention methods.

2. DISCHARGE STRUCTURE REQUIREMENTS

A) The primary spillway will be designed to adequately carry the anticipated peak runoff from a 25 Year - 24 Hour precipitation event. The combination primary and secondary (emergency) spillway system will be designed to safely carry the anticipated peak runoff from a 25 Year - 24 Hour precipitation event. When sediment basins are proposed in the drainage course of a public water supply, the spillway system will be designed and constructed to adequately carry the runoff from a 50 Year - 24 Hour precipitation event. The emergency spillway in the control section will be at least 20 feet in length; the side slopes will be no steeper than 2:1, and the percent slope from the entrance to the exit section of the emergency spillwaywill be no greater than that stated in the design plans.

B) Channel linings, for single channel spillway systems, will be riprap or concrete.

C) When consisting of pipe, the primary spillway will be installed according to Class “C” pipe installation for embankment bedding. Where exposed above ground along the backslope of the embankment, the pipe will have an anti-seep collar installed at each joint of the discharge pipe to radiate at least two (2) feet from the pipe in all directions.

D) Sediment basins with a single spillway system, such as a skimmer board, will be a trapezoidal open channel constructed in consolidated, non-erodible material and lined with riprap, concrete, asphalt or durable rock.

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS (continued)

E) The primary spillway will be designed and constructed with a device to eliminate floating solids from leaving the impoundment. This device will consist of a turned down elbow when using pipe or a skimmer system when using an open channel spillway.

F) When necessary, to prevent erosion of the embankment or discharge area, a splash pad of riprap, durable rock, saccrete, etc. will be installed at the discharge end of the primary spillway.

G) The combined spillway systems, for sediment basins constructed in series, will be designed to adequately accommodate the entire drainage area.

3. INSPECTION, MAINTENANCE AND CERTIFICATION REQUIREMENTS

A) Inspections will be conducted regularly during construction of the sediment basin by a qualified registered professional engineer or other qualified person under the direction of a professional engineer. Upon completion of construction, the sediment basin will be certified, by a qualified registered professional engineer, to the Regulatory Authority as having been constructed in accordance with the approved detailed design plans.

B) Sediment basins will be inspected semi-monthly for erosion, instability, etc., until the removal of the structure or an NPDES Permit is no longer required at this site.

C) Sediment basins will be examined quarterly for structural weakness, instability, erosion, slope failure, or other hazardous conditions.

D) If during the above-described periodic inspections, it is determined that there exist signs of structural weakness, instability, erosion, slope failure, improper functioning, or other hazardous conditions, these will be repaired immediately.

E) Standard anticipated maintenance will include repairing rills and gullies, repairing slope failures, re-seeding areas of failed or scarce vegetation, cleaning out or removing debris obstructing pipes and/or spillways to allow proper functioning, etc. Standard maintenance discovered during the above-described periodic inspections will be performed immediately. Hazardous conditions observed during inspections will be reported immediately to the Regulatory Authority for furthers consultation or instructions.

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS (continued)

F) Retained sediment will be removed from each sediment basin when the accumulated sediment reaches sixty (60%) percent of its design capacity.

4. BASIN REMOVAL REQUIREMENTS

A) Upon completion of mining, reclamation, restabilization and effluent standards being met, the operator will submit to ADEM a request in writing to abandon, remove, or permanently leave the sediment basin(s) and measures that will be taken to comply with applicable ADEM regulations.

B) Once the operator has received approval from ADEM, each sediment basin not proposed as a permanent water impoundment will be de-watered in a controlled manner by either pumping or siphoning. Upon successful dewatering, a determination will be made as to the retained sediment level in the basin. After determining the retained sediment level, a channel will be cut into the embankment down to the retained sediment level on the side of the embankment deemed most suitable to reach natural ground without encountering prohibiting rock. The embankment material removed from this newly constructed channel will be spread and compacted over the previous impoundment (wet area) area to prevent erosion and ensure re-stabilization. The newly constructed channel will be of adequate width (minimum 30 feet) and sloped to a grade (approximately 1% to 3%) which will cause all surface drainage to travel across this area in sheet flow, minimizing the possibility of erosion. Also, where necessary, hay dams will be installed in strategic locations across the width of the channel to retain sediment and slow the water velocity to a favorable rate. Upon removal of the embankment section, all disturbed areas will be graded in such a manner to ensure slope stability, successful re-stabilization and to minimize erosion. All disturbed areas will be seeded with a mixture of annual and perennial grasses fertilized and mulched. No slope, existing or created in the removal of the sediment basin, will be left on a grade that will slip or slough.

5. PERMANENT WATER IMPOUNDMENT REQUIREMENTS

A) All sediment basins remaining as permanent water impoundments will have supplemental data submitted to the Regulatory Authority concerning water quality, water quantity, size, depth, configuration, postmining land use, etc.

B) Final grading slopes of the entire permanent water impoundment area will not exceed a slope of 2 Horizontal to 1 Vertical to provide for safety and access for future waterusers.

APPENDIX B

DIVERSION DITCH CONSTRUCTION SPECIFICATIONS

DIVERSION DITCH AND DIVERSION BERM DESIGN AND CONSTRUCTION SPECIFICATIONS

1) Temporary diversions will be designed and constructed to adequately carry the runoff from a 2-Year - 6 Hour precipitation event.

2) Permanent diversions will be designed and constructed to adequately carry the runoff from a 10 Year - 6 Hour precipitation event.

3) Permanent diversions will be designed and constructed with gently sloping banks stabilized with appropriate vegetation.

4) All diversions will be designed, constructed and maintained, using the best technology currently available, whereas additional contribution of suspended solids to stream-flow and to runoff outside the permit area is prevented.

5) Maintenance of appropriate gradient, channel lining, revegetation, roughness structures, detention basins, etc. will be used, when necessary, as sediment control measures for these diversions.

6) Diversions will not be constructed on existing landslides nor be located so as to increase the potential for landslides.

7) Temporary diversions will be removed and the affected area regarded, topsoiled (if required) and revegetated when no longer needed.

8) Channel linings, for diversions with slopes of five (5%) percent or less, will consist of a mixture of both annual and perennial grasses being predominantly fescue and bermuda. Channel linings, for diversions with slopes greater than five (5%) percent, will consist of riprap or other non-erodible material or cut into non-erodible material.

9) Adequate freeboard will be provided for protection for transition of flows and critical areas such as swells and curves along the entire diversion length.

10) At discharge points, where diversions intersect with natural streams or exit velocities of the diversion are greater than that of the receiving streams, energy dissipaters will be installed when deemed necessary.

DIVERSION DITCH AND DIVERSION BERM DESIGN AND CONSTRUCTION SPECIFICATIONS (continued)

11) Excess material excavated in the construction of the diversion, not needed for diversion channel geometry or the re-grading of the channel; will be disposed of in the mining pit.

12) Diversions will not be designed or constructed to divert water into underground mines without written approval from the Regulatory Authority.

13) The entire area in which a diversion berm is proposed will be cleared and grubbed of all organic material, scarified, and no surface slopes will be left steeper than 1V:1H.

14) Diversion berms will be constructed with desirable material, free of sod, stones, roots, limbs, etc. over six (6") inches in diameter. This material will be spread in layers no greater than twelve (12") inches in thickness and compacted to ninety-five (95%) percent of the standard proctor density, as outlined in ASTM, until the design height is reached.

15) Upon completion of construction of diversion ditches or diversion berms, all disturbed areas will be seeded with a mixture of both annual and perennial grasses, fertilized, and mulched in order to minimize erosion and ensure re-stabilization.

16) All diversions (berms or ditches) will be examined quarterly for erosion, instability, structural weakness, or other hazardous conditions and maintenance performed as necessary.

APPENDIX C

SILT FENCE DESIGN AND CONSTRUCTION SPECIFICATIONS

SILT FENCE DESIGN AND CONSTRUCTION SPECIFICATIONS

1) Mesh height - 3'0" including 6" trench flap.

2) Prefabricated with 4 1/2" long treated hardwood stakes spaced on 7'7" centers.

3) Mesh opening - Equivalent Opening Size (E.O.S.) by U.S. Standard sieve measure (ASTM D4751-87) is 20-30 mesh.

4) Allowable Flow Rate - 40 gallon per minute per square foot (Test Method CFMC GET-2).

5) Maximum Particle Size Passing - 0.595 millimeter.

6) Mullein Burst Strength - 210 pounds per square inch (ASTM D- 3786-80).

7) Grab Strength - 120 pounds per square inch.

8) Maximum Elongation - 30 percent (ASTM D-1682-64).

9) The silt fence will be installed by initially cutting a trench approximately six (6") inches wide by six (6") inches deep, along the contour for the entire length of the fence. Upon completion of the trench, the silt fence will be stretched alongside the trench with the treated hardwood stakes being driven into the ground approximately two (2') feet deep against the upper wall of the trench. The six (6") inch trench flap will then be laid along the bottom of the trench and covered with compacted fill material. (See Attached Typical Section)

10) Prior to the removal of the silt fence, any silt or sediment retained by the silt fence will be seeded with a mixture of both annual and perennial grasses, fertilized and mulched.

APPENDIX D

PRIMARY HAUL ROAD

DESIGN AND CONSTRUCTION SPECIFICATIONS

DESIGN, CONSTRUCTION, MAINTENANCE, AND RECLAMATION SPECIFICATIONS FOR PRIMARY ROADS

1. LOCATION

A) Primary roads will be located on ridges or high areas or on the most stable available slopes so as to control and prevent erosion, siltation, flooding, and adverse impacts to fish and wildlife, or their habitat and related environmental values, to the extent possible.

B) No part of any primary road will be located in the channel of an intermittent or perennial stream without written approval from the Regulatory Authority.

C) If at all possible, all primary roads will be located upstream of sediment basins to prevent, control and minimize additional contributions of suspended solids to stream flow or runoff outside the permit area, the violation of applicable State or Federal water quality standards, seriously altering the normal flow of water in stream-beds or drainage channels, and damage to all public or private property.

D) In instances where it is not possible to locate primary roads in the above manner, sediment control will be achieved by the use of silt fences, rock check dams, hay bale berms, etc.

2. DESIGN REQUIREMENTS

A) Primary roads will be designed by or under the direct supervision of a qualified registered Professional Engineer experienced in the design and construction of roads, in accordance with the ADEM rules and regulations, and current, prudent engineering practices. No Primary Road grade will be steeper than fifteen (15) percent.

B) All primary roadway embankments will be designed and constructed to be stable under normal construction and operating conditions, with a minimum static safety factor of 1.3.

C) All primary roads will be designed, constructed, reconstructed and maintained to have adequate drainage control structures to safely pass the peak runoff anticipated from a 10-year, 6-hour precipitation event.

3. CONSTRUCTION REQUIREMENTS

A) The foundation area of the roadbed will be cleared and grubbed of all organic material and the topsoil will be removed. The disturbed area will be kept to the minimum necessary to accommodate the roadbed and/or associated drainage ditch construction.

B) The road construction material will be suitable subgrade material, free of sod, roots, stumps, etc., and will not contain rocks which exceed twelve (12) inches in diameter. The road construction material will be placed in layers (12-inch maximum thickness) and compacted to ninety-five (95%) percent of the standard proctor density, as set forth in ASTM.

C) The minimum top width of primary roads will under no circumstance be less than sixteen (16) feet and will be of maximum width necessary to facilitate the largest equipment using the road.

D) All slopes (cut and fill) will be no steeper than 2 horizontal to 1 vertical, unless specified otherwise in the detailed design.

E) Roadbeds will be cut into consolidated, non-erodible material or will be surfaced with durable, non-toxic, non-acid forming material. In most instances, durable sandstone overburden material from the mine site will be used for surfacing material. In instances where durable sandstone overburden material from the site is not available or suitable, then durable, non-toxic, non-acid forming material, such as chert, crushed sandstone, redrock, and/or crushed sandstone will be hauled in from off site, placed and compacted on the roadbed surface a minimum depth of four (4) inches.

F) Primary roads will be constructed with grades no steeper than fifteen (15) percent for no more than 300’.

4. DRAINAGE AND SEDIMENT CONTROL REQUIREMENTS

A) Primary roads will be constructed, reconstructed, and maintained to have adequate drainage control, using structures such as, but not limited to bridges, culverts, drainage pipes, ditches, cross drains, and ditch relief drains designed to safely pass the peak runoff anticipated from a 10-year, 6-hour precipitation event. All drainage control structures will be designed and constructed in such a manner whereas, to allow a free and operating conditions to prevent, control, and minimize erosion at the inlets and outlets.

B) Culverts and drainage pipes will be designed and installed to provide adequate support for the load of the largest equipment using the road. For design purposes, "H-20" (live load + impact) was used. All culverts or drainage pipes with diameters of forty-eight (48) inches or less will be covered with a minimum of one (1) foot and the maximum cover

will not exceed fifty-seven (57) feet of desirable compacted material. All culverts or drainage pipes with diameters greater than forty- eight (48) inches will be covered with a minimum of two (2) feet and the maximum cover will not exceed forty-one (41) feet of desirable compacted material.

C) Culverts and drainage pipes will be designed and installed to allow adequate freeboard to prevent overtopping of the embankment.

D) Drainage ditches, cross drains, and ditch relief drains will be constructed and maintained to prevent uncontrolled surface drainage over the road surface and roadway embankment.

E) Drainage ditches will be constructed with no sustained grades greater than five (5%) percent, unless unavoidable. If ditches must be constructed with grades in excess of five (5%) percent, drainage ditches will be lined with riprap.

F) Sediment control will be achieved by the use of silt fences, rock check dams, hay bale berms, etc. in strategic locations, to prevent excessive siltation to the receiving streams.

G) Upon completion of construction of all roads, the side slopes of the roadway cut and fill sections, including all borrow areas formed in the construction, areas used for disposal of excess material, ditches, etc. will be seeded with a mixture of perennial and annual grasses, fertilized and mulched to prevent erosion and ensure restabilization. Grass mixtures will include, but not be limited to, fescue, bermuda, rye grass, browntop millet, clover and sericea.

5. INSPECTION AND MAINTENANCE REQUIREMENTS

A) Routine inspections and maintenance (such as re-grading, resurfacing, maintenance of sediment control structures, spot replanting, and dust control) will be conducted regularly during the life of each road to assure that each road continually meets design and performance standards.

B) Dust control will be achieved by the periodic application of water, chemical binders and/or other dust suppressants.

C) Any road damaged by a catastrophic event, such as a flood, or earthquake, will be repaired as soon as it is practicable after the damage has occurred.

6. REMOVAL AND RECLAMATION REQUIREMENTS

A) All primary roads that are not mined through and remain after the completion of mining may be left as permanent roads for landowner access, if there is no opposition by said landowner.

B) All primary roads that are not mined through and remain after the completion of mining which are not to be retained as permanent for landowner access will be removed and reclaimed as soon as practicable after it is no longer needed for mining and reclamation purposes. This removal and reclamation will include:

1. Closing the road to traffic.

2. Removing all bridges, culverts, drainage pipes, and other drainage control structures, unless otherwise approved as part of the postmining land use.

3. Removing and/or otherwise disposing of road surfacing materials, that are not compatible with the postmining land use and re-vegetation requirements, onsite or removed and stored for re-use.

4. Reshaping and re-grading cut and fill slopes as necessary to be compatible with the postmining land use and to compliment the natural drainage pattern of the surrounding terrain.

5. Protecting the natural drainage patterns by installing dikes or cross drains as necessary to control surface runoff and erosion.

6. Scarifying or ripping the roadbed, replacing topsoil or substitute material, and revegetating the entire disturbed area.

8. TYPICAL ROADBED CONFIGURATION

A) See attached drawings, cross-sections, etc., for an illustration of the typical roadbed configurations.

APPENDIX E

PROPOSED SEDIMENT BASINS

CONSTRUCTION REQUIREMENTS

SEDIMENT BASIN 001

Drainage Area: 67 Acres
Disturbed Area: 65 Acres
Primary/Emergency Spillway: 15’ Wide Concrete Lined Trapezoidal Channel
Sediment Volume: 10.46 Acre-Feet
Detention Volume: 6.35 Acre-Feet
Normal Pool Volume: 16.81 Acre-Feet

See Exhibit “G” - Detailed Design Plans for Sediment Basin 001.

SEDIMENT BASIN 002

Drainage Area: 71 Acres
Disturbed Area: 69 Acres
Primary/Emergency Spillway: 20’ Wide Concrete Lined Trapezoidal Channel
Sediment Volume: 10.72 Acre-Feet
Detention Volume: 7.15 Acre-Feet
Normal Pool Volume: 17.87 Acre-Feet

See Exhibit “G” - Detailed Design Plans for Sediment Basin 002.

SEDIMENT BASIN 003

Drainage Area: 39 Acres
Disturbed Area: 37 Acres
Primary/Emergency Spillway: 20’ Wide Concrete Lined Trapezoidal Channel
Sediment Volume: 5.62 Acre-Feet
Detention Volume: 3.74 Acre-Feet
Normal Pool Volume: 9.36 Acre-Feet

See Exhibit “G” - Detailed Design Plans for Sediment Basin 003.

SEDIMENT BASIN 004

Drainage Area: 9 Acres
Disturbed Area: 8 Acres
Primary/Emergency Spillway: 12’ Wide Concrete Lined Trapezoidal Channel
Sediment Volume: 1.67 Acre-Feet
Detention Volume: 0.92 Acre-Feet
Normal Pool Volume: 2.59 Acre-Feet

See Exhibit “G” - Detailed Design Plans for Sediment Basin 004.

SEDIMENT BASIN 005

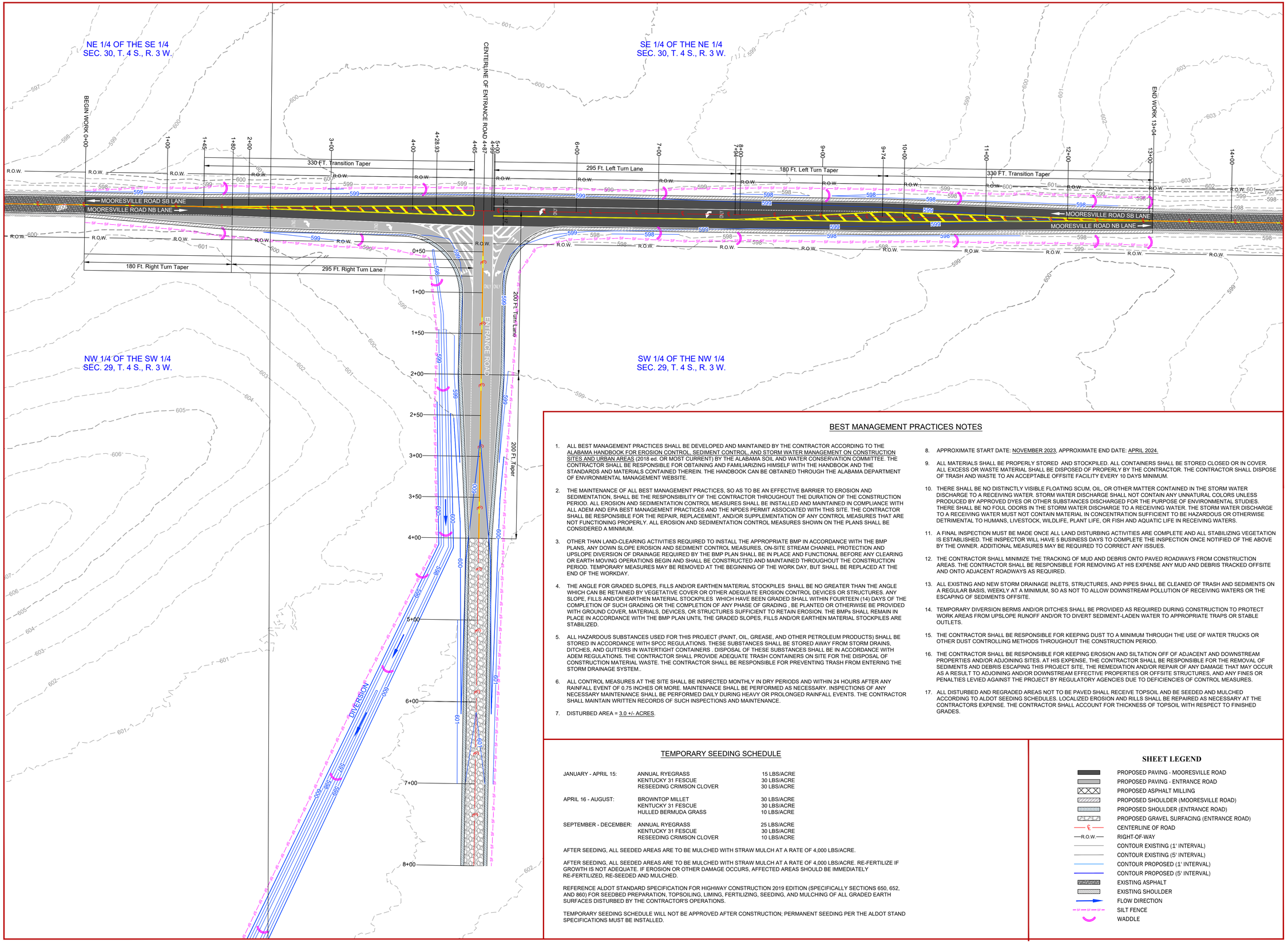
Drainage Area: 19 Acres
Disturbed Area: 18 Acres
Primary/Emergency Spillway: 12’ Wide Concrete Lined Trapezoidal Channel
Sediment Volume: 2.70 Acre-Feet
Detention Volume: 1.80 Acre-Feet
Normal Pool Volume: 4.50 Acre-Feet

See Exhibit “G” - Detailed Design Plans for Sediment Basin 005.

APPENDIX F

QUARRY ENTRANCE ROAD

EXCERPT FROM DESIGN PLAN



BEST MANAGEMENT PRACTICES NOTES

1. ALL BEST MANAGEMENT PRACTICES SHALL BE DEVELOPED AND MAINTAINED BY THE CONTRACTOR ACCORDING TO THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL, AND STORM WATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS (2018 ed. OR MOST CURRENT) BY THE ALABAMA SOIL AND WATER CONSERVATION COMMITTEE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND FAMILIARIZING HIMSELF WITH THE HANDBOOK AND THE STANDARDS AND MATERIALS CONTAINED THEREIN. THE HANDBOOK CAN BE OBTAINED THROUGH THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT WEBSITE.
2. THE MAINTENANCE OF ALL BEST MANAGEMENT PRACTICES, SO AS TO BE AN EFFECTIVE BARRIER TO EROSION AND SEDIMENTATION, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGHOUT THE DURATION OF THE CONSTRUCTION PERIOD. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN COMPLIANCE WITH ALL ADEM AND EPA BEST MANAGEMENT PRACTICES AND THE NPDES PERMIT ASSOCIATED WITH THIS SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR, REPLACEMENT, AND/OR SUPPLEMENTATION OF ANY CONTROL MEASURES THAT ARE NOT FUNCTIONING PROPERLY. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHOWN ON THE PLANS SHALL BE CONSIDERED A MINIMUM.
3. OTHER THAN LAND-CLEARING ACTIVITIES REQUIRED TO INSTALL THE APPROPRIATE BMP IN ACCORDANCE WITH THE BMP PLANS, ANY DOWN SLOPE EROSION AND SEDIMENT CONTROL MEASURES, ON-SITE STREAM CHANNEL PROTECTION AND UPSLOPE DIVERSION OF DRAINAGE REQUIRED BY THE BMP PLAN SHALL BE IN PLACE AND FUNCTIONAL BEFORE ANY CLEARING OR EARTH MOVING OPERATIONS BEGIN AND SHALL BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY, BUT SHALL BE REPLACED AT THE END OF THE WORKDAY.
4. THE ANGLE FOR GRADED SLOPES, FILLS AND/OR EARTHEN MATERIAL STOCKPILES SHALL BE NO GREATER THAN THE ANGLE WHICH CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. ANY SLOPE, FILLS AND/OR EARTHEN MATERIAL STOCKPILES WHICH HAVE BEEN GRADED SHALL WITHIN FOURTEEN (14) DAYS OF THE COMPLETION OF SUCH GRADING OR THE COMPLETION OF ANY PHASE OF GRADING , BE PLANTED OR OTHERWISE BE PROVIDED WITH GROUND COVER, MATERIALS, DEVICES, OR STRUCTURES SUFFICIENT TO RETAIN EROSION. THE BMPs SHALL REMAIN IN PLACE IN ACCORDANCE WITH THE BMP PLAN UNTIL THE GRADED SLOPES, FILLS AND/OR EARTHEN MATERIAL STOCKPILES ARE STABILIZED.
5. ALL HAZARDOUS SUBSTANCES USED FOR THIS PROJECT (PAINT, OIL, GREASE, AND OTHER PETROLEUM PRODUCTS) SHALL BE STORED IN ACCORDANCE WITH SPCC REGULATIONS. THESE SUBSTANCES SHALL BE STORED AWAY FROM STORM DRAINS, DITCHES, AND GUTTERS IN WATERTIGHT CONTAINERS . DISPOSAL OF THESE SUBSTANCES SHALL BE IN ACCORDANCE WITH ADEM REGULATIONS. THE CONTRACTOR SHALL PROVIDE ADEQUATE TRASH CONTAINERS ON SITE FOR THE DISPOSAL OF CONSTRUCTION MATERIAL WASTE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING TRASH FROM ENTERING THE STORM DRAINAGE SYSTEM..
6. ALL CONTROL MEASURES AT THE SITE SHALL BE INSPECTED MONTHLY IN DRY PERIODS AND WITHIN 24 HOURS AFTER ANY RAINFALL EVENT OF 0.75 INCHES OR MORE. MAINTENANCE SHALL BE PERFORMED AS NECESSARY. INSPECTIONS OF ANY NECESSARY MAINTENANCE SHALL BE PERFORMED DAILY DURING HEAVY OR PROLONGED RAINFALL EVENTS. THE CONTRACTOR SHALL MAINTAIN WRITTEN RECORDS OF SUCH INSPECTIONS AND MAINTENANCE.
7. DISTURBED AREA = 3.0 +/- ACRES.
8. APPROXIMATE START DATE: NOVEMBER 2023, APPROXIMATE END DATE: APRIL 2024.
9. ALL MATERIALS SHALL BE PROPERLY STORED AND STOCKPILED. ALL CONTAINERS SHALL BE STORED CLOSED OR IN COVER. ALL EXCESS OR WASTE MATERIAL SHALL BE DISPOSED OF PROPERLY BY THE CONTRACTOR. THE CONTRACTOR SHALL DISPOSE OF TRASH AND WASTE TO AN ACCEPTABLE OFFSITE FACILITY EVERY 10 DAYS MINIMUM.
10. THERE SHALL BE NO DISTINCTLY VISIBLE FLOATING SCUM, OIL, OR OTHER MATTER CONTAINED IN THE STORM WATER DISCHARGE TO A RECEIVING WATER. STORM WATER DISCHARGE SHALL NOT CONTAIN ANY UNNATURAL COLORS UNLESS PRODUCED BY APPROVED DYES OR OTHER SUBSTANCES DISCHARGED FOR THE PURPOSE OF ENVIRONMENTAL STUDIES. THERE SHALL BE NO FOUL ODORS IN THE STORM WATER DISCHARGE TO A RECEIVING WATER. THE STORM WATER DISCHARGE TO A RECEIVING WATER MUST NOT CONTAIN MATERIAL IN CONCENTRATION SUFFICIENT TO BE HAZARDOUS OR OTHERWISE DETRIMENTAL TO HUMANS, LIVESTOCK, WILDLIFE, PLANT LIFE, OR FISH AND AQUATIC LIFE IN RECEIVING WATERS.
11. A FINAL INSPECTION MUST BE MADE ONCE ALL LAND DISTURBING ACTIVITIES ARE COMPLETE AND ALL STABILIZING VEGETATION IS ESTABLISHED. THE INSPECTOR WILL HAVE 5 BUSINESS DAYS TO COMPLETE THE INSPECTION ONCE NOTIFIED OF THE ABOVE BY THE OWNER. ADDITIONAL MEASURES MAY BE REQUIRED TO CORRECT ANY ISSUES.
12. THE CONTRACTOR SHALL MINIMIZE THE TRACKING OF MUD AND DEBRIS ONTO PAVED ROADWAYS FROM CONSTRUCTION AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AT HIS EXPENSE ANY MUD AND DEBRIS TRACKED OFFSITE AND ONTO ADJACENT ROADWAYS AS REQUIRED.
13. ALL EXISTING AND NEW STORM DRAINAGE INLETS, STRUCTURES, AND PIPES SHALL BE CLEANED OF TRASH AND SEDIMENTS ON A REGULAR BASIS, WEEKLY AT A MINIMUM, SO AS NOT TO ALLOW DOWNSTREAM POLLUTION OF RECEIVING WATERS OR THE ESCAPING OF SEDIMENTS OFFSITE.
14. TEMPORARY DIVERSION BERMS AND/OR DITCHES SHALL BE PROVIDED AS REQUIRED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING DUST TO A MINIMUM THROUGH THE USE OF WATER TRUCKS OR OTHER DUST CONTROLLING METHODS THROUGHOUT THE CONSTRUCTION PERIOD.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING EROSION AND SILTATION OFF OF ADJACENT AND DOWNSTREAM PROPERTIES AND/OR ADJOINING SITES. AT HIS EXPENSE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF SEDIMENTS AND DEBRIS ESCAPING THIS PROJECT SITE, THE REMEDIATION AND/OR REPAIR OF ANY DAMAGE THAT MAY OCCUR AS A RESULT TO ADJOINING AND/OR DOWNSTREAM EFFECTIVE PROPERTIES OR OFFSITE STRUCTURES, AND ANY FINES OR PENALTIES LEVIED AGAINST THE PROJECT BY REGULATORY AGENCIES DUE TO DEFICIENCIES OF CONTROL MEASURES.
17. ALL DISTURBED AND REGRADED AREAS NOT TO BE PAVED SHALL RECEIVE TOPSOIL AND BE SEEDED AND MULCHED ACCORDING TO ALDOT SEEDING SCHEDULES. LOCALIZED EROSION AND RILLS SHALL BE REPAIRED AS NECESSARY AT THE CONTRACTORS EXPENSE. THE CONTRACTOR SHALL ACCOUNT FOR THICKNESS OF TOPSOIL WITH RESPECT TO FINISHED GRADES.

TEMPORARY SEEDING SCHEDULE

JANUARY - APRIL 15:	ANNUAL RYEGRASS	15 LBS/ACRE
	KENTUCKY 31 FESCUE	30 LBS/ACRE
	RESEEDING CRIMSON CLOVER	30 LBS/ACRE
APRIL 16 - AUGUST:	BROWNTOP MILLET	30 LBS/ACRE
	KENTUCKY 31 FESCUE	30 LBS/ACRE
	HULLED BERMUDA GRASS	10 LBS/ACRE
SEPTEMBER - DECEMBER:	ANNUAL RYEGRASS	25 LBS/ACRE
	KENTUCKY 31 FESCUE	30 LBS/ACRE
	RESEEDING CRIMSON CLOVER	10 LBS/ACRE

AFTER SEEDING, ALL SEEDED AREAS ARE TO BE MULCHED WITH STRAW MULCH AT A RATE OF 4,000 LBS/ACRE.

AFTER SEEDING, ALL SEEDED AREAS ARE TO BE MULCHED WITH STRAW MULCH AT A RATE OF 4,000 LBS/ACRE. RE-FERTILIZE IF GROWTH IS NOT ADEQUATE. IF EROSION OR OTHER DAMAGE OCCURS, AFFECTED AREAS SHOULD BE IMMEDIATELY RE-FERTILIZED, RE-SEEDED AND MULCHED.

REFERENCE ALDOT STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION 2019 EDITION (SPECIFICALLY SECTIONS 650, 652, AND 860) FOR SEEDBED PREPARATION, TOPSOILING, LIMING, FERTILIZING, SEEDING, AND MULCHING OF ALL GRADED EARTH SURFACES DISTURBED BY THE CONTRACTOR'S OPERATIONS.

TEMPORARY SEEDING SCHEDULE WILL NOT BE APPROVED AFTER CONSTRUCTION; PERMANENT SEEDING PER THE ALDOT STAND SPECIFICATIONS MUST BE INSTALLED.

SHEET LEGEND

- PROPOSED PAVING - MOORESVILLE ROAD
- PROPOSED PAVING - ENTRANCE ROAD
- PROPOSED ASPHALT MILLING
- PROPOSED SHOULDER (MOORESVILLE ROAD)
- PROPOSED SHOULDER (ENTRANCE ROAD)
- PROPOSED GRAVEL SURFACING (ENTRANCE ROAD)
- CENTERLINE OF ROAD
- R.O.W. — RIGHT-OF-WAY
- CONTOUR EXISTING (1' INTERVAL)
- CONTOUR EXISTING (5' INTERVAL)
- CONTOUR PROPOSED (1' INTERVAL)
- CONTOUR PROPOSED (5' INTERVAL)
- EXISTING ASPHALT
- EXISTING SHOULDER
- FLOW DIRECTION
- SILT FENCE
- WADDLE

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PROJECT:
PROJECT CROSSROADS
MOORESVILLE ROAD - ENTRANCE ROAD
LIMESTONE COUNTY, AL
STONED, LLC

ALABAMA REGISTERED No. 35627 PROFESSIONAL ENGINEER 10/10/2023 ZAC MCGEHEE

SENIOR ENGINEER
C.W. McGehee, P.E.
PROJECT ENGINEER (DESIGN)
Zac McGehee, P.E.
PROJECT ENGINEER (CONSTRUCTION)
Brad Youngblood, P.E.

DATE	
INITIAL	**10-10-2023**
Rv. 1	
Rv. 2	
Rv. 3	

SHEET TITLE

QUARRY ENTRANCE ROAD EROSION AND SEDIMENT CONTROL MAP

SHEET NUMBER

13

21 OF 28

HORIZONTAL SCALE
50' 0 50'

VERTICAL SCALE
N/A 0 N/A

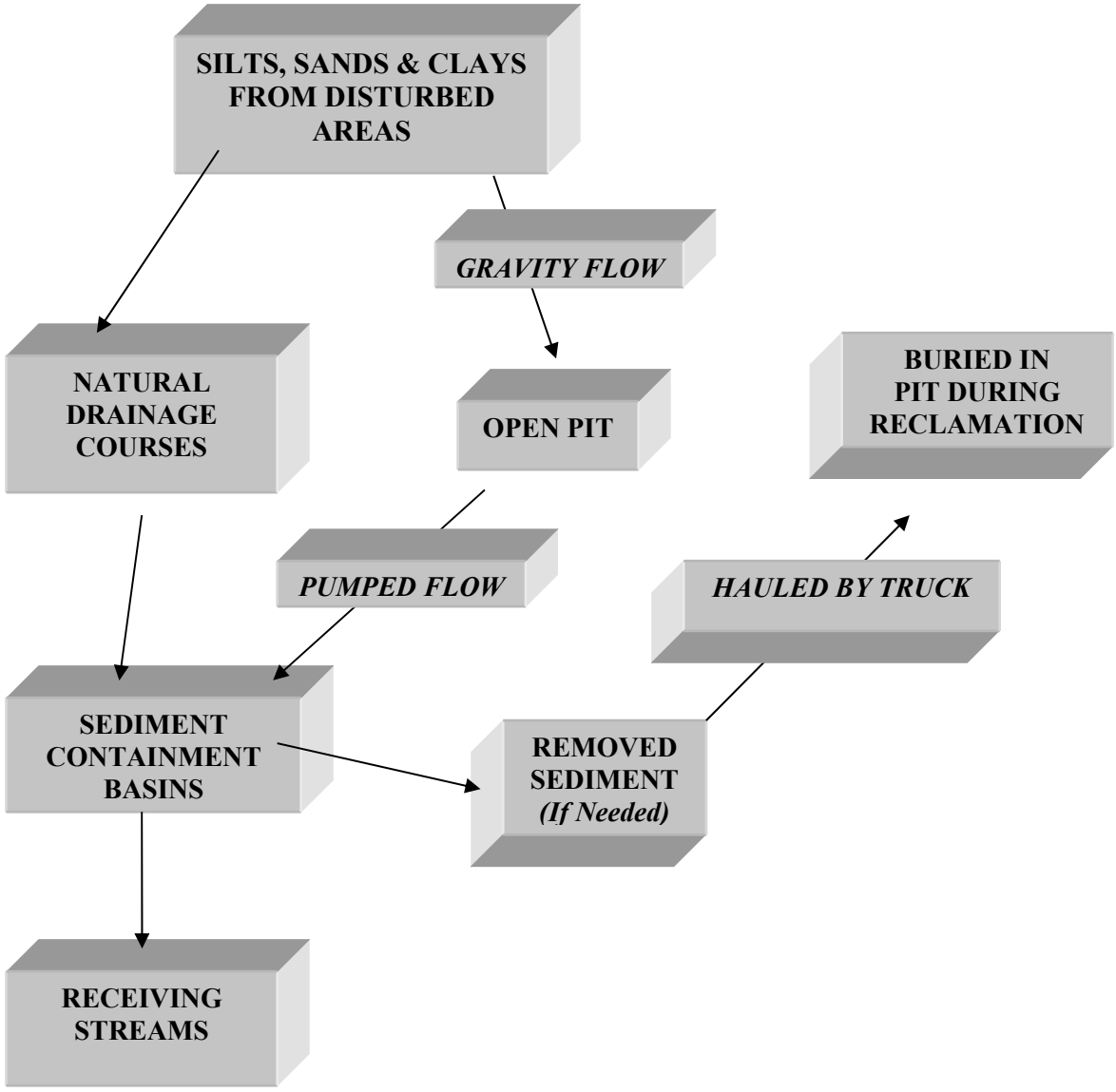
DESIGN CERTIFICATION STATEMENT

I, Jordan McGehee, a qualified Registered Professional Engineer, hereby certify that the above "Pollution Abatement Plan" was developed under my direct supervision and is true and correct to the best of my knowledge and belief.

MCGEHEE ENGINEERING CORP

Jordan McGehee, P.E.
Alabama Reg. No. 37129

10/10/23
Date



SCHEMATIC DIAGRAM OF WASTE CYCLE

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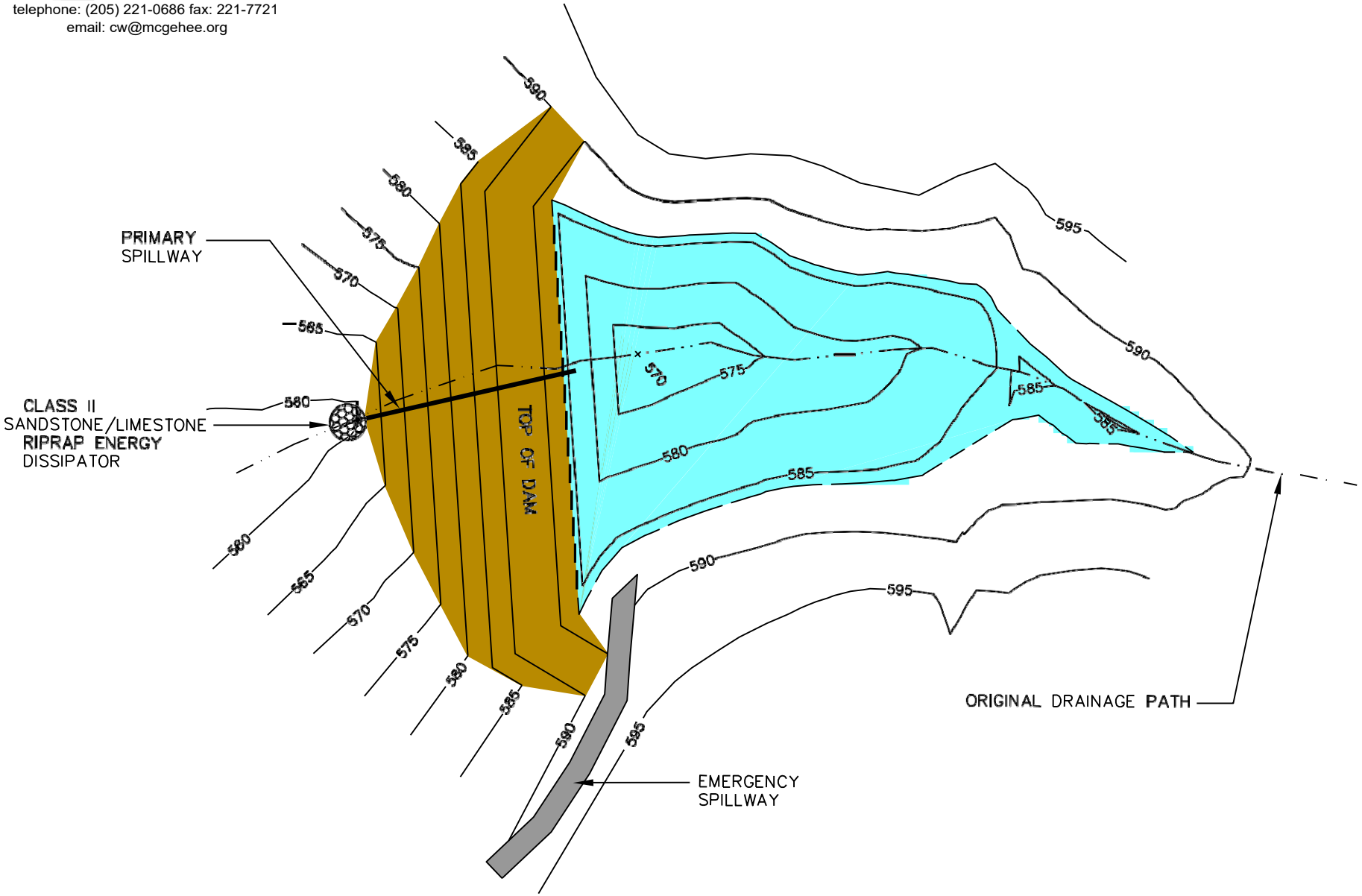
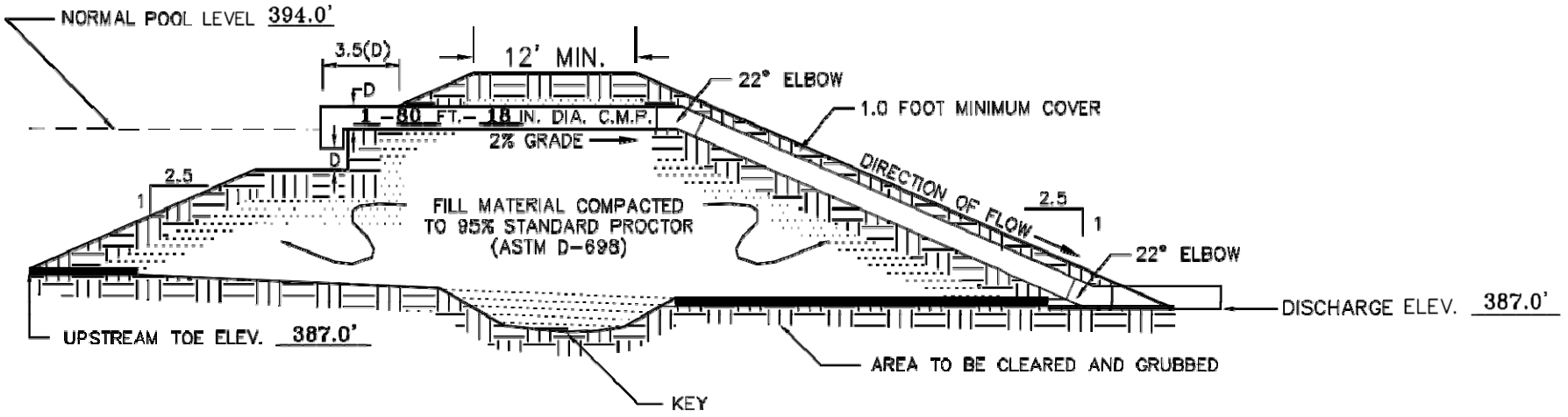
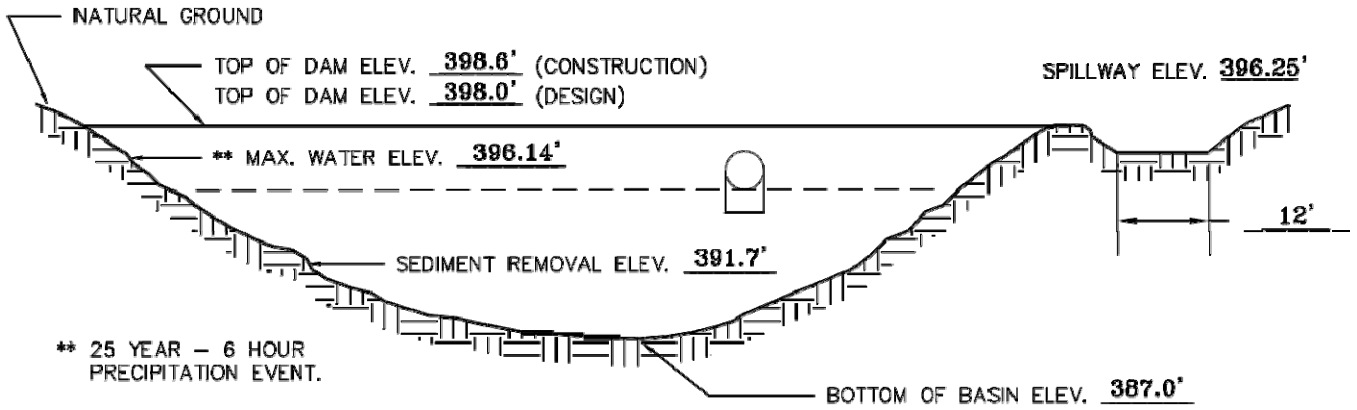
PLAN VIEW OF EMBANKMENT POND
TYPICAL DRAWING



TYPICAL EMBANKMENT CROSS-SECTION



TYPICAL IMPOUNDMENT PROFILE



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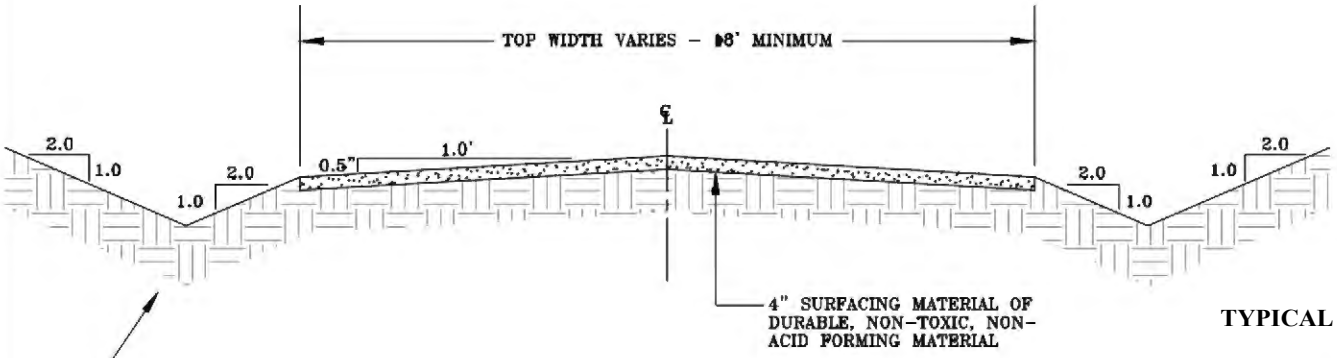
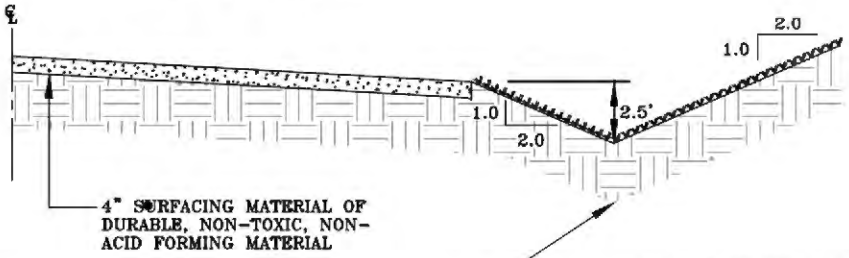
PRIMARY ROAD
TYPICAL CUT SECTION



PRIMARY ROAD
TYPICAL DRAINAGE DITCH CROSS-SECTION

MINIMUM DRY FREEBOARD: 0.5'
MAXIMUM FLOW DEPTH: 2.0'

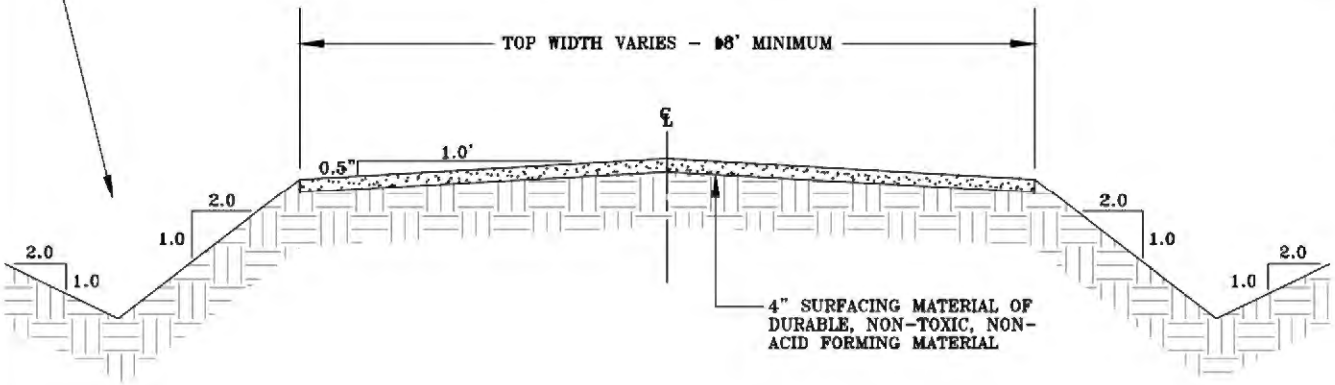


DRAINAGE DITCH TO BE LINED WITH GRASS MIXTURE. SEE SPECIFICATIONS. SEE DETAILED DESIGN PLANS FOR SPECIFIC DESIGN REQUIREMENTS.

MINIMUM GRADIENT: 0.5%
MAXIMUM GRADIENT: 10.0%

DRAINAGE DITCH TO BE LINED WITH GRASS MIXTURE. SEE SPECIFICATIONS. SEE DETAILED DESIGN PLANS FOR SPECIFIC DESIGN REQUIREMENTS.

PRIMARY ROAD
TYPICAL FILL SECTION



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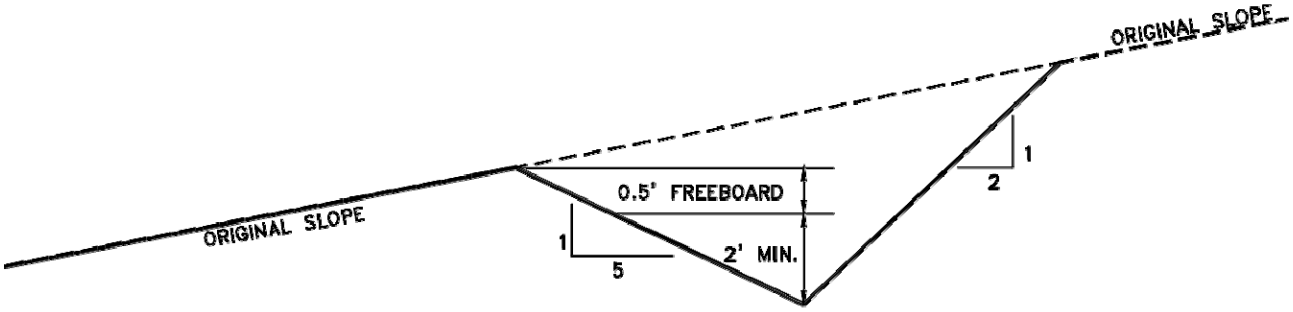
DIVERSION DITCH
TYPICAL CROSS-SECTION



DITCH PROTECTIVE LINER: GRASS MIXTURE, PREDOMINATELY BERMUDA AND FESCUE GRASSES.

CHANNEL BED SLOPE: 1.1% – 2.27%

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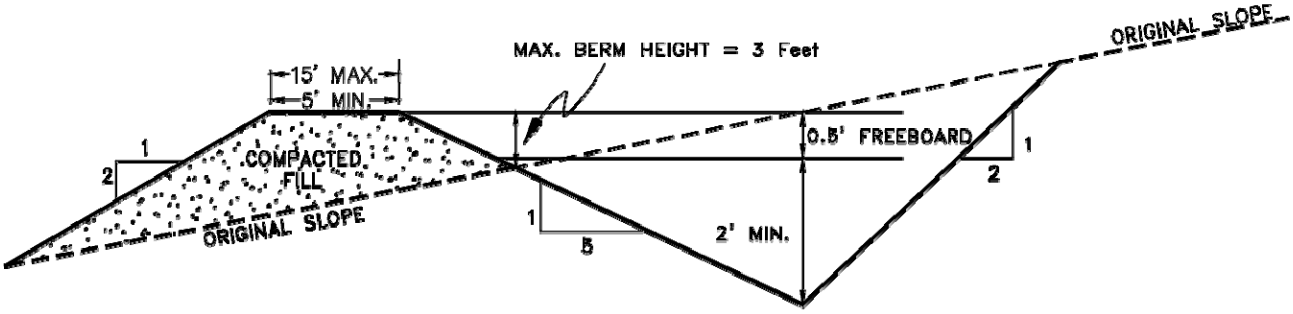
ATTACHMENT III-B-3

DIVERSION DITCH WITH BERM
TYPICAL CROSS-SECTION



DITCH PROTECTIVE LINER: GRASS MIXTURE, PREDOMINATELY BERMUDA AND FESCUE GRASSES.

DISCHARGE: 7.2 CFS
CHANNEL BED SLOPE: 2.0%

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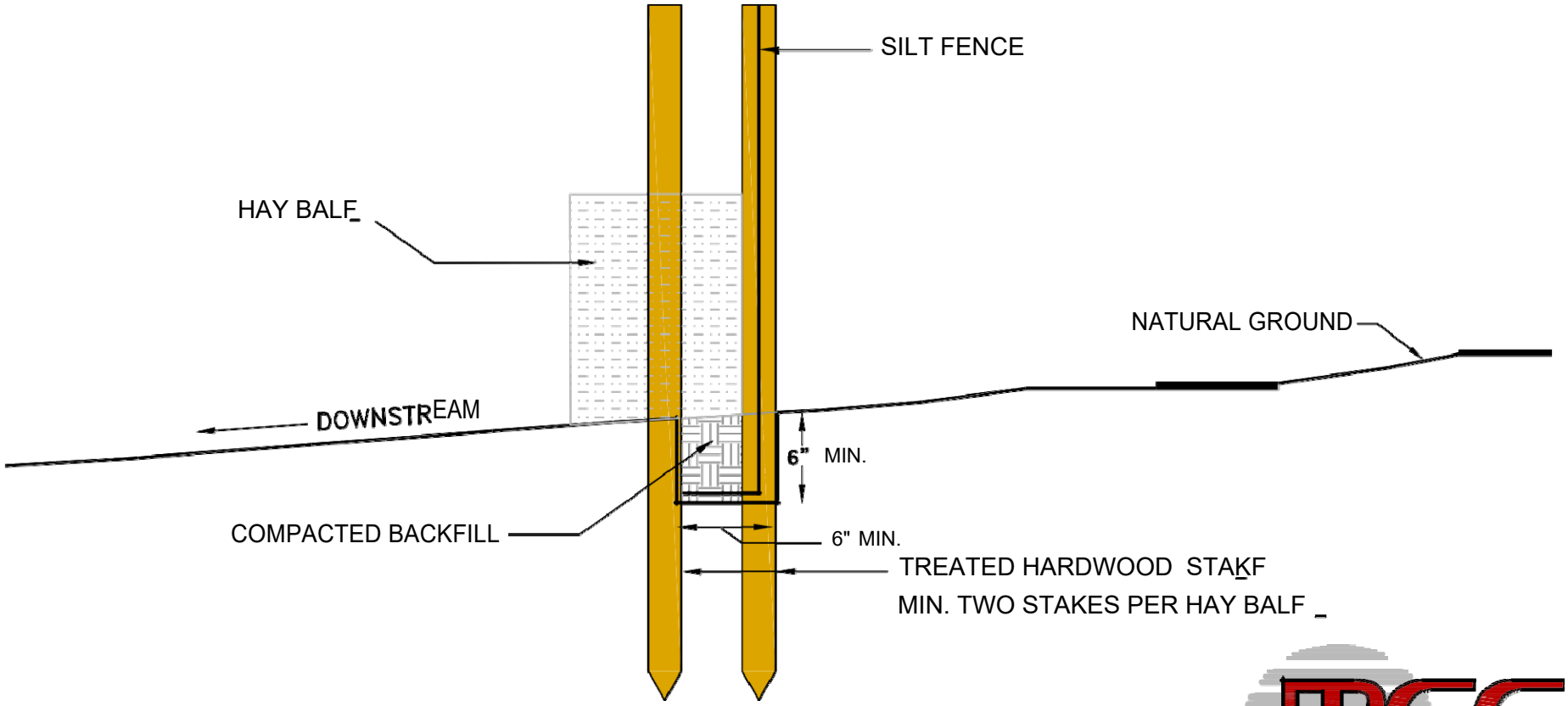
TYPICAL SILT FENCE CONSTRUCTION LAYOUT



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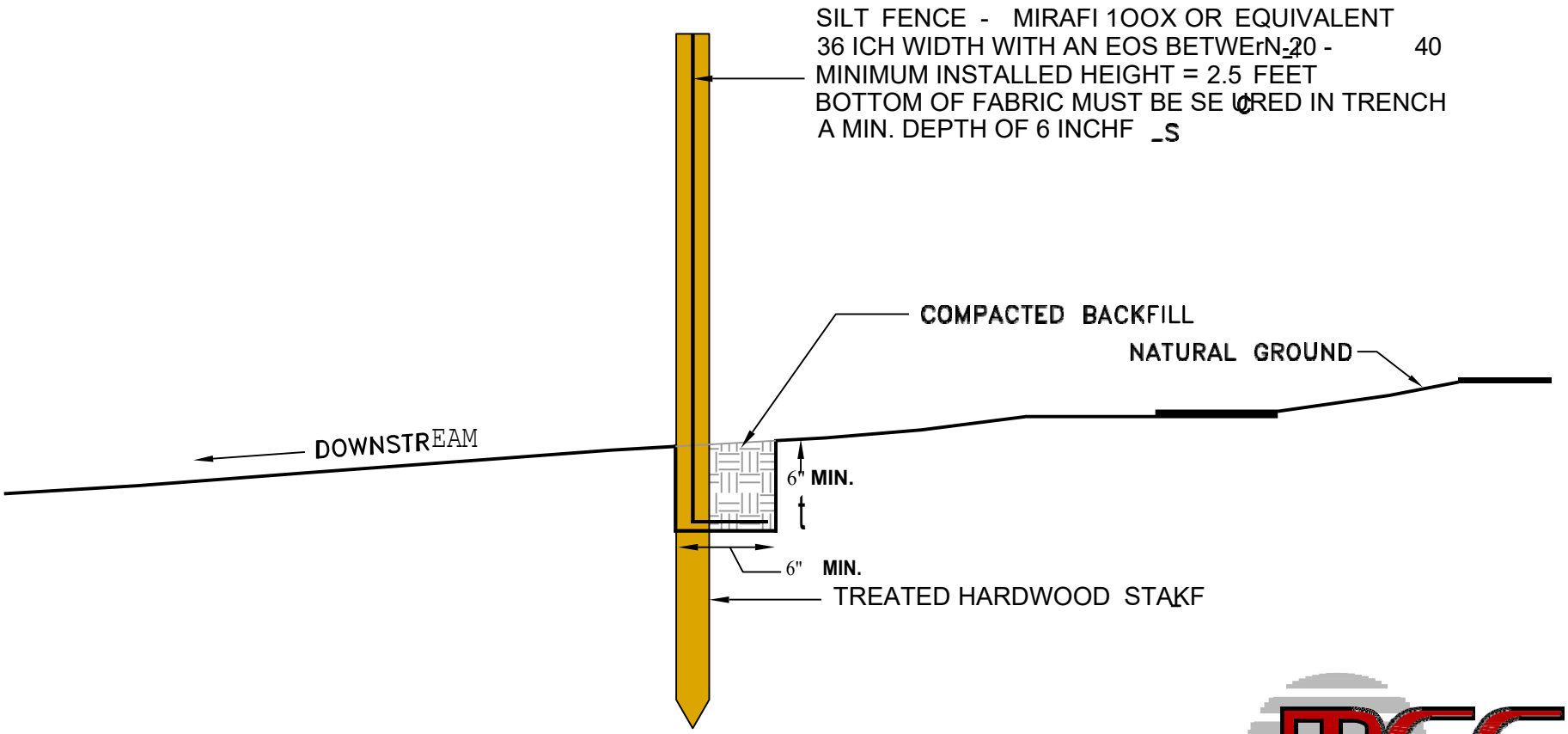
TYPICAL SILT FENCE
CONSTRUCTION LAYOUT



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telephone: (205) 221-0686 fax: 221-7721
email: cw@mcgehee.org

APPENDIX G

DETAILED SEDIMENT BASIN

DESIGN PLANS

October 9th, 2023

Mr. Robert Glover
Alabama Department of Environmental
1400 Coliseum Blvd.
Montgomery, AL 36110

RE: **Stoned LLC**
Project Crossroads

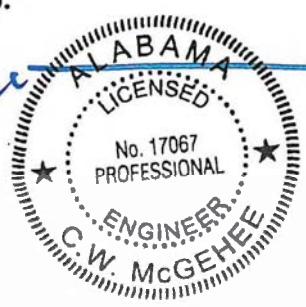
Dear Mr. Glover:

I hereby certify the enclosed detailed design plans for Sediment Basin 001, 002, 003, 004 and 005 for the above referenced quarry are in accordance with the Regulations of the Alabama Department of Environmental Management and that the information used in the enclosed basin design plans is true and correct to the best of my knowledge and belief.

If you have any questions or need additional information, please do not hesitate to contact our office.

Sincerely,

McGehee Engineering Corp.



C.W. McGehee, P.E.
Alabama Reg. No. 17067

Post Office Box 3431 • 450 19th St. West • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 • cw@mcgehee.org

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS

Sediment basins (temporary or permanent) will be designed and constructed using the following as minimum specifications:

1. EMBANKMENT REQUIREMENTS

A) The minimum width of the top of the embankment will under no circumstance be less than twelve (12) feet.

B) The embankment will have a minimum front and back slope no steeper than 3H:1V.

C) The foundation area of the embankment will be cleared and grubbed of all organic matter with no surface slope steeper than 1 horizontal to 1 vertical. The entire wet area, as measured from the upstream toe of the embankment to the normal pool level, will be cleared of trees and large brush.

D) A core of the embankment will be constructed in a cutoff trench along the centerline of the embankment. The cutoff trench will be a minimum of 8 feet wide. The cutoff trench will extend at least 2 feet into bedrock or impervious soil. The side slopes of the cutoff trench will be a no steeper than 1H:1V. The cutoff trench will be filled with impervious material, compacted to ninety-five (95%) percent of the standard proctor density, as set forth in ASTM.

E) The embankment construction material will be free of roots, tree debris, stumps, rocks, stones, etc., which exceed six (6") inches in diameter. The embankment material will be placed in layers of twelve (12") inches or less and compacted to ninety-five (95%) percent of the standard proctor density, as set forth in ASTM.

F) The design embankment height for impoundments that do not discharge into a PWS classified stream will be a minimum of 1.5 feet above the maximum water level anticipated from a 25 Year - 24 Hour precipitation event. The design embankment height for impoundments that discharge into a PWS classified stream will be a minimum of 1.5 feet above the maximum water level anticipated from a 50 Year - 24 Hour precipitation event.

G) The embankment and all areas disturbed in the construction of the embankment will be seeded with a mixture of perennial and annual grasses, fertilized and mulched to prevent erosion and ensure restabilization. Hay dams, silt fences, rock check dams, etc. will be installed, where deemed necessary, as additional erosion prevention methods.

2. DISCHARGE STRUCTURE REQUIREMENTS

A) The primary spillway (spillpipe) will be designed to adequately carry the anticipated peak runoff from a 1 Year - 24 Hour precipitation event. The combination primary and secondary (emergency) spillway system will be designed to safely carry the anticipated peak runoff from a 25 Year - 24 Hour precipitation event. When sediment basins are proposed in the drainage course of a public water supply, the spillway system will be designed and constructed to adequately carry the runoff from a 50 Year - 24 Hour precipitation event.

B) Secondary (emergency) spillways will be a trapezoidal open channel with side slopes no steeper than 2H:1V. Secondary (emergency) spillways will be at least 20 feet long. Secondary (emergency) spillways will be lined with riprap or concrete.

C) When consisting of pipe, the primary spillway will be installed according to Class "C" pipe installation for embankment bedding.

D) Sediment basins with a single spillway system, will be a trapezoidal open channel constructed in consolidated, nonerodible material and lined with concrete (See Detailed Design Plans for Spillway Lining).

E) To ensure subsurface withdrawal, the primary spillway will be designed and constructed with device to eliminate floating solids from leaving the impoundment. This device will consist of a tee or a turned down elbow when using pipe. This device will consist of a skimmer system or floating turbidity curtain when using an open channel spillway.

F) When necessary, to prevent erosion of the embankment or discharge area, a splash pad of rip-rap, durable rock, sacrete, etc. will be installed at the discharge end of the primary spillway.

G) The combined spillway systems, for sediment basins constructed in series, will be designed to adequately accommodate the entire drainage area.

3. INSPECTION, MAINTENANCE AND CERTIFICATION REQUIREMENTS

A) Inspections will be conducted regularly during construction of the sediment basin by a qualified registered professional engineer or other qualified person under the direction of a professional engineer. Upon completion of construction, the sediment basin will be certified, by a qualified registered professional engineer, to the Regulatory Authority as having been constructed in accordance with the approved detailed design plans.

B) Sediment basins will be inspected semi-monthly for erosion, instability, etc., with maintenance performed as necessary, until the authorized removal of the structure.

C) Sediment basins will be examined quarterly for structural weakness, instability, erosion, slope failure, or other hazardous conditions with maintenance performed as necessary.

D) Retained sediment will be removed from each sediment basin when the accumulated sediment reaches 60 percent of the design volume as set forth in the detailed design plans.

4. BASIN REMOVAL REQUIREMENTS

A) Upon completion of mining, reclamation, restabilization and effluent standards being met, each sediment basin not proposed as a permanent water impoundment will be dewatered in a controlled manner by either pumping or siphoning. Upon successful dewatering, a determination will be made as to the retained sediment level in the basin. After determining the retained sediment level, a channel will be cut into the embankment down to the retained sediment level on the side of the embankment deemed most suitable to reach natural ground without encountering prohibiting rock. The embankment material removed from this newly constructed channel will be spread and compacted over the previous impoundment (wet area) area to prevent erosion and ensure restabilization. The newly constructed channel will be of adequate width (minimum 30 feet) and sloped to a grade (approximately 1% to 3%) which will cause all surface drainage to travel across this area in sheet flow, minimizing the possibility of erosion. Also, where necessary, hay dams will be installed in strategic locations across the width of the channel to retain sediment and slow the water velocity to a favorable rate. Upon removal of the embankment section, all disturbed areas will be graded in such a manner to ensure slope stability, successful restabilization and to minimize erosion. All disturbed areas will be seeded with a mixture of annual and perennial grasses, fertilized and mulched. No slope, existing or created in the removal of the sediment basin, will be left on a grade that will slip or slough.

FENNELL ROAD
OLD HIGHWAY 20
MOORESVILLE ROAD
SCHOOL HOUSE ROAD
ORCHARD LANE
GARRETT ROAD
SOUTHERN RAILWAY
LIMESTONE CREEK
BELLE MINA
19
20
30
29
31
32
SEDIMENT BASIN 001P
SEDIMENT BASIN 002P
SEDIMENT BASIN 003P
SEDIMENT BASIN 004P
SEDIMENT BASIN 005P
B
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SE/SE
SW/SW
SE/SW
SW/SE
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NE/NE
NW/NW
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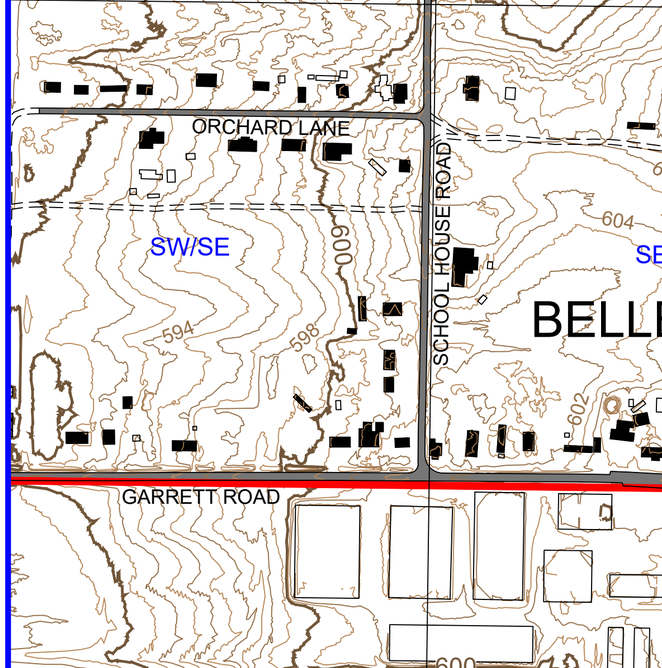

VICINITY MAP, SCALE: 1" = 1 MILE

MAP LEGEND

- GRADE AND BARE AREA, CURVE NUMBER 81
- FLOODWAY (TOTAL AVOIDANCE)
- FLOODPLAIN (SEE NOTES BELOW)
- B — PROPOSED OUTFALL/SEDIMENT BASIN, CURVE NUMBER 100
- DRAINAGE DIVIDE
- (S-1) SURFACE OWNERSHIP
- PUBLIC ROAD
- PRIVATE ROAD
- RAILROAD
- OCCUPIED DWELLING
- UNOCCUPIED BUILDING/BARN, SHED, ETC.
- LAND HOOK
- 50' STREAM BUFFER ZONE
- IMPOUNDED WATER
- DIVERSION DITCH
- INTERMITTENT AND/OR PERENIAL STREAM

N
W E
S

CONTOUR INTERVAL: 2 FT.
CONTOURS OBTAINED FROM LIMESTONE COUNTY MAPPING. FLIGHT DATE 2016.

SECTION 29, TOWNSHIP 4 SOUTH, RANGE 3 WEST, LIMESTONE COUNTY, ALABAMA
BASE MAP: GREENBRIER & TANNER U.S.G.S. QUAD.

NOTES:

NO BUILDINGS WITHIN 1,000' OF PERMIT AREA OTHER THAN SHOWN.

PROPERTY OWNERSHIP BY QUARTER-QUARTER-SECTION (FORTY) EXCEPT WHERE NOTED OTHERWISE.

LOCATION OF LIMESTONE, OVERBURDEN AND WASTE STOCKPILES ARE SUBJECT TO CHANGE.

FOLLOWING AN EXTENSIVE JURISDICTION DETERMINATION, SEE ATTACHED, THERE ARE NO WATERS OF THE UNITED STATES (W.O.T.U.S.) WITHIN THE PROPOSED N.P.D.E.S. PERMIT AREA.

CONSULTATION WITH THE LIMESTONE COUNTY FLOODPLAIN ADMINISTRATOR CONCERNING THE PERMISSIBLE USE OF THE AREA DESIGNATED AS FLOODPLAIN WITHIN THE PROPOSED N.P.D.E.S. PERMIT BOUNDARY IS CURRENTLY UNDERWAY.

I HEREBY CERTIFY THIS MAP TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

ALABAMA REGISTERED No. 17067 PROFESSIONAL ENGINEER C.W. MCGEHEE

10/09/2023
DATE

mcgehee engineering corp
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telephone: (205) 221-0686 fax: 221-7721
email: cw@mcgehee.org

STONED, LLC

PROJECT CROSSROADS

WATERSHED MAP

FILE: CROSSROADS	SCALE: 1" = 300'	JOB NO.: 23-166
APPROVED BY: C.W.M.	DATE: 06/15/23	SHEET NO.: 1 OF 1

DETAILED DESIGN PLANS
SEDIMENT BASIN 001

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SEDIMENT BASIN 001

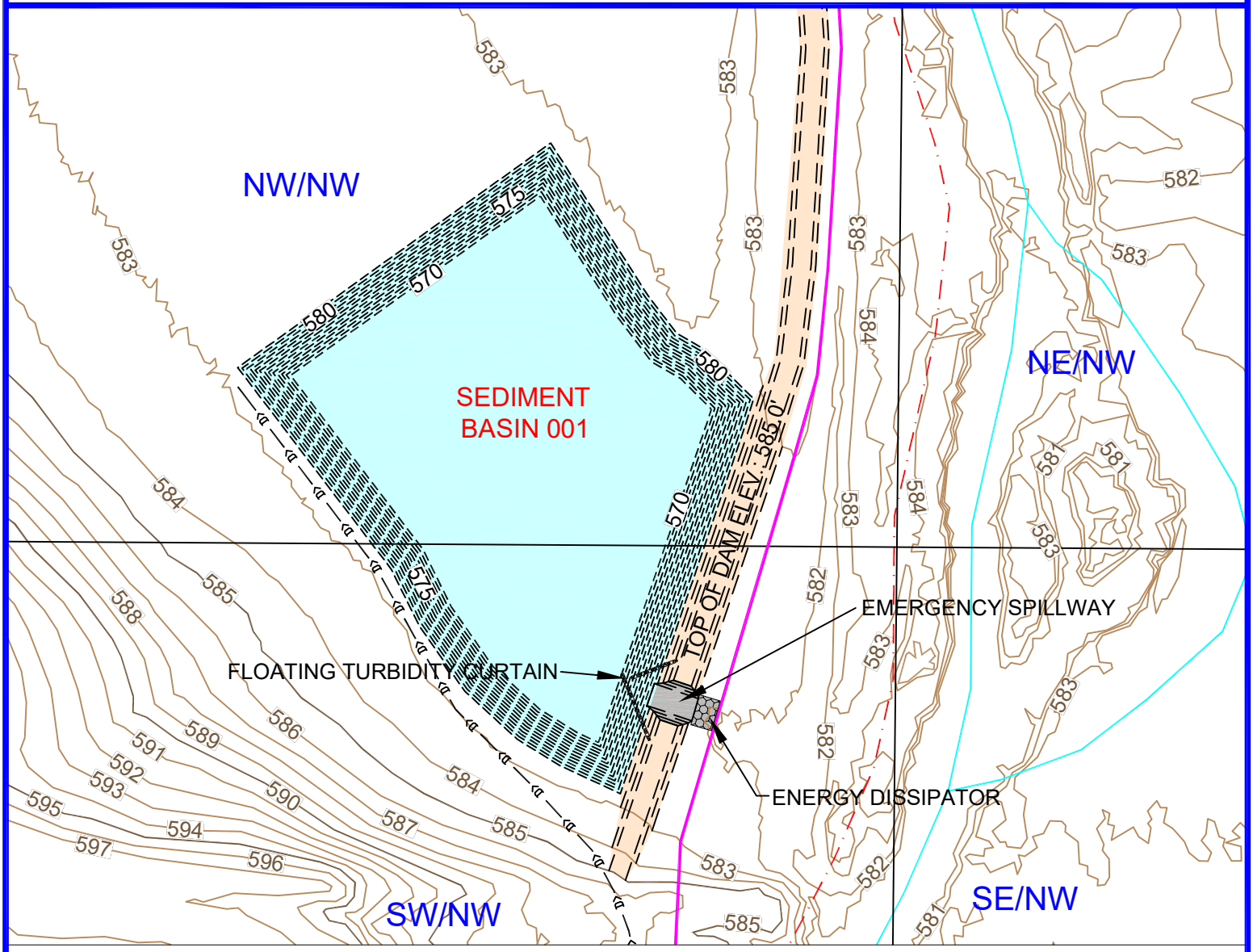
EXCAVATED TOE ELEV.: 570.0'
UPSTREAM TOE ELEV.: 582.0'
SEDIMENT REMOVAL ELEV.: 578.0'
EMERGENCY SPILLWAY ELEV.: 582.0'
**MAXIMUM WATER ELEV.: 583.48'
TOP OF DAM ELEV.: 585.0'

EMERGENCY SPILLWAY: 15' WIDE TRAPEZOIDAL CONCRETE LINED OPEN CHANNEL

STONED LLC

PROJECT CROSSROADS

SEDIMENT BASIN 001
PLAN VIEW DRAWING
SCALE: 1" = 100'



LEGEND

- PERMIT BOUNDARY
- STREAM
- 50 FEET STREAM BUFFER ZONE
- DIVERSION DITCH
- EXISTING CONTOUR
- 595 EXISTING INDEX CONTOUR
- PROPOSED CONTOUR
- 595 PROPOSED INDEX CONTOUR
- NORMAL POOL AREA
- EMBANKMENT

ENERGY DISSIPATER (CLASS II SANDSTONE RIPRAP)

** 25 YEAR - 24 HOUR PRECIPITATION EVENT.

N
W E
S

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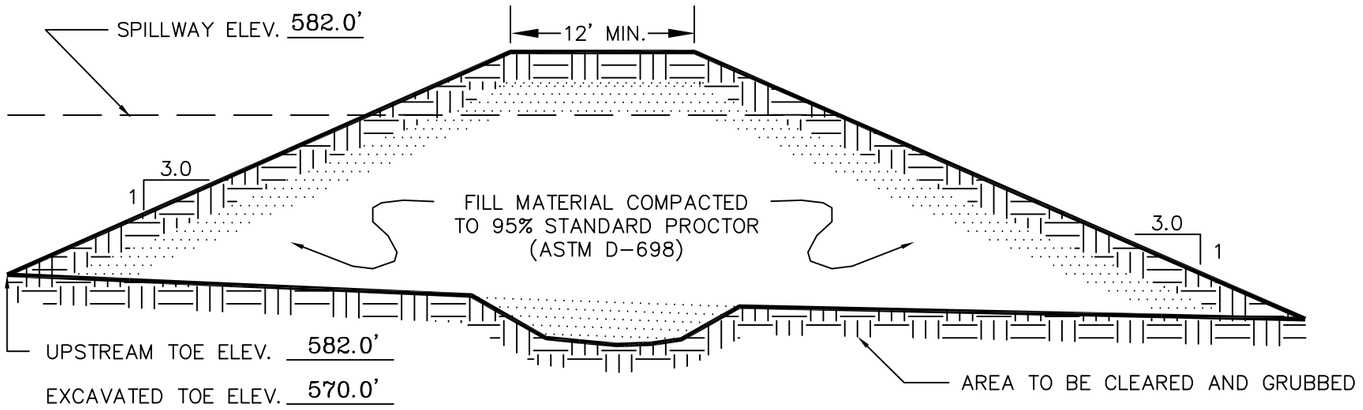
Project Crossroads - Sediment Basin 001

Elevation-Area-Capacity Table

Elevation (ft)	Area (ac)	Capacity (ac-ft)
570.00	1.131	0.000
570.50	1.152	0.571
571.00	1.173	1.152
571.50	1.195	1.744
572.00	1.217	2.347
572.50	1.238	2.961
573.00	1.260	3.585
573.50	1.283	4.221
574.00	1.305	4.868
574.50	1.328	5.527
575.00	1.351	6.196
575.50	1.374	6.877
576.00	1.397	7.570
576.50	1.420	8.274
577.00	1.443	8.990
577.50	1.467	9.717
578.00	1.491	10.457
578.50	1.515	11.209
579.00	1.539	11.972
579.50	1.564	12.748
580.00	1.588	13.536
580.50	1.613	14.336
581.00	1.638	15.149
581.50	1.663	15.974
582.00	1.689	16.812
582.50	2.991	17.967
583.00	4.664	19.865
583.50	11.453	23.770
584.00	21.241	31.818

EMBANKMENT CROSS-SECTION

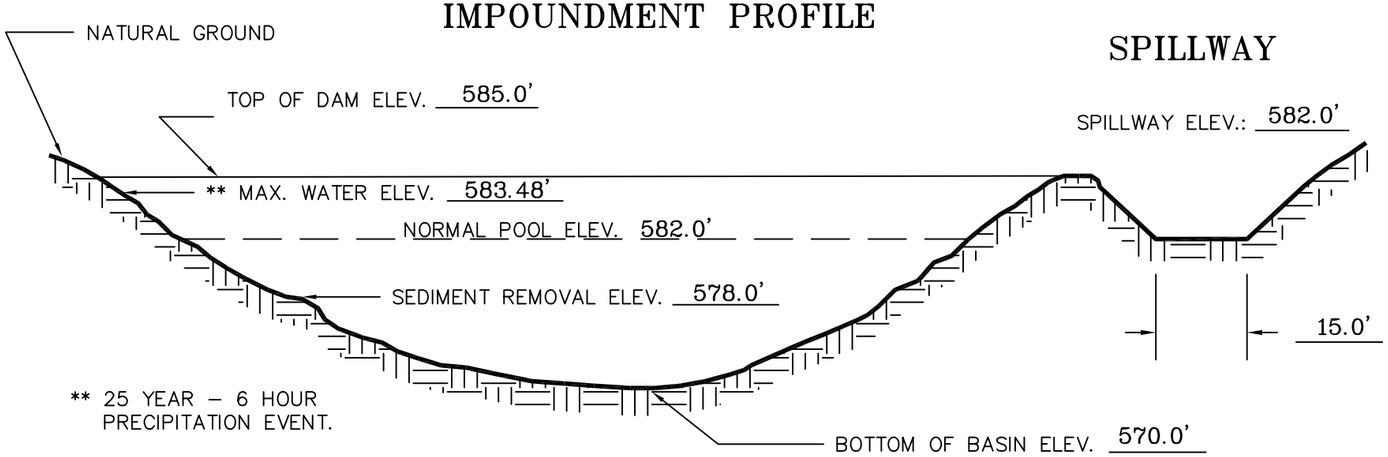


COMPANY: STONED LLC

MINE NAME: PROJECT CROSSROADS MINE NO. 1

BASIN I.D. #: SEDIMENT BASIN 001

IMPOUNDMENT PROFILE



SPILLWAY

SPILLWAY ELEV.: 582.0'

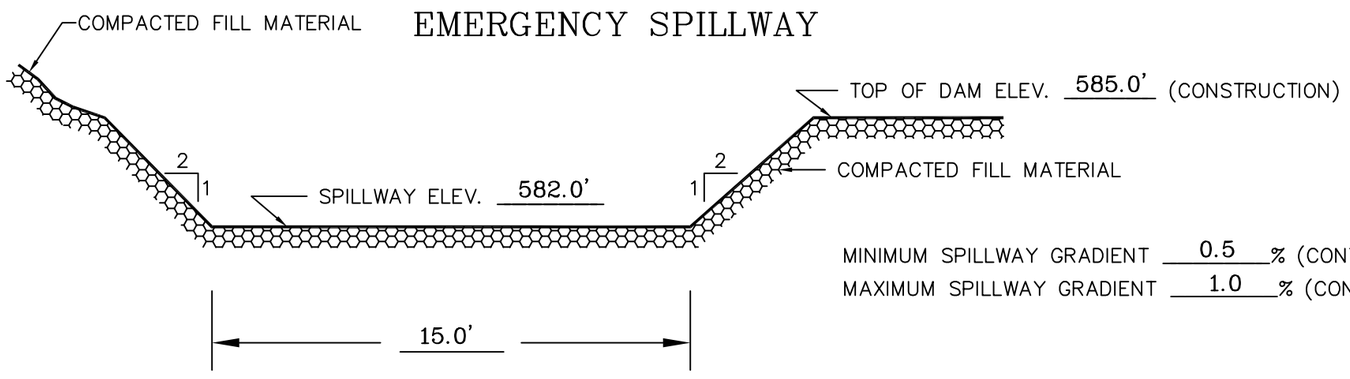
KEY BASIN PARAMETERS

DRAINAGE AREA	67.0	ACRES
DISTURBED AREA	65.0	ACRES
SEDIMENT STORAGE	10.46	AC.FT.
DETENTION STORAGE	6.35	AC.FT.
PERMANENT POOL CAPACITY	16.81	AC.FT.
** PEAK INFLOW	141.49	C.F.S.
** PEAK OUTFLOW	75.15	C.F.S.

NOTE: ALL ELEVATIONS MEAN SEA LEVEL.

** 25 YEAR - 24 HOUR PRECIPITATION EVENT.

EMERGENCY SPILLWAY



MINIMUM SPILLWAY GRADIENT 0.5 % (CONTROL SECTION)

MAXIMUM SPILLWAY GRADIENT 1.0 % (CONTROL SECTION)

SEE SPILLWAY CONTROL SECTION AND TAIL DITCH DESIGN FOR CHANNEL LINING REQUIREMENTS.

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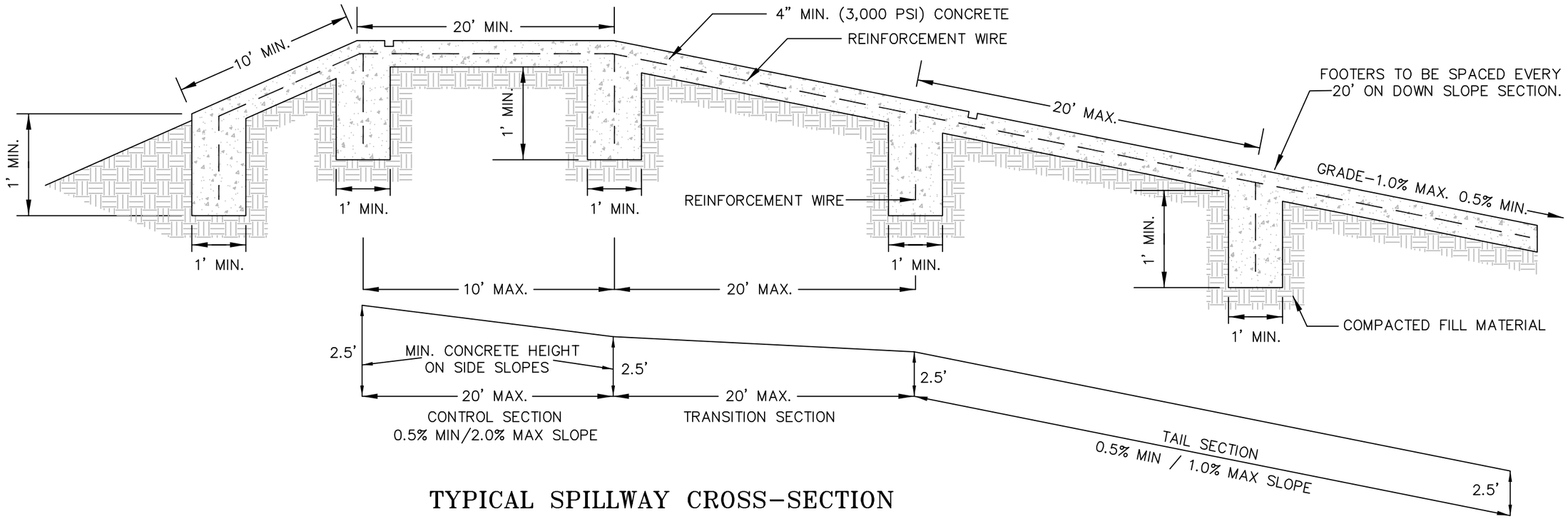
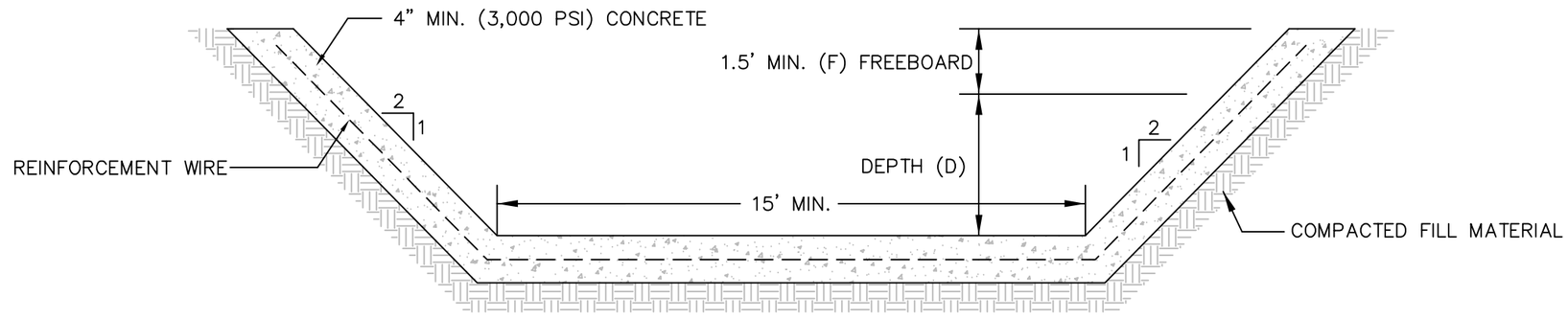
SEDIMENT BASIN 001 SPILLWAY PROFILE



TYPICAL SPILLWAY CROSS-SECTION



	BEGINNING OF CONTROL SECTION	END OF CONTROL SECTION	END OF TRANSITION SECTION	ENTIRE TAIL SECTION
MAXIMUM FLOW DEPTH "D"	1.5'	1.5'	1.5'	1.5'
FREEBOARD "F"	1.5'	1.5'	1.5'	1.5'
MINIMUM CONCRETE HEIGHT ON SIDE SLOPES	3.0'	3.0'	3.0'	3.0'

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SPILLWAY CHANNEL SPECIFICATIONS
SEDIMENT BASIN 001

The entire control section and tail ditch section of the emergency spillway will be cut into the compacted fill of the embankment and lined with a minimum of 4 inches of reinforced concrete. All concrete will be reinforced with 10 gauge, 6" x 6" welded wire mesh. Fiber mesh may be added to the concrete for additional strength, however, the addition of fiber mesh shall not be used in place of the required 6" x 6" welded wire.

The gradient of the control section of the emergency spillway will not exceed one half (0.5%) percent. The gradient of the tail ditch section of the emergency spillway will not exceed one (1%) percent.

The control section and tail ditch section of the emergency spillway will extend from the inner face of the embankment, past the centerline of the embankment and be carried out beyond the downstream slope of the embankment.

The concrete liner at the beginning of the control section of the emergency spillway will be a minimum of 3.0 feet as measured vertically, allowing 1.5 feet for the maximum anticipated flow and 1.5 feet of dry freeboard. The concrete liner at the end of the control section of the emergency spillway will be a minimum of 3.0 feet as measured vertically, allowing 1.5 feet for the maximum anticipated flow and 1.5 feet of dry freeboard. The concrete liner of the tail ditch section of the emergency spillway will be a minimum of 3.0 feet as measured vertically, allowing 1.50 feet for the maximum anticipated flow and 1.5 foot of dry freeboard.

See enclosed SEDCAD 4.0 spillway tail ditch section design and attached Plan Sheet cross-section for the minimum and maximum emergency spillway construction requirements.

A floating silt fence (lightweight turbidity curtain) will be installed near the entrance to the spillway to accomplish sub-surface withdrawal. The floating silt fence (lightweight turbidity curtain) will be set at normal pool and will be anchored at the 25 Year – 24 Hour Event peak stage with steel fence posts.

Sediment Basin 001 - Spillway Tail Ditch

Material: Concrete, Rubble

Trapezoidal Channel

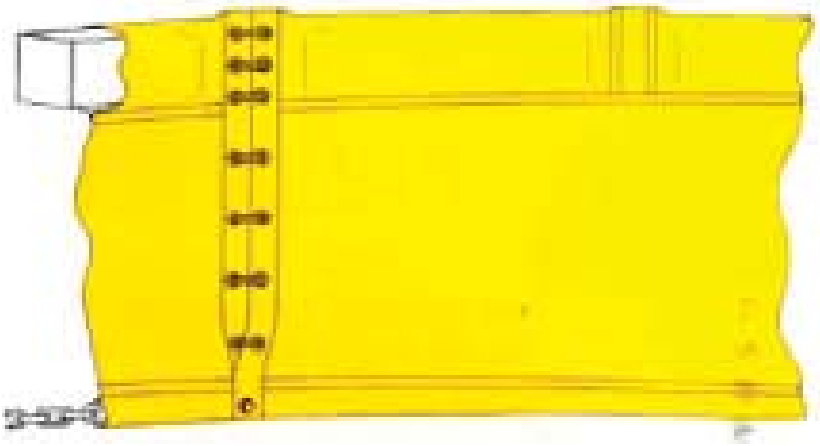
Bottom Width (ft)	Left Sideslope Ratio	Right Sideslope Ratio	Slope (%)	Manning's n	Freeboard Depth (ft)	Freeboard % of Depth	Freeboard Mult. x (VxD)
15.00	2.0:1	2.0:1	1.0	0.0220	1.50		

	w/o Freeboard	w/ Freeboard
Design Discharge:	76.00 cfs	
Depth:	0.83 ft	2.33 ft
Top Width:	18.31 ft	24.31 ft
Velocity:	5.52 fps	
X-Section Area:	13.76 sq ft	
Hydraulic Radius:	0.736 ft	
Froude Number:	1.12	

SUBSURFACE WITHDRAWAL DEVICE AND FLOATING SILT BOOM

Lightweight Turbidity Curtain

Application: Calm waters with little current, such as lakes, ponds, canals and shoreline areas.



Specifications

- Curtain to be anchored at the maximum anticipated peak stage elevation (10 Year – 24 Hour Precipitation Event).
- PVC coated floatations - ultraviolet resistant
- Geotextile fabric screens
- Chain ballast with connectors
- Double sewn seams with grommets
- Depths per requirements ' 50' sections = Minimum 24” deep
- Fabric - Polyester reinforced vinyl high visibility yellow
- Connector - Sections are laced together through grommets and load lines are bolted together.
- Flotation - 6" expanded polystyrene over 9 lbs./ft. buoyancy.
- Ballast - 1/4" galvanized chain (.7 lbs/ft).

Stoned LLC
Project Crossroads

HYDROLOGY AND SEDIMENTOLOGY PREDICTION
25 YEAR - 24 HOUR PRECIPITATION EVENT
SEDIMENT BASINS 001

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STONED LLC

Project Crossroads

Sediment Basin 001

25 Year - 24 Hour Precipitation Event

C. W. McGehee, P.E.

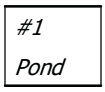
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	25 yr - 24 hr
Rainfall Depth:	6.400 inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Pond	#1	==>	End	0.000	0.000	Sediment Basin 001



Structure Summary:

		Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#1	In	67.000	67.000	141.49	22.70
	Out			75.15	22.69

Structure Detail:

Structure #1 (Pond)

Sediment Basin 001

Pond Inputs:

Initial Pool Elev:	582.00 ft
Initial Pool:	16.81 ac-ft

Emergency Spillway

Spillway Elev	Crest Length (ft)	Left Sideslope	Right Sideslope	Bottom Width (ft)
582.00	20.00	2.00:1	2.00:1	15.00

Pond Results:

Peak Elevation:	583.48 ft
Dewater Time:	0.72 days

Dewatering time is calculated from peak stage to lowest spillway

Elevation-Capacity-Discharge Table

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)
570.00	1.131	0.000	0.000	
570.50	1.152	0.571	0.000	
571.00	1.173	1.152	0.000	
571.50	1.195	1.744	0.000	
572.00	1.217	2.347	0.000	
572.50	1.238	2.961	0.000	
573.00	1.260	3.585	0.000	
573.50	1.283	4.221	0.000	
574.00	1.305	4.868	0.000	
574.50	1.328	5.527	0.000	
575.00	1.351	6.196	0.000	
575.50	1.374	6.877	0.000	
576.00	1.397	7.570	0.000	
576.50	1.420	8.274	0.000	
577.00	1.443	8.990	0.000	
577.50	1.467	9.717	0.000	
578.00	1.491	10.457	0.000	
578.50	1.515	11.209	0.000	
579.00	1.539	11.972	0.000	

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)	
579.50	1.564	12.748	0.000		
580.00	1.588	13.536	0.000		
580.50	1.613	14.336	0.000		
581.00	1.638	15.149	0.000		
581.50	1.663	15.974	0.000		
582.00	1.689	16.812	0.000		Spillway #1
582.50	2.991	17.967	2.728	5.12*	
583.00	4.664	19.865	36.939	10.30	
583.48	11.283	23.613	75.146	1.80	Peak Stage
583.50	11.453	23.770	76.743		
584.00	21.241	31.818	130.185		

**Designates time(s) to dewater have been extrapolated beyond the 50 hour hydrograph limit.*

Detailed Discharge Table

Elevation (ft)	Emergency Spillway (cfs)	Combined Total Discharge (cfs)
570.00	0.000	0.000
570.50	0.000	0.000
571.00	0.000	0.000
571.50	0.000	0.000
572.00	0.000	0.000
572.50	0.000	0.000
573.00	0.000	0.000
573.50	0.000	0.000
574.00	0.000	0.000
574.50	0.000	0.000
575.00	0.000	0.000
575.50	0.000	0.000
576.00	0.000	0.000
576.50	0.000	0.000
577.00	0.000	0.000
577.50	0.000	0.000
578.00	0.000	0.000
578.50	0.000	0.000
579.00	0.000	0.000
579.50	0.000	0.000
580.00	0.000	0.000
580.50	0.000	0.000
581.00	0.000	0.000

Elevation (ft)	Emergency Spillway (cfs)	Combined Total Discharge (cfs)
581.50	0.000	0.000
582.00	0.000	0.000
582.50	2.728	2.728
583.00	36.939	36.939
583.50	76.743	76.743
584.00	130.185	130.185

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#1	1	65.000	0.921	0.000	0.000	81.000	F	139.63	21.633
	2	2.000	0.001	0.000	0.000	100.000	F	9.81	1.066
	Σ	**67.000**						**141.49**	**22.699**

Stoned LLC
Project Crossroads

DETAILED DESIGN PLANS
SEDIMENT BASIN 002

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SEDIMENT BASIN 002

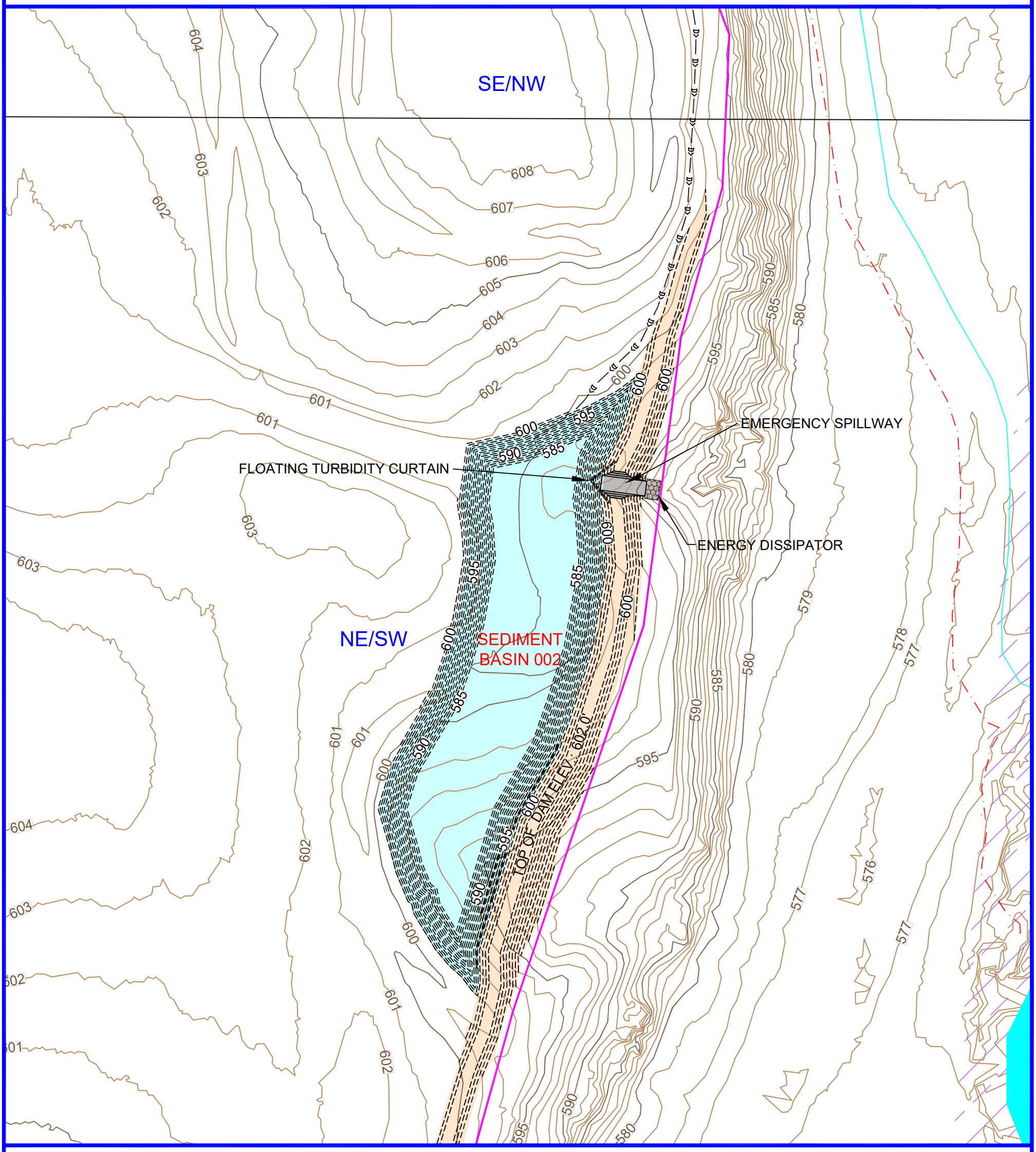
EXCAVATED TOE ELEV.: 585.0'
UPSTREAM TOE ELEV.: 599.0'
SEDIMENT REMOVAL ELEV.: 594.55'
EMERGENCY SPILLWAY ELEV.: 599.0'
**MAXIMUM WATER ELEV.: 600.44'
TOP OF DAM ELEV.: 602.0'

EMERGENCY SPILLWAY: 20' WIDE TRAPEZOIDAL
CONCRETE LINED OPEN CHANNEL

STONED LLC

PROJECT CROSSROADS

SEDIMENT BASIN 002
PLAN VIEW DRAWING
SCALE: 1" = 100'



LEGEND

- PERMIT BOUNDARY
- STREAM
- 50 FEET STREAM BUFFER ZONE
- DIVERSION DITCH
- EXISTING CONTOUR
- 595 EXISTING INDEX CONTOUR
- PROPOSED CONTOUR
- 595 PROPOSED INDEX CONTOUR
- NORMAL POOL AREA
- EMBANKMENT

N W E S

ENERGY DISSIPATER (CLASS II SANDSTONE RIPRAP)
** 25 YEAR - 24 HOUR PRECIPITATION EVENT.

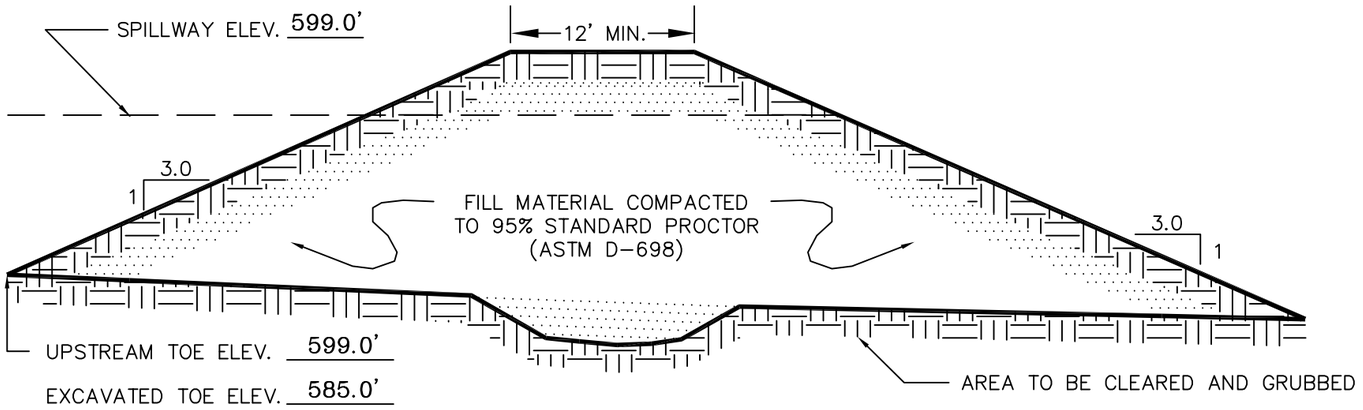
mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: cw@mcgehee.org

Project Crossroads - Sediment Basin 002

Elevation-Area-Capacity Table

Elevation (ft)	Area (ac)	Capacity (ac-ft)
585.00	0.862	0.000
585.50	0.888	0.438
586.00	0.914	0.888
586.50	0.940	1.351
587.00	0.967	1.828
587.50	0.994	2.318
588.00	1.021	2.822
588.50	1.049	3.339
589.00	1.077	3.870
589.50	1.105	4.416
590.00	1.134	4.976
590.50	1.162	5.550
591.00	1.191	6.138
591.50	1.220	6.741
592.00	1.249	7.358
592.50	1.279	7.990
593.00	1.309	8.637
593.50	1.339	9.299
594.00	1.370	9.976
594.50	1.401	10.669
595.00	1.432	11.377
595.50	1.478	12.105
596.00	1.525	12.855
596.50	1.572	13.630
597.00	1.621	14.428
597.50	1.670	15.251
598.00	1.719	16.098
598.50	1.770	16.970
599.00	1.821	17.868
599.50	1.873	18.791
600.00	1.925	19.741
600.50	6.403	21.714
601.00	13.493	26.579
601.50	18.002	34.426
602.00	23.160	44.690

EMBANKMENT CROSS-SECTION

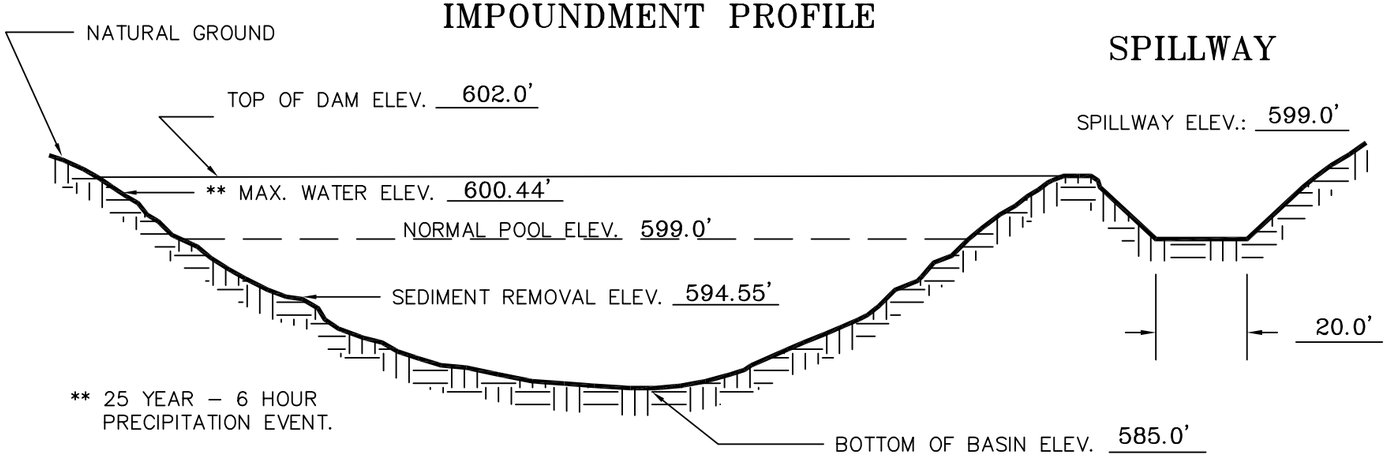


COMPANY: STONED LLC

MINE NAME: PROJECT CROSSROADS MINE NO. 1

BASIN I.D. #: SEDIMENT BASIN 002

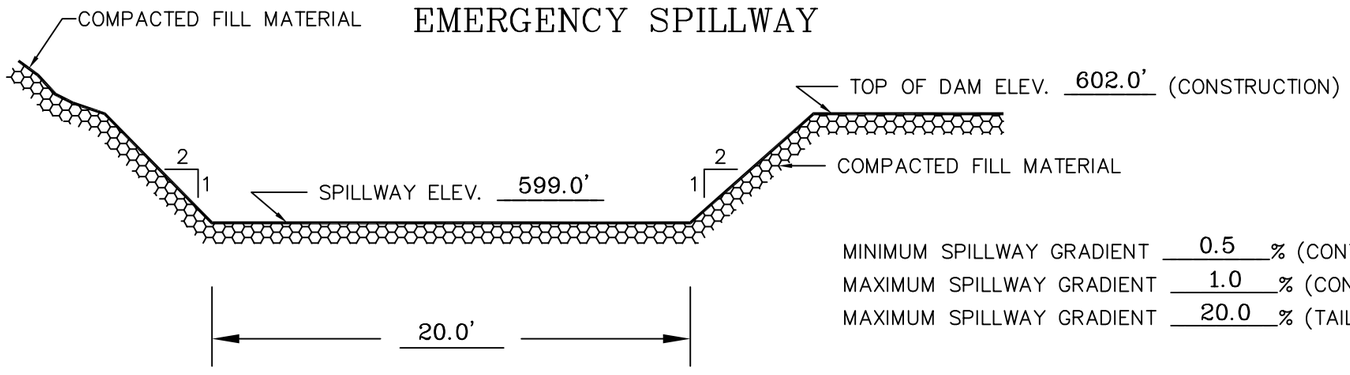
IMPOUNDMENT PROFILE



SPILLWAY

SPILLWAY ELEV.: 599.0'

EMERGENCY SPILLWAY



MINIMUM SPILLWAY GRADIENT 0.5 % (CONTROL SECTION)

MAXIMUM SPILLWAY GRADIENT 1.0 % (CONTROL SECTION)

MAXIMUM SPILLWAY GRADIENT 20.0 % (TAIL DITCH SECTION)

SEE SPILLWAY CONTROL SECTION AND TAIL DITCH DESIGN FOR CHANNEL LINING REQUIREMENTS.

KEY BASIN PARAMETERS

DRAINAGE AREA	71.0	ACRES
DISTURBED AREA	69.0	ACRES
SEDIMENT STORAGE	10.72	AC.FT.
DETENTION STORAGE	7.15	AC.FT.
PERMANENT POOL CAPACITY	17.87	AC.FT.
** PEAK INFLOW	111.94	C.F.S.
** PEAK OUTFLOW	93.25	C.F.S.

NOTE: ALL ELEVATIONS MEAN SEA LEVEL.

** 25 YEAR - 24 HOUR PRECIPITATION EVENT.

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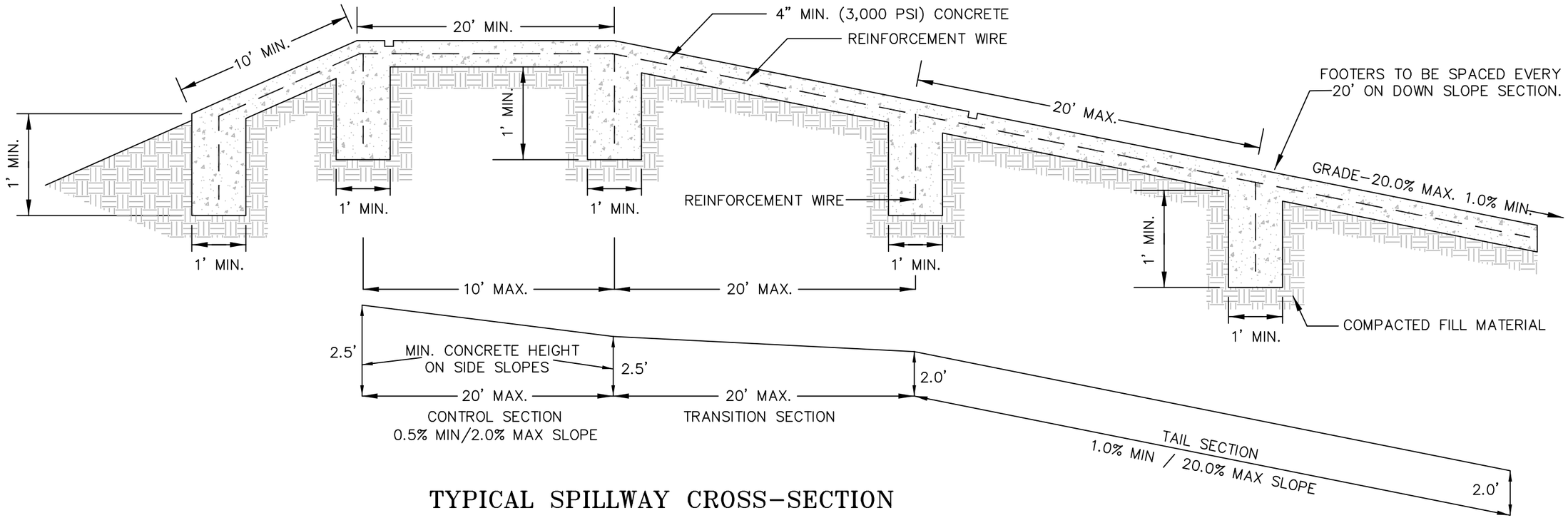
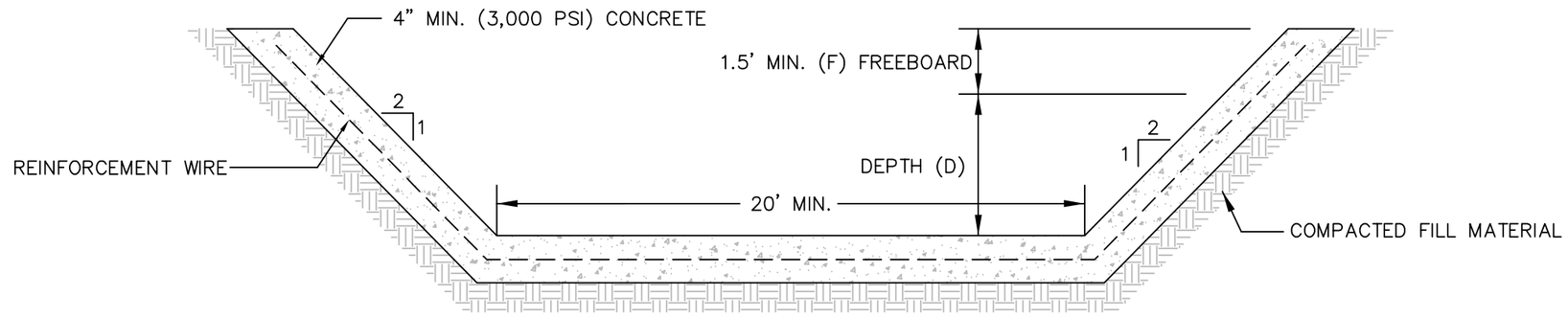
SEDIMENT BASIN 002 SPILLWAY PROFILE



TYPICAL SPILLWAY CROSS-SECTION



	BEGINNING OF CONTROL SECTION	END OF CONTROL SECTION	END OF TRANSITION SECTION	ENTIRE TAIL SECTION
MAXIMUM FLOW DEPTH "D"	1.5'	1.5'	1.0'	1.0'
FREEBOARD "F"	1.5'	1.5'	1.5'	1.5'
MINIMUM CONCRETE HEIGHT ON SIDE SLOPES	3.0'	3.0'	2.5'	2.5'

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SPILLWAY CHANNEL SPECIFICATIONS
SEDIMENT BASIN 002

The entire control section and tail ditch section of the emergency spillway will be cut into the compacted fill of the embankment and lined with a minimum of 4 inches of reinforced concrete. All concrete will be reinforced with 10 gauge, 6" x 6" welded wire mesh. Fiber mesh may be added to the concrete for additional strength, however, the addition of fiber mesh shall not be used in place of the required 6" x 6" welded wire.

The gradient of the control section of the emergency spillway will not exceed one half (0.5%) percent. The gradient of the tail ditch section of the emergency spillway will not exceed twenty (20%) percent.

The control section and tail ditch section of the emergency spillway will extend from the inner face of the embankment, past the centerline of the embankment and be carried out beyond the downstream slope of the embankment.

The concrete liner at the beginning of the control section of the emergency spillway will be a minimum of 3.0 feet as measured vertically, allowing 1.5 feet for the maximum anticipated flow and 1.5 feet of dry freeboard. The concrete liner at the end of the control section of the emergency spillway will be a minimum of 3.0 feet as measured vertically, allowing 1.5 feet for the maximum anticipated flow and 1.5 feet of dry freeboard. The concrete liner of the tail ditch section of the emergency spillway will be a minimum of 2.5 feet as measured vertically, allowing 1.0 feet for the maximum anticipated flow and 1.5 foot of dry freeboard. There will be a transition zone of at least 20 feet in length between the control section and the tail section. The minimum depth at the beginning of the transition will be 3.0 feet and 2.5 feet at the end of the transition. The flow line of the spillway will be smoothed at the transition to avoid abrupt changes in the flow line slope.

See enclosed SEDCAD 4.0 spillway tail ditch section design and attached Plan Sheet cross-section for the minimum and maximum emergency spillway construction requirements.

A floating silt fence (lightweight turbidity curtain) will be installed near the entrance to the spillway to accomplish sub-surface withdrawal. The floating silt fence (lightweight turbidity curtain) will be set at normal pool and will be anchored at the 25 Year – 24 Hour Event peak stage with steel fence posts.

Sediment Basin 002 - Spillway Tail Ditch

Material: Concrete, Rubble

Trapezoidal Channel

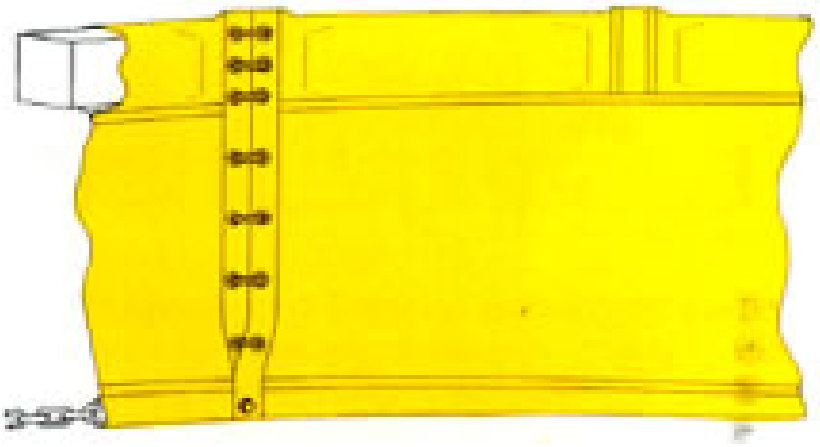
Bottom Width (ft)	Left Sideslope Ratio	Right Sideslope Ratio	Slope (%)	Manning's n	Freeboard Depth (ft)	Freeboard % of Depth	Freeboard Mult. x (VxD)
20.00	2.0:1	2.0:1	20.0	0.0220	1.50		

	w/o Freeboard	w/ Freeboard
Design Discharge:	94.00 cfs	
Depth:	0.33 ft	1.83 ft
Top Width:	21.30 ft	27.30 ft
Velocity:	13.98 fps	
X-Section Area:	6.73 sq ft	
Hydraulic Radius:	0.313 ft	
Froude Number:	4.38	

SUBSURFACE WITHDRAWAL DEVICE AND FLOATING SILT BOOM

Lightweight Turbidity Curtain

Application: Calm waters with little current, such as lakes, ponds, canals and shoreline areas.



Specifications

- Curtain to be anchored at the maximum anticipated peak stage elevation (10 Year – 24 Hour Precipitation Event).
- PVC coated floatations - ultraviolet resistant
- Geotextile fabric screens
- Chain ballast with connectors
- Double sewn seams with grommets
- Depths per requirements ' 50' sections = Minimum 24” deep
- Fabric - Polyester reinforced vinyl high visibility yellow
- Connector - Sections are laced together through grommets and load lines are bolted together.
- Flotation - 6" expanded polystyrene over 9 lbs./ft. buoyancy.
- Ballast - 1/4" galvanized chain (.7 lbs/ft).

HYDROLOGY AND SEDIMENTOLOGY PREDICTION
25 YEAR - 24 HOUR PRECIPITATION EVENT
SEDIMENT BASINS 001

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STONED LLC

Project Crossroads

Sediment Basin 002

25 Year - 24 Hour Precipitation Event

C. W. McGehee, P.E.

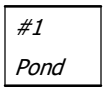
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	25 yr - 24 hr
Rainfall Depth:	6.400 inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Pond	#1	==>	End	0.000	0.000	Sediment Basin 002



Structure Summary:

		Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#1	In	71.000	71.000	111.94	24.01
	Out			93.25	24.01

Structure Detail:

Structure #1 (Pond)

Sediment Basin 002

Pond Inputs:

Initial Pool Elev:	599.00 ft
Initial Pool:	17.87 ac-ft

Emergency Spillway

Spillway Elev	Crest Length (ft)	Left Sideslope	Right Sideslope	Bottom Width (ft)
599.00	20.00	2.00:1	2.00:1	20.00

Pond Results:

Peak Elevation:	600.44 ft
Dewater Time:	1.36 days

Dewatering time is calculated from peak stage to lowest spillway

Elevation-Capacity-Discharge Table

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)
585.00	0.862	0.000	0.000	
585.50	0.888	0.438	0.000	
586.00	0.914	0.888	0.000	
586.50	0.940	1.351	0.000	
587.00	0.967	1.828	0.000	
587.50	0.994	2.318	0.000	
588.00	1.021	2.822	0.000	
588.50	1.049	3.339	0.000	
589.00	1.077	3.870	0.000	
589.50	1.105	4.416	0.000	
590.00	1.134	4.976	0.000	
590.50	1.162	5.550	0.000	
591.00	1.191	6.138	0.000	
591.50	1.220	6.741	0.000	
592.00	1.249	7.358	0.000	
592.50	1.279	7.990	0.000	
593.00	1.309	8.637	0.000	
593.50	1.339	9.299	0.000	
594.00	1.370	9.976	0.000	

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)	
594.50	1.401	10.669	0.000		
595.00	1.432	11.377	0.000		
595.50	1.478	12.105	0.000		
596.00	1.525	12.855	0.000		
596.50	1.572	13.630	0.000		
597.00	1.621	14.428	0.000		
597.50	1.670	15.251	0.000		
598.00	1.719	16.098	0.000		
598.50	1.770	16.970	0.000		
599.00	1.821	17.868	0.000		Spillway #1
599.50	1.873	18.791	3.625	20.90	
600.00	1.925	19.741	48.400	10.65	
600.44	6.122	21.469	93.251	1.10	Peak Stage
600.50	6.403	21.714	99.605		
601.00	13.493	26.579	167.398		
601.50	18.002	34.426	249.224		
602.00	23.160	44.690	344.812		

Detailed Discharge Table

Elevation (ft)	Emergency Spillway (cfs)	Combined Total Discharge (cfs)
585.00	0.000	0.000
585.50	0.000	0.000
586.00	0.000	0.000
586.50	0.000	0.000
587.00	0.000	0.000
587.50	0.000	0.000
588.00	0.000	0.000
588.50	0.000	0.000
589.00	0.000	0.000
589.50	0.000	0.000
590.00	0.000	0.000
590.50	0.000	0.000
591.00	0.000	0.000
591.50	0.000	0.000
592.00	0.000	0.000
592.50	0.000	0.000
593.00	0.000	0.000
593.50	0.000	0.000
594.00	0.000	0.000

Elevation (ft)	Emergency Spillway (cfs)	Combined Total Discharge (cfs)
594.50	0.000	0.000
595.00	0.000	0.000
595.50	0.000	0.000
596.00	0.000	0.000
596.50	0.000	0.000
597.00	0.000	0.000
597.50	0.000	0.000
598.00	0.000	0.000
598.50	0.000	0.000
599.00	0.000	0.000
599.50	3.625	3.625
600.00	48.400	48.400
600.50	99.605	99.605
601.00	167.398	167.398
601.50	249.224	249.224
602.00	344.812	344.812

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#1	1	69.000	1.478	0.000	0.000	81.000	F	110.98	22.942
	2	2.000	0.001	0.000	0.000	100.000	F	9.81	1.066
	Σ	**71.000**						**111.94**	**24.008**

Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	1	4. Cultivated, straight row	0.12	2.00	1,650.00	0.310	1.478
#1	**1**	**Time of Concentration:**					**1.478**

DETAILED DESIGN PLANS
SEDIMENT BASIN 003

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SEDIMENT BASIN 001

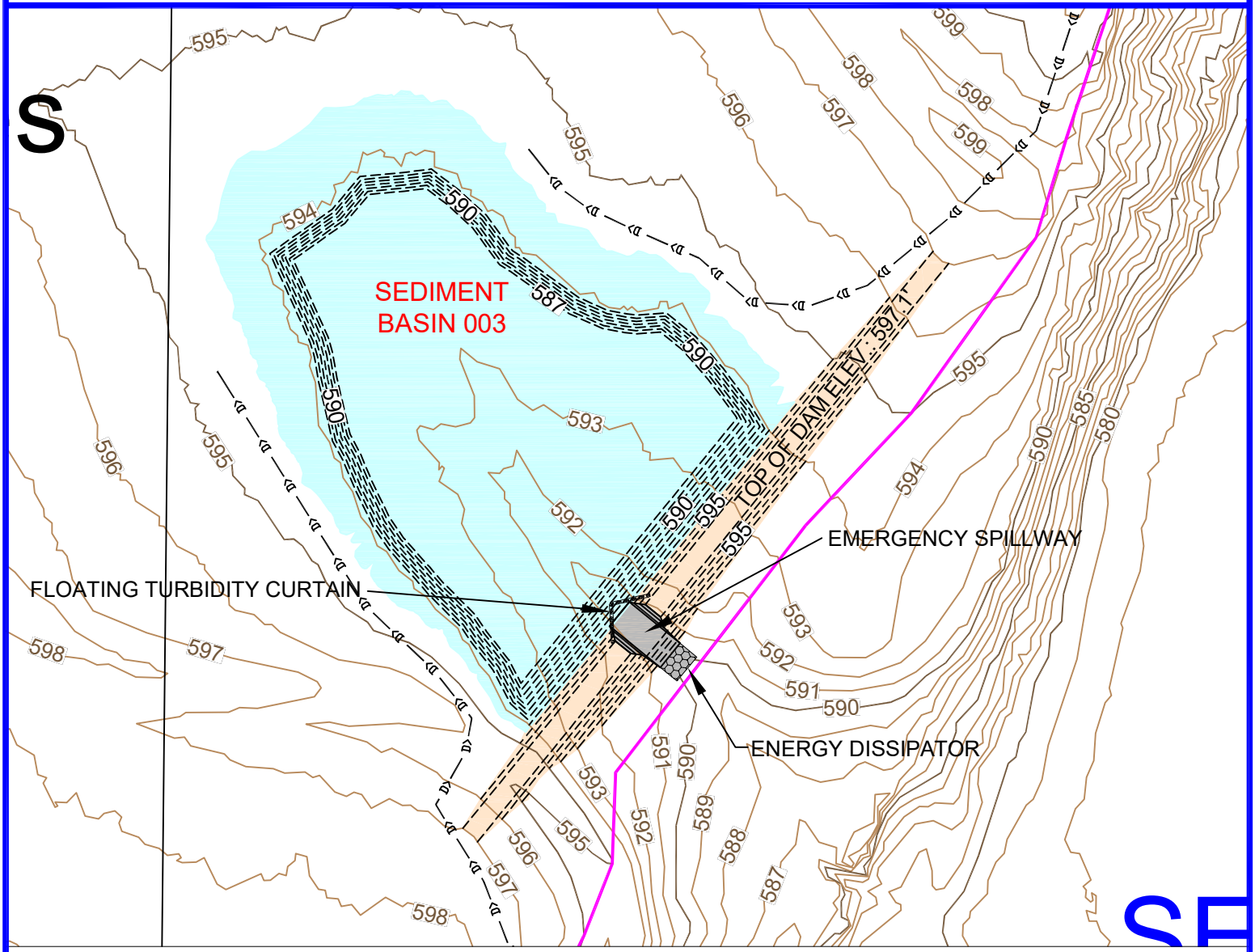
EXCAVATED TOE ELEV.: 587.0'
UPSTREAM TOE ELEV.: 591.0'
SEDIMENT REMOVAL ELEV.: 591.75'
EMERGENCY SPILLWAY ELEV.: 594.4'
**MAXIMUM WATER ELEV.: 595.58'
TOP OF DAM ELEV.: 597.1'

EMERGENCY SPILLWAY: 20' WIDE TRAPEZOIDAL
CONCRETE LINED OPEN CHANNEL

STONED LLC

PROJECT CROSSROADS

SEDIMENT BASIN 003
PLAN VIEW DRAWING
SCALE: 1" = 100'



LEGEND

- PERMIT BOUNDARY
- STREAM
- 50 FEET STREAM BUFFER ZONE
- DIVERSION DITCH
- EXISTING CONTOUR
- 595 EXISTING INDEX CONTOUR
- PROPOSED CONTOUR
- 595 PROPOSED INDEX CONTOUR
- NORMAL POOL AREA
- EMBANKMENT

ENERGY DISSIPATER (CLASS II SANDSTONE RIPRAP)

** 25 YEAR - 24 HOUR PRECIPITATION EVENT.

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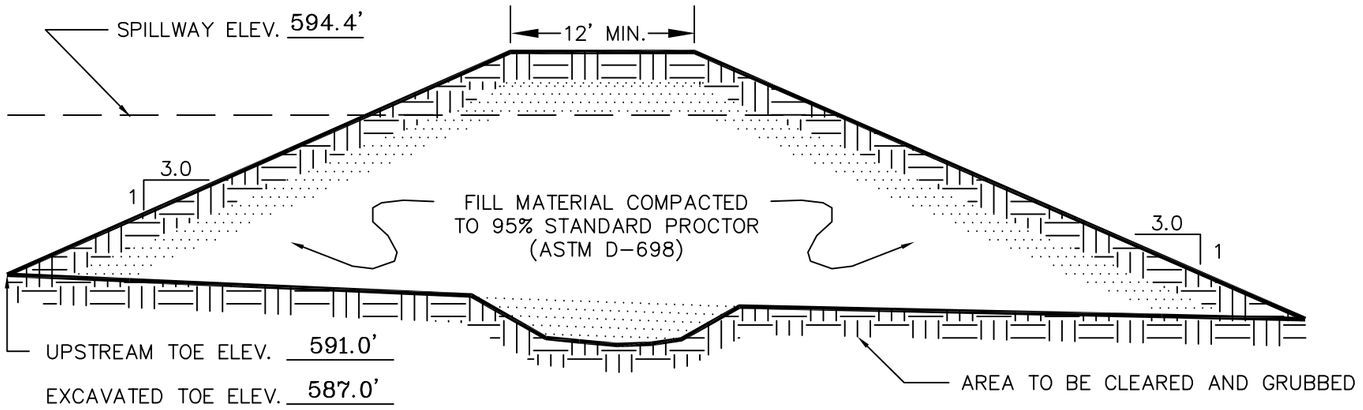
Sediment Basin 003 - Stage Storage

Elevation-Area-Capacity Table

Elevation (ft)	Area (ac)	Capacity (ac-ft)
587.00	1.064	0.000
587.50	1.087	0.538
588.00	1.111	1.087
588.50	1.135	1.649
589.00	1.158	2.222
589.50	1.183	2.807
590.00	1.207	3.405
590.50	1.231	4.014
591.00	1.256	4.636
591.50	1.281	5.270
592.00	1.306	5.917
592.50	1.332	6.577
593.00	1.357	7.249
593.50	1.408	7.940
594.00	1.461	8.658
594.50	2.171	9.559
595.00	3.021	10.852
595.50	3.998	12.601
596.00	5.111	14.872
596.50	6.446	17.755
597.00	7.935	21.343

EMBANKMENT CROSS-SECTION

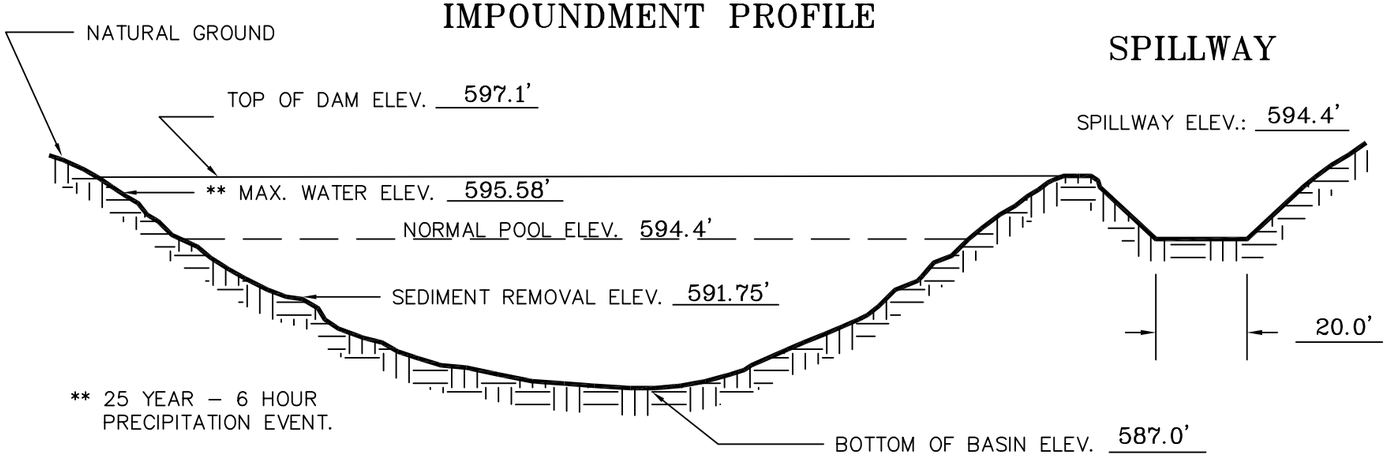


COMPANY: STONED LLC

MINE NAME: PROJECT CROSSROADS MINE NO. 1

BASIN I.D. #: SEDIMENT BASIN 003

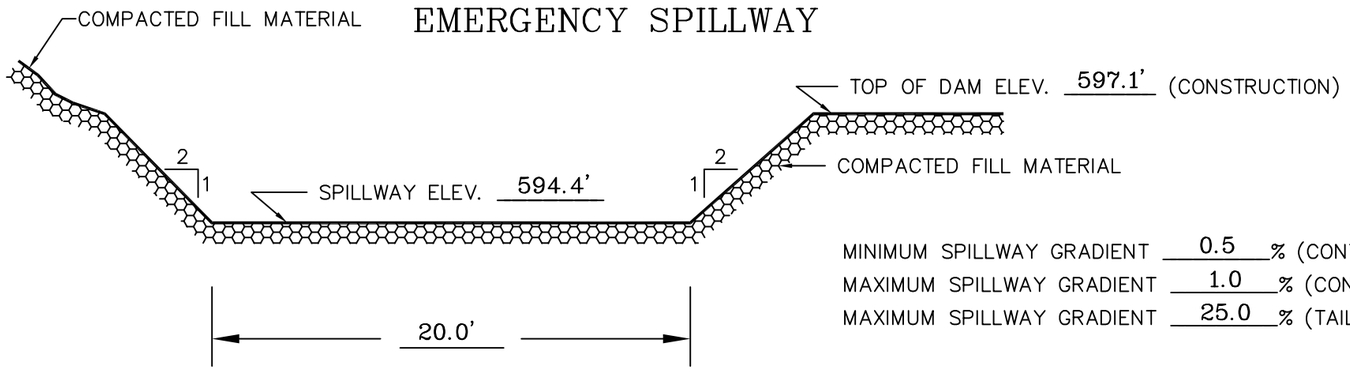
IMPOUNDMENT PROFILE



SPILLWAY

SPILLWAY ELEV.: 594.4'

EMERGENCY SPILLWAY



MINIMUM SPILLWAY GRADIENT 0.5 % (CONTROL SECTION)

MAXIMUM SPILLWAY GRADIENT 1.0 % (CONTROL SECTION)

MAXIMUM SPILLWAY GRADIENT 25.0 % (TAIL DITCH SECTION)

SEE SPILLWAY CONTROL SECTION AND TAIL DITCH DESIGN FOR CHANNEL LINING REQUIREMENTS.

KEY BASIN PARAMETERS

DRAINAGE AREA	39.0	ACRES
DISTURBED AREA	37.0	ACRES
SEDIMENT STORAGE	5.62	AC.FT.
DETENTION STORAGE	3.74	AC.FT.
PERMANENT POOL CAPACITY	9.36	AC.FT.
** PEAK INFLOW	112.36	C.F.S.
** PEAK OUTFLOW	66.14	C.F.S.

NOTE: ALL ELEVATIONS MEAN SEA LEVEL.

** 25 YEAR - 24 HOUR PRECIPITATION EVENT.

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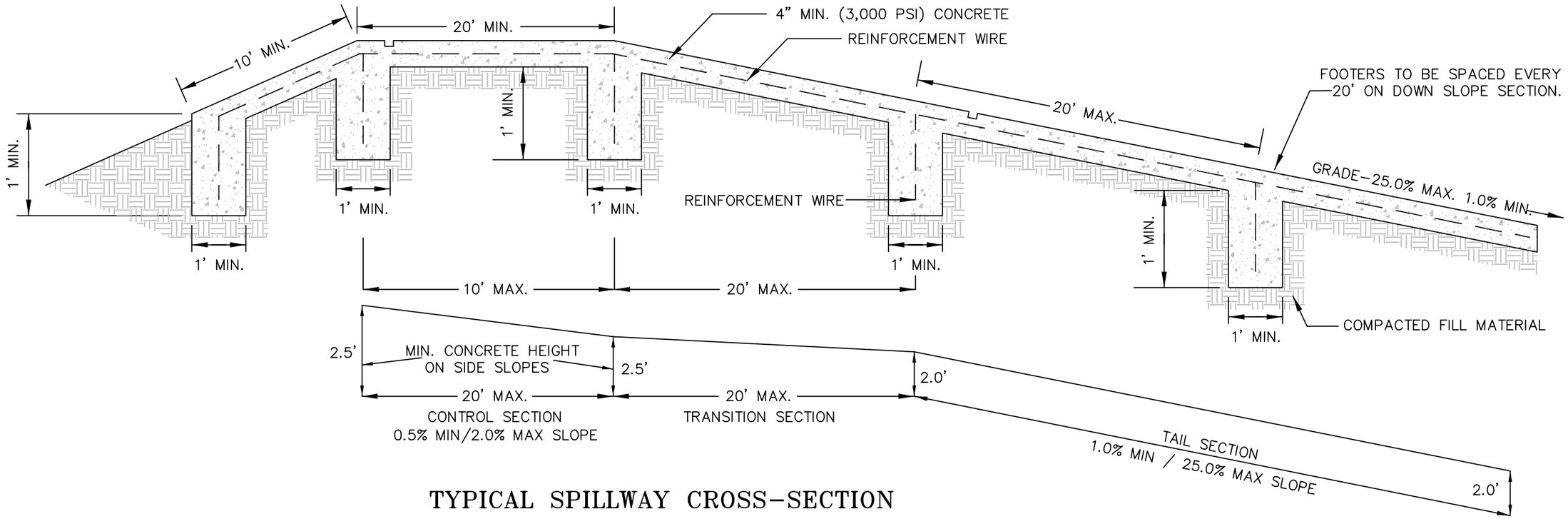
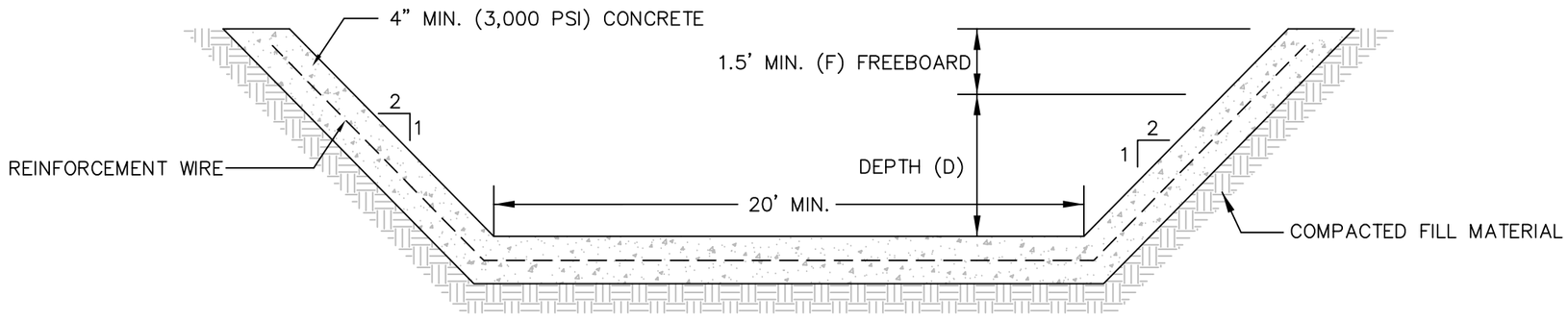
SEDIMENT BASIN 003 SPILLWAY PROFILE



TYPICAL SPILLWAY CROSS–SECTION



	BEGINNING OF CONTROL SECTION	END OF CONTROL SECTION	END OF TRANSITION SECTION	ENTIRE TAIL SECTION
MAXIMUM FLOW DEPTH "D"	1.2'	1.2'	0.5'	0.5'
FREEBOARD "F"	1.5'	1.5'	1.5'	1.5'
MINIMUM CONCRETE HEIGHT ON SIDE SLOPES	2.7'	2.7'	2.0'	2.0'

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SPILLWAY CHANNEL SPECIFICATIONS
SEDIMENT BASIN 003

The entire control section and tail ditch section of the emergency spillway will be cut into the compacted fill of the embankment and lined with a minimum of 4 inches of reinforced concrete. All concrete will be reinforced with 10 gauge, 6" x 6" welded wire mesh. Fiber mesh may be added to the concrete for additional strength, however, the addition of fiber mesh shall not be used in place of the required 6" x 6" welded wire.

The gradient of the control section of the emergency spillway will not exceed one half (0.5%) percent. The gradient of the tail ditch section of the emergency spillway will not exceed twenty five (25%) percent.

The control section and tail ditch section of the emergency spillway will extend from the inner face of the embankment, past the centerline of the embankment and be carried out beyond the downstream slope of the embankment.

The concrete liner at the beginning of the control section of the emergency spillway will be a minimum of 2.7 feet as measured vertically, allowing 1.2 feet for the maximum anticipated flow and 1.5 feet of dry freeboard. The concrete liner at the end of the control section of the emergency spillway will be a minimum of 2.7 feet as measured vertically, allowing 1.2 feet for the maximum anticipated flow and 1.5 feet of dry freeboard. The concrete liner of the tail ditch section of the emergency spillway will be a minimum of 2.0 feet as measured vertically, allowing 0.5 feet for the maximum anticipated flow and 1.5 foot of dry freeboard. There will be a transition zone of at least 20 feet in length between the control section and the tail section. The minimum depth at the beginning of the transition will be 2.7 feet and 2.0 feet at the end of the transition. The flow line of the spillway will be smoothed at the transition to avoid abrupt changes in the flow line slope.

See enclosed SEDCAD 4.0 spillway tail ditch section design and attached Plan Sheet cross-section for the minimum and maximum emergency spillway construction requirements.

A floating silt fence (lightweight turbidity curtain) will be installed near the entrance to the spillway to accomplish sub-surface withdrawal. The floating silt fence (lightweight turbidity curtain) will be set at normal pool and will be anchored at the 25 Year – 24 Hour Event peak stage with steel fence posts.

Sediment Basin 003 - Spillway Tail Ditch

Material: Concrete, Rubble

Trapezoidal Channel

Bottom Width (ft)	Left Sideslope Ratio	Right Sideslope Ratio	Slope (%)	Manning's n	Freeboard Depth (ft)	Freeboard % of Depth	Freeboard Mult. x (VxD)
20.00	2.0:1	2.0:1	25.0	0.0220	1.50		

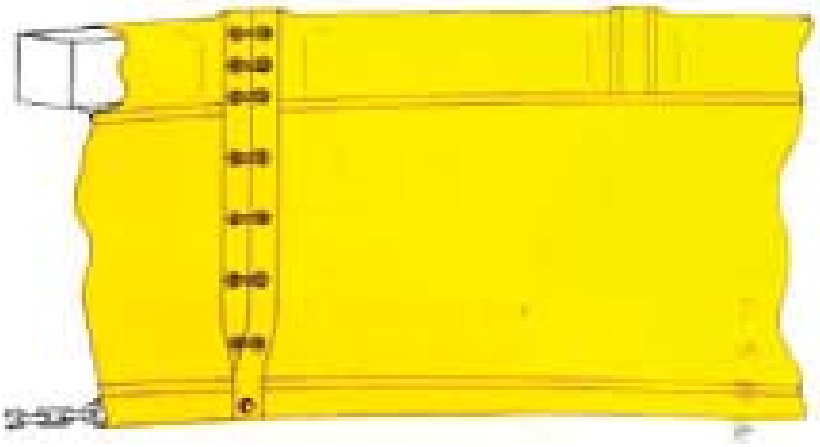
	w/o Freeboard	w/ Freeboard
Design Discharge:	67.00 cfs	
Depth:	0.25 ft	1.75 ft
Top Width:	21.00 ft	27.00 ft
Velocity:	13.14 fps	
X-Section Area:	5.10 sq ft	
Hydraulic Radius:	0.242 ft	
Froude Number:	4.70	

Stoned LLC
Project Crossroads

SUBSURFACE WITHDRAWAL DEVICE AND FLOATING SILT BOOM

Lightweight Turbidity Curtain

Application: Calm waters with little current, such as lakes, ponds, canals and shoreline areas.



Specifications

- Curtain to be anchored at the maximum anticipated peak stage elevation (10 Year – 24 Hour Precipitation Event).
- PVC coated floatations - ultraviolet resistant
- Geotextile fabric screens
- Chain ballast with connectors
- Double sewn seams with grommets
- Depths per requirements ' 50' sections = Minimum 24” deep
- Fabric - Polyester reinforced vinyl high visibility yellow
- Connector - Sections are laced together through grommets and load lines are bolted together.
- Flotation - 6" expanded polystyrene over 9 lbs./ft. buoyancy.
- Ballast - 1/4" galvanized chain (.7 lbs/ft).

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Stoned LLC
Project Crossroads

HYDROLOGY AND SEDIMENTOLOGY PREDICTION
25 YEAR - 24 HOUR PRECIPITATION EVENT
SEDIMENT BASINS 003

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STONED LLC

Project Crossroads

Sediment Basin 003

25 Year - 24 Hour Precipitation Event

C. W. McGehee, P.E.

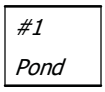
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	25 yr - 24 hr
Rainfall Depth:	6.400 inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Pond	#1	==>	End	0.000	0.000	Sediment Basin 003



Structure Summary:

		Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#1	In	39.000	39.000	112.36	13.38
	Out			66.14	13.38

Structure Detail:

Structure #1 (Pond)

Sediment Basin 003

Pond Inputs:

Initial Pool Elev:	594.40 ft
Initial Pool:	9.36 ac-ft

Emergency Spillway

Spillway Elev	Crest Length (ft)	Left Sideslope	Right Sideslope	Bottom Width (ft)
594.40	20.00	2.00:1	2.00:1	20.00

Pond Results:

Peak Elevation:	595.58 ft
Dewater Time:	0.71 days

Dewatering time is calculated from peak stage to lowest spillway

Elevation-Capacity-Discharge Table

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)	
587.00	1.064	0.000	0.000		
587.50	1.087	0.538	0.000		
588.00	1.111	1.087	0.000		
588.50	1.135	1.649	0.000		
589.00	1.158	2.222	0.000		
589.50	1.183	2.807	0.000		
590.00	1.207	3.405	0.000		
590.50	1.231	4.014	0.000		
591.00	1.256	4.636	0.000		
591.50	1.281	5.270	0.000		
592.00	1.306	5.917	0.000		
592.50	1.332	6.577	0.000		
593.00	1.357	7.249	0.000		
593.50	1.408	7.940	0.000		
594.00	1.461	8.658	0.000		
594.25	1.816	9.066	0.000		
594.40	2.041	9.355	0.000		Spillway #1
594.50	2.197	9.567	3.201	8.80	
595.00	3.021	10.866	19.210	6.70	

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)	
595.50	3.998	12.615	57.496	1.20	
595.58	4.232	12.975	66.141	0.30	Peak Stage
596.00	5.111	14.887	112.015		
596.50	6.446	17.769	182.653		
597.00	7.935	21.358	267.245		

Detailed Discharge Table

Elevation (ft)	Emergency Spillway (cfs)	Combined Total Discharge (cfs)
587.00	0.000	0.000
587.50	0.000	0.000
588.00	0.000	0.000
588.50	0.000	0.000
589.00	0.000	0.000
589.50	0.000	0.000
590.00	0.000	0.000
590.50	0.000	0.000
591.00	0.000	0.000
591.50	0.000	0.000
592.00	0.000	0.000
592.50	0.000	0.000
593.00	0.000	0.000
593.50	0.000	0.000
594.00	0.000	0.000
594.25	0.000	0.000
594.40	0.000	0.000
594.50	3.201	3.201
595.00	19.210	19.210
595.50	57.496	57.496
596.00	112.015	112.015
596.50	182.653	182.653
597.00	267.245	267.245

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#1	1	37.000	0.452	0.000	0.000	81.000	F	110.50	12.317
	2	2.000	0.001	0.000	0.000	100.000	F	9.81	1.066
	Σ	**39.000**						**112.36**	**13.383**

Stoned LLC
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DETAILED DESIGN PLANS
SEDIMENT BASIN 004

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SEDIMENT BASIN 004

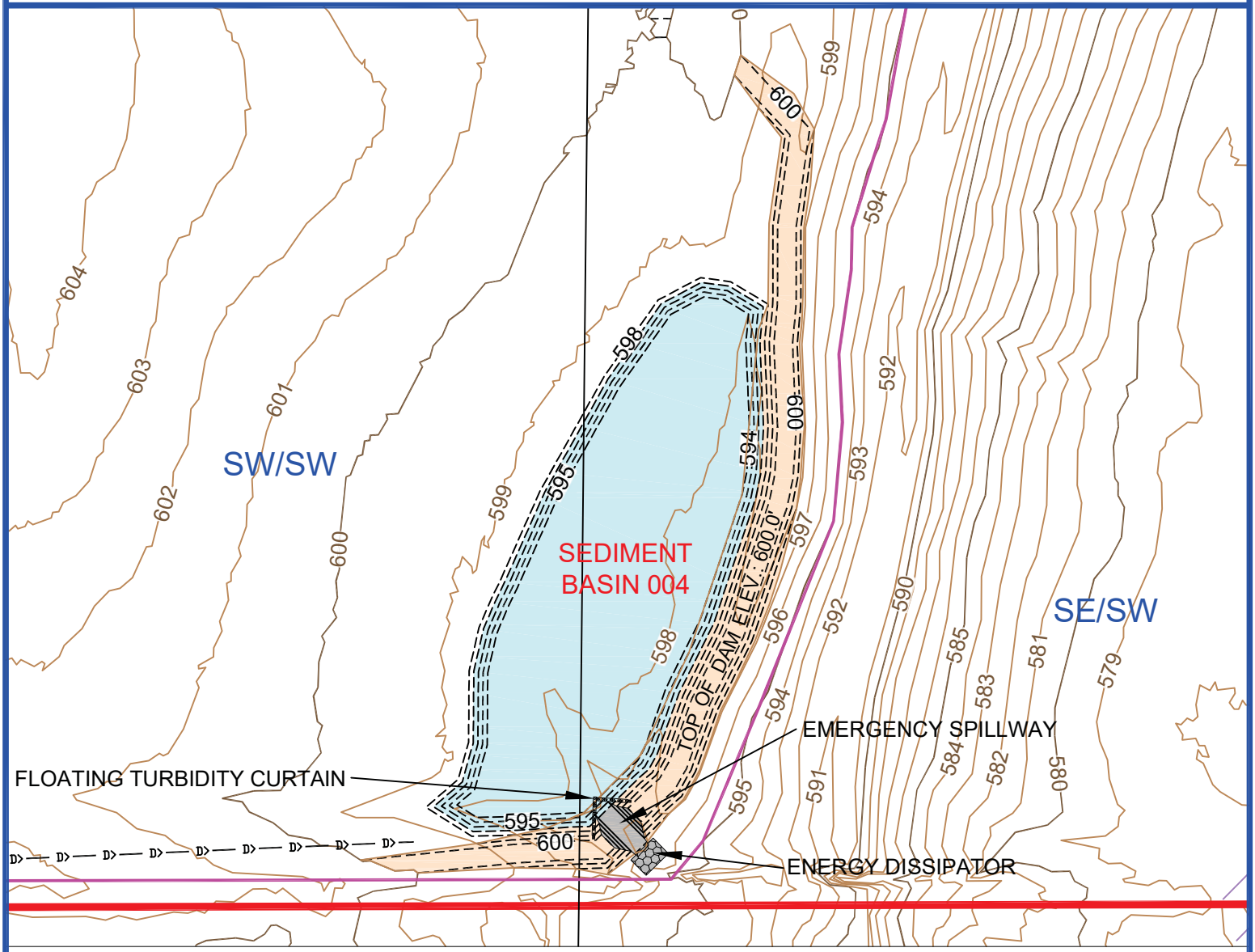
EXCAVATED TOE ELEV.: 594.0'
UPSTREAM TOE ELEV.: 597.0'
SEDIMENT REMOVAL ELEV.: 596.0'
EMERGENCY SPILLWAY ELEV.: 597.0'
**MAXIMUM WATER ELEV.: 598.01'
TOP OF DAM ELEV.: 600.0'

EMERGENCY SPILLWAY: 12' WIDE TRAPEZOIDAL CONCRETE LINED OPEN CHANNEL

STONED LLC

PROJECT CROSSROADS

SEDIMENT BASIN 004
PLAN VIEW DRAWING
SCALE: 1" = 100'



LEGEND

- PERMIT BOUNDARY
- STREAM
- 50 FEET STREAM BUFFER ZONE
- DIVERSION DITCH
- EXISTING CONTOUR
- 595 EXISTING INDEX CONTOUR
- PROPOSED CONTOUR
- 595 PROPOSED INDEX CONTOUR
- NORMAL POOL AREA
- EMBANKMENT

ENERGY DISSIPATER (CLASS II SANDSTONE RIPRAP)

** 25 YEAR - 24 HOUR PRECIPITATION EVENT.

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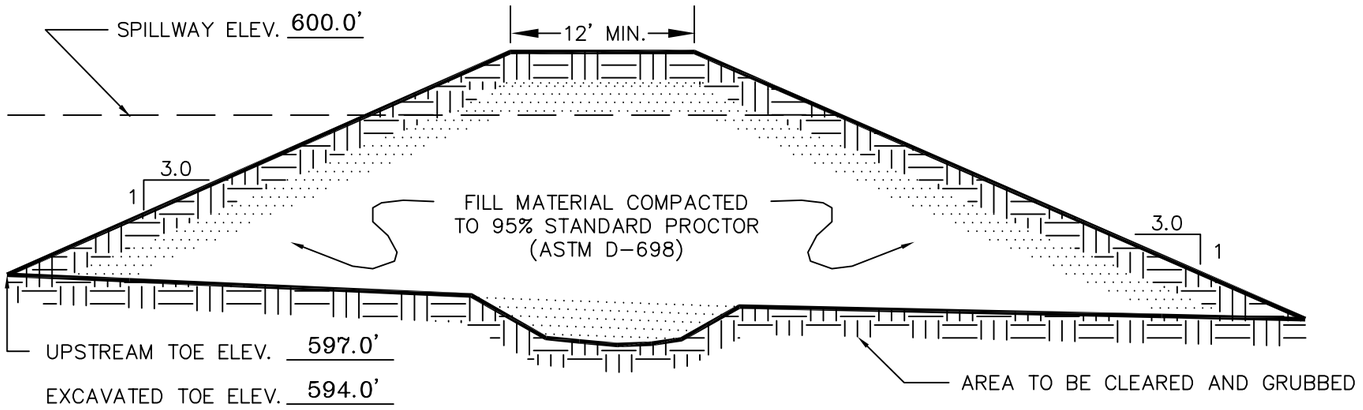
Sediment Basin 004 - Stage Storage

Elevation-Area-Capacity Table

Elevation (ft)	Area (ac)	Capacity (ac-ft)
594.00	0.776	0.000
594.50	0.805	0.395
595.00	0.834	0.805
595.50	0.864	1.229
596.00	0.895	1.669
596.50	0.925	2.124
597.00	0.956	2.594
597.50	0.988	3.080
598.00	1.020	3.582
598.50	1.179	4.131
599.00	1.350	4.763
599.50	1.871	5.565
600.00	2.477	6.648

EMBANKMENT CROSS-SECTION

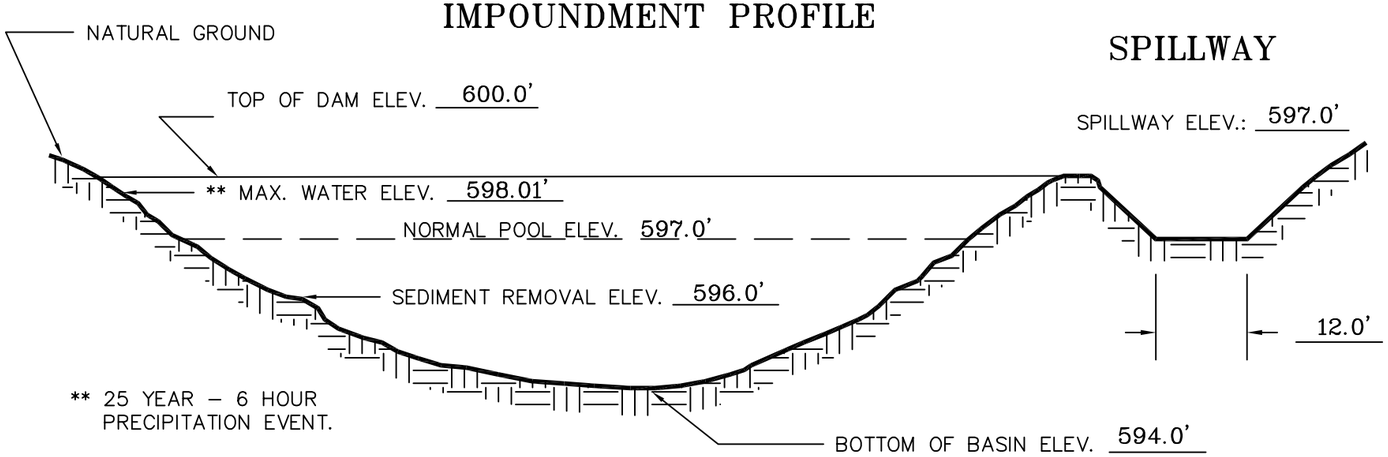


COMPANY: STONED LLC

MINE NAME: PROJECT CROSSROADS MINE NO. 1

BASIN I.D. #: SEDIMENT BASIN 004

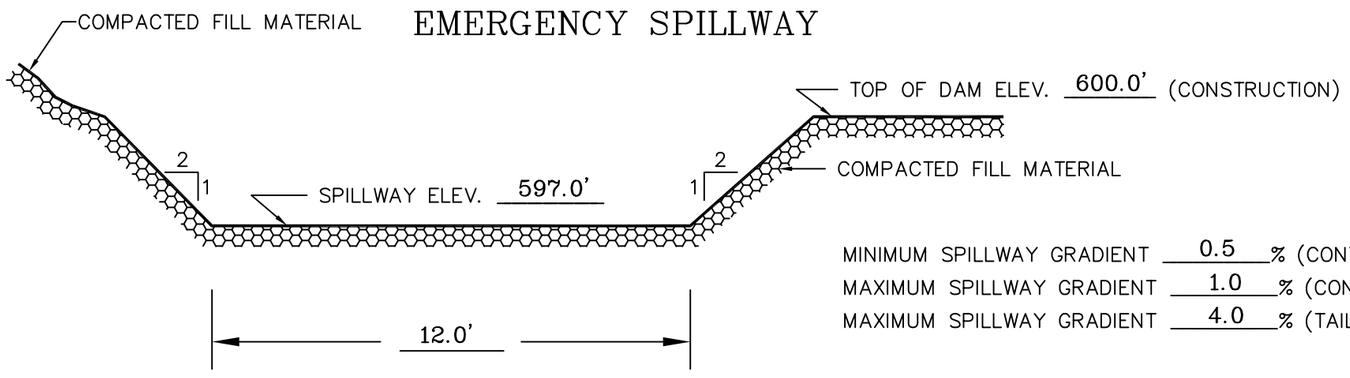
IMPOUNDMENT PROFILE



SPILLWAY

SPILLWAY ELEV.: 597.0'

EMERGENCY SPILLWAY



MINIMUM SPILLWAY GRADIENT 0.5 % (CONTROL SECTION)

MAXIMUM SPILLWAY GRADIENT 1.0 % (CONTROL SECTION)

MAXIMUM SPILLWAY GRADIENT 4.0 % (TAIL DITCH SECTION)

SEE SPILLWAY CONTROL SECTION AND TAIL DITCH DESIGN FOR CHANNEL LINING REQUIREMENTS.

KEY BASIN PARAMETERS

DRAINAGE AREA	9.0	ACRES
DISTURBED AREA	8.0	ACRES
SEDIMENT STORAGE	1.67	AC.FT.
DETENTION STORAGE	0.92	AC.FT.
PERMANENT POOL CAPACITY	2.59	AC.FT.
** PEAK INFLOW	38.12	C.F.S.
** PEAK OUTFLOW	30.57	C.F.S.

NOTE: ALL ELEVATIONS MEAN SEA LEVEL.

** 25 YEAR - 24 HOUR PRECIPITATION EVENT.

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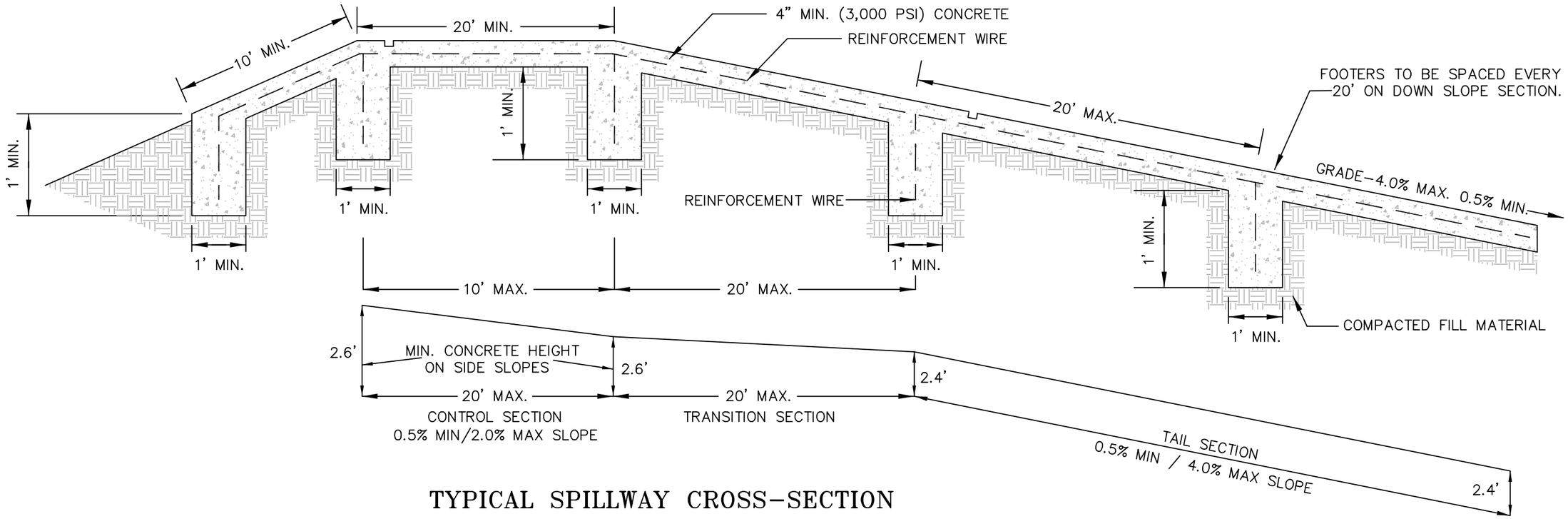
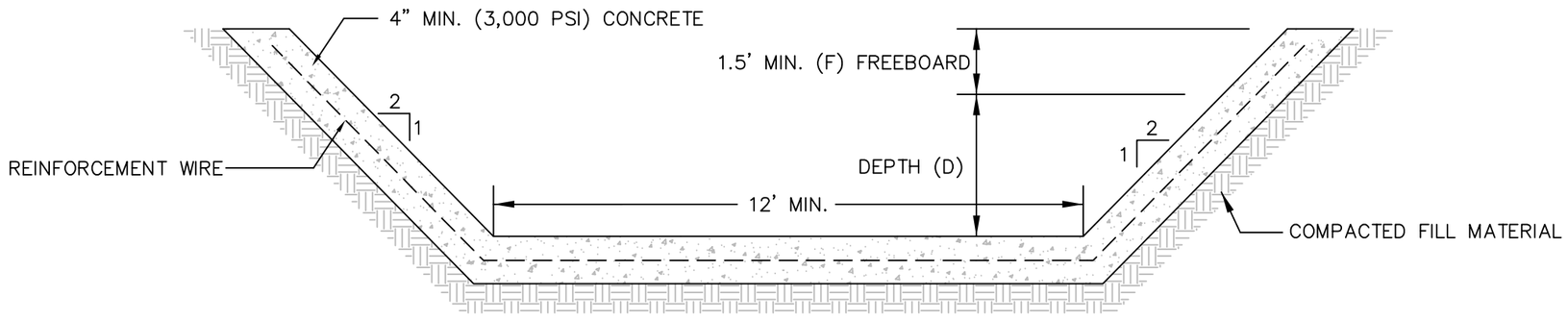
SEDIMENT BASIN 004 SPILLWAY PROFILE



TYPICAL SPILLWAY CROSS-SECTION



	BEGINNING OF CONTROL SECTION	END OF CONTROL SECTION	END OF TRANSITION SECTION	ENTIRE TAIL SECTION
MAXIMUM FLOW DEPTH "D"	1.1'	1.1'	0.9'	0.9'
FREEBOARD "F"	1.5'	1.5'	1.5'	1.5'
MINIMUM CONCRETE HEIGHT ON SIDE SLOPES	2.6'	2.6'	2.4'	2.4'

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SPILLWAY CHANNEL SPECIFICATIONS
SEDIMENT BASIN 004

The entire control section and tail ditch section of the emergency spillway will be cut into the compacted fill of the embankment and lined with a minimum of 4 inches of reinforced concrete. All concrete will be reinforced with 10 gauge, 6" x 6" welded wire mesh. Fiber mesh may be added to the concrete for additional strength, however, the addition of fiber mesh shall not be used in place of the required 6" x 6" welded wire.

The gradient of the control section of the emergency spillway will not exceed one half (0.5%) percent. The gradient of the tail ditch section of the emergency spillway will not exceed four (4%) percent.

The control section and tail ditch section of the emergency spillway will extend from the inner face of the embankment, past the centerline of the embankment and be carried out beyond the downstream slope of the embankment.

The concrete liner at the beginning of the control section of the emergency spillway will be a minimum of 2.6 feet as measured vertically, allowing 1.1 feet for the maximum anticipated flow and 1.5 feet of dry freeboard. The concrete liner at the end of the control section of the emergency spillway will be a minimum of 2.6 feet as measured vertically, allowing 1.1 feet for the maximum anticipated flow and 1.5 feet of dry freeboard. The concrete liner of the tail ditch section of the emergency spillway will be a minimum of 2.4 feet as measured vertically, allowing 0.9 feet for the maximum anticipated flow and 1.5 foot of dry freeboard. There will be a transition zone of at least 20 feet in length between the control section and the tail section. The minimum depth at the beginning of the transition will be 2.6 feet and 2.4 feet at the end of the transition. The flow line of the spillway will be smoothed at the transition to avoid abrupt changes in the flow line slope.

See enclosed SEDCAD 4.0 spillway tail ditch section design and attached Plan Sheet cross-section for the minimum and maximum emergency spillway construction requirements.

A floating silt fence (lightweight turbidity curtain) will be installed near the entrance to the spillway to accomplish sub-surface withdrawal. The floating silt fence (lightweight turbidity curtain) will be set at normal pool and will be anchored at the 25 Year – 24 Hour Event peak stage with steel fence posts.

Sediment Basin 004 - Spillway Tail Ditch

Material: Concrete, Rubble

Trapezoidal Channel

Bottom Width (ft)	Left Sideslope Ratio	Right Sideslope Ratio	Slope (%)	Manning's n	Freeboard Depth (ft)	Freeboard % of Depth	Freeboard Mult. x (VxD)
15.00	2.0:1	2.0:1	1.0	0.0220	1.50		

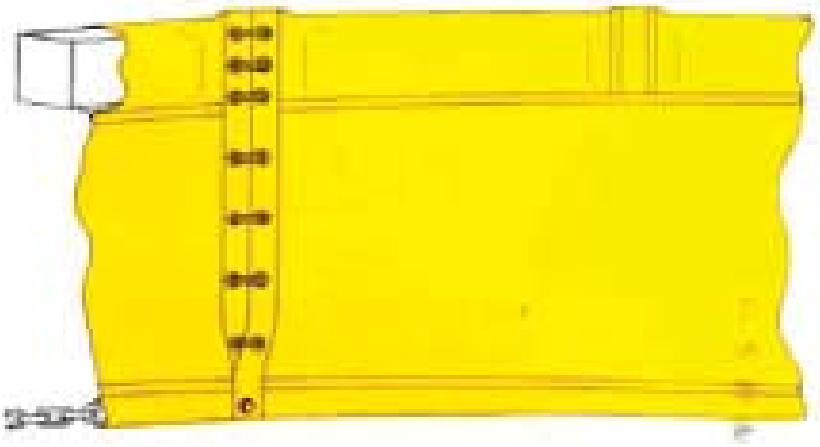
	w/o Freeboard	w/ Freeboard
Design Discharge:	112.36 cfs	
Depth:	0.83 ft	2.33 ft
Top Width:	18.31 ft	24.31 ft
Velocity:	5.52 fps	
X-Section Area:	13.76 sq ft	
Hydraulic Radius:	0.736 ft	
Froude Number:	1.12	

Stoned LLC
Project Crossroads

SUBSURFACE WITHDRAWAL DEVICE AND FLOATING SILT BOOM

Lightweight Turbidity Curtain

Application: Calm waters with little current, such as lakes, ponds, canals and shoreline areas.



Specifications

- Curtain to be anchored at the maximum anticipated peak stage elevation (10 Year – 24 Hour Precipitation Event).
- PVC coated floatations - ultraviolet resistant
- Geotextile fabric screens
- Chain ballast with connectors
- Double sewn seams with grommets
- Depths per requirements ' 50' sections = Minimum 24” deep
- Fabric - Polyester reinforced vinyl high visibility yellow
- Connector - Sections are laced together through grommets and load lines are bolted together.
- Flotation - 6" expanded polystyrene over 9 lbs./ft. buoyancy.
- Ballast - 1/4" galvanized chain (.7 lbs/ft).

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HYDROLOGY AND SEDIMENTOLOGY PREDICTION
25 YEAR - 24 HOUR PRECIPITATION EVENT
SEDIMENT BASINS 004

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STONED LLC

Project Crossroads

Sediment Basin 004

25 Year - 24 Hour Precipitation Event

C. W. McGehee, P.E.

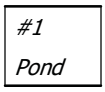
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	25 yr - 24 hr
Rainfall Depth:	6.400 inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Pond	#1	==>	End	0.000	0.000	Sediment Basin 004



Structure Summary:

		Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#1	In	9.000	9.000	38.12	3.36
	Out			30.57	3.36

Structure Detail:

Structure #1 (Pond)

Sediment Basin 004

Pond Inputs:

Initial Pool Elev:	597.00 ft
Initial Pool:	2.59 ac-ft

Emergency Spillway

Spillway Elev	Crest Length (ft)	Left Sideslope	Right Sideslope	Bottom Width (ft)
597.00	20.00	2.00:1	2.00:1	12.00

Pond Results:

Peak Elevation:	598.01 ft
Dewater Time:	1.06 days

Dewatering time is calculated from peak stage to lowest spillway

Elevation-Capacity-Discharge Table

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)	
594.00	0.776	0.000	0.000		
594.40	0.799	0.315	0.000		
594.50	0.805	0.395	0.000		
595.00	0.834	0.805	0.000		
595.50	0.864	1.230	0.000		
596.00	0.895	1.669	0.000		
596.50	0.925	2.124	0.000		
597.00	0.956	2.594	0.000		Spillway #1
597.50	0.988	3.080	2.189	23.35	
598.00	1.020	3.582	30.064		
598.01	1.085	3.590	30.569	2.05	Peak Stage
598.50	1.179	4.131	63.036		
599.00	1.350	4.763	107.884		
599.50	1.871	5.565	163.374		
600.00	2.477	6.648	229.657		

Detailed Discharge Table

Elevation (ft)	Emergency Spillway (cfs)	Combined Total Discharge (cfs)
594.00	0.000	0.000
594.40	0.000	0.000
594.50	0.000	0.000
595.00	0.000	0.000
595.50	0.000	0.000
596.00	0.000	0.000
596.50	0.000	0.000
597.00	0.000	0.000
597.50	2.189	2.189
598.00	30.064	30.064
598.50	63.036	63.036
599.00	107.884	107.884
599.50	163.374	163.374
600.00	229.657	229.657

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#1	1	8.000	0.100	0.000	0.000	81.000	F	33.22	2.831
	2	1.000	0.001	0.000	0.000	100.000	F	4.90	0.533
	Σ	**9.000**						**38.12**	**3.364**

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DETAILED DESIGN PLANS
SEDIMENT BASIN 005

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SEDIMENT BASIN 005

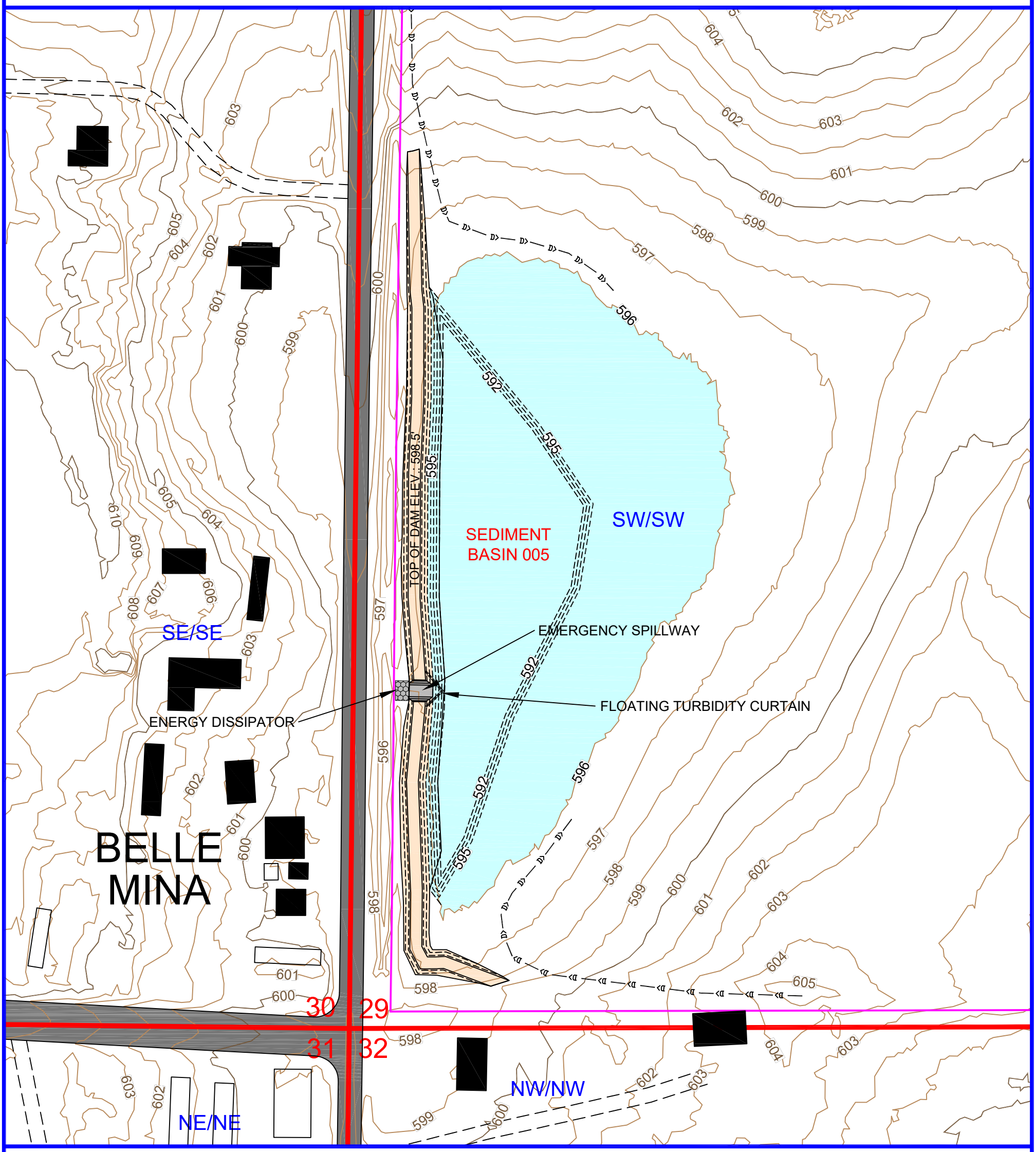
EXCAVATED TOE ELEV.: 592.0'
UPSTREAM TOE ELEV.: 596.0'
SEDIMENT REMOVAL ELEV.: 595.19'
EMERGENCY SPILLWAY ELEV.: 596.0'
**MAXIMUM WATER ELEV.: 596.81'
TOP OF DAM ELEV.: 598.5'

EMERGENCY SPILLWAY: 12' WIDE TRAPEZOIDAL
CONCRETE LINED OPEN CHANNEL

STONED LLC

PROJECT CROSSROADS

SEDIMENT BASIN 005
PLAN VIEW DRAWING
SCALE: 1" = 100'



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ENERGY DISSIPATER (CLASS II SANDSTONE RIPRAP)
** 25 YEAR - 24 HOUR PRECIPITATION EVENT.

LEGEND

- PERMIT BOUNDARY
- STREAM
- 50 FEET STREAM BUFFER ZONE
- DIVERSION DITCH
- EXISTING CONTOUR
- 595 EXISTING INDEX CONTOUR
- PROPOSED CONTOUR
- 595 PROPOSED INDEX CONTOUR
- NORMAL POOL AREA
- EMBANKMENT

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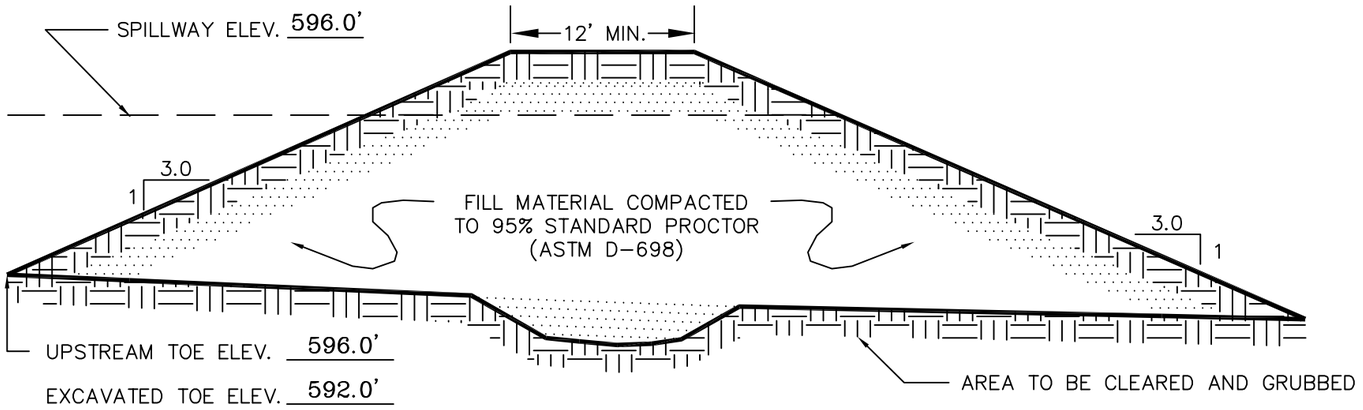
email: cw@mcgehee.org

Sediment Basin 005 - Stage Storage

Elevation-Area-Capacity Table

Elevation (ft)	Area (ac)	Capacity (ac-ft)
593.00	1.102	0.000
593.50	1.145	0.562
594.00	1.189	1.145
594.50	1.233	1.750
595.00	1.278	2.378
595.50	2.088	3.211
596.00	3.097	4.499
596.50	3.876	6.239
597.00	4.743	8.390
597.50	5.390	10.922
598.00	6.078	13.787
598.50	6.754	16.994
599.00	7.466	20.547

EMBANKMENT CROSS-SECTION

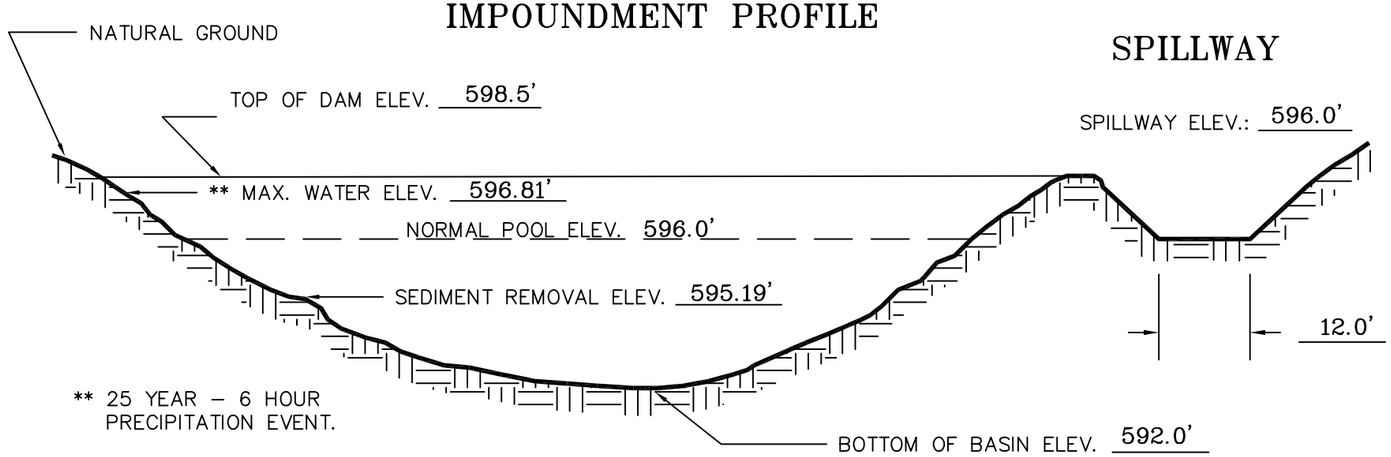


COMPANY: STONED LLC

MINE NAME: PROJECT CROSSROADS MINE NO. 1

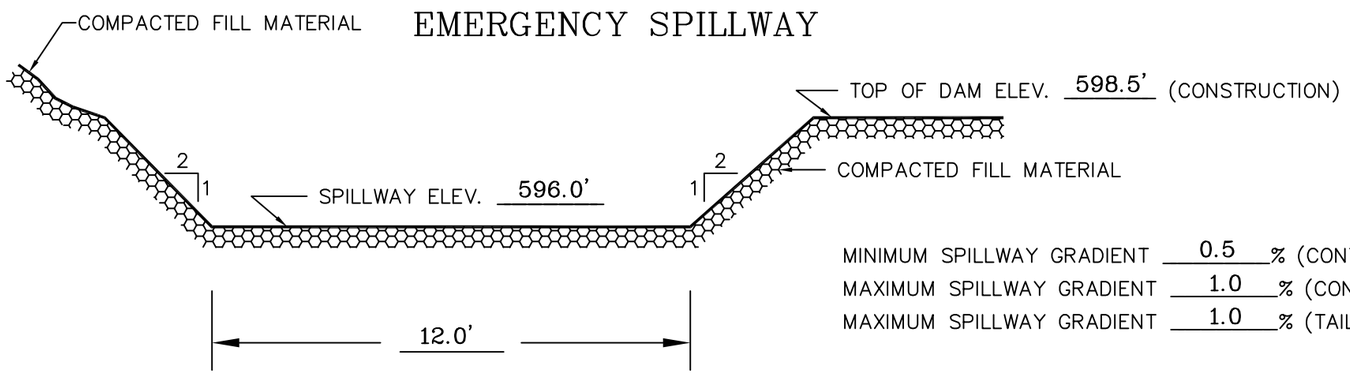
BASIN I.D. #: SEDIMENT BASIN 005

IMPOUNDMENT PROFILE



SPILLWAY

EMERGENCY SPILLWAY



MINIMUM SPILLWAY GRADIENT 0.5 % (CONTROL SECTION)

MAXIMUM SPILLWAY GRADIENT 1.0 % (CONTROL SECTION)

MAXIMUM SPILLWAY GRADIENT 1.0 % (TAIL DITCH SECTION)

SEE SPILLWAY CONTROL SECTION AND TAIL DITCH DESIGN FOR CHANNEL LINING REQUIREMENTS.

KEY BASIN PARAMETERS

DRAINAGE AREA	19.0	ACRES
DISTURBED AREA	18.0	ACRES
SEDIMENT STORAGE	2.7	AC.FT.
DETENTION STORAGE	1.8	AC.FT.
PERMANENT POOL CAPACITY	4.5	AC.FT.
** PEAK INFLOW	65.80	C.F.S.
** PEAK OUTFLOW	19.73	C.F.S.

NOTE: ALL ELEVATIONS MEAN SEA LEVEL.

** 25 YEAR - 24 HOUR PRECIPITATION EVENT.

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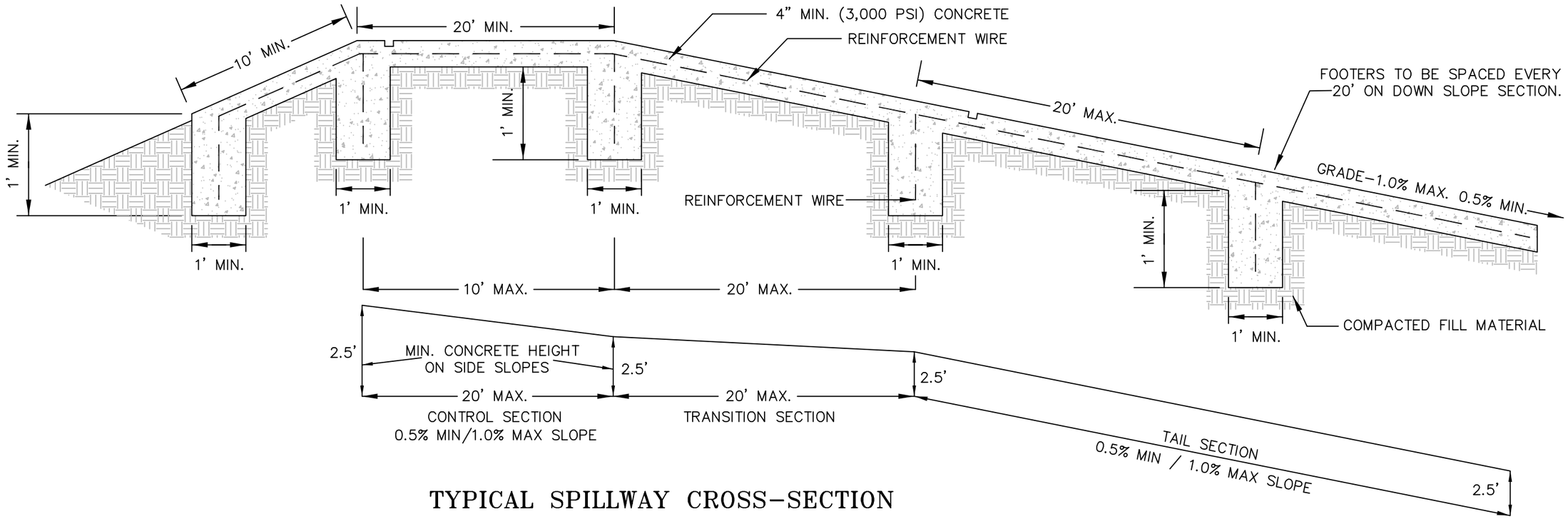
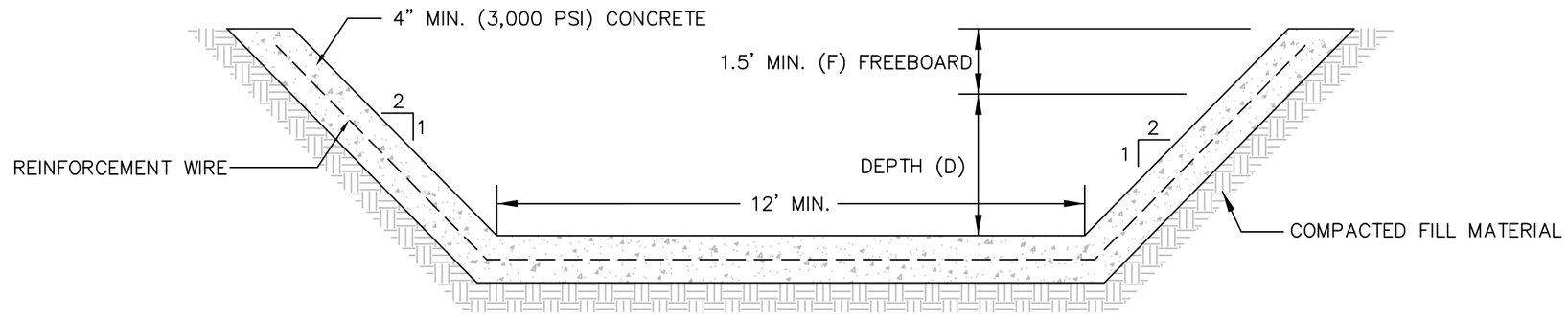
email: cw@mcgehee.org

SEDIMENT BASIN 005 SPILLWAY PROFILE



TYPICAL SPILLWAY CROSS-SECTION



	BEGINNING OF CONTROL SECTION	END OF CONTROL SECTION	END OF TRANSITION SECTION	ENTIRE TAIL SECTION
MAXIMUM FLOW DEPTH "D"	1.0'	1.0'	1.0'	1.0'
FREEBOARD "F"	1.5'	1.5'	1.5'	1.5'
MINIMUM CONCRETE HEIGHT ON SIDE SLOPES	2.5'	2.5'	2.5'	2.5'

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: cw@mcgehee.org

SPILLWAY CHANNEL SPECIFICATIONS
SEDIMENT BASIN 005

The entire control section and tail ditch section of the emergency spillway will be cut into the compacted fill of the embankment and lined with a minimum of 4 inches of reinforced concrete. All concrete will be reinforced with 10 gauge, 6" x 6" welded wire mesh. Fiber mesh may be added to the concrete for additional strength, however, the addition of fiber mesh shall not be used in place of the required 6" x 6" welded wire.

The gradient of the control section of the emergency spillway will not exceed one half (0.5%) percent. The gradient of the tail ditch section of the emergency spillway will not exceed one (1%) percent.

The control section and tail ditch section of the emergency spillway will extend from the inner face of the embankment, past the centerline of the embankment and be carried out beyond the downstream slope of the embankment.

The concrete liner at the beginning of the control section of the emergency spillway will be a minimum of 2.5 feet as measured vertically, allowing 1.0 feet for the maximum anticipated flow and 1.5 feet of dry freeboard. The concrete liner at the end of the control section of the emergency spillway will be a minimum of 2.5 feet as measured vertically, allowing 1.0 feet for the maximum anticipated flow and 1.5 feet of dry freeboard. The concrete liner of the tail ditch section of the emergency spillway will be a minimum of 2.5 feet as measured vertically, allowing 1.00 feet for the maximum anticipated flow and 1.5 foot of dry freeboard.

See enclosed SEDCAD 4.0 spillway tail ditch section design and attached Plan Sheet cross-section for the minimum and maximum emergency spillway construction requirements.

A floating silt fence (lightweight turbidity curtain) will be installed near the entrance to the spillway to accomplish sub-surface withdrawal. The floating silt fence (lightweight turbidity curtain) will be set at normal pool and will be anchored at the 25 Year – 24 Hour Event peak stage with steel fence posts.

Sediment Basin 005 - Spillway Tail Ditch

Material: Concrete, Rubble

Trapezoidal Channel

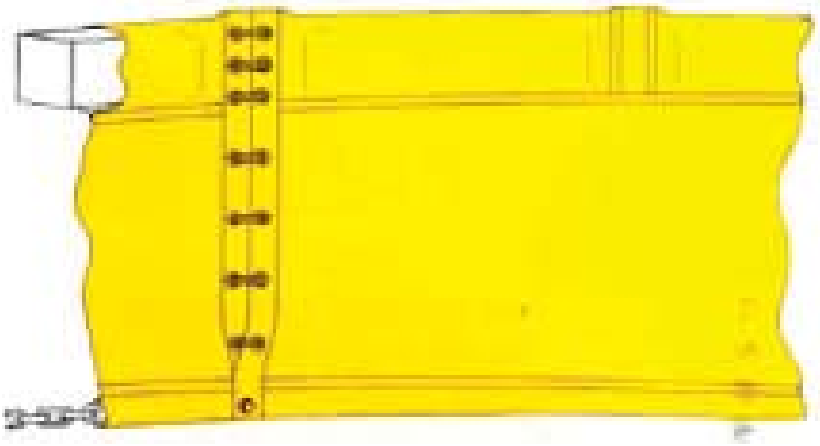
Bottom Width (ft)	Left Sideslope Ratio	Right Sideslope Ratio	Slope (%)	Manning's n	Freeboard Depth (ft)	Freeboard % of Depth	Freeboard Mult. x (VxD)
12.00	2.0:1	2.0:1	1.0	0.0220	1.50		

	w/o Freeboard	w/ Freeboard
Design Discharge:	20.00 cfs	
Depth:	0.43 ft	1.93 ft
Top Width:	13.71 ft	19.71 ft
Velocity:	3.64 fps	
X-Section Area:	5.49 sq ft	
Hydraulic Radius:	0.395 ft	
Froude Number:	1.01	

SUBSURFACE WITHDRAWAL DEVICE AND FLOATING SILT BOOM

Lightweight Turbidity Curtain

Application: Calm waters with little current, such as lakes, ponds, canals and shoreline areas.



Specifications

- Curtain to be anchored at the maximum anticipated peak stage elevation (10 Year – 24 Hour Precipitation Event).
- PVC coated floatations - ultraviolet resistant
- Geotextile fabric screens
- Chain ballast with connectors
- Double sewn seams with grommets
- Depths per requirements ' 50' sections = Minimum 24” deep
- Fabric - Polyester reinforced vinyl high visibility yellow
- Connector - Sections are laced together through grommets and load lines are bolted together.
- Flotation - 6" expanded polystyrene over 9 lbs./ft. buoyancy.
- Ballast - 1/4" galvanized chain (.7 lbs/ft).

Stoned LLC
Project Crossroads

HYDROLOGY AND SEDIMENTOLOGY PREDICTION
25 YEAR - 24 HOUR PRECIPITATION EVENT
SEDIMENT BASINS 005

Post Office Box 3431 • 450 19th St. West • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 • cw@mcgehee.org

STONED LLC

Project Crossroads

Sediment Basin 005

25 Year - 24 Hour Precipitation Event

C. W. McGehee, P.E.

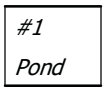
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	25 yr - 24 hr
Rainfall Depth:	6.400 inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Pond	#1	==>	End	0.000	0.000	Sediment Basin 005



Structure Summary:

		Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#1	In	19.000	19.000	65.80	6.56
	Out			19.73	6.46

Structure Detail:

Structure #1 (Pond)

Sediment Basin 005

Pond Inputs:

Initial Pool Elev:	596.00 ft
Initial Pool:	4.50 ac-ft

Emergency Spillway

Spillway Elev	Crest Length (ft)	Left Sideslope	Right Sideslope	Bottom Width (ft)
596.00	20.00	2.00:1	2.00:1	12.00

Pond Results:

Peak Elevation:	596.81 ft
Dewater Time:	0.65 days

Dewatering time is calculated from peak stage to lowest spillway

Elevation-Capacity-Discharge Table

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)	
593.00	1.102	0.000	0.000		
593.50	1.145	0.562	0.000		
594.00	1.189	1.145	0.000		
594.50	1.233	1.750	0.000		
595.00	1.278	2.378	0.000		
595.50	2.088	3.211	0.000		
596.00	3.097	4.499	0.000		Spillway #1
596.50	3.876	6.239	2.189	9.61*	
596.81	4.438	7.592	19.727	5.90	Peak Stage
597.00	4.743	8.390	30.064		
597.50	5.390	10.922	63.036		
598.00	6.078	13.787	107.884		
598.50	6.754	16.994	163.374		
599.00	7.466	20.547	229.657		

**Designates time(s) to dewater have been extrapolated beyond the 50 hour hydrograph limit.*

Detailed Discharge Table

Elevation (ft)	Emergency Spillway (cfs)	Combined Total Discharge (cfs)
593.00	0.000	0.000
593.50	0.000	0.000
594.00	0.000	0.000
594.50	0.000	0.000
595.00	0.000	0.000
595.50	0.000	0.000
596.00	0.000	0.000
596.50	2.189	2.189
597.00	30.064	30.064
597.50	63.036	63.036
598.00	107.884	107.884
598.50	163.374	163.374
599.00	229.657	229.657

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#1	1	18.000	0.220	0.000	0.000	81.000	F	64.87	6.024
	2	1.000	0.001	0.000	0.000	100.000	F	4.90	0.533
	Σ	**19.000**						**65.80**	**6.557**

POLLUTION ABATEMENT PLAN

Prepared for:

Alabama Department of Environmental Management

STONED, LLC

Project Crossroads

NPDES Permit Application

Prepared by:

MCGEHEE ENGINEERING CORP.
P. O. Box 3431 Jasper, Alabama 35502-3431
Telephone: (205) 221-0686
Fax: (205) 221-7721

INTRODUCTION

This document is an application for a proposed N.P.D.E.S. Permit. Stoned, LLC, Project Crossroads is located in Section 29, Township 4 South, Range 3 West, Limestone County, Alabama. This application was prepared in accordance with the rules and regulations of the Alabama Department of Environmental Management.

The "Pollution Abatement Plan" is presented in two parts, which include a brief narrative and the "Pollution Abatement Plan" both presented herein. The narrative is intended to address the format as outlined by the ADEM Water Division - Water Quality and Control Program, rules and regulations, as well as present the basis for the design as further detailed in the "Pollution Abatement Plan". The drawings as presented in the "Pollution Abatement Plan" were derived from rules and regulations from ADEM as well as from other generally accepted design data sources primarily from the U.S. Department of Agriculture Soil Conservation Service. Generally, the narrative will follow the outline of Chapter 6 - 9 - .03, Surface Mining Rules and Regulations from the ADEM rules and regulations.

OPERATOR

The operator of this limestone operation is Stoned, LLC which will have its home office as follows:

Stoned, LLC
801 Franklin Street, S.E.
Huntsville, Alabama 35801

GENERAL INFORMATION

Stoned, LLC proposes to operate a limestone, dirt and chert quarry and processing facility. As part of these operations, the limestone, dirt and chert will be mined & processed, loaded on trucks, and transported. All surface drainage will be drained into one of the five proposed outfalls/sedimentation ponds. Water from these basins will then be discharged into an U.T. to Limestone Creek and directly into Limestone Creek. **See NPDES Permit Maps.**

Design plans submitted with this document provide an existing contour map taken from Tanner and Greenbrier U.S.G.S., 7-1/2 minute, Quadrangles. The map shows the layout of the limestone, dirt and chert mining facility, drainage patterns and proposed outfalls. All surface drainage from the mining area drains naturally into the sedimentation ponds, permitted outfalls 001-005.

SURFACE WATER DIVERSIONS

The enclosed topographic map shows the contour of the land and general drainage patterns. All disturbed surface drainage will gravity drain through natural drainage courses or diversion ditches to the outfalls/sediment basins.

In the event that diversion ditch construction is necessary, diversion ditches will be constructed in accordance with the "Attached Diversion Ditch Criteria".

QUALITY AND CHARACTERISTICS OF WASTE PRODUCTS

The only waste products produced at the limestone, dirt and chert quarry will be silts from processing operations. The silts will be trapped and settle when passing through the sediment basins. Each sediment basin will be cleaned out as needed to provide adequate sediment retention volume for incoming materials. The pH, total iron and manganese, because of the nature of the operation, should pose no problem and should remain in compliance with the N.P.D.E.S. parameter requirements.

SOLID OR LIQUID WASTE DISPOSAL PLAN

The sediment basins will be cleaned out when the capacity of said basins reach sixty (60%) percent of their design capacity. The sediment basins will be cleaned out in an environmentally safe manner (loader, backhoe, etc.). Sediment removed from the sediment basins will be disposed of in the adjacent existing pit.

SEDIMENT CONTROL FOR HAULROADS AND INCIDENTALS

Haul roads, existing or created for this operation, will be ditched and stabilized by planting a grass mixture suitable for seasonal conditions, fertilizing and mulching all cut, fill, and borrow areas to minimize erosion and enhance re-stabilization. In small areas where incidental drainage cannot be diverted through the sediment basins, silt fences will be constructed to control runoff. Silt fences will be constructed in accordance with the attached "Silt Fence Design and Construction Specifications".

LOCATION OF ADJACENT STREAMS

After obtaining airspace authorization from the Federal Aviation Administration (FAA), on June 26, 2023, McGehee Engineering Corp. flew (Sensefly EBEE X RTK Drone) the proposed site to establish and document current conditions and planimetrics. On June 28, 2023, qualified personnel from McGehee Engineering Corp. performed an on-site wetland delineation and

stream assessment of the entire proposed NPDES permit area. At the time of the aerial flight and on-site inspection, the site was an active wheat and soybean plantation. At the time of the on-site wetland delineation and stream assessment, it was determined that no jurisdictional Waters of the United States (WOTUS) were present.

Included in the preceding N.P.D.E.S. Application are maps (Scale: 1" = 300' and 1" = 2,000') showing the location of all adjacent streams and the receiving water of this operation.

NON-POINT SOURCE DISCHARGE CONTROL

Because all disturbed areas are graded in such a manner as to route all drainage through the sediment basins, all drainage from the Project Crossroads should carry all sediment (silts, clay, etc.) into the approved point source discharge outfalls. See the attached Sediment Basin Detail Design Plans for Sediment Basins 001-005. Sediment Basins 001-005 will control the runoff from the crushing, screening and processing areas.

PUBLIC WATER SUPPLIES

The receiving waters from the proposed facility are an unnamed tributary to Limestone Creek and Limestone Creek. The receiving water is not a public water supply.

APPENDIX A

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS

Proposed sediment basins (temporary or permanent) will be designed and constructed using the following as minimum specifications:

1. EMBANKMENT REQUIREMENTS

A) The minimum width of the top of the embankment will under no circumstance be less than twelve (12) feet.

B) The embankment will have a minimum front and back slope no steeper than 3 horizontal to 1 vertical.

C) The foundation area of the embankment will be cleared and grubbed of all organic matter with no surface slope steeper than 1 horizontal to 1 vertical.

D) A core will be constructed in a cutoff trench along the centerline of the embankment. The cutoff trench will be at least eight (8) feet wide with the side slope steepness to be no greater than 1 horizontal to 1 vertical. The material placed in the cutoff trench will be compacted to ninety-five (95%) percent of the standard proctor density, as set forth in ASTM.

E) The embankment construction material will be free of sod, roots, stumps, rocks, etc., which exceed six (6") inches in diameter. The embankment material will be placed in layers of twelve (12") inches or less and compacted to ninety-five (95%) percent of the standard proctor density, as set forth in ASTM.

F) The embankment, foundation and abutments will be designed and constructed to be stable under normal construction and operating conditions, with a minimum static safety factor of 1.5 and a minimum seismic safety factor of 1.2, at normal pool level with steady seepage saturation conditions.

G) The actual constructed height of the embankment will be a minimum of five (5%) percent higher than the design height to allow for settling over the life of the embankment.

H) All basins will have a minimum of 1.5 feet of freeboard between the normal overflow and the emergency spillway and a minimum 1.5 feet of freeboard between the height of the maximum design flow and the top of the dam anticipated from a 25 Year - 24 Hour precipitation event.

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS (continued)

I) For embankments constructed as point source discharges, the embankment will be constructed and abutments keyed into undisturbed, virgin, ground if at all possible. In the event that this cannot be achieved, additional design and construction specifications will be submitted in the Detailed Basin Design Plans.

J) The embankment and all areas disturbed in the construction of the embankment will be seeded with a mixture of perennial and annual grasses, fertilized and mulched to prevent erosion and ensure re-stabilization. Hay dams, silt fences, and rock check dams, etc. will be installed, where deemed necessary, as additional erosion prevention methods.

2. DISCHARGE STRUCTURE REQUIREMENTS

A) The primary spillway will be designed to adequately carry the anticipated peak runoff from a 25 Year - 24 Hour precipitation event. The combination primary and secondary (emergency) spillway system will be designed to safely carry the anticipated peak runoff from a 25 Year - 24 Hour precipitation event. When sediment basins are proposed in the drainage course of a public water supply, the spillway system will be designed and constructed to adequately carry the runoff from a 50 Year - 24 Hour precipitation event. The emergency spillway in the control section will be at least 20 feet in length; the side slopes will be no steeper than 2:1, and the percent slope from the entrance to the exit section of the emergency spillway will be no greater than that stated in the design plans.

B) Channel linings, for single channel spillway systems, will be riprap or concrete.

C) When consisting of pipe, the primary spillway will be installed according to Class “C” pipe installation for embankment bedding. Where exposed above ground along the backslope of the embankment, the pipe will have an anti-seep collar installed at each joint of the discharge pipe to radiate at least two (2) feet from the pipe in all directions.

D) Sediment basins with a single spillway system, such as a skimmer board, will be a trapezoidal open channel constructed in consolidated, non-erodible material and lined with riprap, concrete, asphalt or durable rock.

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS (continued)

E) The primary spillway will be designed and constructed with a device to eliminate floating solids from leaving the impoundment. This device will consist of a turned down elbow when using pipe or a skimmer system when using an open channel spillway.

F) When necessary, to prevent erosion of the embankment or discharge area, a splash pad of riprap, durable rock, saccrete, etc. will be installed at the discharge end of the primary spillway.

G) The combined spillway systems, for sediment basins constructed in series, will be designed to adequately accommodate the entire drainage area.

3. INSPECTION, MAINTENANCE AND CERTIFICATION REQUIREMENTS

A) Inspections will be conducted regularly during construction of the sediment basin by a qualified registered professional engineer or other qualified person under the direction of a professional engineer. Upon completion of construction, the sediment basin will be certified, by a qualified registered professional engineer, to the Regulatory Authority as having been constructed in accordance with the approved detailed design plans.

B) Sediment basins will be inspected semi-monthly for erosion, instability, etc., until the removal of the structure or an NPDES Permit is no longer required at this site.

C) Sediment basins will be examined quarterly for structural weakness, instability, erosion, slope failure, or other hazardous conditions.

D) If during the above-described periodic inspections, it is determined that there exist signs of structural weakness, instability, erosion, slope failure, improper functioning, or other hazardous conditions, these will be repaired immediately.

E) Standard anticipated maintenance will include repairing rills and gullies, repairing slope failures, re-seeding areas of failed or scarce vegetation, cleaning out or removing debris obstructing pipes and/or spillways to allow proper functioning, etc. Standard maintenance discovered during the above-described periodic inspections will be performed immediately. Hazardous conditions observed during inspections will be reported immediately to the Regulatory Authority for furthers consultation or instructions.

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS (continued)

F) Retained sediment will be removed from each sediment basin when the accumulated sediment reaches sixty (60%) percent of its design capacity.

4. BASIN REMOVAL REQUIREMENTS

A) Upon completion of mining, reclamation, restabilization and effluent standards being met, the operator will submit to ADEM a request in writing to abandon, remove, or permanently leave the sediment basin(s) and measures that will be taken to comply with applicable ADEM regulations.

B) Once the operator has received approval from ADEM, each sediment basin not proposed as a permanent water impoundment will be de-watered in a controlled manner by either pumping or siphoning. Upon successful dewatering, a determination will be made as to the retained sediment level in the basin. After determining the retained sediment level, a channel will be cut into the embankment down to the retained sediment level on the side of the embankment deemed most suitable to reach natural ground without encountering prohibiting rock. The embankment material removed from this newly constructed channel will be spread and compacted over the previous impoundment (wet area) area to prevent erosion and ensure re-stabilization. The newly constructed channel will be of adequate width (minimum 30 feet) and sloped to a grade (approximately 1% to 3%) which will cause all surface drainage to travel across this area in sheet flow, minimizing the possibility of erosion. Also, where necessary, hay dams will be installed in strategic locations across the width of the channel to retain sediment and slow the water velocity to a favorable rate. Upon removal of the embankment section, all disturbed areas will be graded in such a manner to ensure slope stability, successful re-stabilization and to minimize erosion. All disturbed areas will be seeded with a mixture of annual and perennial grasses fertilized and mulched. No slope, existing or created in the removal of the sediment basin, will be left on a grade that will slip or slough.

5. PERMANENT WATER IMPOUNDMENT REQUIREMENTS

A) All sediment basins remaining as permanent water impoundments will have supplemental data submitted to the Regulatory Authority concerning water quality, water quantity, size, depth, configuration, postmining land use, etc.

B) Final grading slopes of the entire permanent water impoundment area will not exceed a slope of 2 Horizontal to 1 Vertical to provide for safety and access for future water users.

APPENDIX B

DIVERSION DITCH CONSTRUCTION SPECIFICATIONS

DIVERSION DITCH AND DIVERSION BERM DESIGN AND CONSTRUCTION SPECIFICATIONS

1) Temporary diversions will be designed and constructed to adequately carry the runoff from a 2-Year - 6 Hour precipitation event.

2) Permanent diversions will be designed and constructed to adequately carry the runoff from a 10 Year - 6 Hour precipitation event.

3) Permanent diversions will be designed and constructed with gently sloping banks stabilized with appropriate vegetation.

4) All diversions will be designed, constructed and maintained, using the best technology currently available, whereas additional contribution of suspended solids to stream-flow and to runoff outside the permit area is prevented.

5) Maintenance of appropriate gradient, channel lining, revegetation, roughness structures, detention basins, etc. will be used, when necessary, as sediment control measures for these diversions.

6) Diversions will not be constructed on existing landslides nor be located so as to increase the potential for landslides.

7) Temporary diversions will be removed and the affected area regarded, topsoiled (if required) and revegetated when no longer needed.

8) Channel linings, for diversions with slopes of five (5%) percent or less, will consist of a mixture of both annual and perennial grasses being predominantly fescue and bermuda. Channel linings, for diversions with slopes greater than five (5%) percent, will consist of riprap or other non-erodible material or cut into non-erodible material.

9) Adequate freeboard will be provided for protection for transition of flows and critical areas such as swells and curves along the entire diversion length.

10) At discharge points, where diversions intersect with natural streams or exit velocities of the diversion are greater than that of the receiving streams, energy dissipaters will be installed when deemed necessary.

DIVERSION DITCH AND DIVERSION BERM DESIGN AND CONSTRUCTION SPECIFICATIONS (continued)

11) Excess material excavated in the construction of the diversion, not needed for diversion channel geometry or the re-grading of the channel; will be disposed of in the mining pit.

12) Diversions will not be designed or constructed to divert water into underground mines without written approval from the Regulatory Authority.

13) The entire area in which a diversion berm is proposed will be cleared and grubbed of all organic material, scarified, and no surface slopes will be left steeper than 1V:1H.

14) Diversion berms will be constructed with desirable material, free of sod, stones, roots, limbs, etc. over six (6") inches in diameter. This material will be spread in layers no greater than twelve (12") inches in thickness and compacted to ninety-five (95%) percent of the standard proctor density, as outlined in ASTM, until the design height is reached.

15) Upon completion of construction of diversion ditches or diversion berms, all disturbed areas will be seeded with a mixture of both annual and perennial grasses, fertilized, and mulched in order to minimize erosion and ensure re-stabilization.

16) All diversions (berms or ditches) will be examined quarterly for erosion, instability, structural weakness, or other hazardous conditions and maintenance performed as necessary.

APPENDIX C

SILT FENCE DESIGN AND CONSTRUCTION SPECIFICATIONS

SILT FENCE DESIGN AND CONSTRUCTION SPECIFICATIONS

1) Mesh height - 3'0" including 6" trench flap.

2) Prefabricated with 4 1/2" long treated hardwood stakes spaced on 7'7" centers.

3) Mesh opening - Equivalent Opening Size (E.O.S.) by U.S. Standard sieve measure (ASTM D4751-87) is 20-30 mesh.

4) Allowable Flow Rate - 40 gallon per minute per square foot (Test Method CFMC GET-2).

5) Maximum Particle Size Passing - 0.595 millimeter.

6) Mullein Burst Strength - 210 pounds per square inch (ASTM D- 3786-80).

7) Grab Strength - 120 pounds per square inch.

8) Maximum Elongation - 30 percent (ASTM D-1682-64).

9) The silt fence will be installed by initially cutting a trench approximately six (6") inches wide by six (6") inches deep, along the contour for the entire length of the fence. Upon completion of the trench, the silt fence will be stretched alongside the trench with the treated hardwood stakes being driven into the ground approximately two (2') feet deep against the upper wall of the trench. The six (6") inch trench flap will then be laid along the bottom of the trench and covered with compacted fill material. (See Attached Typical Section)

10) Prior to the removal of the silt fence, any silt or sediment retained by the silt fence will be seeded with a mixture of both annual and perennial grasses, fertilized and mulched.

APPENDIX D

PRIMARY HAUL ROAD

DESIGN AND CONSTRUCTION SPECIFICATIONS

DESIGN, CONSTRUCTION, MAINTENANCE, AND RECLAMATION SPECIFICATIONS FOR PRIMARY ROADS

1. LOCATION

A) Primary roads will be located on ridges or high areas or on the most stable available slopes so as to control and prevent erosion, siltation, flooding, and adverse impacts to fish and wildlife, or their habitat and related environmental values, to the extent possible.

B) No part of any primary road will be located in the channel of an intermittent or perennial stream without written approval from the Regulatory Authority.

C) If at all possible, all primary roads will be located upstream of sediment basins to prevent, control and minimize additional contributions of suspended solids to stream flow or runoff outside the permit area, the violation of applicable State or Federal water quality standards, seriously altering the normal flow of water in stream-beds or drainage channels, and damage to all public or private property.

D) In instances where it is not possible to locate primary roads in the above manner, sediment control will be achieved by the use of silt fences, rock check dams, hay bale berms, etc.

2. DESIGN REQUIREMENTS

A) Primary roads will be designed by or under the direct supervision of a qualified registered Professional Engineer experienced in the design and construction of roads, in accordance with the ADEM rules and regulations, and current, prudent engineering practices. No Primary Road grade will be steeper than fifteen (15) percent.

B) All primary roadway embankments will be designed and constructed to be stable under normal construction and operating conditions, with a minimum static safety factor of 1.3.

C) All primary roads will be designed, constructed, reconstructed and maintained to have adequate drainage control structures to safely pass the peak runoff anticipated from a 10-year, 6-hour precipitation event.

3. CONSTRUCTION REQUIREMENTS

A) The foundation area of the roadbed will be cleared and grubbed of all organic material and the topsoil will be removed. The disturbed area will be kept to the minimum necessary to accommodate the roadbed and/or associated drainage ditch construction.

B) The road construction material will be suitable subgrade material, free of sod, roots, stumps, etc., and will not contain rocks which exceed twelve (12) inches in diameter. The road construction material will be placed in layers (12-inch maximum thickness) and compacted to ninety-five (95%) percent of the standard proctor density, as set forth in ASTM.

C) The minimum top width of primary roads will under no circumstance be less than sixteen (16) feet and will be of maximum width necessary to facilitate the largest equipment using the road.

D) All slopes (cut and fill) will be no steeper than 2 horizontal to 1 vertical, unless specified otherwise in the detailed design.

E) Roadbeds will be cut into consolidated, non-erodible material or will be surfaced with durable, non-toxic, non-acid forming material. In most instances, durable sandstone overburden material from the mine site will be used for surfacing material. In instances where durable sandstone overburden material from the site is not available or suitable, then durable, non-toxic, non-acid forming material, such as chert, crushed sandstone, redrock, and/or crushed sandstone will be hauled in from off site, placed and compacted on the roadbed surface a minimum depth of four (4) inches.

F) Primary roads will be constructed with grades no steeper than fifteen (15) percent for no more than 300’.

4. DRAINAGE AND SEDIMENT CONTROL REQUIREMENTS

A) Primary roads will be constructed, reconstructed, and maintained to have adequate drainage control, using structures such as, but not limited to bridges, culverts, drainage pipes, ditches, cross drains, and ditch relief drains designed to safely pass the peak runoff anticipated from a 10-year, 6-hour precipitation event. All drainage control structures will be designed and constructed in such a manner whereas, to allow a free and operating conditions to prevent, control, and minimize erosion at the inlets and outlets.

B) Culverts and drainage pipes will be designed and installed to provide adequate support for the load of the largest equipment using the road. For design purposes, "H-20" (live load + impact) was used. All culverts or drainage pipes with diameters of forty-eight (48) inches or less will be covered with a minimum of one (1) foot and the maximum cover

will not exceed fifty-seven (57) feet of desirable compacted material. All culverts or drainage pipes with diameters greater than forty- eight (48) inches will be covered with a minimum of two (2) feet and the maximum cover will not exceed forty-one (41) feet of desirable compacted material.

C) Culverts and drainage pipes will be designed and installed to allow adequate freeboard to prevent overtopping of the embankment.

D) Drainage ditches, cross drains, and ditch relief drains will be constructed and maintained to prevent uncontrolled surface drainage over the road surface and roadway embankment.

E) Drainage ditches will be constructed with no sustained grades greater than five (5%) percent, unless unavoidable. If ditches must be constructed with grades in excess of five (5%) percent, drainage ditches will be lined with riprap.

F) Sediment control will be achieved by the use of silt fences, rock check dams, hay bale berms, etc. in strategic locations, to prevent excessive siltation to the receiving streams.

G) Upon completion of construction of all roads, the side slopes of the roadway cut and fill sections, including all borrow areas formed in the construction, areas used for disposal of excess material, ditches, etc. will be seeded with a mixture of perennial and annual grasses, fertilized and mulched to prevent erosion and ensure restabilization. Grass mixtures will include, but not be limited to, fescue, bermuda, rye grass, browntop millet, clover and sericea.

5. INSPECTION AND MAINTENANCE REQUIREMENTS

A) Routine inspections and maintenance (such as re-grading, resurfacing, maintenance of sediment control structures, spot replanting, and dust control) will be conducted regularly during the life of each road to assure that each road continually meets design and performance standards.

B) Dust control will be achieved by the periodic application of water, chemical binders and/or other dust suppressants.

C) Any road damaged by a catastrophic event, such as a flood, or earthquake, will be repaired as soon as it is practicable after the damage has occurred.

6. REMOVAL AND RECLAMATION REQUIREMENTS

A) All primary roads that are not mined through and remain after the completion of mining may be left as permanent roads for landowner access, if there is no opposition by said landowner.

B) All primary roads that are not mined through and remain after the completion of mining which are not to be retained as permanent for landowner access will be removed and reclaimed as soon as practicable after it is no longer needed for mining and reclamation purposes. This removal and reclamation will include:

1. Closing the road to traffic.

2. Removing all bridges, culverts, drainage pipes, and other drainage control structures, unless otherwise approved as part of the postmining land use.

3. Removing and/or otherwise disposing of road surfacing materials, that are not compatible with the postmining land use and re-vegetation requirements, onsite or removed and stored for re-use.

4. Reshaping and re-grading cut and fill slopes as necessary to be compatible with the postmining land use and to compliment the natural drainage pattern of the surrounding terrain.

5. Protecting the natural drainage patterns by installing dikes or cross drains as necessary to control surface runoff and erosion.

6. Scarifying or ripping the roadbed, replacing topsoil or substitute material, and revegetating the entire disturbed area.

8. TYPICAL ROADBED CONFIGURATION

A) See attached drawings, cross-sections, etc., for an illustration of the typical roadbed configurations.

APPENDIX E

PROPOSED SEDIMENT BASINS

CONSTRUCTION REQUIREMENTS

SEDIMENT BASIN 001

Drainage Area: 67 Acres
Disturbed Area: Initial 10 Acres, Final – 65 Acres Primary Spillway:
Emergency Spillway: 10’ Wide Spillway Channel Sediment Volume: 1.50 Acre-Feet
Detention Volume: 1.00 Acre-Feet Normal Pool Volume: 2.50 Acre-Feet

Sediment Basin 001 will be an incised basin. The pond area will be constructed by excavating an 150’ x 150’ x 5’ area. The primary spillway for Basin 001 will be installed at the existing ground level with the emergency spillway at the same level as the primary spillway. As the active pit advances to Sediment Basin 001, the pit area greatly enlarges due to the removal of limestone, dirt and chert. Once the active pit advances to Sediment Basin 001, a very large, completely incised Basin 001 will be created. The final configuration of Sediment Basin 001 will contain an enormous volume of sediment storage and detention volume.

SEDIMENT BASIN 002

Drainage Area: 71 Acres
Disturbed Area: Initial 10 Acres, Final – 70 Acres Primary Spillway:
Emergency Spillway: 10’ Wide Spillway Channel Sediment Volume: 1.50 Acre-Feet
Detention Volume: 1.00 Acre-Feet Normal Pool Volume: 2.50 Acre-Feet

Sediment Basin 002 will be an incised basin. The pond area will be constructed by excavating an 150’ x 150’ x 5’ area. The primary spillway for Basin 002 will be installed at the existing ground level with the emergency spillway at the same level as the primary spillway. As the active pit advances to Sediment Basin 002, the pit area greatly enlarges due to the removal of limestone, dirt and chert. Once the active pit advances to Sediment Basin 002, a very large, completely incised Basin 002 will be created. The final configuration of Sediment Basin 002 will contain an enormous volume of sediment storage and detention volume.

SEDIMENT BASIN 003

Drainage Area: 39 Acres
Disturbed Area: Initial 10 Acres, Final – 38 Acres Primary Spillway:
Emergency Spillway: 10’ Wide Spillway Channel Sediment Volume: 1.50 Acre-Feet
Detention Volume: 1.00 Acre-Feet Normal Pool Volume: 2.50 Acre-Feet

Sediment Basin 003 will be an incised basin. The pond area will be constructed by excavating an 150’ x 150’ x 5’ area. The primary spillway for Basin 003 will be installed at the existing ground level with the emergency spillway at the same level as the primary spillway. As the active pit advances to Sediment Basin 003, the pit area greatly enlarges due to the removal of limestone,

dirt and chert. Once the active pit advances to Sediment Basin 003, a very large, completely incised Basin 003 will be created. The final configuration of Sediment Basin 003 will contain an enormous volume of sediment storage and detention volume.

SEDIMENT BASIN 004

Drainage Area: 9 Acres Disturbed Area: 8 Acres Primary Spillway:
Emergency Spillway: 10’ Wide Spillway Channel Sediment Volume: 1.20 Acre-Feet
Detention Volume: 1.00 Acre-Feet Normal Pool Volume: 2.00 Acre-Feet

Sediment Basin 004 will be an incised basin. The pond area will be constructed by excavating an 132’ x 132’ x 5’ area. The primary spillway for Basin 004 will be installed at the existing ground level with the emergency spillway at the same level as the primary spillway. As the active pit advances to Sediment Basin 004, the pit area greatly enlarges due to the removal of limestone, dirt and chert. Once the active pit advances to Sediment Basin 004, a very large, completely incised Basin 004 will be created. The final configuration of Sediment Basin 004 will contain an enormous volume of sediment storage and detention volume.

SEDIMENT BASIN 005

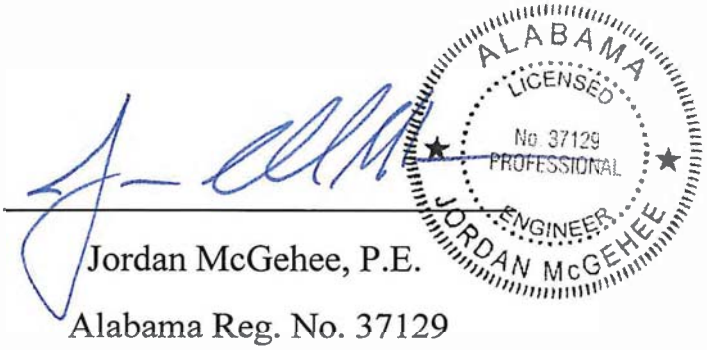
Drainage Area: 19 Acres
Disturbed Area: Initial 10 Acres, Final – 18 Acres Primary Spillway:
Emergency Spillway: 10’ Wide Spillway Channel Sediment Volume: 1.50 Acre-Feet
Detention Volume: 1.00 Acre-Feet Normal Pool Volume: 2.50 Acre-Feet

Sediment Basin 005 will be an incised basin. The pond area will be constructed by excavating an 150’ x 150’ x 5’ area. The primary spillway for Basin 005 will be installed at the existing ground level with the emergency spillway at the same level as the primary spillway. As the active pit advances to Sediment Basin 005, the pit area greatly enlarges due to the removal of limestone, dirt and chert. Once the active pit advances to Sediment Basin 005, a very large, completely incised Basin 005 will be created. The final configuration of Sediment Basin 005 will contain an enormous volume of sediment storage and detention volume.

DESIGN CERTIFICATION STATEMENT

I, Jordan McGehee, a qualified Registered Professional Engineer, hereby certify that the above "Pollution Abatement Plan" was developed under my direct supervision and is true and correct to the best of my knowledge and belief.

MCGEHEE ENGINEERING CORP.



Jordan McGehee, P.E.

Alabama Reg. No. 37129

10/4/23

Date

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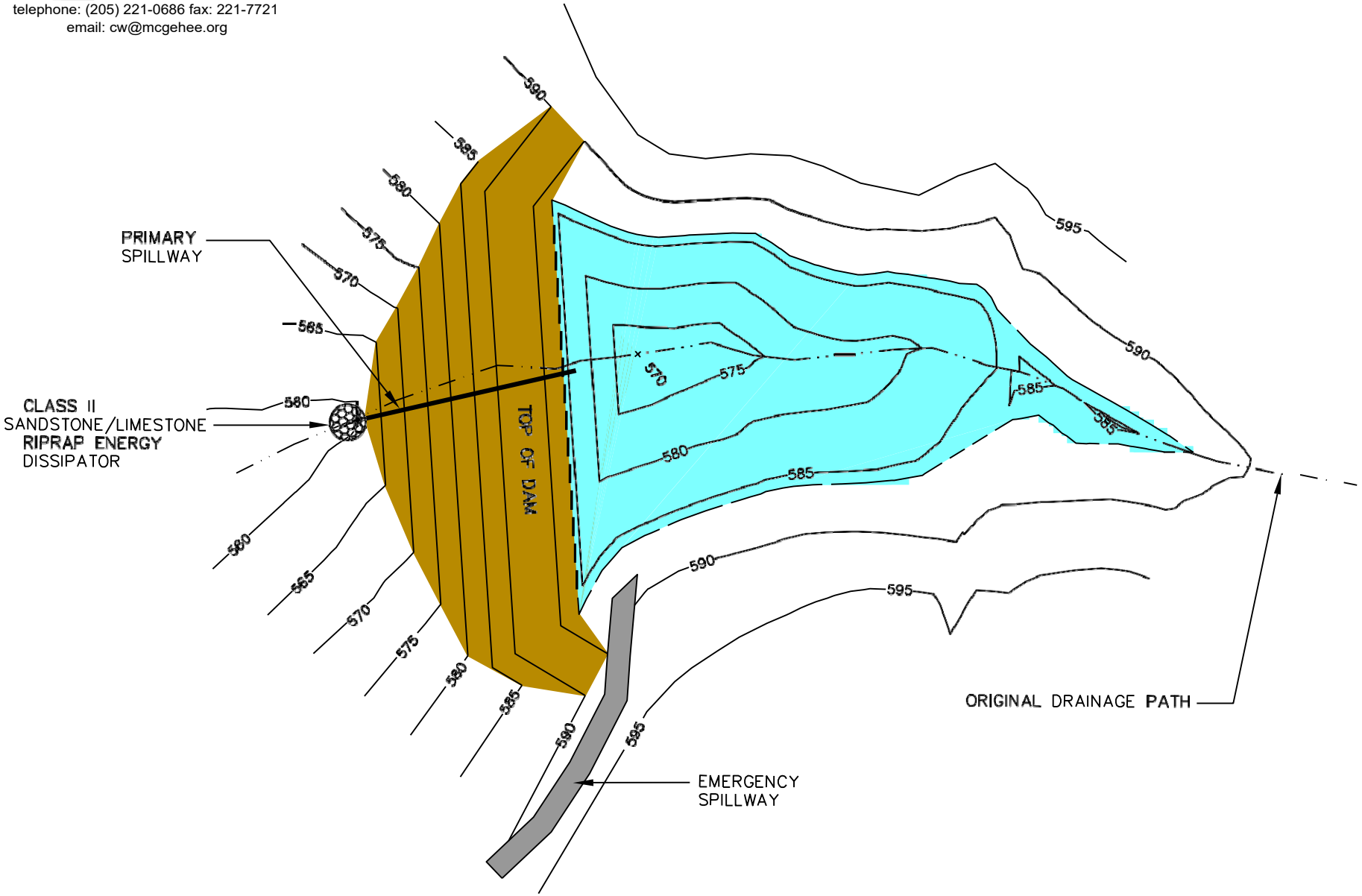
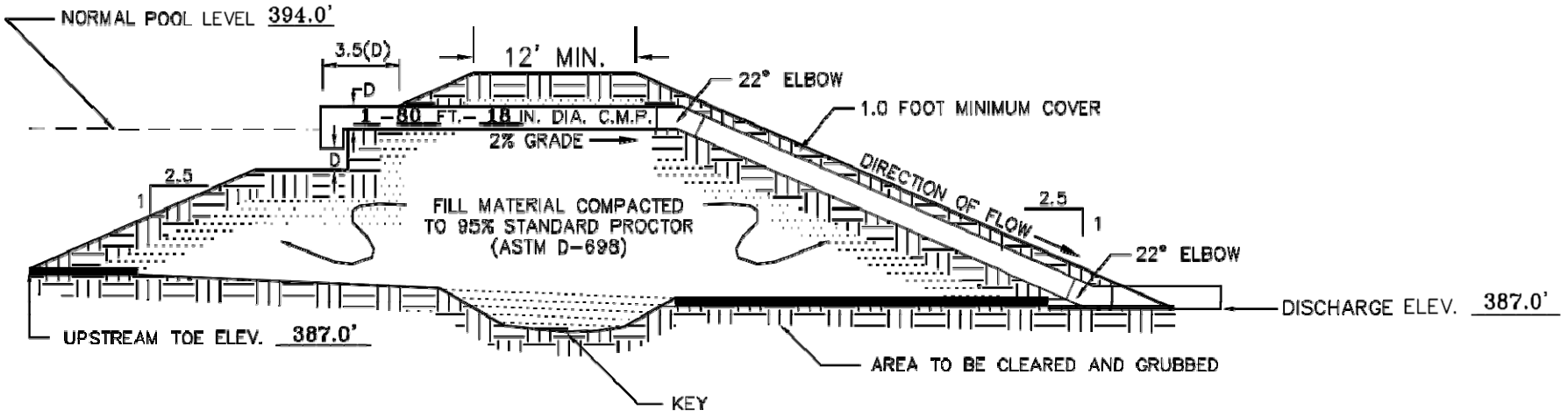
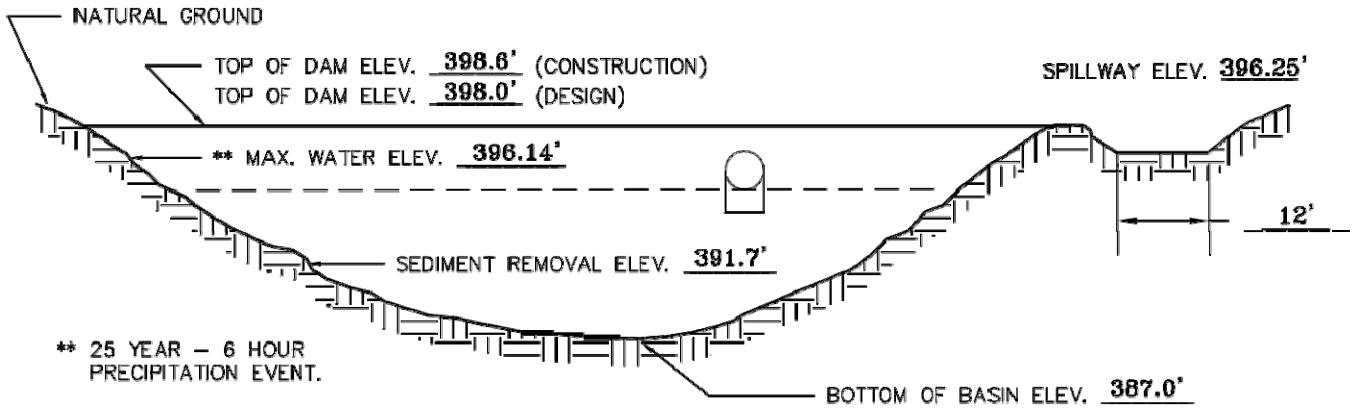
PLAN VIEW OF EMBANKMENT POND
TYPICAL DRAWING



TYPICAL EMBANKMENT CROSS-SECTION



TYPICAL IMPOUNDMENT PROFILE



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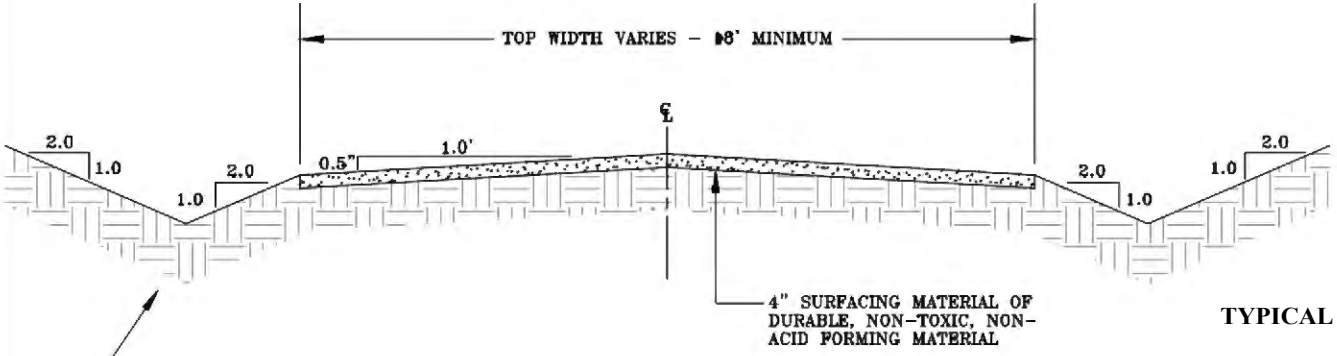
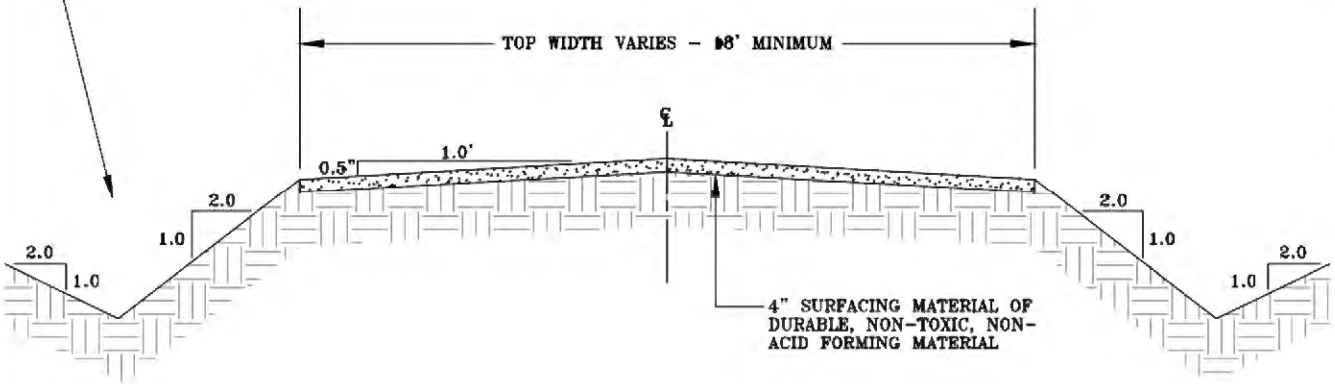
PRIMARY ROAD
TYPICAL CUT SECTION



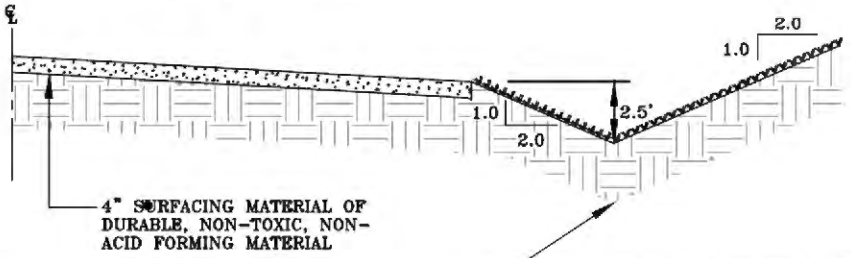
DRAINAGE DITCH TO BE LINED WITH GRASS MIXTURE. SEE SPECIFICATIONS. SEE DETAILED DESIGN PLANS FOR SPECIFIC DESIGN REQUIREMENTS.

PRIMARY ROAD
TYPICAL FILL SECTION



PRIMARY ROAD
TYPICAL DRAINAGE DITCH CROSS-SECTION

MINIMUM DRY FREEBOARD: 0.5'
MAXIMUM FLOW DEPTH: 2.0'



MINIMUM GRADIENT: 0.5%
MAXIMUM GRADIENT: 10.0%

DRAINAGE DITCH TO BE LINED WITH GRASS MIXTURE. SEE SPECIFICATIONS. SEE DETAILED DESIGN PLANS FOR SPECIFIC DESIGN REQUIREMENTS.

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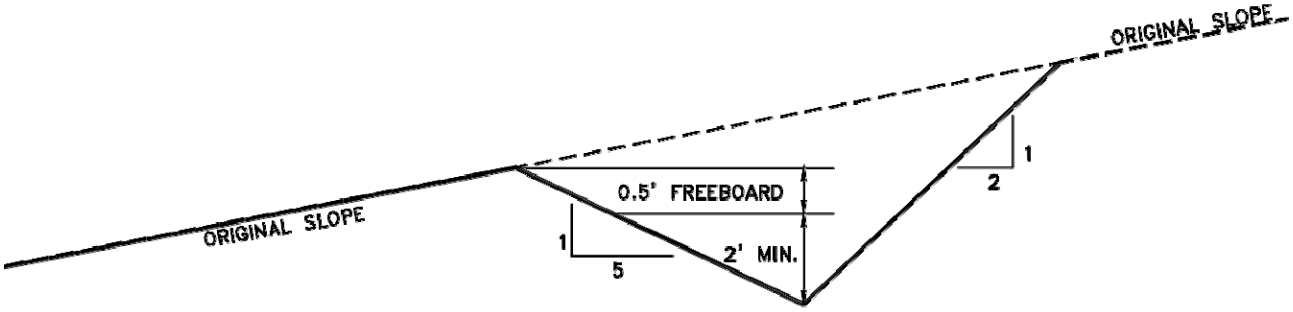
DIVERSION DITCH
TYPICAL CROSS-SECTION



DITCH PROTECTIVE LINER: GRASS MIXTURE, PREDOMINATELY BERMUDA AND FESCUE GRASSES.

CHANNEL BED SLOPE: 1.1% – 2.27%

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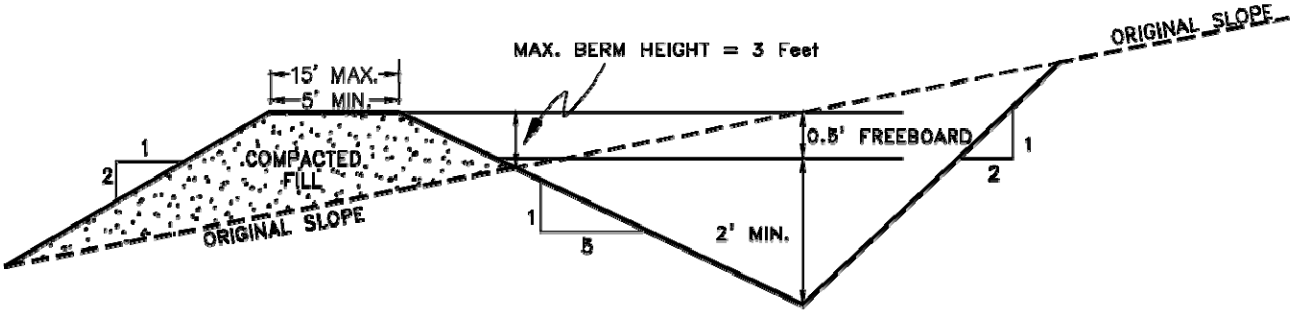
ATTACHMENT III-B-3

DIVERSION DITCH WITH BERM
TYPICAL CROSS-SECTION



DITCH PROTECTIVE LINER: GRASS MIXTURE, PREDOMINATELY BERMUDA AND FESCUE GRASSES.

DISCHARGE: 7.2 CFS
CHANNEL BED SLOPE: 2.0%

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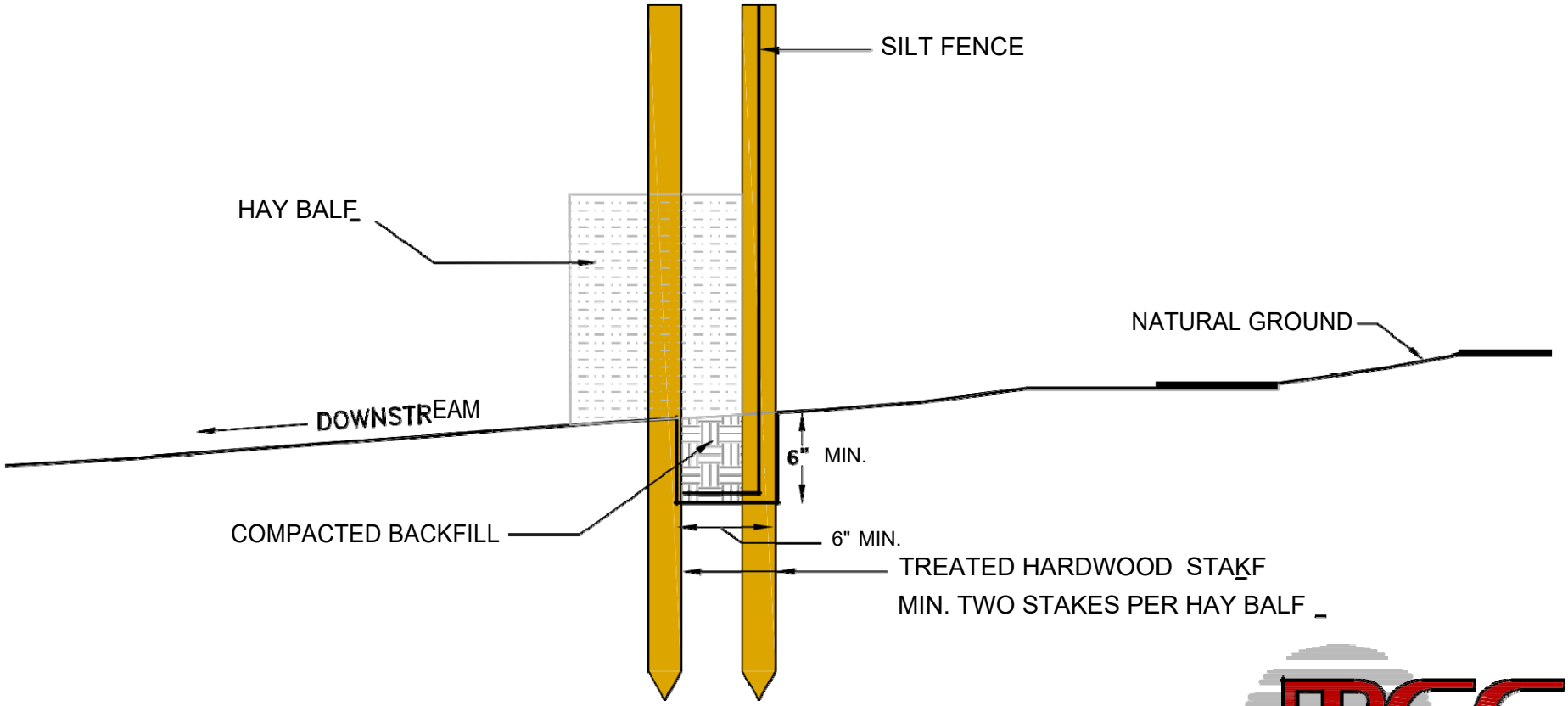
TYPICAL SILT FENCE CONSTRUCTION LAYOUT



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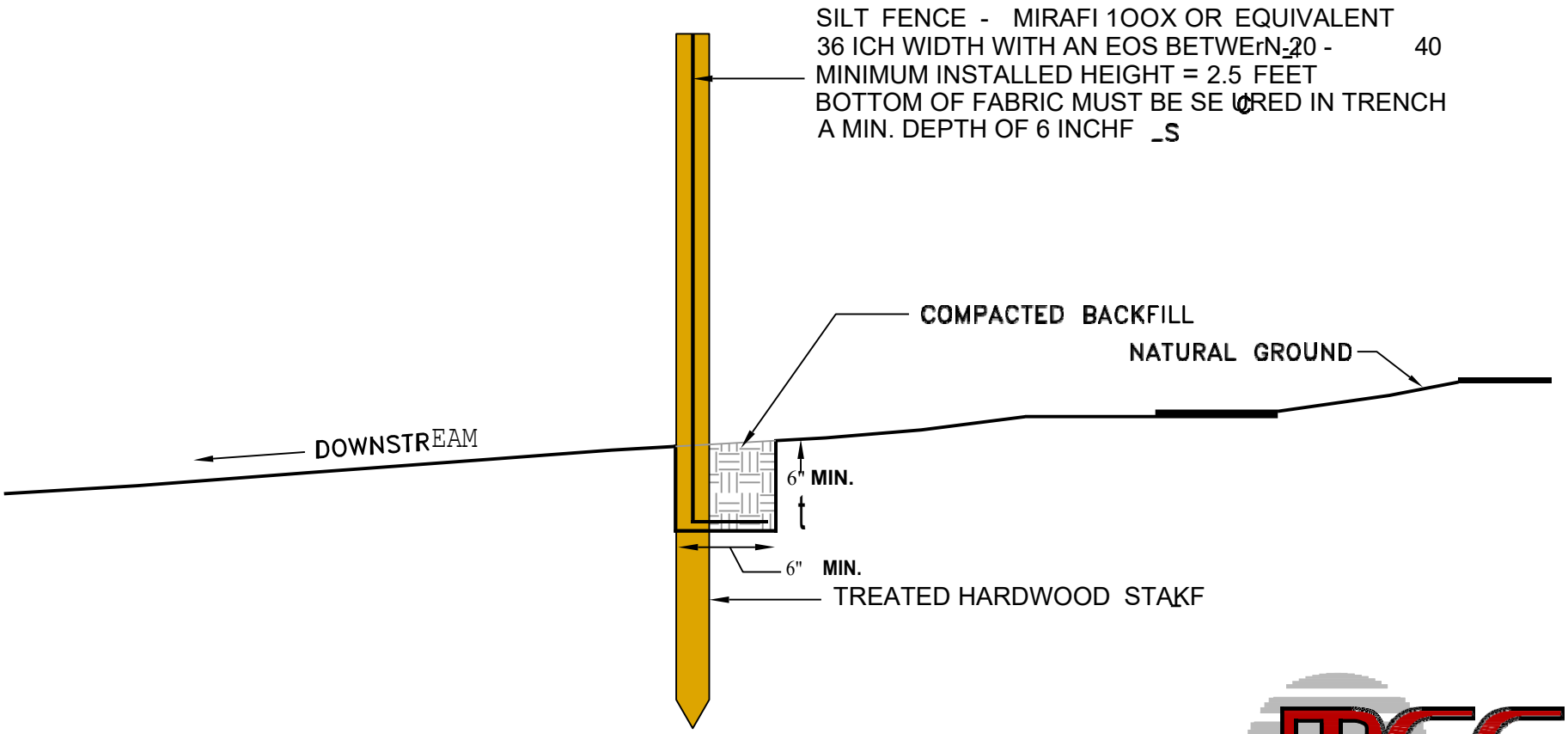
TYPICAL SILT FENCE
CONSTRUCTION LAYOUT



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SPILL PREVENTION CONTROL
AND
COUNTER MEASURES PLAN

STONED, LLC
8239 Mooresville Road
Belle Mina, AL 35615
Limestone County

Project Crossroads Quarry

Prepared by:

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Spill Prevention Control and Counter Measures Plan
& Best Management Practices Plan

Table of Contents

APPENDICES

SPCC Plan – Spill History Form
SPCC Plan – Spill Event Record Form
Facility Vicinity Map

ATTACHMENTS

Attach. A-1	Brittle Fracture Evaluation Attachment
Attach. A-2	Tank Integrity Inspection Attachment
Attach. A-3	Facility Layout Map

1. REGULATORY SCOPE

This Spill Prevention Control and Counter Measures Plan (SPCC) has been prepared for the Stoned, LLC — Project Crossroads Quarry located in Belle Mina, Alabama.

This plan describes engineering features and management techniques used to prevent the release of significant or hazardous materials at the site. Table 1 lists regulations with which the Prevention Plan complies.

Table 1 - Regulations addressed by the Prevention Plan

Regulation	Why
40 CFR §112 Oil Spill Prevention Control and Countermeasure (SPCC) Planning	Because the facility stores over 1,320 gallons of petroleum it is required to maintain oil spill prevention control and countermeasure planning (SPCC) in accordance with the Clean Water Act
NPDES permit Stormwater Pollution Prevention Plan (SWPPP), including Best Management Practices (BMPs)	The facility complies with a stormwater discharge permit which requires the facility prepare and comply with a SWPPP incorporating (BMPs)

The Facility is not subject to the substantial harm criteria listed in 40 CFR 110. As such, Appendix A-1 contains the required certification form documenting that the Facility is not "reasonably expected to cause substantial harm to the environment by discharging into or on the navigable waters or adjoining shorelines."

2. FACILITY DESCRIPTION

2.1 General

The site location is shown on the Facility Vicinity Map in the appendix section. The Facility is located at 7239 Mooresville Road, Belle Mina AL 35615 and occupies approximately 199 acres. The site is bordered to the west by Mooresville Road. The north boundary of the site is bordered by Old Hwy 20. The east boundary of the site is bordered by Limestone Creek while the south side of the property is bound by a forested wood line with private owners. Limestone, Dirt and Chert are the only raw materials that will be handled or processed at this facility. The operations at the quarry and processing facility will consist of extracting limestone, dirt and chert from the permit area, processing the limestone, dirt and chert, storage of the limestone, dirt and chert, the delivery of all products from the facility via trucks to their end destination. The quarry and processing facility will employ sufficient personnel and operate at time intervals necessary to operate the facility efficiently.

The Facility will have a maximum above ground storage capacity of 33,500 gallons (3 tanks).

2.2 Facility Drainage and Discharges

The Facility's drainage flows to the east of the property. The site is generally flat with a gentle slope to the eastern corner. All discharges from the site are collected by sediment basins 001,002,003 and 004 on the east side of the property and sediment basin 005 on the southwest of the property. Sediment basins 001 and 002 flow into UTs of Limestone Creek, while sediment basins 003,004 and 005 flow into Limestone Creek.

2.3 General Spill Characteristic of Site Layout

The facility's general physical features minimize the potential effects that a site spill would have on adjacent property. The features are described as follows:

- The facility is relatively flat which tends to mitigate the potential of lateral movement of a spill, should one occur.

- Should a spill occur, flow will be toward the eastern and southern corner of the property. If a spill does occur it will be partially absorbed by the surrounding permitted land, therefore, minimizing run-off to adjacent properties.

- The Facility utilizes secondary containment and/or double walled storage tanks to minimize the potential effects that a site spill would have on adjacent property.

2.4 Security Procedures to Prevent Spills

Stoned, LLC maintains security procedures which are intended to prevent unauthorized entry of persons or animals into the active portion of the facility. These procedures minimize the potential for vandalism or unauthorized manipulation of oil or hazardous materials stored at the Facility.

The property is surrounded by security fencing. The entrance gates are normally closed during business hours and not open to the public. The gates are kept locked when not in use. All of the gate entrances are maintained under well lighted conditions at all times. The master pump switch is controlled in the office and is turned off at the end of each working day to prevent dispensing of diesel fuels.

The Facility, including all contractors, must ensure that master flow and drain valves remain in the closed position, starter control on each containment pump is locked in the off position, and securely cap or blank-flange the loading/unloading connections of pipelines when these pieces of equipment are not in use.

2.5 History of Spills

There is no history of spills, this is a new proposed permit.

3. IDENTIFICATION OF POTENTIALLY SIGNIFICANT MATERIALS

Stoned, LLC audited the Facility for materials and activities which could require spill prevention planning. The following materials and activities were audited:

- Oil and Fuel Storage Areas,
- Loading, Unloading, and Storage Activities,
- Vehicle and Plant Maintenance,

Table A-1 lists each material identified for evaluation in this plan. Approximate storage quantities are identified for each material. The Facility Layout Map depicts the locations of these materials.

Table A-1

Capacity	Contents	Capacity	Contents
10,000 gallons	Diesel Fuel	500 gallons	Waste Oil
500 gallons	Hydraulic Oil	500 gallons	Motor Oil

4. SPILL PREVENTION FOR FUEL AND OIL

The following subsections detail the spill prevention controls which have been implemented at the facility for petroleum oils. Spill prevention for oils is described in accordance with the required outline in 40 CFR §112.

Physical Layout of the Facility and General Drainage (40 CFR §112.7(a)(3))

A physical diagram of the facility is identified in the Facility Layout Map.

Fuel and Oil Storage Tank Description and Containment (40 CFR §112.7 (a)(3) (i & iii)

Tanks used to store oil have been appropriately designed.

Stoned, LLC provides several types of containment for its tanks. First, individual secondary physical containment surrounds storage tanks. Second, some fuel and oil storage tanks have double walled construction and are located on concrete slabs.

If individual containment is exposed to rainwater, they are positively sealed. Precipitation that accumulates within the secondary containment structures, where present, is allowed to evaporate or is collected and disposed of through approved outside contractors.

4.1.1 Buried Tanks and Corrosion Protection 40 §CFR 112.8(c)(4), (5).

There are no buried, partially buried or bunkered tanks used at the Facility.

4.1.2 Tank Inspection 40 §CFR 112.7(e).

All aboveground tanks are visible to inspectors. They are subject to inspection as described in Section 5 of this plan. The facility must maintain inspection reports for a period of five (5) years when tanks are in use. Integrity testing is performed on an as-needed basis, especially when repairs are done that might significantly change the potential for oil to be discharged. Containers that do not store oil, but merely use oil, are not subject to the integrity testing requirements. Tank Integrity Inspections contained in API Standard 653 are included in the Tank Integrity Inspections Attachment.

4.1.3 Brittle Fracture Evaluation 40 §CFR 112.7(i).

Brittle fracture analysis is required when a field-constructed aboveground oil storage tank undergoes a repair, alteration, reconstruction, or change in service that might affect the risk of brittle fracture discharge or failure. An evaluation is required for a tank that has discharged oil or failed due to brittle fracture or another catastrophe. Brittle fracture evaluation procedures contained in API Standard 653 are included in the Brittle Fracture Evaluation Attachment. It should be noted that the fuel and oil tanks are not field-constructed and do not require brittle fracture evaluation.

4.1.4 Tank Gauging 40 §CFR 112.8(c)(6).

Gauging of the liquid level in tanks is performed using visual site glasses or other visual methods. Tanks in which visual monitoring cannot be performed shall have the internal monitoring of the tank cavity done via gauging stick.

The diesel fuel and oil tanks do not utilize electronic level controls. Tank filling procedures require that the driver observe the filling of each tank.

4.1.5 Correction of Visible Discharges 40 §CFR 112.8(c)(10).

All leaks, which result from loss of oil from containers, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts are corrected by the maintenance staff, with removal of accumulations of oil beginning promptly. Prompt removal means beginning the cleanup of any accumulation of oil immediately after discovery of the discharge, or immediately after any actions to prevent fire or explosion or other threats to worker health and safety.

Removal of pervious material (soil), in which leaks or spills have occurred, will be can be estimated and recorded on the spill event/history form along with an estimated volume of the contaminated material.

4.1.6 Past Discharges 40 §CFR 112.4(a), (c).

Stoned, LLC is responsible for providing information to the EPA Regional Administrator, and to the appropriate State agencies in charge of oil pollution control, whenever the facility has discharged more

than 1,000 U.S. gallons of oil in a single discharge, or discharged more than 42 U.S. gallons of oil in each of two discharges, occurring within any twelve (12) month period.

4.1.7 Portable Tanks/Drums 40 §CFR 112.8(c)(11).

Stoned, LLC could potentially use 55-gallon drums and portable oil totes in various locations within the facility warehouse. As a general practice, these drums and totes are located indoors (within secondary containment) on catchment basins or on grated secondary structures (pits). Leaks or spills that can occur from these portable containers are contained by local geography or building foundation and collected with spill absorbents.

4.1.8 Description of Fuel and Oil Tank Piping 40 §CFR 112.8(d))

Stoned, LLC oil tanks utilize minimal amounts of piping. Several tanks use short spans of piping for filling and emptying purposes. Piping must be designed to minimize abrasion and corrosion. All piping must regularly be inspected during installation, modification or repair. The facility must also cap or blank-flange the terminal connection when piping is not in service and warn all vehicles entering the facility about above ground piping or other oil transfer operations.

4.1.9 Fuel and Oil Tank Loading and Unloading 40 §CFR 112.7(h)

Loading and unloading operations from the delivery truck (s) will be done in a manner consistent with the following standard procedures. It is assumed the supplier has addressed at a minimum, the following topics within the respective plan. Proper operating procedures should include the following:

- Load only one product at a time;
- Examine the lowest drain and outlets of vehicles prior to tank filling and departure;
- Manually hold open loading valves. The valve is spring operated and will close upon release;
- Drivers should stay with equipment always during loading operations;
- Drivers trained in proper emergency procedures and location of fire extinguishers;
- Signs properly displayed for no smoking and proper grounding;
- No material will be unloaded from any motor vehicle unless the handbrake is securely set and the wheels are choked;
- No flammable liquid will be unloaded from any motor vehicle while the engine is running.

The generally flat topography of the site contains berms/spill prevention structures that serve as

containment for oil loading and unloading operations. In addition, many of the tanks have secondary containment structures which effectively collects drips under the fill valves.

4.1.10 Fuel and Oil Tank Security 40 §CFR 112.7(g)

Security for the site is described in Section 2.4 of this Plan. Features of security relating to oil pollution prevention include:

- Site perimeter fencing;
- Restricted site access using entrance gates;
- Continuous site lighting; and
- Surveillance equipment.

4.1.11 Fuel and Oil Spill Prevention &Training 40 §CFR 112.7(f)

Stoned, LLC conducts annual oil spill prevention training in conjunction with other spill prevention programs as described in Section 5 of this plan.

5. INSPECTIONS AND TRAINING

Stoned, LLC performs periodic inspections of the site to check the effectiveness of the spill prevention plan. In general, informal inspections of the areas shown on the following table are performed on a daily basis by maintenance personnel. Formal, documented inspections of these areas are performed monthly by designated facility supervisors.

Type	Inspection Frequency
Secondary containment structures	Visual daily, documented monthly
Drum storage areas	Visual daily, documented monthly
Receiving area	Visual daily, documented monthly
Bulk storage tanks	Visual daily, documented monthly
Areas surrounding tanks	Visual daily, documented monthly
Spill prevention and cleanup equipment	Visual daily, documented monthly

Stoned, LLC schedules and conducts training to assure operating personnel have adequate understanding of spill prevention and the contingency plans. Training topics include:

- Spill response;
- Spill prevention;
- Loading/unloading precautions;
- Dangerous waste and hazardous material management; and
- Recent spill events, equipment failures, malfunctioning equipment components, and recently developed precautionary measures.

6. EMERGENCY RESPONSE PLAN

Stoned, LLC maintains an Emergency Response Plan which addresses spill response procedures as follows:

6.1 Emergency Communication

Facility personnel can be contacted as follows:

- Direct dial using the site telephones.
- Accessing the facility two-way radio system.

6.2 Contact Lists

The Manager of each department, or their designated substitute, will act as Emergency Coordinator in initiating emergency procedures. There is one Emergency Coordinator, or a designated representative, on the site at all times for each department. The designated Area Supervisor will act as Emergency Coordinator during night shifts, on weekends, and on holidays.

The Emergency Coordinator is responsible for implementing this Plan and has full site authority to commit the resources necessary to remedy the emergency, including the commitment of money and potential facility shut down. In general, his/her role will be to work with local, state, and/or Federal agencies and emergency personnel to assure the safety of emergency workers on Stoned, LLC property.

Tables A-4 and A-5 identify the designated emergency contacts or agencies and their respective telephone numbers. In the case of an off-site release of a "reportable quantity" (RQ) of material, the local, state and federal agencies will be notified. Table A-6 identifies the material RQ relevant to the Facility.

Table A-4 - Designated Facility Emergency Coordinators

Title	**Monday - Friday: 8 am - 5 p.m.**		**Weekends, nights, holidays**
Plant Manager	Lance Green	(256)-871-1857	(256) 871-1857
Secondary Contact	Ethan Belue	(256)-275-2481	(256) 275-2481

Table A-5 - Supporting Off-Site Contacts

Immediate Notification is defined as 15 minutes after person in charge has knowledge of release

AGENCY	PHONE NUMBER	WHEN TO CALL
GENERAL		
Fire Department;	911	Any emergency when needed
Police Department;	911	
Ambulance Service;	911	
Limestone County Emergency Management Agency	(256) 232-2631	Any large emergencies
Alabama Highway Dept. (ALDOT)	1-800-423-3218	
Alabama State Troopers	(256) 353-0331	
Limestone County Sheriff Dept.	(256) 232-0111	
Alabama Marine Police	(334) 676-6005	
Alabama Power Co.	(205) 326-8000	
Notification		
Limestone County Emergency Management Agency	(256) 232-2631	
Alabama Department Environmental Management	(205) 942-6168 (205) 583-5560 (after hours) (334) 271-7700	Any amount released to navigable waters of the state, or conveyances to those waters (i.e., streams, creeks, ditches)
National Response Center (NRC)	(800) 424-8802	Any amount released to navigable waters of the state, or conveyances to those waters (i.e., streams, creeks, ditches)
Cleanup Assistance		
Spectrum Environmental Services, Inc.	(205) 664-2000	When cleanup assistance is required per plan

Table A-6 - Spill Reportable Threshold Quantities

Substance	**Reportable Quantity (RQ)**
Oil or Petroleum	ANY AMOUNT RELEASED TO NAVIGABLE WATERS OF THE STATE, OR CONVEYANCES TO THOSE WATERS (I.E., STREAMS, CREEKS, DITCHES).

6.3 General Emergency Response Procedures

The following general procedures apply to all facility emergencies

6.3.1 Discovery of Emergency by Employee

The initial observation of an emergency may be made by any employee of Stoned, LLC The following steps will be taken if an employee discovers an emergency situation:

1. Remove yourself and others to safety.
2. Contact the appropriate Emergency Coordinator.

6.3.2 Emergency Coordinator Assessment of Emergency

When the Emergency Coordinator arrives at the site, he/she will take control of the affected area and will maintain authority until the situation has been controlled. In general, he/she will take the following steps.

1. Assess the type of emergency which is occurring, including the potential of personnel injury, facility damage, chemical release, fire, earthquake, floods, etc.
2. Contact 911 if an injury has occurred.
3. Secure the area and use communication systems, as required, to notify Facility personnel of the emergency and its potential hazards.
4. For oil releases, Immediately Notify (Immediate Notification is defined as 15 minutes after person in charge has knowledge of release) the appropriate outside agencies, provided in Table A-5, if the extent of the spill or emergency is beyond the ability of facility personnel to perform the appropriate chemical release cleanup activities.

The following information should be available when initiating a spill report to one of the agencies:

- Name of person reporting the spill.
- Address of the facility.
- The substance spilled or discharged.
- The estimated quantity of the spill or discharge.
- The time the spill or discharge occurred, or was discovered.
- Name of waterway receiving spillage or discharge.
- Person to contact and phone number of the facility.
- Answer any questions asked by the agency to the best of your ability.

7. FACILITY SECURITY PLAN

The purpose of the Security Plan is to monitor all entry into the facility and prevent any unwanted access. The plan will employ protective measures and procedures that will fight against seizure, sabotage, piracy, annoyance, or terrorism. The plan includes measures taken to respond if breech of security is found.

8. DESIGNATED RESPONSIBLE PERSON

The facility Environmental, Safety & Health Manager named below is the designated person responsible for implementing this Plan. He/she delegates responsibility for implementing this plan to area production and maintenance managers as presented in the Emergency Response Plan.

Name: Keith Sharp

9. PLAN UPDATES

Stoned, LLC will update the SPCC Plan once every five (5) years as follows:

9.1 Review and Evaluation of SPCC Plan

Stoned, LLC will review petroleum storage and secondary containment structure inspections yearly and will review and evaluate the SPCC Plan once every five (5) years or whenever significant changes to the facility oil tanks have been completed.

If Stoned, LLC detects changes in oil tanks, the plan is updated. If the changes materially affect the facility's potential to cause an uncontrolled release of oil into the environment, the plan is recertified by a Professional Engineer.

SPCC Review Date	Stoned, LLC Signature
_____	_____
_____	_____
_____	_____

9.2 Distribution

Copies of this plan will be maintained on site and made available on site to all personnel.

SPCC PLAN – SPILL HISTORY FORM

SPCC SPILL HISTORY
(List all spills within past five years)

STONED, LLC
JASPER, ALABAMA

Date of Spill: _____

Approximate Volume of Spill: ___ *Gallons*

Contents of Spill: _____

Description of occurrence:

_____
_____
_____

Remediation Actions Implemented:

_____
_____
_____

Date of Spill: _____

Approximate Volume of Spill: ___ *Gallons*

Contents of Spill: _____

Description of occurrence:

_____
_____
_____

Remediation Actions Implemented:

_____
_____
_____

SPCC PLAN – SPILL EVENT RECORD FORM

SPILL EVENT RECORD

STONED, LLC
BELLE MINA, ALABAMA

Date of Event: _____

Time: _____

Navigable Water Polluted: _____

I. CAUSE:

_____
_____
_____

II. CORRECTIVE ACTIONS AND/OR COUNTERMEASURES TOOK:

_____
_____
_____

III. ADDITIONAL PREVENTIVE MEASURES, if any:

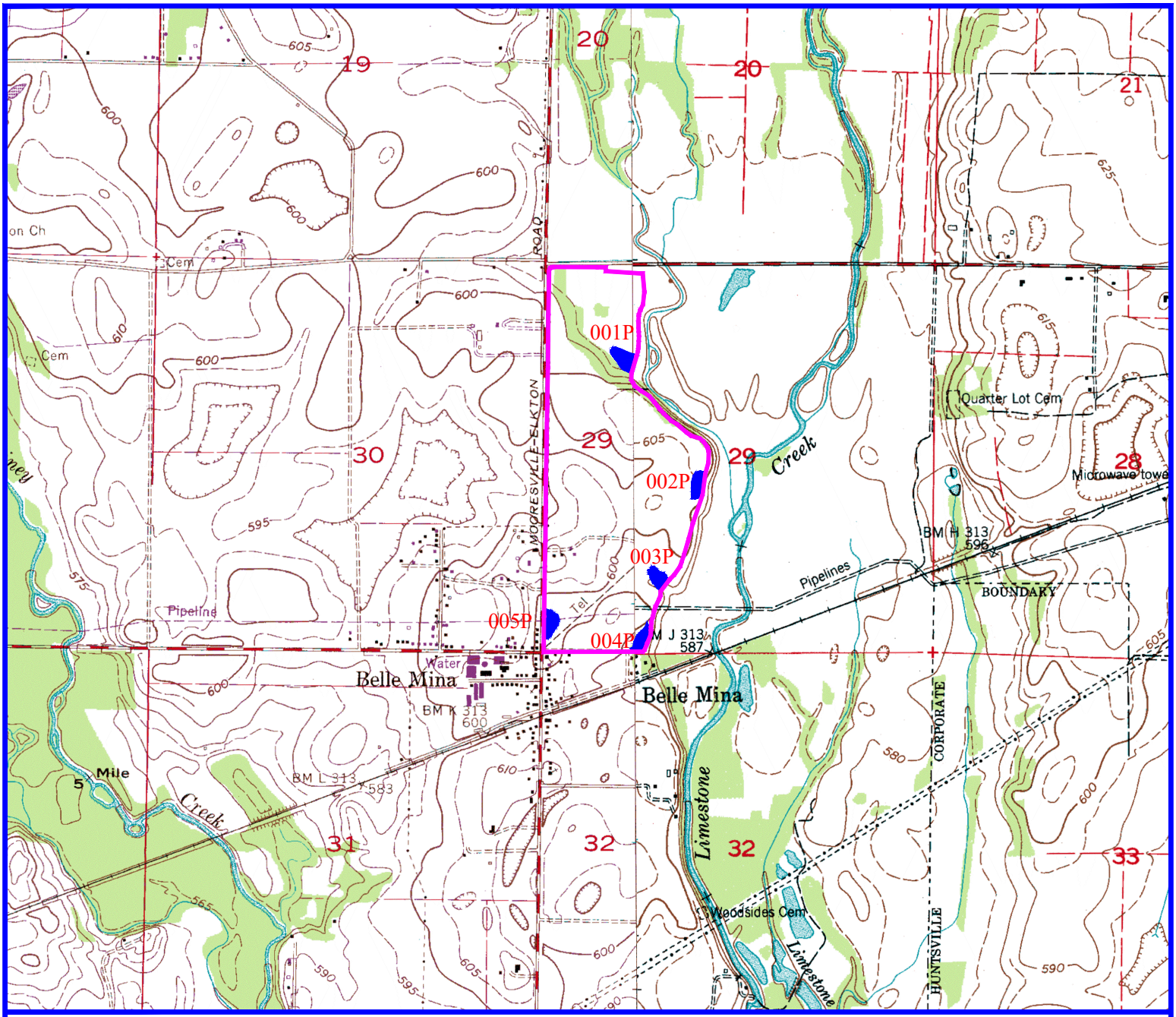
_____
_____
_____

Date and Time of Regulatory Notification, if any: _____

Regulatory Agency Notified, if any: _____

_____
Signature of Responsible Official

FACILITY VICINITY MAP



STONED, LLC
PROJECT CROSSROADS

FACILITY VICINITY MAP

SECTION 29
TOWNSHIP 4 SOUTH, RANGE 3 WEST,
ALL IN LIMESTONE COUNTY, ALABAMA
BASE MAPS: TANNER & GREENBRIER U.S.G.S. QUADS.
SCALE: 1" = 2000'

NPDES PERMIT BOUNDARY

PROPOSED OUTFALL

N
W E
S

mcgehee engineering corp
post office box 3431 - 450 19th street
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: staff@mcgehee.org

ATTACHMENT A-1

BRITTLE FRACTURE EVALUATION ATTACHMENT

Section 5—Brittle Fracture Considerations

5.1 General

This section provides a procedure for the assessment of existing tanks for suitability for continued operation or change of service with respect to the risk of brittle fracture and does not supplement or replace the requirements of Section 12 for the examination and testing for the hydrostatic testing of repaired, modified, or reconstructed tanks. 12
The procedure applies to both welded and riveted tanks; however, the procedure is based primarily on experience and data obtained from welded tanks.

5.2 Basic Considerations

5.2.1 A decision tree (see Figure 5.1) is used to present the assessment procedure for failure due to brittle fracture. The decision tree is based on the following principles.

5.2.2 In all reported incidents of tank failure due to brittle fracture, failure occurred either shortly after erection during hydrostatic testing or on the first filling in cold weather, after a change to lower temperature service, or after a repair/alteration. This experience shows that once a tank has demonstrated the ability to withstand the combined effects of maximum liquid level (highest stresses) and lowest operating temperature without failing, the risk of failure due to brittle fracture with continued service is minimal.

5.2.3 Any change in service must be evaluated to determine if it increases the risk of failure due to brittle fracture. In the event of a change to a more severe service (such as operating at a lower temperature or handling product at a higher specific gravity) it is necessary to consider the need for a hydrostatic test to demonstrate fitness for a new more severe service. The following aspects should be considered:

a) the likelihood of repairs/alterations since the original hydrostatic test not meeting requirements of this standard;

b) deterioration of the tank since original hydrostatic test.

5.3 Assessment Procedure

5.3.1 The assessment procedure illustrated in Figure 5.1 shall be used. Each of the key steps, numbered 1 through 11 on the decision tree, correspond sequentially to the explanations provided below.

5.3.2 *Step 1*—The tanks meet the requirements of API 650 (Seventh Edition or later) or API 650, Appendix G (Fifth and Sixth Editions) to minimize the risk of failure due to brittle fracture. Alternatively, tanks may also be shown to meet the toughness requirements of API 650 (Seventh Edition or later) by impact testing coupon samples from a representative number of shell plates.

5.3.3 *Step 2*—Many tanks that continue to operate successfully in the same service were not built to the requirements of API 650 (see editions and appendices named in 5.3.2). These tanks are potentially susceptible to failure due to brittle fracture and require an assessment as illustrated by the decision tree.

5.3.4 *Step 3*—For the purpose of this assessment, hydrostatic testing demonstrates fitness for continued service with minimal risk of failure due to brittle fracture, provided that all governing requirements for repairs, alterations, reconstruction, or change in service are in accordance with this standard (including a need for hydrostatic testing after major repairs, major alterations or reconstruction). The effectiveness of the hydrostatic test in demonstrating fitness for continued service is shown by industry experience.

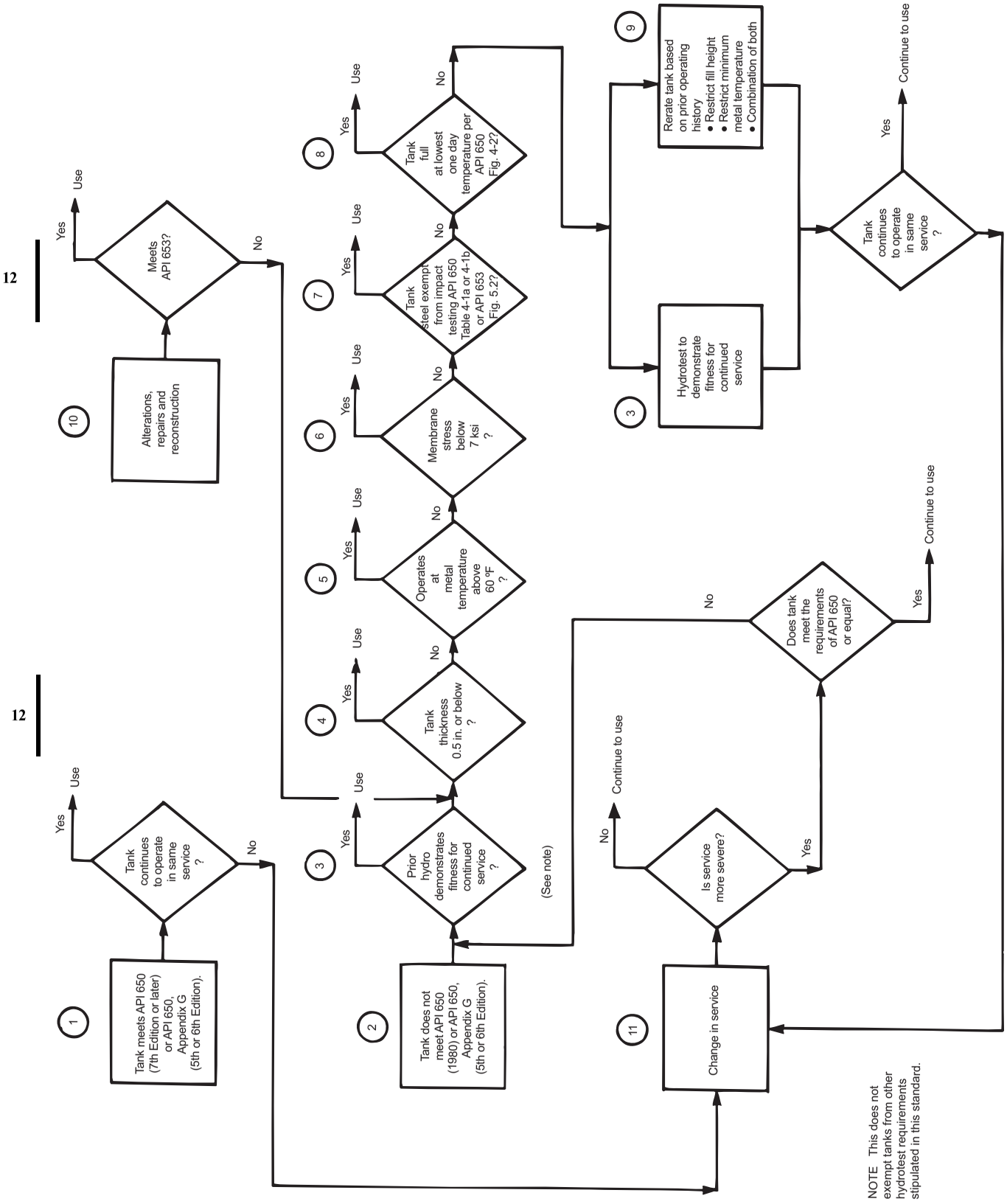


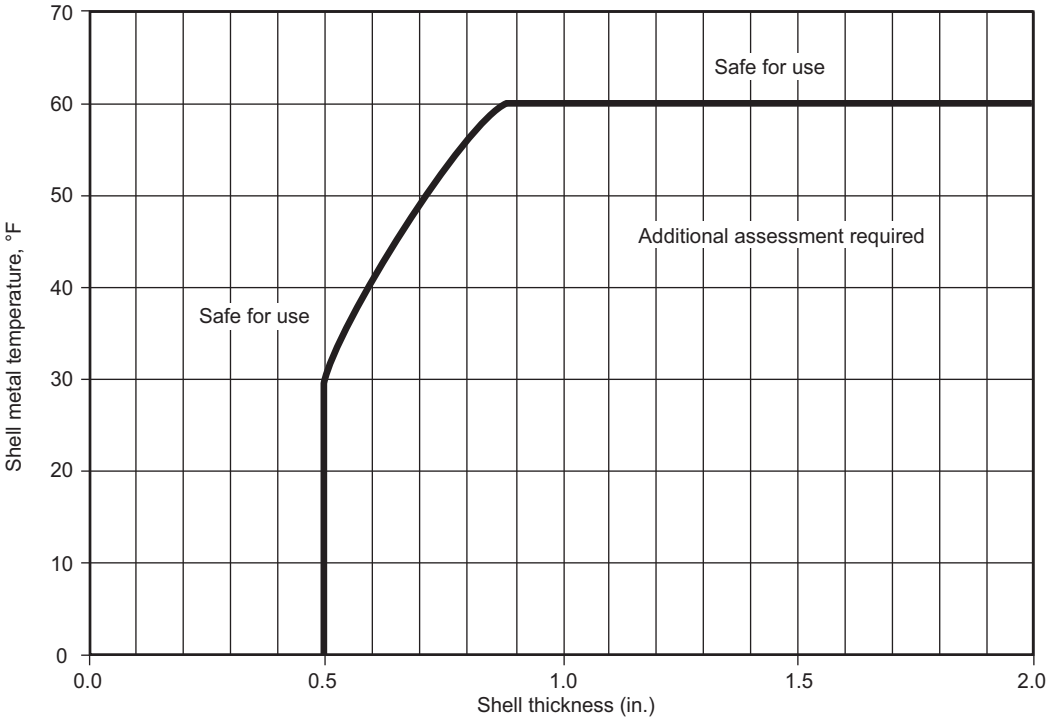
Figure 5.1—Brittle Fracture Considerations

5.3.5 *Step 4*—If a tank shell thickness is no greater than 0.5 in., the risk of failure due to brittle fracture is minimal, provided that an evaluation for suitability of service in accordance with Section 4 has been performed. The original nominal thickness for the thickest tank shell plate shall be used for this assessment.

5.3.6 *Step 5*—No known tank failures due to brittle fracture have occurred at shell metal temperatures of 60 °F or above. Similar assurance against brittle fracture can be gained by increasing the metal temperature by heating the tank contents.

5.3.7 *Step 6*—Industry experience and laboratory tests have shown that a membrane stress in tank shell plates of at least 7 ksi is required to cause failure due to brittle fracture.

5.3.8 *Step 7*—Tanks constructed from steels listed in Figure 4-1 of API 650 can be used in accordance with their exemption curves, provided that an evaluation for suitability of service in conformance with Section 4 of this standard has been performed. Additionally, tanks constructed in accordance with another nationally recognized code or standard containing toughness rules (such as API 620) may be used in accordance with the current toughness rules of that standard. Tanks fabricated from steels of unknown material specifications, thicker than $^1/_2$ in. and operating at a shell metal temperature below 60 °F, can be used if the tank meets the requirements of Figure 5.2. The original nominal thickness for thickest tank shell plate shall be used for the assessment. For unheated tanks, the shell metal temperature shall be the design metal temperature as defined in API 650, Section 3.4. 12



NOTE For unheated tanks, the shell metal temperature shall equal the design metal temperature as defined in API 650, Section 3.4. The original nominal thickness for the thickest tank shell plate shall be used for the assessment. 12

Figure 5.2—Exemption Curve for Tanks Constructed from Carbon Steel of Unknown Material Specification

5.3.9 *Step 8*—The risk of failure due to brittle fracture is minimal once a tank has demonstrated that it can operate at a specified maximum liquid level at the lowest expected temperature without failing. For the purpose of this assessment, the lowest expected temperature is defined as the lowest one-day mean temperature as shown in API 650, Figure 4-2. It is necessary to check tank log records and meteorological records to ensure that the tank had operated at the specified maximum liquid level when the 1-day mean temperature was as low as shown in API 650, Figure 4-2.

5.3.10 *Step 9*—An evaluation can be performed to establish a safe operating envelope for a tank based on the operating history. This evaluation shall be based on the most severe combination of temperature and liquid level experienced by the tank during its life. The evaluation may show that the tank needs to be re-rated or operated differently; several options exist:

a) restrict the liquid level.

b) restrict the minimum metal temperature.

c) change the service to a stored product with a lower specific gravity.

d) combinations of Items a), b), and c), above.

The owner/operator can also make a more rigorous analysis to determine the risk of failure due to brittle fracture by performing a fracture mechanics analysis based on established principles and practices. The procedures and acceptance criteria for conducting an alternative analysis are not included in this standard.

5.3.11 *Step 10*—All repairs, alterations, and relocations shall be made in compliance with this standard.

5.3.12 *Step 11*—An assessment shall be made to determine if the change in service places the tank at greater risk of failure due to brittle fracture. The service can be considered more severe and create a greater risk of brittle fracture if the service temperature is reduced (e.g. changing from heated oil service to ambient temperature product), or the product is changed to one with a greater specific gravity and thus increased stresses.

ATTACHMENT A-2

TANK INTEGRITY INSPECTION ATTACHMENT

API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction*

Last Updated August 2016. (New Additions for 2016 are Highlighted in Yellow)

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Section	Edition	Inquiry #	Submitted Inquiry	SCAST Response
1.1	2nd - Dec. 1995	653-I-10/98		For riveted tanks, the rules in the original code of construction should be applied for issues not covered in API 653 (see Section 1.1.5). Otherwise, all of the applicable rules in API 653 apply. Note that the minimum thickness calculation for a riveted tank shell is covered in Section 4.3.4.
1.1.1	3rd - Dec. 2001	653-I-12/03	Is this procedure for both pressure and non-pressure vessels? I don't see a pressure component in the formula.	API 653 only applies to tanks that have been built and placed in service (see 1.1.1). Therefore, the tank will need to comply with all of the requirements of API 650.
1.5	2nd - Dec. 1995	653-I-04/99	Does API 653 require contractors performing repairs to have a API 653 certified inspector employed with them, and if so, where can this be found in the standard?	No. The API 653 certified inspector need not be an employee if the contractor meets the requirements of Section 1.5.4.
3.19.c	Ed 4, Ad 2	653-2013-F4	Is the removal and re-installation of existing shell plate beneath the liquid level defined as a major alteration/major repair when the re-installed plate is longer than 12 inches (such as a doorsheet) and all the weld spacing requirements of API 653 are satisfied?	Yes, but also refer to 12.3.2 and 12.3.2.3.8 for other provisions relevant to doorsheets.
4.2.4	2nd - Dec. 1995	653-I-10/00	Shall the design requirements of the latest edition of API 650 be considered for tanks that will have their operating temperature increased above 200°F.	Yes. See Sections 1.1.5 and 4.2.4.3.
4.2.4	2nd - Dec. 1995	653-I-03/01	1: An existing tank greater than 100 ft. in diameter with a lap-welded bottom is currently in heated service (>200ºF). This tank is removed from service for a routine internal inspection. Does this tank have to be retrofitted with an annular ring per API 650, Section M.4? 2: An existing tank greater than 100 ft. in diameter with a lap-welded bottom is being changed to heated service. Does API 653, 4.3.3.4 require this tank to be retrofitted with an annular ring per API 650, M.4.1? Or is it acceptable to evaluate the tank per M.4.2 to determine if stresses, minimum fill height, and fill/empty cycles will be acceptable with the existing lap welded bottom?	1: Yes. See Sections 1.1.5 and 4.2.4.3. 2: Yes. See Sections 1.1.5 and 4.2.4.3.

API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction*

Last Updated August 2016. (New Additions for 2016 are Highlighted in Yellow)

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4.3	2nd - Dec. 1995		Referring to API 653, if the corroded thickness in a bottom course is below the minimum thickness allowed per Section 4.3, must the corroded portion of the bottom course be removed and replaced by a new plate?	Yes, unless a patch plate repair is provided in accordance with Section 9.3. All requirements of Section 9.3 must be met, including obtaining the owner approval and complying with the 1/2 in. limit on shell plate thickness.
4.3	1st - Jan. 1991		What information is required to determine the fill height according to API 653?	Refer to API 653, Section 4.3.3.1 and 4.3.3.2.
4.3.2.1	2nd - Dec. 1995		How do you classify "corroded areas of considerable size" -- Section 4.3.2.1? Is there a size limit for this corroded area? If so, what are these limits? If not, why not?	It is not specifically defined, but an area larger than that defined in 4.3.2.2 would be considered a corroded area of considerable size.
4.3.3	1st - Jan. 1991		Will the evaluation of the calculations require a certified API 653 inspector?	No. Refer to the top of Section 4.3.1.2.
4.3.3	2nd - Dec. 1995		Does the criteria to settle the minimum thickness (t_{min} -- Section 4.3.3) calculation for welded tank shell apply only for a local corroded area? If so, what are the limits for this local area? Can that criteria be applied when there is a uniform corroded area along all the tank course? In this particular case, would t_1 be equal to t_2?	It is a general limit that applies either to a locally corroded area or to a uniformly corroded area.
4.3.3	2nd - Dec. 1995	653-I-09/00	1: When evaluating the retirement thickness in a corroded plate away from welds at a distance of at least the greater of one inch or twice the plate thickness, is the value of E=1.0 to be used? 2: If the value of E for an existing tank is less than 1.0, should this value for E be used in calculating the minimum required thickness of the tank?	1: Yes. 2: Yes.
4.3.3.1	2nd - Dec. 1995	653-I-22/98	Did API intend to reduce the operating height of tanks when the formula in 4.3.3.1 was changed to eliminate the term "H-1" and replace it with the term "H"?	No. The intent was to require the minimum required thickness of a locally corroded area of the tank shell be based on the actual height of liquid above the corroded area. The retirement thickness of a shell course was to be based on the one-foot method as described in API 650.

API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction*

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4.3.4.1	2nd - Dec. 1995	653-I-01/07	SECTION 4. 4.3.4.1 Joint efficiencies for riveted tank shells; E = 1.0 for shell plate 6 in. or more away from rivets. QUESTION: How do I have to interpret this? Is the figure below correct?, if so, how many rivet rows do this joint to have for E = 1.	No. Six inches applies to outermost rivet away from the joint
4.4.1	1st - Jan. 1991		Does API 653 permit the use of leak detection procedures to justify extending inspection intervals beyond that determined by corrosion rates?	No. API 653, Section 4.4.1, does require periodic assessment of tank bottom integrity that could use leak detection data to shorten the inspection data.
4.4.5	2nd - Dec. 1995	653-I-07/97	Does the definition of RPB (see API 653, Section 4.4.5, or API 650, Appendix I, Section 1.1, Note 1) include a thin or reinforced thick film lining applied to the topside of a tank bottom in conformance to API RP 652?	No. The intent is that the RPB be positioned outside the tank for the purpose of preventing the escape of contaminated material and channeling released material for leak detection. An internal lining would not satisfy this purpose.
4.4.5.1	Ed 5	653-2015-F2	To determine the topside corrosion rate (StPr) discussed in 4.4.5.1, does API 653 require thickness change to be based on data pairs (i.e. start and end of a period of time) which are known to be at the same location?	No.
4.4.7.1	2nd - Dec. 1995	653-I-04/00	Does API 653 require that tank bottom expected service life calculations for a bottom, that has been repaired with patch plates fillet-welded over areas of underside pitting, be based on the corrosion rate (UP_r) of the repaired areas or the unrepaired areas?	Refer to API 653, Section 4.4.7.1. The last paragraph in the "Note" in this paragraph requires the use of the corrosion rate of the corroded area be used, unless the cause of the corrosion is removed in which case the corrosion rate of the unrepaired area can be used.

API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction*

Last Updated August 2016. (New Additions for 2016 are Highlighted in Yellow)

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4.4.8	3rd - Dec. 2001	653-I-09/03	Background: This inquiry addresses the technical correctness of the note to Table 4-4 of API 653. The effect of compaction just inside the ring-well does not produce stress levels of ignorance because the annular plate can bridge over a hollow band of settlement. Bending stresses at the edge of the ring-wall become significant when the fill inside the ring-wall permits a large width (too extensive to bridge) or the whole floor to dish and settle below the level of the ring-wall. Question: Does the committee consider the Note to Table 4-4 is misleading about what happens in this most critical area of a tanks structure and if not then why not?	No. Due to limited committee resources, API cannot respond to questions seeking the rationale for requirements in its standards. These requirements are based upon consideration of technical data and the judgment and skill of experienced engineering and technical personnel representing both users and manufacturers who serve on the standards-writing committees.
6	2nd - Dec. 1995		Does API 653 require that the authorized inspector be physically present at the inspection site and have 1st-hand knowledge of all aspects of the tank inspection?	Yes, refer to Section 6.3.2.1 and 6.4.1.2, concerning the periodic external and internal inspections. However, the authorized inspector is not required to be present for the routine in-service inspections required in Section 6.3.1.1.
6.2	2nd - Dec. 1995		Does API 653 specify the time frame for leak detection between internal inspections?	No.
6.3	3rd - Dec. 2001	653-I-02/03	Referring to Sections 6.3 and 6.4, can risk based inspection (RBI) be applied to determine the external inspection interval of a tank?	No. RBI can be applied to internal inspection intervals only.
6.3	3rd - Dec. 2001	653-I-09/03	Can risk based inspection (RBI) be applied to determine the external inspection interval of a tank?	No. RBI can be applied to internal inspection intervals only.
6.3.1.2	2nd - Dec. 1995	653-I-08/01	Does API 653 provide for extending the intervals for routine in-service inspections for tanks designed and constructed to API 650 when in services such as water or plastic pellet storage?	No. See 6.3.1.2.
6.3.2	2nd - Dec. 1995	653-I-24/98	Does API 653 require the insulation covering flanges to be removed for periodic inspections?	No, unless sings of leakage or damage are evident..
6.3.2	2nd - Dec. 1995	653-I-12/99	Does API 653, Section 6.3.2, indicate when the 5-year external inspection interval is to be measured from, e.g. the date last inspected, the date on the last inspection report, or the date put back in service?	The inspection interval is to be measured from the date of the last inspection. See API 653, Section 6.3.2.1.
6.3.3	1st - Jan. 1991		Does API 653, Section 6.3.3 require ultrasonic thickness readings on the tank shell?	No. UT examination is permitted but not required for the external inspection.

API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction*

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6.3.3	2nd - Dec. 1995	653-I-08/97	Referring to API 653, Section 6.3, does this Section, including Section 6.3.3, ever require an internal ultrasonic examination of the tank bottom?	No. This section is addressing external inspection while the tank is in service, and therefore, would not require examination of the tank bottom. However, particular observations may suggest that the tank bottom be examined, such as for signs of internal shell corrosion near the tank bottom.
6.3.3.3	2nd - Dec. 1995		If the internal inspection is used as a substitute for the external ultrasonic thickness measurements (per 6.3.3.3), are ultrasonic thickness readings required during the internal inspection?	No.
6.4.2	3rd - Dec. 2001	653-I-03/02	Referring to API 653, Sections 6.4.2.2 (last sentence) and 6.4.3 (5th sentence), do they mean together that the inspection interval shall not exceed 20 years unless an RBI assessment is performed to support an extension?	Yes.
6.4.2.2	2nd - Dec. 1995	653-I-08/97	Referring to API 653, Section 6.4.2.2, when corrosion rates are not known, 1) must an inspection be performed within ten years after a tank has been put into service?, and 2) is it acceptable to perform the inspection in the ninth year of operation?	1: The inspection must be performed within 10 years of operation, with the starting date for the ten-year period determined by when the requirements of API 653 are 1st applied, either by jurisdiction or by user policy. 2: The inspection can be performed at any time within the ten-year period, with the next ten-year period beginning at that time.
7.3.1	2nd - Dec. 1995	653-I-14/98	Does API 653 permit the welding of electrical conduit supports (unistruts) to be welded onto the projection of bottom plates outside the shell of tanks built to API 650?	Section 5 of API 653 defers this issue to API 650, which requires that the material comply with Section 2. The welding and NDE should comply with API 650, Section 5.2.3.5
8.2	2nd - Dec. 1995		Referring to API 653, Section 8.2 and 8.3, when inserting a new shell course into an existing tank shell, is the weld joining the new course to the course above considered as a "new weld joint" or an "existing weld joint?"	The process of inserting a new course into an existing tank is an alteration, not a reconstruction, which makes Section 7 applicable, but not Section 8. Refer to Section 9.2.3.2, which indicates that the original code of construction may be followed for such work.

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8.4.2	2nd - Dec. 1995	653-I-06/99	There is a difference in the formulas (dropping the "1" from the API 653 formula in Section 4.3.3.1), is it the intent of API 653 that the API 650 formula with an "E", added for the joint efficiency, be used when a reconstructed tank is involved? $t_d = \frac{2.6\,D\,(H-1)\,G}{S_d\,E} + CA$	Yes
8.4.2	2nd - Dec. 1995	653-I-06/99	Is it the intent of API 653 that the following API 650 formula for the hydrostatic test height be used when a reconstructed tank is involved? $H_t = \frac{S_d\ E\ t_{\min}}{2.6\ D} + 1$	Yes.
9.1	2nd - Dec. 1995		Is there ever a condition when the new bottom would not extend beyond the shell plates?	No.
9.1	2nd - Dec. 1995		Does API 653 permit the installation of single-corrugation bell-shaped bottom plates that would serve as expansion joints? The corrugation size would be approximately 4 inches high by 14 inches wide.	No. API 653 is based on configurations specifically conforming to API 650 except where stated otherwise, or where existing details are not covered by API 650. Refer to Section 1.1.5 and 9.1.1 of API 653. The proposed detail may or may not provide a "level of integrity" equal to the current 650 rules. API 650 is based on bottoms that are flat, resting on foundations that provide adequate friction that keep the tensile stress due to shell expansion to an insignificantly low value.

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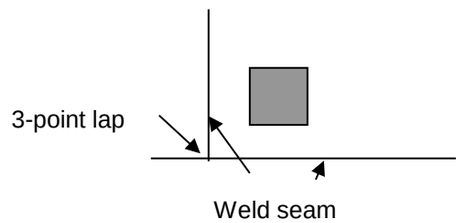
9.1	2nd - Dec. 1995	653-I-01/00	Referring to API 653, Figure 9-5 and Section 9.10, Can a patch be placed near a three-point seam as shown below? Illustration: A 12 in. square bottom patch plate located 2 in. min from weld seams -  	Yes, unless the patch plate covers the 3-point lap. See Note 5 in Fig. 9-5.
9.1	2nd - Dec. 1995	653-I-03/00	1: Does an authorized inspector have to be on site during reconstruction, repairs and alterations?	1: No, but the authorized inspector is required to be on the site for the external and internal inspections required by Section 4 of API 653.
9.1	3rd - Dec. 2001	653-I-08/04	Does API 653 specify inspection hold point(s) during tank repair and/or alteration when the authorized inspector is required to approve the work?	No. The standard does not specify required inspection hold points, but leaves this to the discretion of the authorized inspector. Refer to 9.1.3.
9.1.1, Fig. 9.13	Ed 4, Ad 2	653-2013-F2	Do all the spacing limitations of Figure 9.13 apply when the bottom seams are lap welded?	Yes, the limitations apply to all bottom lap welds per 9.10.3.1. Figure 9.13, Note 6 affirms that the limitations also apply to butt-welded bottoms.
9.2	2nd - Dec. 1995	653-I-02/98	Referring to API 653, Section 12.1.2.5, does the weld between the insert plate and the shell plate have to be fully or partially radiographed if a new nozzle has been installed in a new insert plate that complies with Section 9.2. and 12.2?	Yes.

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9.2	3rd - Dec. 2001	653-I-10/03	When cutting door sheets into butt welded tank shells, do the new vertical seams of the door sheet need to be offset if it goes from one course to another?	The new vertical weld joints in butt welded tanks must be offset as stated in 9.2.2.2 and API 650, Section 3.1.5.2b.
9.2.1	3rd - Dec. 2001	653-I-04/03	Can a shell course in an existing tank that is 2.4 m wide be replaced with two 1.2 m shell courses?	Yes. API 653 only requires that replacement shell plates be 300 mm (12 in.) wide; see 9.2.2.1.
9.2.2.1, Fig. 9.1	Ed 4, Ad 2	653-2013-F3	1. Does the minimum spacing between repair plates given as "H" in Figure 9.1 apply to repair plates that are square with rounded corners? 2. Do the minimum spacings for repair plates given in Figure 9.1 apply to all shapes listed in 9.2.2.1 and 9.3.1.4, even for shapes that are not depicted in Figure 9.1?	1. Yes. 2. Yes.
9.2.2	2nd - Dec. 1995	653-I-14/98	Do the welding requirements for the critical zone of Section 9.2.2 of API 653 apply to the welds made for attaching supports, such as unistrut supports welded to the projection of bottom plates?	No. The critical zone is inside the tank shell.
9.2.3	2nd - Dec. 1995		1: Does API 653 permit the above new weld joint to be a lap-welded design, assuming the existing tank welds are lap-welded? 2: If the above new weld must be butt-welded to the shell above, how can the joint be made where this weld joins the lap-welded vertical welds?	1: Yes, per Section 9.2.3.2 2: Butt-welding is not required, per 9.2.3.2.
9.2.3	2nd - Dec. 1995	653-I-20/98	Can a complete (360º) doubler plate be installed on the inside of the tank shell and fillet welded to the ID of the tanks shell and tank bottom for the purpose of reinforcing a corroded lower tank shell when the thickness of the tanks shell does not comply with the minimum thickness requirements of API 653 due to	No. This type of repair does not comply with the requirements of API 653.
9.2.4.3	Ed 4, Ad 3	653-2014-F1	If two new plates are used for a door sheet in a riveted tank, one in the bottom ring and a smaller one in the second ring, may the second ring plate cross a riveted (or lapped) vertical seam?	No. Per the second sentence of 9.2.4.3 it is "not permitted in any case" for the door sheet to cross a lapped or riveted vertical seam.

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9.3.1	2nd - Dec. 1995	653-I-06/97	1: Does API 653 permit installing a lap-welded patch plate on the inside of a shell plate, as well as the outside? 2: Is the 48 in. maximum patch plate vertical dimension, as permitted by API 653, in Section 9.3.1.7, dependent upon the horizontal width of patch plates? Note that there is a 6 in. minimum, however, for both the horizontal and vertical dimensions of the patch plate.	1: The use of inside patch plates is not prohibited by API 653, except as indicated in Section 9.3.1.6. 2: No.
9.3.1.1	2nd - Dec. 1995	653-I-13/99	1: Referring to API 653, Section 9.3.1.1, what is the alternative repair method if the shell course is greater than ½ in.? 2: Is API 653 retroactively applicable to a tank that had patches installed on a tank shell, with a thickness greater than ½ in., prior to the issue of API 653?	1: The rest of Section 7 specifies the applicable repair rules. 2: Yes, see Section 9.3.1.
9.3.1.6	2nd - Dec. 1995		Is it acceptable to repair an externally corroded shell plate at the shell-to-bottom joint using an internal patch plate extending to the corner weld?	No. Refer to Section 9.3.1.6 which requires a 6-inch clearance from the inside corner weld.
9.3.1.7	3rd	653-I-06/06	1: Do the restrictions for tank shell patch plates, maximum 48" X 72", outlined in API 653 Section 9.3.1.7 apply to tank bottoms? 2: Does API 653 require the removal of existing patch plates on the tank bottom that do not comply with the current requirements of API 653?	1: No; refer to API 653 Section 9.10. 2: API 653 does not cover this specific situation, refer to API 653 Sections 1.1.5 and 1.1.6.
9.3.2	2nd - Dec. 1995	653-I-06/97	Referring to API 653, Section 9.3.2, does this section mean that it is acceptable to repair a small corroded area by cutting a 2" diameter hole and then applying a patch plate?	Yes, assuming the corroded area lies in the area removed.
9.3.2.1	2nd - Dec. 1995	653-I-06/97	Referring to API 653, Section 9.3.2.1, does the "inner perimeter" refer to the perimeter of the hole in the shell plate?	Yes.
9.7	3rd - Dec. 2001	653-I-03/04	For a diamond-shaped reinforcing plate that is to be modified to have a tombstone shape, can the tombstone shape be obtained by welding two triangular shaped plates below the lower diagonal edges of the existing diamond shaped reinforcing plate?	No. Refer to Figure 9-3B for acceptable detail for addition of reinforcing plate to existing shell penetration.

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9.8	2nd - Dec. 1995	653-I-17/98	When adding a new nozzle to an existing shell plate > ½ inches that does not meet the current design metal temperature criteria, which of the [alleged] conflicting rules are to be satisfied: Section 9.8.2b of API 653, Section 3.7.3.1a of API 650, or Section 3.7.3.1b of API 650?	Refer to Section 9.8.1 of API 653, which requires that the rules of 653, Section 9.8.2 and 650 be met. Section 3.7.3.1a applies to the spacing from shell joints to insert plates, reinforcing plates, or nozzles. Section 3.7.3.1b applies to spacing between adjacent nozzles, reinforcing plates, insert plates, or any combination. Section 9.8.2b specifies the minimum size of the insert plate if a reinforcing plate is used. These rules, including 9.8.2d, need to be worked together. There is no conflict.
9.8	2nd - Dec. 1995	653-I-07/99	In the case of a new clean-out fitting being installed in an old tank, does API 653 or 650 allow the waiving of the requirement on API 650, Section 3.7.7.3 calling for stress-relieving after completely pre-assembling into a shell plate and prior to installation in the tank shell?	No. The entire clean-out fitting must be stress-relieved. See API 653, Section 9.8.
9.8	3rd - Dec. 2001	653-I-05/03	1: If a 20-inch manway is removed from an existing tank and a new 30-inch manway installed, is this work considered a replacement, repair, or alteration by the rules of API 653, Section 9? 2: Does API 653 allow the replacement of only the nozzle neck of a 6-inch nozzle in a tank with a shell thickness greater than 0.5 in., and not meeting current design metal temperature requirements? 3: Does API 653 allow the replacement of a nozzle neck without replacing the reinforcing pad, when the nozzle size is increased in a tank with a shell thickness greater than 0.5 in., and not meeting current design metal temperature requirements?	1: The replacement of a 20-inch manway with a new 30-inch manway is covered in Section 9.8 2: Section 9.8 requires that this nozzle and reinforcing pad be removed from the tank and an insert plate with the new nozzle be installed. 3: API 653 requires that this nozzle and reinforcing pad be removed, and an insert plate with the new nozzle installed as outlined in 9.8.

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9.8.2	Ed 4, Ad 2	INQ-653-D02	1: When calculating minimum required thickness of an insert or thickened insert in an existing tank is the allowable stress for the new material limited to the allowable stress of the existing material? 2: In API-653 9.8.2 does the reference to API-650 for design stress allow calculation of an insert plate or thickened insert plate so that the installed thickness could be less than the existing shell plate thickness?	1: No. When calculating the minimum required thickness for new material used for an insert or thickened insert the allowable stress of the new material shall be used. Additionally, the material thickness shall not be less that the greatest nominal thickness of an adjacent plate (ref. API-653 9.2.1). 2: No. The as-built standard stresses shall be used for calculation of new inserts or thickened inserts required thickness but installed material must be the same thickness as the adjacent existing shell plate as a minimum (ref. API-653 9.2.1). Paragraph 9.8.2 specifically addresses reinforcement area calculations.
9.9	1st - Jan. 1991		Are the requirements of Section 9.9.2 applicable only if the tank bottom has failed?	No. The requirements apply whenever a new tank bottom is being installed in a tank.
9.9	2nd - Dec. 1995	653-I-18/98	When making a "tombstone" modification to an existing penetration, extending the reinforcing down to the shell-to-bottom weld, does API 653 permit increasing the thickness of nozzle reinforcing plates and proportionally decreasing the vertical dimension from the nozzle centerline to the tank bottom?	Yes, provided the requirements for reinforcement and weld spacing comply with API 650. See Section 9.9.1.
9.9	2nd - Dec. 1995	653-I-11/01	Does API 653 allow nozzle-type clean out fittings that are half above floor level and half below floor level to be replaced in an old tank or installed in a new tank? If so, what section permits them to be replaced?	No.
9.9.1	2nd - Dec. 1995	653-I-06/00	Refer to Sections 9.9.1 and 9.9.2.2 of API 653. Given the following proposed tank modification: 1) A second bottom is to be installed by slotting the shell. 2) The existing diamond shape reinforcing plate is required to be replaced with a tombstone type reinforcing plate as shown in Fig. 9-3b to meet weld spacing. 3) The modification will satisfy the reinforcing area required. 4) This modification would violate the minimum elevation shown in Fig. 3-4A of API 650. Is the proposed modification in compliance of API 653?	This modification would not comply with the second edition of API 653, Addendum 4. However, a revision has been approved to Section 9.10.2.1.4, that when issued may allow modifications as described above, with some conditions that may be applicable. Please refer to the third edition of API 653 for this revision.
9.9.2.1.2	2nd - Dec. 1995		Is the requirement for a projection of a new bottom beyond the shell specified by the Section 9.9.2.1.2 dependent upon whether the bottom replacement is due to failure or due to some other reason?	No. This detail applies anytime that a bottom is installed in a tank.

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9.10	3rd - Dec. 2001	653-I-13/03	Does API Standard 653 allow a replacement bottom to be installed above an existing bottom with a flush-type cleanout fitting?	Yes. Refer to Section 9.9.2.3 and Figure 9-4.
9.10.1	3rd - Dec. 2001	653-I-15/03	1: Is removal of an existing bottom plate and replacement with a new plate allowed in Section 9.10.1? 2: When replacing an entire bottom plate, or portion thereof, not in the critical zone, does API Standard 653 specify a minimum plate width required?	1: The standard does not address replacement of a single bottom plate. 2: See Reply 1.
9.10.1	3rd - Dec. 2001	653-I-07/04	Is a patch plate an acceptable repair for a corroded tank bottom, and can the patch plate be placed over a weld seam?	Yes, provided the repair complies with the spacing and material requirements of API 653. Refer to 7.2, 9.10.1, and Figure 9-5
9.10.1.1	2nd - Dec. 1995		Regarding 653, Section 9.10.1.1, if a tank has an annular ring, is the critical zone limited to the region within 12 in. of the shell?	No, the critical zone is the entire annular ring and extends 12 in. beyond the annular ring.
9.10.1.2	2nd - Dec. 1995		If the tank does not have an annular ring, does it still have a critical zone, and is the critical zone defined as the region within 12 in. of the shell?	Yes.
9.10.2	2nd - Dec. 1995	653-I-05/98	Does the API allow variations in the installation of tank bottoms that do not comply with API 653, Section 9.10.2, such as the fillet welding of the new bottom to the inside of the tank shell instead of slotting the tank shell?	No.
9.10.2	2nd - Dec. 1995		Does API 653 permit repairing a tank bottom by welding a completely new floor directly on top of the old bottom plates, which would serve as a back-up for the new welds?	No. Refer to Section 9.10.2.1.1, which requires the use of a cushion material between the new and old bottoms.
9.10.2	2nd - Dec. 1995	653-I-01/99	1: In API 653, Section 9.10.2.1.2, is "cutting a slot" intended to mean a complete severing of the tank wall? 2: Is there a sketch or more definitive explanation of what is described regarding the slotted detail? 3: Is there any provision in API 653 for a shell-to-bottom weld (for a replacement bottom) that could be welded from the inside of the tank?	1: Yes. 2: No. 3: No. Two-sided welding is required. See 9.10.2.3 of API 653 which refers to API 650 (including Section 3.1.5.7 of API 650).
9.10.2	2nd - Dec. 1995	653-I-19/98	When a new raised bottom is installed in an existing tank, what criteria apply to the spacing between the existing shell nozzles and the new bottom-to-shell weld?	Refer to API 653, Section 9.10.2.1.4, which requires that the minimum spacing specified in API 650, Section 3.7.3, be met.

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9.10.2	3rd - Dec. 2001	653-I-16/03	1: Can nozzles that are required to be raised by 9.10.2.1.4 be modified in accordance with 9.9? 2: When shell nozzles that require stress relief are modified in accordance with 9.9.2.2 and/or 9.10.2.1.5, can the required stress relief be performed with the nozzle in the tank shell?	1: Yes. The nozzles would have to meet the requirements of 9.10.2.1.5 and API 650, Section 3.7.3. Refer to API 653, Section 9.9.2. 2: No. Refer to API 650, Sections 3.7.4.3, and 3.7.4.2.
9.10.2.1.1	3rd Ad. 2	653-I-01-06	1: May an entire replacement bottom be placed directly on top of the existing bottom? 2: May a single tank bottom plate be repaired by the use of a lap welded patch plate that covers the entire existing bottom plate?	1: No. Refer to API 653 Section 9.10.2.1.1 and Figure 9-5 Note 3. 2: Yes, provided the weld spacing requirements defined in API 653 Figure 9-5 are met.
9.10.3.1, Fig. 9.13	Ed 4, Ad 2	INQ-653-D05	If a tank is to be repaired to API 653 and it is required to bring the tank up to the latest API 650 Edition and fit wear plates beneath the roof support columns, do the wear plates have to be sized or positioned so that the weld attaching the wear plate to the bottom plate is separated by a minimum distance from welds between bottom plates as shown by Figure 9.13?	Yes, as stated in 9.10.3.1. Alternatively, additional NDE listed in 9.10.3.1 shall be applied to welds that do not meet Figure 9.13 spacing.
9.11	3rd - Dec. 2001	650-I-06/02	1: When installing girders and rafters in an existing tank, do they need to be installed in accordance with the latest edition of API Standard 650? 2: When not altering the roof rafters and framing of an existing tank, is it necessary to upgrade it to the current edition of API Standard 650?	1: Yes, refer to API Standard 653, Section 9.11.1.2. 2: Refer to API Standard 653 Section 4.2.2.
9.14.1	2nd - Dec. 1995	653-I-09/01	Does API 653 allow hot tapping NPS 2 connections in tank shells less than ¼ inch thick when the material is of unknown toughness?	Yes, if the thickness is not less than 3/16 inch. Refer to Table 9-1 and to Section 9.14.1 for further restrictions.
9.14.1	2nd - Dec. 1995	653-I-12/97	Referring to API 653, Sections 9.14.1.3 and 9.14.5.1, is the use of E-6010 electrode permitted for welding the 1st pass of the weld attaching the hot-tap nozzle to the shell? Subsequent passes would be the specified low-hydrogen electrode (E-7018).	No. E-6010 is not a low-hydrogen electrode, as required by Section 9.14.1.3.

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10.5	2nd - Dec. 1995	653-I-06/98	Would it be correct to assess planar tilt and calculate limits via use of the plumbness rules in API 653, Section 10.5.2?	API 653 has no rules on tilt of existing tank shells, per se. The only tolerances applicable to reconstructed tank shells are for plumbness, roundness, peaking, and banding, as defined in Section 10.5. However, Section 10.5.6 provides rules that in effect specify the permitted planar tilt of the foundation. Also, refer to Appendix B, Section B.2.2.2, which provides guidelines on rigid body tilting.
10.5.5	2nd - Dec. 1995	653-I-08/99	1: In API 653, Section 10.5.5, does the term "banding" apply to the fillet-welded joint between the bottom of the tank shell and the annular plates, i.e. the bottom corner weld? 2: Does API 653, permit the waiver of Section 10.5 if a suitably qualified engineer certifies that the tank is structurally fit for the intended purpose (Note that this allowable under API 650, Section 5.5.1; although the seller in this case is the manufacturer?	1: No. 2: No.
10.5.6	2nd - Dec. 1995	653-I-14/99	1: Are the foundation tolerances in API 653, Section 10.5.6, applicable only to reconstructed tanks or repairs on tank foundations originally constructed to the tolerances of API 650, Section 5.5.5, and Appendix B? 2: Are the foundation tolerances in API 653, Section 10.5.6, applicable to re-leveling tanks when the original tank foundation was constructed to the tolerances of API 650, Section 5.5.5, and Appendix B?	1: Yes. 2: No. The foundation tolerances in API 653, Section 10.5.6 apply only to reconstructed tanks and do not apply to re-leveling existing tanks. Sections 12.3.1.2 and 12.3.2.5 provide requirements on re-leveling work.
12	2nd - Dec. 1995	653-I-09/99	Consider a tank built in the 1950's to API 12C rules, but having vertical and horizontal welds that will not pass the API 12C radiography criteria. If only the vertical welds were repaired, can the tank be put back in service meeting the API 653 requirements?	The horizontal and vertical welds examined must be evaluated/repaired based on the rules in API 650, Section 9.6, and API 653, Section 10, before placing the tank back in service.
12	2nd - Dec. 1995	653-I-03/99	Referring to API 653, Section 10, is NDE required after roof repairs are made?	No
12.1.1	3rd - Dec. 2001	653-I-04/02	Does API 653 require radiographic tracer shots on repairs of new shell plate to new shell plate welds and new shell plate to old shell plate as is required in new construction repairs with API 650.	Yes. See Section 12.1.1.3.

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12.1.2.2	2nd - Dec. 1995	653-I-03/98	1: Referring to API 653, does Section 12.1.2.2 require that cavities created during the removal of attachment welds of existing reinforcement plates be examined? 2: If the answer is YES, does the examination have to be conducted before the cavities are repaired?	1: Yes, VT and either MT or PT are required. 2: Yes. See Section 12.1.2.2.
12.1.4.2	2nd - Dec. 1995	653-I-08/98	Does API 653, Section 12.1.4.2, in its entirety, apply only to attachments welded to Groups IV through VI material?	Yes.
12.2.1	2nd - Dec. 1995	653-I-05/00	With justifiable cause and at the request of the owner, is it allowable to substitute the RT in Section 12.2.1 of API 653 with UT?	No.
12.2.1.1	2nd - Dec. 1995		Regarding API 653, Section 12.2.1.1., if during a major tank repair new vertical welds are introduced which both intersect new horizontal welds and old horizontal welds, does the intersection of the new vertical weld with the old horizontal weld have to be radiographed?	Yes, see Sections 12.2.1.3 and 12.2.1.5.
12.2.1.1	2nd - Dec. 1995		Can the examination of the [above] vertical weld required by Section 12.2.1.1 of API 653 be done concurrently with either the examination of the intersection with the new horizontal weld or with the examination of the intersection with the old horizontal weld?	API 653 does not prohibit concurrent examinations, as long as the required weld lengths are examined in the vertical, horizontal, and intersection of vertical and horizontal joints.
12.2.1.1	2nd - Dec. 1995		When replacing several shell rings on an existing tank, is it acceptable, per API 653, to radiograph the joints between existing plates per Section 12.2.1.1, 12.2.1.2, and 12.2.1.3 of API 653 and joints between new plates per API 650? Or must all joints be radiographed per API 653?	When replacing shell rings on an existing tank, all joints must be radiographed per API 653.
12.3	2nd - Dec. 1995	653-I-05/98	Does the hydrostatic test in Section 12 of API 653 specify a water test or can any liquid be used?	The intent is only for water to be used for the hydrostatic test so the tank shell is stressed to a higher level than in operation to prove adequacy of repairs for product service and to minimize the risk of brittle fracture while in service.
12.3	2nd - Dec. 1995	653-I-09/98	A tank has been repaired and hydrotested according to the requirements of API 653. Following the hydrotest, a condition not complying with API 653 is discovered, e.g. a weld spacing being too small, that was not identified prior to testing. Is this tank acceptable for service?	At the time the tank repair and testing was completed the tank is acceptable for service per API 653, assuming there was no prior knowledge of the noncompliant condition. If the condition was identified after hydrotesting, that condition must be evaluated and handled as required by the tank owner/operator and the local jurisdiction.

API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction*

Last Updated August 2016. (New Additions for 2016 are Highlighted in Yellow)

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12.3	2nd - Dec. 1995	653-I-16/98	1: What is the maximum nozzle size that can be installed before a full hydrotest is required? 2: Can a tank be pressure tested with the product (#2 low sulfur diesel gasoline)?	1: If the tank is not exempt from hydrotesting per Section 12.3.2, the maximum nozzle size for nozzles installed below the design liquid level is 12 in. NPS. Any bottom penetration located within 12 in. of the tank shell requires a full hydrotest. 2: No. The intent is only for water to be used for the hydrostatic test so the tank shell is stressed to a higher level than in operation to prove adequacy of repairs for product service and to minimize the risk of brittle fracture while in service.
12.3.1	2nd - Dec. 1995		Referring to API 653, Section 12.3.1.2 (e) and Table 12-1 (3), do these apply to the cleaning of the weld necessary prior to making a restoration of a corroded or otherwise deficient weld?	No, but this issue is currently under review by the API committee responsible for maintaining API 653.
12.3.2	2nd - Dec. 1995	653-I-23/98	Does API recommend the hydrostatic testing of major repairs to tanks that store products with a specific gravity greater than 1.0?	All tanks should be subjected to a hydrostatic test following major repairs unless the tank and the repairs comply with the requirements for waiving a hydrostatic test in API 653, Section 12.3.2.
12.3.2.1	2nd - Dec. 1995	653-I-11/98	Referring to API 653, Second - Addendum 2, for the case of a tank with a new bottom installed in an existing tank that includes a new shell-to-bottom weld, is a hydrotest required?	Yes. A clarification to Section 12.3.2.1 and Table 12-1 was published in the December 1998 addenda clarifying that if the shell-to-bottom weld is completely removed, or if the new bottom is installed by slotting the shell, a hydrotest is required. If the bottom is replaced without removing the existing shell-to-bottom weld, and compliance with Table 12-1 is met, then a hydrotest in not required. It is not intended that this interpretation be applied retroactively to bottom replacements completed prior to this revision.
12.3.2.1	2nd - Dec. 1995	653-I-01/01	To meet the requirements of a hydrostatic test exemption per API 653, Section 12.3.2.1(a), must all repairs be reviewed, or just the items that are covered in the scope of the major repair?	Section 12.3.2.1a applies only to the items within the scope of the major repair.
12.5	3rd - Dec. 2001	653-I-11/02	Is a settlement survey required during hydrostatic testing as described in Section 12.5?	Yes, settlement shall be measured during and when water reaches 100 percent of the test level; see 12.5.2.
13	2nd - Dec. 1995	653-I-10/98	Referring to API 653, Section 11, if the only work to be done on a tank is floor repair, must the shell course, allowable stress, and material be entered on the nameplate?	No. A nameplate is required for reconstructed tanks, not for repaired tanks. Refer to Sections 13.1.1 and 13.2

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13	2nd - Dec. 1995	653-I-10/01	How long does API 653 require inspection records to be retained? Background: We are working with API 653-certified inspectors to perform API 653 inspection services for various clients. A question has arisen over whether monthly "routine in-service inspection" records are to be kept for the life of the tank, or whether some shorter retention interval, such as 10 years, might be considered adequate.	API 653 does not specify the retention period.
Figure 9-1	2nd - Dec. 1995		Do the rules of API 653, Figure 9-1 apply to weld spacing if bottom plates only are being replaced?	No.
General	3rd Dec 2001	653-I-03/06	We have a copy of an API standard no. 653, 3rd edition addendum 1 in September 2003. I was trying to follow the procedure for determining the t min for our tank. The material is SA-285C which I didn't see in the table for maximum allowable stresses. Also, this is a pressure vessel 100psi.	No. Refer to API 510
General	2nd - Dec. 1995		Does API 653 include requirements for abandonment of tanks?	No.
General	2nd - Dec. 1995		Do aboveground storage tanks with capacity of 10,000 barrels or less require an API 653 inspection?	No. API 653 applies to tanks built in accordance with API 650 and its predecessor 12C with no reduction in size. API 650 is designed for tanks in oil storage services. API 650 can be used for other applications as may be required by the tank owner/operator or jurisdictional requirements. API 653 can be used for inspection of tanks in other services. Jurisdictional requirements may specify instruction per API 653.
General	3rd	653-I-05/06	1: Does API 653 require evaluation of inspection results to be in accordance with the as-built standard? 2: Does API 653 require repairs to be performed in-accordance to the current applicable standard?	1: No, there are specific requirements for the evaluation of inspection results in many sections of API 653 and there is not a general rule for the evaluation of inspection results. 2: No, there are specific requirements for the repairs of tank components in the different sections of API 653 and there is not a general rule for the repairs performed on tank components.
General	3rd	653-I-07/06	When a portion of a shell plate is replaced adjacent to a vertical weld seam, may the replacement plate terminate at the vertical weld seam?	No, refer to API 653 Section 9.2.2.1 and Figure 9-1. Repair plate inserted in a tank shell plate may not have vertical weld seam in an existing vertical weld.

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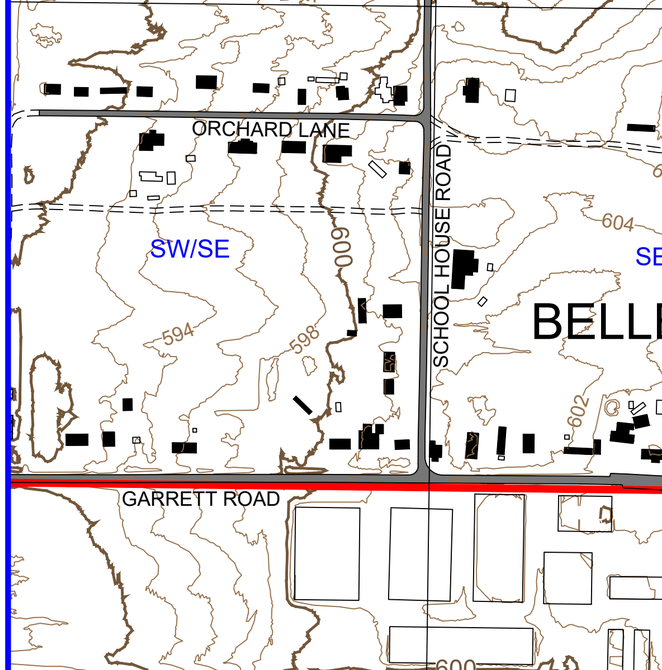
General	2nd - Dec. 1995	653-I-04/01	Given that an inspection in accordance with API 653 is pending for selected tanks constructed in accordance with the 7th Edition of API 650, are these tanks required by API 653 to be upgraded to meet the requirements of current edition of API 650?	No. However, if there is a change in service involved, or there is a reconstruction, repair, or alteration required, then the requirements in 653 generally invoke the current edition of 650 for the evaluation/construction work required. Refer to the appropriate sections in 653.
General	3rd Dec 2001	653-I-01/06	1: Can an entire replacement bottom be placed directly on top of the existing bottom? 2: Can a single bottom plate be overlaid?	1: No. Refer to API Section 9.10.2.1.1 and Figure 9-5-Note 3. 2: Yes, provided the weld spacing requirements defined in Figure 9-5 are met.
General	3rd Dec 2001	653-I-04/06	Can a patch plate be welded to the bottom within 6 inches of the shell?	No unless it is a tomb stone design. Refer to Figure 9-5
Table 6-1	2nd - Dec. 1995		Referring to API 653, Table 6-1, what is the meaning of the term "tank bottom/foundation design?"	This expression is referring to the configuration of the tank and foundation as a whole. Another way to phrase the condition would be: "There is no mechanism in place that would detect a contain a bottom leak."
Table 6-1	2nd - Dec. 1995		Does the term "means to provide . . . containment of a bottom leak" imply undertank liner systems?	An undertank liner system is one method of containing bottom leaks. However, there are other methods, such as double bottoms, that also accomplish the containment.
Table 9-1	Ed 4, Ad 2	INQ-653-D04	In Table 9.1 for nozzle sizes intermediate to two rows, can minimum shell thickness interpolate to between the correlated shell thickness' given?	No, enter the table in the row that applies to the nozzle under consideration. Shell thickness must meet minimum requirements given in that row.

ATTACHMENT A-3

FACILITY LAYOUT MAP

FENNELL ROAD
OLD HIGHWAY 20
MOORESVILLE ROAD
ORCHARD LANE
SCHOOL HOUSE ROAD
GARRETT ROAD
BELLE MINA
SOUTHERN RAILWAY
LIMESTONE CREEK
PIPELINE
ENTRANCE ROAD
ASPHALT PLANT
FUTURE EXPANSION
FUEL STORAGE AREA
QUARRY PLANT
MINING PIT
SEDIMENT BASIN 001P
SEDIMENT BASIN 002P
SEDIMENT BASIN 003P
SEDIMENT BASIN 004P
SEDIMENT BASIN 005P
SW/SE
SE/SE
SW/SW
SE/SW
SW/SE
NW/NE
NE/NE
NW/NW
NE/NW
NW/NE
SW/NE
SE/NE
SE/NW
SW/NE
NW/SE
NE/SE
NW/SW
NE/SW
NW/SE
SW/SE
SE/SE
SW/SW
SE/SW
SW/SE
NW/NE
NE/NE
NW/NW
NE/NW
NW/NE
(P-1)
(P-2)
B
19
20
29
30
31
32



VICINITY MAP, SCALE: 1" = 1 MILE

MAP LEGEND

- NPDES PERMIT BOUNDARY/AREA (199 ACRES)
- FLOODWAY (TOTAL AVOIDANCE)
- FLOODPLAIN (SEE NOTES BELOW)
- B — PROPOSED OUTFALL/SEDIMENT BASIN
- DRAINAGE DIVIDE
- SURFACE OWNERSHIP DIVIDE OTHER THAN QUARTER/QUARTER LINE
- (S-1) SURFACE OWNERSHIP
- PUBLIC ROAD
- PRIVATE ROAD
- RAILROAD
- OCCUPIED DWELLING
- UNOCCUPIED BUILDING/BARN, SHED, ETC.
- LAND HOOK
- 50' STREAM BUFFER ZONE
- IMPOUNDED WATER
- DIVERSION DITCH
- INTERMITTENT AND/OR PERENIAL STREAM
- FUEL STORAGE LOCATION

N
W E
S

CONTOUR INTERVAL: 2 FT.
CONTOURS OBTAINED FROM LIMESTONE COUNTY MAPPING. FLIGHT DATE 2016.

SECTION 29, TOWNSHIP 4 SOUTH, RANGE 3 WEST, LIMESTONE COUNTY, ALABAMA
BASE MAP: GREENBRIER & TANNER U.S.G.S. QUAD.

NOTES:

NO BUILDINGS WITHIN 1,000' OF PERMIT AREA OTHER THAN SHOWN.

PROPERTY OWNERSHIP BY QUARTER-QUARTER-SECTION (FORTY) EXCEPT WHERE NOTED OTHERWISE.

LOCATION OF LIMESTONE, OVERBURDEN AND WASTE STOCKPILES ARE SUBJECT TO CHANGE.

FOLLOWING AN EXTENSIVE JURISDICTION DETERMINATION, SEE ATTACHED, THERE ARE NO WATERS OF THE UNITED STATES (W.O.T.U.S.) WITHIN THE PROPOSED N.P.D.E.S. PERMIT AREA.

CONSULTATION WITH THE LIMESTONE COUNTY FLOODPLAIN ADMINISTRATOR CONCERNING THE PERMISSIBLE USE OF THE AREA DESIGNATED AS FLOODPLAIN WITHIN THE PROPOSED N.P.D.E.S. PERMIT BOUNDARY IS CURRENTLY UNDERWAY.

I HEREBY CERTIFY THIS MAP TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

ALABAMA REGISTERED No. 17067 PROFESSIONAL ENGINEER C.W. MCGEHEE

6/13/2023
DATE

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jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: cw@mcgehee.org

PROPERTY OWNERSHIP

(P-1) ELEPHANTS R US, LLC
(P-2) LANDQUEST PROPERTIES, LLC.

STONED, LLC

PROJECT CROSSROADS

FACILITY LAYOUT MAP

FILE: CROSSROADS	SCALE: 1" = 300'	JOB NO.: 23-166
APPROVED BY: C.W.M.	DATE: 06/15/23	SHEET NO.: 1 OF 1