TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

RECEIVED

August 4, 2008

COUNTY ENGINEER

Mr. Daryl Stoker
New Braunfels Independent School District
430 W. Mill St.
New Braunfels, Texas 78130

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: NBISD High School Field House; Located on Loop 337 north of Hwy 46; New Braunfels, Texas
TYPE OF PLAN: Request for Modification of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program ID No. 1591.06; Investigation No. 683251; Regulated Entity No. RN102767803

Dear Mr. Stoker:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the request for modification of the approved WPAP for the above-referenced project submitted to the San Antonio Regional Office by Gil Engineering Associates, Inc. on behalf of New Braunfels Independent School District on June 16, 2009. Final review of the WPAP was completed after additional material was received on July 18, 2008. As presented to the TCEQ, the Temporary Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The New Braunfels High School was originally constructed in the 1960's. The installation of underground storage tanks was approved at the school site on June 24, 1985 (NBISD Transportation Facility, EAPP File #785.00).

In 2001, the renovations and additions fell under the regulations of the TCEQ (TNRCC at the time) and 30 TAC Chapter 213. The 56 acre site had approximately 25.2 acres of existing impervious cover. The WPAP approved on February 16, 2001, added 2.4 acres of additional impervious cover and increased the total impervious cover to 27.6 acres (49%). A partial sedimentation/filtration system designed using the

1999 edition of the TNRCC"s "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices" was constructed. The basin was designed with a water capture volume of 10,179 cubic feet (10,019 cubic feet required) and a sand filter area of 1,350 square feet (1,252 square feet required).

A modification was approved on November 8, 2002 for the impervious cover associated with an obstacle course. There was no loss of water quality volume associated with this modification.

A second modification was approved on August 17, 2007 for renovations to the field house and parking area. The net increase in impervious cover was 47 square feet. The required water quality volume was raised to 10,026 cubic feet.

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 4.1 acres. It will include the removal of the natural grass football field and the installation of an impermeable liner, permeable aggregate base, underlying collector pipes and an artificial turf football field. The two "D" areas adjacent to the field end zones will be converted from natural grass to rubberized track surface. All other areas associated with the track and football field area are considered existing impervious cover. The new impervious cover will be 2.35 acres (57 percent of the 4.1 acre site) and 29.94 acres impervious cover for the total site. No change to the wastewater disposal system or treatment plant is proposed by this modification.

PERMANENT POLLUTION ABATEMENT MEASURES

No permanent BMPs are proposed for this project. The new impervious cover for the 4.1 acre site is 1.874 acres for the football field and 0.476 for the "D" areas.

EXCEPTION JUSTIFICATION

The application proposed an exception request from the requirement of installing permanent BMPs. As stated by the project engineer, the artificial turf and rubberized "D" ring areas will reduce the amount of TSS generated.

The natural grass field:

- Requires approximately 200 pounds of fertilizers a week during growing season
- Requires mowing and clipping, which if not captured, decay and release organic particles which contribute to TSS
- Requires a regular watering schedule
- Can develop bare spots where erosion can occur

The artificial turf field and rubberized "D" areas eliminate all of the above requirements for a natural grass field. The artificial turf field is designed to have approximately six inches of gravel and filter sand above the collector underedrain pipes. This will provide a limited storage capacity and a limited filtration aspect for stormwater which lands on the football field.

The rubberized "D" areas will consist of an asphalt paving with rubberized track surface sealed with a latex binder. This area will receive only pedestrian traffic as vehicular traffic would destroy the

rubberized surface. As stated by the project engineer, this rubberized "D" area will produce less TSS than the current natural grass field.

GEOLOGY

According to the geologic assessment included with the application, the site is located on the Person Formation. One manmade feature in bedrock was rated non-sensitive by the project geologist. The San Antonio Regional Office site assessment conducted on July 25, 2008 revealed the site as described in the geologic assessment.

SPECIAL CONDITIONS

I. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letter dated February 16, 2001.

II. The exception request is granted based on the discussion presented in this letter summarized from correspondence from the project engineer.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

2. The holder of the approved Edwards Aquifer Protection Plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, PST) can be required depending on the specifics of the plan.

3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.

5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.

6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of

appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.

8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

<u>During Construction:</u>

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.

12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

13. No wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and

Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

15. Intentional discharges of sediment laden storm water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.

16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to

the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact Charly Fritz of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4065.

Sincerely,

Mark R. Vickery, P.G.
Executive Director
Texas Commission on Environmental Quality

MRV/CEF/eg

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625

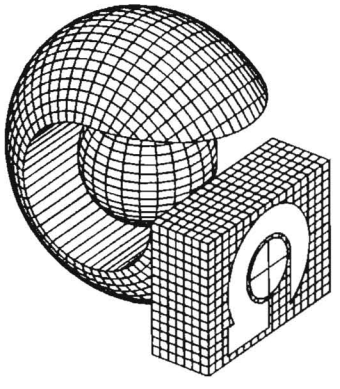
cc: Mr. Victor Gil, P.E., Gil Engineering Associates, Inc.
Mr. Bruce Boyer, City of New Braunfels
Mr. Tom Hornseth, P.E., Comal County
Ms. Velma Danielson, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC212

Edwards Aquifer Protection Program Modification Plan

To:
Attn: TCEQ San Antonio Regional Office
14250 Judson Road
San Antonio, TX 78233-4480
210-490-3096

For:
New Braunfels Independent School District
New Braunfels High School Field House
2551 Loop 337N
New Braunfels, Texas 78130

Prepared by:



Gil Engineering Associates. Inc.

CONSULTING ENGINEERS SURVEYORS

PLANNERS BUILDING DESIGNERS

506 EAST BRAKER LANE AUSTIN, TEXAS 78753-2751 phone (512) 835-4203

fax (512) 835-4407

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 18, 2008

RECEIVED
JUN 23 2008
COUNTY ENGINEER

Mr. Thomas H. Hornseth, P.E.
Comal County Engineer
195 David Jonas Drive
New Braunfels TX 78132-3710

Re: Edwards Aquifer, Comal County
PROJECT NAME: New Braunfels Independent School District High School Field House, located at 2551 Loop 337N, New Braunfels, Comal County Texas
PLAN TYPE: Application for Approval of a Water Pollution Abatement Plan (WPAP) 30 Texas Administration Code (TAC) Chapter 213; Edwards Aquifer Protection Program
EAPP File No.: 1591.06

Dear Mr. Hornseth:

The enclosed Contributing Zone Water Pollution Abatement Plan, received on June 16, 2008 application is being forwarded to you pursuant to the Edwards Aquifer Rules. The Texas Commission on Environmental Quality (TCEQ) is required by 30 TAC Chapter 213 to provide copies of all applications to affected incorporated cities and underground water conservation districts for their comments prior to TCEQ approval.

Please forward your comments to this office by July 15, 2007.

The Texas Commission on Environmental Quality appreciates your assistance in this matter and your compliance efforts to ensure protection of the State's environment. If you or members of your staff have any questions regarding these matters, please feel free to contact the San Antonio Region Office at (210) 490-3096.

Sincerely

Lynn M. Bumguardner
Water Section Work Leader
San Antonio Regional Office

LMB/eg

Modification of a Previously Approved Plan Checklist

✓ General Information Form (*TCEQ-0587*)
- ATTACHMENT A - Road Map
- ATTACHMENT B - USGS / Edwards Recharge Zone Map
- ATTACHMENT C - Project Description

✓ Geologic Assessment Form (*TCEQ-0585*)
- ATTACHMENT A - Geologic Assessment Table, *TCEQ-0585-Table*
- Comments to the Geologic Assessment Table
- ATTACHMENT B - Soil Profile and Narrative of Soil Units
- ATTACHMENT C - Stratigraphic Column
- ATTACHMENT D - Narrative of Site Specific Geology
- Site Geologic Map(s)
- Table or list for the position of features' latitude/longitude (if mapped using GPS)

✓ Modification of a Previously Approved Plan (*TCEQ-0590*)
- ATTACHMENT A - Original Approval Letter and Approved Modification Letters
- ATTACHMENT B - Narrative of Proposed Modification
- ATTACHMENT C - Current Site Plan of the Approved Project

✓ Application Form (appropriate for the modification)
- Aboveground Storage Tank Facility Plan (*TCEQ-0575*)
- Organized Sewage Collection System Plan (*TCEQ-0582*)
- Underground Storage Tank Facility Plan (*TCEQ-0583*)
- Water Pollution Abatement Plan Application Form (*TCEQ-0584*)
- Lift Station / Force Main System Application (*TCEQ-0624*)

✓ Temporary Stormwater Section (*TCEQ-0602*), if necessary
- ATTACHMENT A - Spill Response Actions
- ATTACHMENT B - Potential Sources of Contamination
- ATTACHMENT C - Sequence of Major Activities
- ATTACHMENT D - Temporary Best Management Practices and Measures
- ATTACHMENT E - Request to Temporarily Seal a Feature, if sealing a feature
- ATTACHMENT F - Structural Practices
- ATTACHMENT G - Drainage Area Map
- ATTACHMENT H - Temporary Sediment Pond(s) Plans and Calculations
- ATTACHMENT I - Inspection and Maintenance for BMPs
- ATTACHMENT J - Schedule of Interim and Permanent Soil Stabilization Practices

✓ Permanent Stormwater Section (*TCEQ-0600*), if necessary
- ATTACHMENT A - 20% or Less Impervious Cover Waiver, if project is multi-family residential, a school, or a small business and 20% or less impervious cover is proposed for the site
- ATTACHMENT B - BMPs for Upgradient Stormwater
- ATTACHMENT C - BMPs for On-site Stormwater
- ATTACHMENT D - BMPs for Surface Streams
- ATTACHMENT E - Request to Seal Features, if sealing a feature
- ATTACHMENT F - Construction Plans
- ATTACHMENT G - Inspection, Maintenance, Repair and Retrofit Plan
- ATTACHMENT H - Pilot-Scale Field Testing Plan, if BMPs not based on *Complying with the Edwards Aquifer Rules: Technical Guidance for BMPs*
- ATTACHMENT I -Measures for Minimizing Surface Stream Contamination

Modification of a Previously Approved Plan Checklist (continued)

✓ Agent Authorization Form (*TCEQ-0599)*, if application submitted by agent

✓ Application Fee Form (*TCEQ-0574*)

✓ Check Payable to the "Texas Commission on Environmental Quality"

✓ Core Data Form (*TCEQ-10400)*

General Information Form
For Regulated Activities on the
Edwards Aquifer Recharge and Transition Zones
and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B)
Effective June 1, 1999

REGULATED ENTITY NAME: New Braunfels High School Field House
COUNTY: Comal STREAM BASIN: Panther Canyon

EDWARDS AQUIFER: ✓ RECHARGE ZONE
__ TRANSITION ZONE

PLAN TYPE: __ WPAP __ AST __ EXCEPTION
__ SCS __ UST ✓ MODIFICATION

CUSTOMER INFORMATION

1. Customer (Applicant):

Contact Person: Daryl Stoker
Entity: New Braunfels Independent School District
Mailing Address: 430 W. Mill Street
City, State: New Braunfels, Texas Zip: 78130
Telephone: (830) 627-6731 FAX: (830) 627-6741

Agent/Representative (If any):

Contact Person: Victor Gil, P.E.
Entity: Gil Engineering Associates, Inc.
Mailing Address: 506 E. Braker Lane
City, State: Austin, TX Zip: 78753-2751
Telephone: 512-835-4203 FAX: 512-835-4407

2. ✓ This project is inside the city limits of New Braunfels.
__ This project is outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
__ This project is not located within any city's limits or ETJ.

3. The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

The project location is on the current New Braunfels High School site. The physical address is 2551 Loop 337 N, New Braunfels, Texas 78130. The site is the stadium football field adjacent to the field house.

4. ✓ **ATTACHMENT A - ROAD MAP**. A road map showing directions to and the location of the project site is attached at the end of this form.

5. ✓ **ATTACHMENT B - USGS / EDWARDS RECHARGE ZONE MAP**. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached behind this sheet. The map(s) should clearly show:

✓ Project site.
✓ USGS Quadrangle Name(s).
✓ Boundaries of the Recharge Zone (and Transition Zone, if applicable).
✓ Drainage path from the project to the boundary of the Recharge Zone.

6. ✓ Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment. **The TCEQ must be able to inspect the project site or the application will be returned.**

7. ✓ **ATTACHMENT C - PROJECT DESCRIPTION**. Attached at the end of this form is a detailed narrative description of the proposed project.

8. Existing project site conditions are noted below:
— Existing commercial site
— Existing industrial site
— Existing residential site
— Existing paved and/or unpaved roads
— Undeveloped (Cleared)
— Undeveloped (Undisturbed/Uncleared)
✓ Other: Addition to existing school site

PROHIBITED ACTIVITIES

9. ✓ I am aware that the following activities are prohibited on the **Recharge Zone** and are not proposed for this project:

(1) waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
(2) new feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
(3) land disposal of Class I wastes, as defined in 30 TAC §335.1;
(4) the use of sewage holding tanks as parts of organized collection systems; and
(5) new municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).

10. ✓ I am aware that the following activities are prohibited on the **Transition Zone** and are not proposed for this project:

(1) waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
(2) land disposal of Class I wastes, as defined in 30 TAC §335.1; and
(3) new municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

ADMINISTRATIVE INFORMATION

11. The fee for the plan(s) is based on:

✓ For a Water Pollution Abatement Plan and Modifications, the total acreage of the site where regulated activities will occur.
— For an Organized Sewage Collection System Plans and Modifications, the total linear footage of all collection system lines.
— For a UST Facility Plan or an AST Facility Plan, the total number of tanks or piping

systems.

__ A Contributing Zone Plan.

__ A request for an exception to any substantive portion of the regulations related to the protection of water quality.

__ A request for an extension to a previously approved plan.

12. Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

__ TCEQ cashier

__ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)

✓ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

13. ✓ Submit one (1) original and three (3) copies of the completed application to the appropriate regional office for distribution by the TCEQ to the local municipality or county, groundwater conservation districts, and the TCEQ's Central Office.

14. ✓ No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the executive director.

✓ No person shall commence any regulated activity until the Contributing Zone Plan for the activity has been filed with the executive director.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **GENERAL INFORMATION FORM** is hereby submitted for TCEQ review. The application was prepared by:

Daryl Stoker
Print Name of Customer/Agent

Signature of Customer/Agent

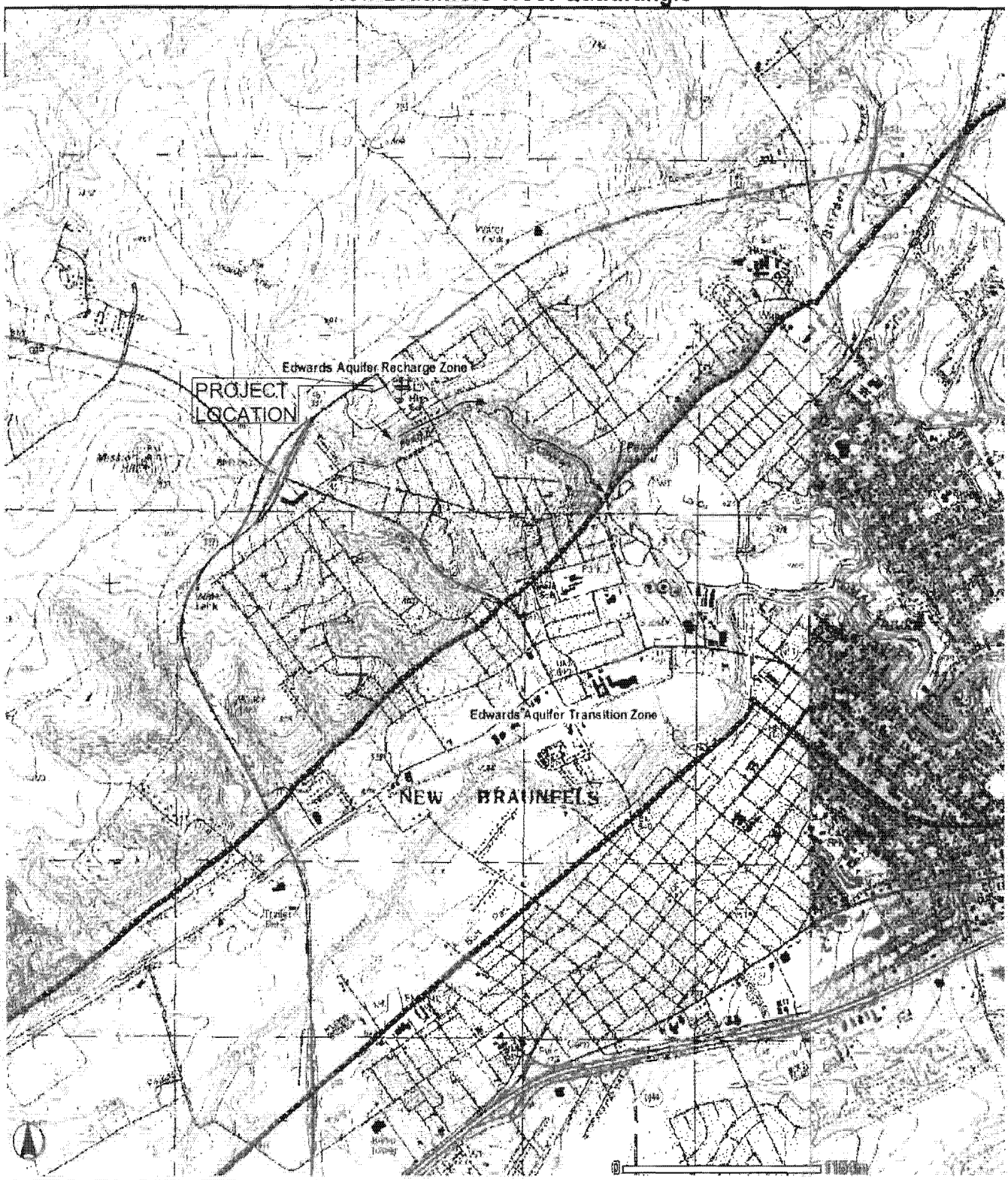
6/6/08
Date

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

ATTACHMENT A
Road Map

New Braunfels West Quadrangle



Scale 1:24,000 = 1" = 2,000'

ATTACHMENT B
USGS/ Edwards Recharge Zone Map

PROJECT DESCRIPTION

Introduction

The project site consists of the stadium football field adjacent to the field house. The current grass football field encompasses approximately 102,372 square feet of natural turf. Previously, regular watering and monthly applications of fertilizer were required to maintain the field. A proposed modification consisting of the demolition and removal of the natural turf (an existing pervious cover area), the demolition of existing track flatwork, the installation of a liner, permeable aggregate base, an underlying runoff collector piping network, and the installation of a proprietary artificial playing field and two D-areas (impervious cover areas) is the subject matter of this report. Other modifications include the resurfacing of the existing track oval, chutes, and event areas. Construction of two new pole vault areas consisting of less than 20 sq ft of new impervious cover is also proposed.

This site is in the City of New Braunfels and in Comal County and is zoned R-2 (Single Family and Two Family Residential). The existing high school site currently is unplatted as raw acreage and was conveyed in Volume 123 Page 210 of the Official Records of Comal County.

The site is NOT within the limits of any 100 year flood plain and does NOT have a Critical Water Quality Zone. There are NO areas irrigated with wastewater.

The project's proposed Limits of Construction (LOC) boundary has been located around the proposed modifications to minimize site disturbances to an area of approximately 179,432 sf. The planned modifications consist of the demolition and removal of approximately 100,177 square feet (sf) of existing pervious sod and organics from the site and approximately 2196 sf of existing impervious track and field flatwork as shown on Site Plan Sheet S1. Excavation of this area prepares the surface for the installation of approximately 81,640 sf of a proprietary synthetic field turf with a vertical flow drainage system, compacted sub base, and a 20 mil impermeable HDPE liner. Additionally, approximately 20,732 sf of rubberized "D" ends are proposed at both ends of the field. Other existing track and field components such as track, long jump, and pole vault areas are slated for resurfacing and sand renewal work. See Plan Sheet S1 for a table containing impervious/pervious cover calculations.

The new artificial turf field will decrease nutrient loads by not requiring monthly applications of fertilizer to maintain the field. The drainage provisions under the field also act as a limited storage facility for field runoff.

The project is to begin as soon as possible (upon project approval) and is to be completed within 12 months (after site plan approval). There is no proposed phasing of the project.

ATTACHMENT C
Project Description

The entire site is located within the jurisdiction of the City of New Braunfels.

Drainage Area

There is NO existing 100 year flood plain.

Runoff generated on the football field and track surfaces is currently routed via drainage swales and ditches and allowed to flow over land to the south east section of the property where it exits the site without detention or treatment. Proposed modifications will collect and direct runoff to this same route via a new drainage system.

Discussion of the Existing and Proposed Drainage Patterns

The existing site currently does not have runoff detention or treatment in place. The new artificial turf field will decrease nutrient loads by not requiring monthly applications of fertilizer to maintain the field. The drainage provisions under the field also act as a limited storage facility for field runoff. All proposed "D" area flatwork improvements consist of a rubberized top coat. No vehicular travel or other pollutant contributing activity is planned for these new surfaces. Consequently, the subject modifications pose no increase to TSS hence; proposed runoff leaving the site will not be detained or treated.

The existing drainage patterns will NOT be altered.

There is NO floodplain modification proposed by this Site Plan.

The existing site is NOT contained within any known 100 year flood plains.

Discussion of Proposed Variances

There are NO variances proposed by this project.

Critical Environmental Features within the Project and Know Features within 150 feet of the Project

The surrounding area has been fully developed. A cursory review by the undersigned of the entire site area did NOT reveal any critical environmental features within the limits of construction. This area is located in the Recharge Zone of the Edward's Aquifer.

Tree Preservation Plan

There are no existing trees to be protected as a part of this project.

ATTACHMENT C
Project Description

Known Underground Storage Tanks

There are NO known underground storage tanks located within the project area and/or the entire school site area.

ATTACHMENT C
Project Description

Geologic Assessment
For Regulated Activities
on The Edwards Aquifer Recharge/transition Zones
and Relating to 30 TAC §213.5(b)(3), Effective June 1, 1999

REGULATED ENTITY NAME: New Braunfels High School Football Field (90087166)

TYPE OF PROJECT: _X_ WPAP __ AST ___ SCS __ UST

LOCATION OF PROJECT: _X_ Recharge Zone __ Transition Zone __ Contributing Zone within the Transition Zone

PROJECT INFORMATION

1. _X_ Geologic or manmade features are described and evaluated using the attached **GEOLOGIC ASSESSMENT TABLE**.

2. Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (*Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A*, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

Soil Units, Infiltration Characteristics & Thickness		
Soil Name	Group*	Thickness (feet)
Rumple-Comfort Association (RUD)	C/D	<2 to 3

* Soil Group Definitions (Abbreviated)

A. Soils having a high infiltration rate when thoroughly wetted.

B. Soils having a moderate infiltration rate when thoroughly wetted.

C. Soils having a slow infiltration rate when thoroughly wetted.

D. Soils having a very slow infiltration rate when thoroughly wetted.

3. _X_ A **STRATIGRAPHIC COLUMN** is attached at the end of this form that shows formations, members, and thicknesses. The outcropping unit should be at the top of the stratigraphic column.

4. _X_ A **NARRATIVE DESCRIPTION OF SITE SPECIFIC GEOLOGY** is attached at the end of this form. The description must include a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure, and karst characteristics of the site.

5. _X_ Appropriate **SITE GEOLOGIC MAP(S)** are attached:

The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1" : 400'

Applicant's Site Plan Scale 1" = 30'
Site Geologic Map Scale 1" = 30'
Site Soils Map Scale (if more than 1 soil type) 1" = 30'

6. Method of collecting positional data:
   X Global Positioning System (GPS) technology.
   ___ Other method(s).

7. X The project site is shown and labeled on the Site Geologic Map.

8. X Surface geologic units are shown and labeled on the Site Geologic Map.

9. X Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

   ___ Geologic or manmade features were not discovered on the project site during the field investigation.

10. ___ The Recharge Zone boundary is shown and labeled, if appropriate.

11. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.):

   ___ There are wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
   ___ The wells are not in use and have been properly abandoned.
   ___ The wells are not in use and will be properly abandoned.
   ___ The wells are in use and comply with 16 TAC Chapter 76.

   X There are no wells or test holes of any kind known to exist on the project site.

ADMINISTRATIVE INFORMATION

12. X One (1) original and three (3) copies of the completed assessment has been provided.

Date(s) Geologic Assessment was performed: May 22, 2008
Date(s)

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Dustin G. Smyth
Print Name of Geologist

(210) 641-2112
Telephone

(210) 641-2124
Fax

STATE OF TEXAS
DUSTIN G. SMYTH
GEOLOGY
10241
LICENSED
PROFESSIONAL GEOSCIENTIST

Signature of Geologist

6-2-08

June 2, 2008
Date

Representing: Terracon Consulting Engineers and Scientists
(Name of Company)

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

Terracon

GEOLOGIC ASSESSMENT
NEW BRAUNFELS HIGH SCHOOL FOOTBALL FIELD
2551 LOOP 337 NORTH
NEW BRAUNFELS, TEXAS
JUNE 2, 2008

LOCATION

The subject site is an existing high school football field on the New Braunfels High School Campus, located at 2551 Loop 337 North in New Braunfels, Texas. This site lies within the designated Edwards Aquifer Recharge Zone. Therefore, future intended development of the site must conform to criteria in accordance with the Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program Rules in accordance with Title 30 of the Texas Administrative Code, Section 213 (30 TAC§ 213).

EXPLANATION OF ASSESSMENT

This assessment follows general guidelines contained in the TCEQ "*Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/ Transition Zones*" (TCEQ Guidance 0585). The site is located on an area of the recharge zone that may contain karst features formed by selective solutioning of limestone minerals by water. Karst features may be expressed as surface features but more commonly tend to persist with depth. The site visit that was performed on May 22, 2008 by Mr. Kevin Bryant, P.G., consisted of a walk through survey of the subject property and non-intrusive visual observations of readily accessible, easily visible surface conditions. Intrusive subsurface testing such as excavation, cave mapping, infiltrometer testing, geophysical studies, or tracer studies are not required for the geologic assessment of any feature in accordance with this practice.

A geologic or manmade feature, for the purpose of this practice is a feature with a surficial expression on the recharge zone of the Edwards Aquifer suggesting a potential for hydraulic interconnectedness between the surface and the Edwards Aquifer.

GENERAL SITE DESCRIPTION

The site is located on a relatively flat, developed football on the New Braunfels High School Campus, located at 2551 Loop 337 North in New Braunfels, Comal County, Texas. The property is an oval parcel of land surrounded by seating, concession stands and fencing. Site specific topography was provided on a site plan from Gil Engineering. The site plan indicates that the site elevations range from Elevation (EL) 824 feet at the highest point along the center of the football field to a low of EL 823 near the perimeter of the field.

A review of online aerial photographs at google.com, mapquest.com, and teraserver.microsoft.com indicate that the site is developed as a football field and has been for many years. Vegetation at the time of our visit consisted of sparse turf grasses that have been mowed to a short length (Photo 1).

SOIL DESCRIPTION

Based on a review of the United States Department of Agriculture (USDA) Soil Survey website (http://websoilsurvey.nrcs.usda.gov), and Urban Hydrology for Small Watersheds (Technical Release No. 55, Engineering Division, Soil Conservation Service, USDA, January 1975) the primary soil type located on the site is the Rumple Comfort Association (RUD). This soil association generally occurs on 1 to 8 percent slopes with average depths of 20 to 40 inches to lithic bedrock. These soils are classified as having a very low to moderately low water transmission rate.

The native soil was not exposed at the site due to site improvements such as turf grass on the football field and bleachers and other improvements around the field. A small portion of the sprinkler system was excavated for repairs at the time of our field visit. The soil in the excavation appears to be consistent with what is mapped at the site.

NARRATIVE DESCRIPTION OF SITE GEOLOGY

According to the Geologic Map of the Edwards Aquifer Recharge Zone, South Central, Texas (United States Geological Survey, 2005) and Geologic Map of the New Braunfels 30" x 60" Quadrangle (University of Texas at Austin, Bureau of Economic Geology, Miscellaneous Map 39, 2000), the site is located on the Person Formation of the Edwards group.

The Person Formation of the Lower Cretaceous is approximately 170 to 180-feet thick. The lithology ranges from mudstone to grainstone to crystalline limestone. This site is mapped within the cyclic and marine member. This member is approximately 10 to 100 feet thick and consists of chert-bearing mudstone, packstone, and miliolid grainstone. The rock tends to weather to massive, light-tan outcrops with scattered *Toucasia* present. According to the above-mentioned geologic map, this member is one of the most productive hydrologically because of the large number of subsurface caverns associated with incipient karstification. This member is considered very permeable with laterally extensive, fabric and nonfabric-selective porosity. The Person member at this site was not observed due to landscaping and turf grass on the football field.

The dominant structural trend in the area is approximately N60E. Based on existing geologic mapping, it does not appear that any faults cross the site. Caves have not been mapped in the general area.

SITE SPECIFIC GEOLOGIC FEATURE DESCRIPTIONS

S-1: Man-made Feature: A joint utility trench is located on the football field. Based on information obtained from Mr. Dan Brown of New Braunfels ISD, the trench contains water, sewer, and electrical lines. The trench is reported to be 4 feet deep, and 4 to 5 feet in width. A subsurface sprinkler system is also installed on the site. However, the sprinkler system is only located approximately 6 inches below the surface in the topsoil and does not penetrate into the bedrock. At the time of our field visit, a portion of the sprinkler system had been excavated to make repairs (Figure 2). Because the utility trench is a manmade feature and was backfilled in such a manner that there are no depressions or holes on the field associated with the trench, the relative surface infiltration rate is thought to be low.

COMMENTS AND OBSERVATIONS

Modification of the site topography or surface water flow during construction is anticipated. It is common for previously unsuspected, covered, or concealed solution enlarged fractures, caves, and cavities to be discovered during construction. This assessment does not address the possible presence of subsurface conditions that may be exposed during construction. Should solution features or conditions be exposed during construction that indicate a potential for hydraulic interconnectedness between the surface and the Edwards Aquifer, construction should be halted and the TCEQ Edwards Aquifer Protection Program should be contacted immediately in accordance with 30 TAC §213.5(f)(2).

Terracon

STRATIGRAPHIC COLUMN
NEW BRAUNFELS HIGH SCHOOL FOOTBALL FIELD
2551 LOOP 337 NORTH
NEW BRAUNFELS, TEXAS

System	Group	Formation	Member Or Informal Unit	Thickness (Feet)	Lithology
Cretaceous	Edwards				
		Person (Kep)	Cyclic and marine member	80-90	Mudstone to packstone; miliolid grainstone; chert
			Leached and collapsed member	70-90	Crystalline limestone; mudstone to grainstone; chert; collapsed breccia
			Regional dense member	20-24	Dense, argillaceous mudstone
		Kainer (Kek)	Grainstone member	50-60	Miliolid grainstone; crystalline limestone chert
			Kirschberg evaporite member	50-60	Highly altered crystalline limestone; chalky
			Dolomitic member	110-130	Mudstone to grainstone; also crystalline limestone; chert
			Basal nodular member	50-60	Shaly, nodular limestone; mudstone and miliolid grainstone

Based on information provided on the Geologic Map of the Edwards Aquifer Recharge Zone, South Central, Texas (USGS, 2005).

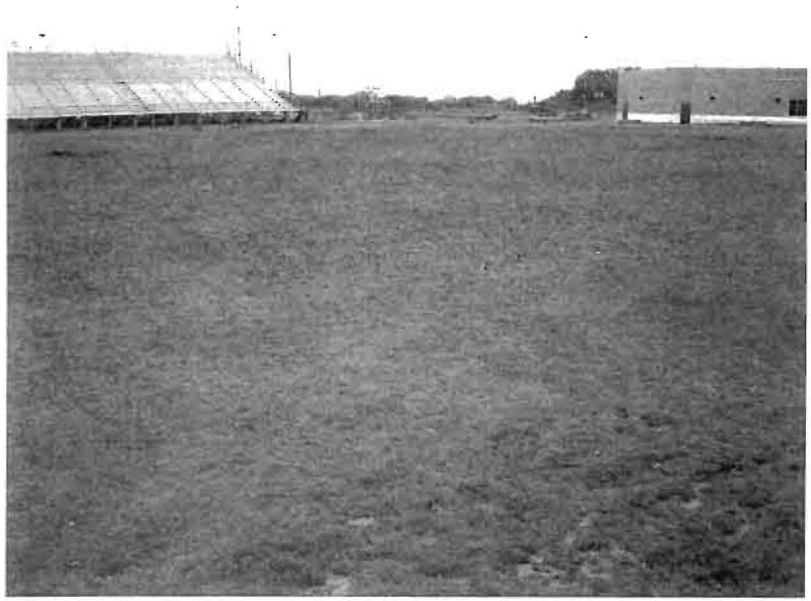


Photo #1 Typical view of the site.

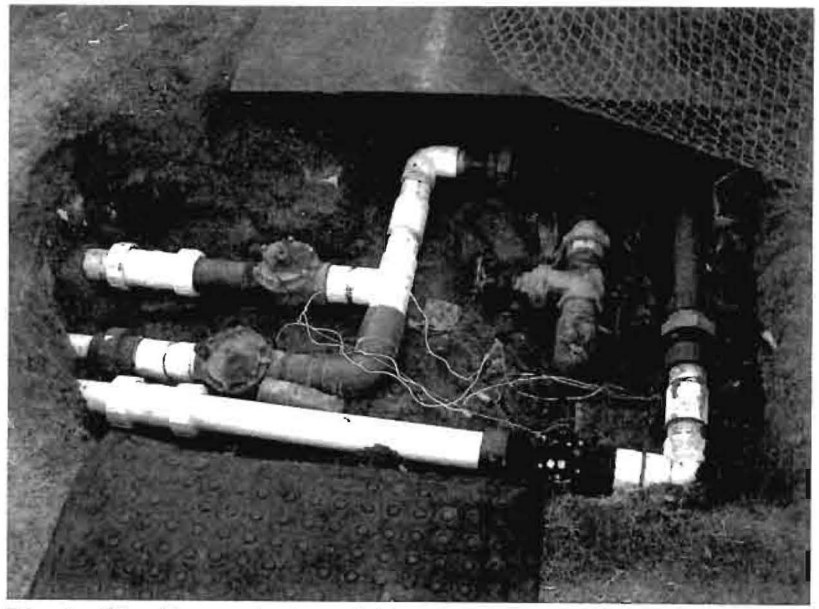


Photo #2 Excavated sprinkler system as seen during our site visit.

Terracon

Terracon Project No. 90087166
Date Photos Taken: May 22, 2008

GEOLOGIC MAP
NEW BRAUNFELS HIGH SCHOOL
FOOTBALL FIELD

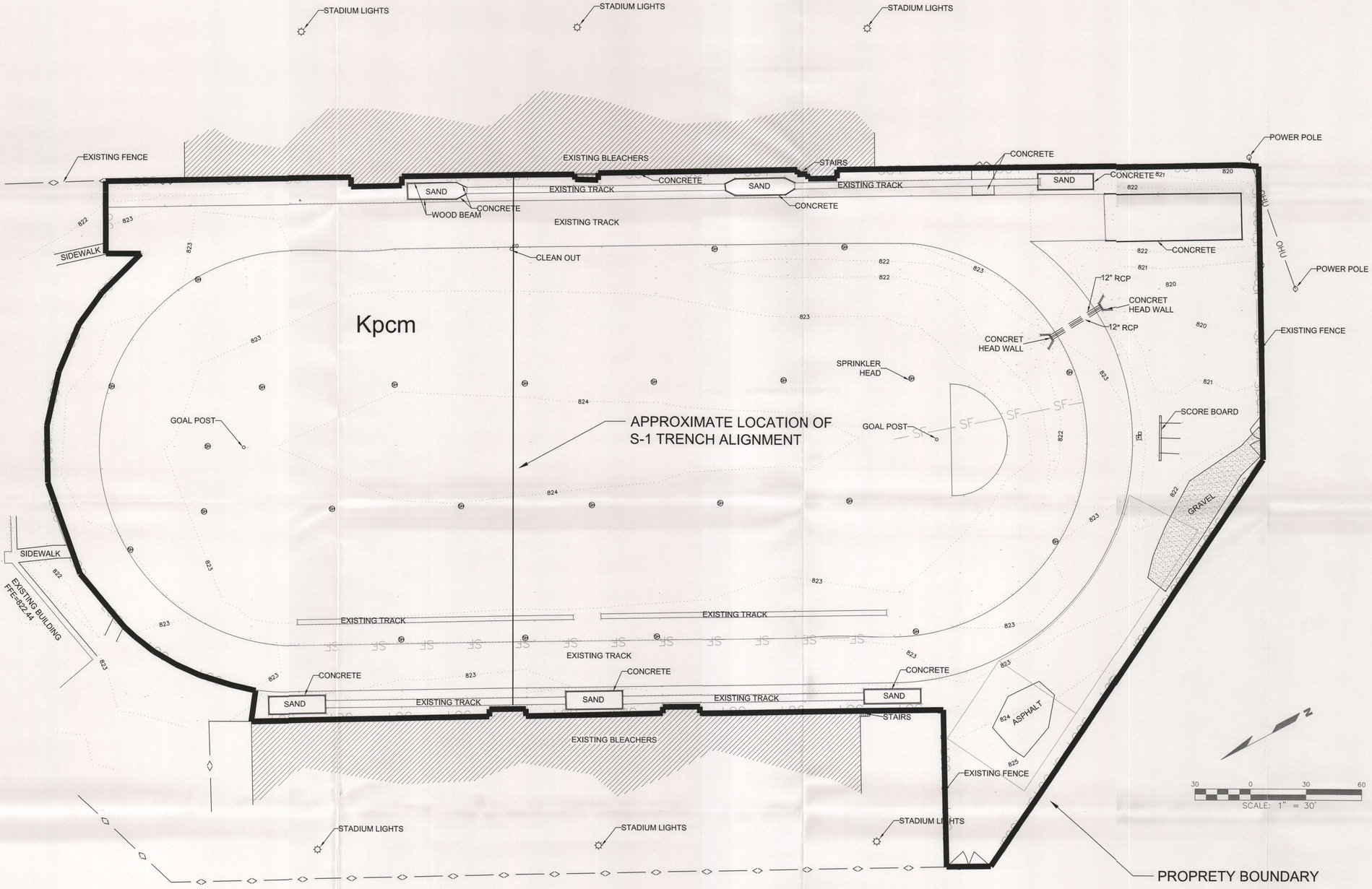
2551 LOOP 337 NORTH
NEW BRAUNFELS, TEXAS

Project Mngr:	DGS	Terracon	Project No. 90087166
Designed By:	DGS		Scale: 1" = 30'
Checked By:	DGS		Date: 05-29-08
Approved By:	DGS		Drawn By: DGS(90)
File Name:			Figure No. 2

REVISION RECORD

Date:	Revised By:	Description:

Notes:



LEGEND

Kpcm - LOWER CRETACEOUS EDWARDS GROUP; PERSON FORMATION; CYCLIC AND MARINE MEMBER.

STATE OF TEXAS
DUSTIN G. SMYTH
GEOLOGY
10241
LICENSED
PROFESSIONAL GEOSCIENTIST

BASE MAP INFORMATION FOR GENERAL SITE PLAN PROVIDED BY GIL ENGINEERING.

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: New Braunfels High School Football Field (90087166)

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DIP	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
S-1	29° 43' 03.5"	98° 09' 05.6"	MB	30	Kpcm	5.0	150.0	4.0	N65W	0			x	8	38	X		X		Drainage

* DATUM: NAD 83

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12 TOPOGRAPHY
Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

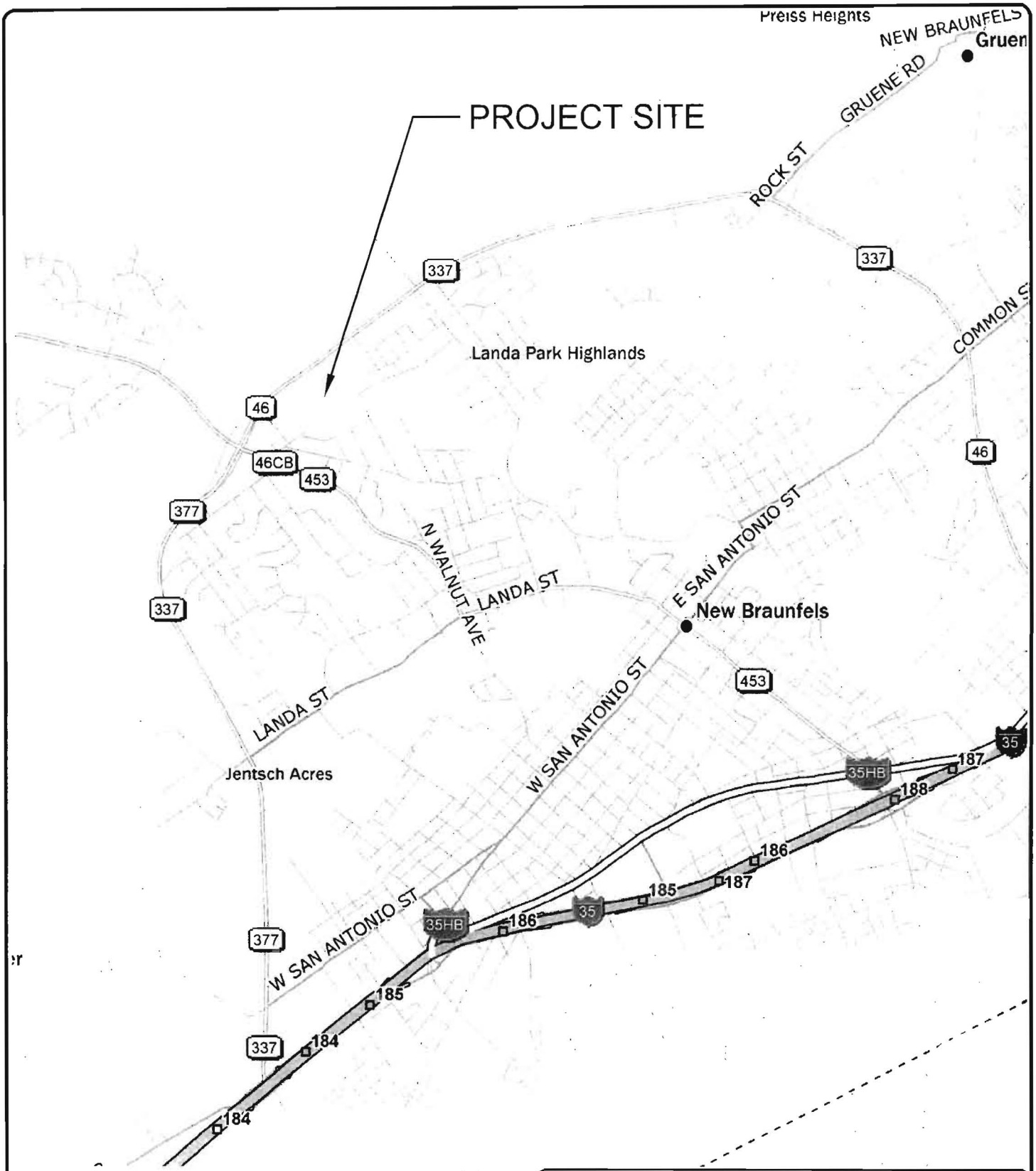
Dustin G. Smyth

STATE OF TEXAS
DUSTIN G. SMYTH
GEOLOGY
10241
LICENSED
PROFESSIONAL GEOSCIENTIST
6-2-08

Date: June 2, 2008

Sheet 1 of 1

TCEQ-0585-Table (Rev. 10-01-04)



SOURCE: DELORME© STREET ATLAS USA 2008.

N

DIAGRAM IS FOR GENERAL LOCATION ONLY,
AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

SITE VICINITY MAP

NEW BRAUNFELS HIGH SCHOOL FOOTBALL FIELD
2551 LOOP 337 NORTH
NEW BRAUNFELS, TEXAS

Project Mngr.	DGS	Terracon	Project No. 90087166
Checked By:	DGS		Scale: NOT TO SCALE
Approved By:	DGS		Drawn By: DGS(90)
File Name:			Figure No. 1

Modification of a Previously Approved Plan
for Regulated Activities on the
Edwards Aquifer Recharge Zone and Transition Zone
and Relating to 30 TAC 213.4(j), Effective June 1, 1999

1. Current Regulated Entity Name: New Braunfels High School Field House
Original Regulated Entity Name: New Braunfels High School Obstacle Course
Assigned Regulated Entity Numbers (RN): 1) 102767803, 2) _____, 3) _____

✓ The applicant has not changed and the Customer Number (CN) is: CN 600397814
___ The applicant has changed. A new Core Data Form has been provided.

2. ✓ **Attachment A: Original Approval Letter and Approved Modification Letters:** A copy of the original approval letter and copies any letters approving modification are found at the end of this form.

3. A modification of a previously approved plan in requested for (check all that apply):

___ physical or operational modification of any water pollution abatement structure(s) including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
___ change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
✓ development of land previously identified as undeveloped in the original water pollution abatement plan;
___ physical modification of the approved organized sewage collection system;
___ physical modification of the approved underground storage tank system;
___ physical modification of the approved aboveground storage tank system.

4. Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

WPAP Modification Summary	Approved Project	Proposed Modification
Acres	1.44	4.12
Type of Development	Educational Facility	Educational Facility
Number of Residential Lots	0	0
Impervious Cover (acres)	.08	3.26
Impervious Cover (%)	55.393%	79.159%
Permanent BMPs		
Other		

SCS Modification Summary	Approved Project	Proposed Modification
Linear Feet		
Pipe Diameter		
Other		

AST Modification Summary	Approved Project	Proposed Modification
Number of ASTs		
Volume of ASTs		
Other		

UST Modification Summary	Approved Project	Proposed Modification
Number of USTs		
Volume of USTs		
Other		

5. ✓ **Attachment B: Narrative of Proposed Modification**. A narrative description of the nature of the proposed modification is provided at the end of this form. It discusses what was approved, including previous modifications, and how this proposed modification will change the approved plan.

6. ✓ **Attachment C: Current site plan of the approved project.** A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is provided at the end of this form. A site plan detailing the changes proposed in the submitted modification is required elsewhere.

___ The approved construction has not commenced. The original approval letter, and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.

___ The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.

___ The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.

✓ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.

___ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.

7. ✓ The acreage of the approved plan has increased. A Geologic Assessment has been provided for the new acreage.

___ Acreage has not been added to **or** removed from the approved plan.

8. ✓ One (1) original and 3 copies of the complete application has been provided.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This request for a **MODIFICATION TO A PREVIOUSLY APPROVED PLAN** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

DARYL STOKER
Print Name of Customer/Agent

Signature of Customer/Agent

6/6/08
Date

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

February 16, 2001

Dr. Ron Reaves, Superintendent
New Braunfels Independent School District
430 West Mill Street
New Braunfels, TX 78130

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: New Braunfels High School Additions & Renovations; 2551 Loop 337; New Braunfels, Texas
TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program File No. 1591.00

Dear Dr. Reaves:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the WPAP application for the referenced project submitted to the San Antonio Regional Office by Jerry Powell, P.E. of CDS/Muery Services on behalf of New Braunfels Independent School district on October 24, 2000. Final review of the WPAP submittal was completed after additional material was received on January 2, 2001, January 23, 2001, February 13, 2001, and February 14, 2001. As presented to the TNRCC, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer protection plan. A motion for reconsideration must be filed no later than 20 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The subject site is 56 acres and has approximately 25.2 acres (45%) of existing impervious cover. Eight of the 56 acres are undeveloped and downgradient of the proposed on-site construction area. New construction will include parking lots (2.12 acres), classrooms (0.23 acres), concessions and restroom building (0.05 acres) near the existing football stadium and softball field as described in the application. The Gym/Cafeteria and football stadium will undergo renovations. The proposed additions and renovations will add 2.4 acres (4.3%) of impervious cover. The total impervious cover will be 27.59 acres (49%). Project wastewater will be disposed of by conveyance to the existing Kuehler Street Sewage Treatment Plant owned by New Braunfels Utilities.

PERMANENT POLLUTION ABATEMENT MEASURES

A sedimentation/filtration basin and a vegetated filter will be constructed to treat stormwater runoff. Because of the existing development on the site, the proposed measures will treat a pollutant load equivalent to the proposed 4.3% increase in impervious cover. The measures are designed to meet the required 80 percent removal of the increased load in total suspended solids caused by the proposed construction. In lieu of the originally proposed vegetated filter strip, the sedimentation/filtration basin described below will be oversized to capture stormwater runoff from existing impervious cover. The individual treatment measures will consist of the following.

The partial sedimentation/filtration basin is designed in accordance with the 1999 edition of the TNRCC's "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices," and is sized to capture the first 0.23 inches of stormwater run-off from ten acres, providing a total capture volume of 10,019 cubic feet. The filtration system will consist of:

1. 1,350 square feet of sand, which is 18 inches thick,
2. an underdrain piping wrapped with geotextile membrane, and
3. an impervious liner.

GEOLOGY

An exception to submitting a geologic assessment was requested because one had been submitted with a previous application for construction of regulated activities at the subject site. The San Antonio Regional Office site inspection of January 22, 2001, no additional geologic or manmade features. However, the vegetated filter strip for the proposed parking area adjacent to Loop 337 would have used the TXDOT right of way. Additionally, four temporary buildings without wastewater service, and two temporary buildings with wastewater service were observed on the site.

SPECIAL CONDITIONS

1. The request for exception not to submit the required geologic assessment is hereby granted.

2. Based on the January 22, 2001 on-site inspection of the project site, Commission records indicate that six temporary buildings were placed on the site on or before January 22, 2001. These activities were conducted without the prior approval of the water pollution abatement plan for the project, as required by Commission rules (30 TAC Chapter 213). Therefore, the applicant is hereby advised that the after-the-fact approval of the installation of the temporary buildings, as provided by this letter, shall not absolve the applicant of any prior violations of Commission rules related to this project, and shall not necessarily preclude the Commission from pursuing appropriate enforcement actions and administrative penalties associated with such violations, as provided in 30 TAC §213.10 of Commission rules.

STANDARD CONDITIONS

1. Pursuant to §26.136 of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

Prior to Commencement of Construction:

2. Within 60 days of receiving written approval of an Edwards Aquifer protection plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TNRCC-0625) that you may use to deed record the approved WPAP is enclosed.

3. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.

4. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

5. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to

the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and file number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.

6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. The TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

7. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

<u>During Construction:</u>

8. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

9. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

10. No wells exist on the site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

11. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

12. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

13. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

14. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TNRCC-10263) is enclosed.

16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

17. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4024.

Sincerely,

Bobby D. Caldwell

for Jeffrey A. Saitas, P.E.
Executive Director
Texas Natural Resource Conservation Commission

JAS/jkm

Enclosure: Deed Recordation Affidavit, Form TNRCC-0625
Change in Responsibility for Maintenance on Permanent BMPs-Form TNRCC-10263

cc: Mr. Jerry Powell, P.E., CDS/Muery Services
Mr. Harry Bennett, City of New Braunfels
Mr. John Bohuslav, TXDOT San Antonio District
Mr. Tom Hornseth, Comal County
Mr. Greg Ellis, Edwards Aquifer Authority
TNRCC Field Operations, Austin

STATE OF TEXAS
COUNTY OF COMAL

This is to certify that this document was FILED and RECORDED in the Official Public Records of Comal County, Texas on the date and time stamped thereon.

Joy Streater
COUNTY CLERK

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COUNTY CLERK
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 8, 2002

Dr. Ron Reaves, Superintendent
New Braunfels Independent School District
430 West Mill Street
New Braunfels, TX 78130

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: New Braunfels High School Obstacle Course; Located at 2551 Loop 337 North; New Braunfels, Texas
TYPE OF PLAN: Request for Modification of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program File No. 1591.02

Dear Dr. Reaves:

The Texas Commission on Environmental Quality (TCEQ, formerly TNRCC) has completed its review of the request for modification of the approved WPAP for the referenced project submitted to the San Antonio Regional Office by Mr. Wade Hawkins on behalf of the New Braunfels Independent School District on October 10, 2002, 2002. Final review of the WPAP submittal was completed after additional material was received on October 18, 2002.

The proposed modifications will be considered minor in scope and nature, are in general compliance with the requirements of 30 TAC Chapter 213. Therefore, the construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer protection plan. A motion for reconsideration must be filed no later than 20 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

This facility was previously approved by letter dated February 16, 2001. A subsequent modification was approved by letter dated May 29, 2002. As presented, the proposed modification to the water pollution abatement plan will consist of constructing a 15 foot wide pathway for an obstacle course along the top and near the base of the sedimentation/filtration basin berm and detention basin berm.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent pollution of stormwater runoff originating on-site or up-gradient of the site and potentially flowing across and off the site after construction, the slope will be stabilized with vegetation.

SPECIAL CONDITIONS

I. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letters of February 16, 2001, and May 29,2002, including deed recordation of this letter, and the placement of temporary and permanent erosion and sedimentation controls.

II. There shall be no loss of water quality volume to the sedimentation / filtration basin.

III The City of New Braunfels should be consulted about any requirements related to the modification of the detention basin.

If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4024.

Sincerely,

Bobby D. Caldwell

for Margaret Hoffman
Executive Director
Texas Commission on Environmental Quality

MH/JKM/eg

cc: Mr. Michael Short, City of New Braunfels
Mr. Tom Hornseth, Comal County
Mr. Greg Ellis, Edwards Aquifer Authority
TCEQ Field Operations, Austin

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 17, 2007

Mr. Daryl Stoker
New Braunfels Independent School District
566 Butcher Street
New Braunfels, Texas 78130

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: NBISD High School Field House; Located on Loop 337, north of Hwy 46, New Braunfels, Texas
TYPE OF PLAN: Request for Modification of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program ID No. 1591.05; Investigation No. 564648; Regulated Entity No. RN102767803

Dear Mr. Stoker:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the request for modification of the approved WPAP for the above-referenced project submitted to the San Antonio Regional Office by Gil Engineering Associates, Inc. on behalf of New Braunfels Independent School District on June 14, 2007. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The New Braunfels High School was originally constructed in the 1960's. In 1985, the installation of underground storage tanks was approved at the school site on June 24, 1985 (NBISD Transportation Facility, EAPP File #785.00).

In 2001, the renovations and additions fell under the regulations of the TCEQ (TNRCC at the time) and 30 TAC Chapter 213. The 56 acre site had approximately 25.2 acres of existing impervious cover. The WPAP approved on February 16, 2001, added 2.4 acres of additional impervious cover and increased the total impervious cover to 27.6 acres (49%). A partial sedimentation/filtration system designed using the 1999 edition of the TNRCC's "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices" was constructed. The basin was designed with a water capture volume of 10,179

cubic feet (10,019 cubic feet required) and a sand filter area of 1,350 square feet (1,252 square feet required).

A modification was approved on November 8, 2002 for the impervious cover associated with an obstacle course area. There was no loss of water quality volume associated with this modification.

PROJECT DESCRIPTION

The proposed commercial (school) project has a total site area of approximately 56 acres. The proposed modification will disturb approximately 1.44 acres and will include the remodeling of the field house buildings and parking areas. The net increase of impervious cover will be 47 square feet. Project wastewater will be disposed of by conveyance to the existing Kuehler Street Water Recycling Center owned by New Braunfels Utilities.

PERMANENT POLLUTION ABATEMENT MEASURES

The 47 square feet of additional impervious cover generates 0.88 pounds of total suspended solids and requires a water quality volume of 7 cubic feet. The water quality basin was designed with a water quality volume of 10,179 cubic feet (10,026 cubic feet now required) and a sand filter area of 1,350 square feet (1,253 square feet now required). The existing sedimentation/filtration basin has sufficient capacity to account for these amounts stated above. The approved measures meet the required 80 percent removal of the increased load in total suspended solids caused by the project.

GEOLOGY

According to the geologic assessment included with the application, no geologic or manmade features exist on the modification site. The San Antonio Regional Office did not conduct an on site inspection.

SPECIAL CONDITIONS

I. The holder of the approved Edwards Aquifer WPAP must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the application.

II. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letter dated February 16, 2001.

III. Intentional discharges of sediment laden storm water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.

IV. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

Prior to Commencement of Construction:

2. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.

3. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.

4. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

5. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.

6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

7. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

8. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

9. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

10. No wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

11. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

12. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

13. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

<u>After Completion of Construction:</u>

14. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses

the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

17. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact Charly Fritz of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4065.

Sincerely,

Glenn Shankle
Executive Director
Texas Commission on Environmental Quality

GS/CEF/eg

Enclosures: Deed Recordation Affidavit, Form TCEQ-0625
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Victor Gil, P.E., Gil Engineering Associates, Inc.
Mr. Robert Potts, Edwards Aquifer Authority
Mr. Bruce Boyer, City of New Braunfels
Mr. Tom Hornseth, Comal County
TCEQ Central Records, Building F, MC 212

NARRATIVE OF PROPOSED MODIFICATION

Modifications to the Water Pollution Abatement Plan (WPAP) and approved by the TNRCC/TCEQ:

- February 16, 2001 - added 2.4 acres of additional impervious cover. A partial sedimentation/filtration system was constructed.
- November 8, 2002 - added new impervious cover associated with an obstacle course area. There was no loss of water quality volume associated with this modification.
- August 17, 2007 – added 47 sf of additional impervious cover associated with the Field House renovation. The increase of impervious cover generated approximately 0.88 pounds of total suspended solids requiring a water quality volume of 7 cubic feet. The existing sedimentation/filtration basin had sufficient capacity to account for these amounts.

The planned modifications consist of the demolition and removal of approximately 100,177 square feet (sf) of existing pervious sod and organics from the site and approximately 2196 sf of existing impervious track and field flatwork as shown on Site Plan Sheet S1. Excavation of this area prepares the surface for the installation of approximately 81,640 sf of a proprietary synthetic field turf with a vertical flow drainage system, compacted sub base, and a 20 mil impermeable HDPE liner. Additionally, approximately 20,732 sf of rubberized "D" ends are proposed at both ends of the field. Other existing track and field components such as track, long jump, and pole vault areas are slated for resurfacing and sand renewal work.

The existing site area does not have runoff detention or treatment in place. The new artificial turf field will decrease nutrient loads by not requiring monthly applications of fertilizer and insecticide to maintain the field. The drainage provisions under the field also act as a limited storage facility for field runoff. All proposed "D" area flatwork improvements consist of a rubberized top coat. No vehicular travel or other pollutant contributing activity is planned for these new surfaces. Consequently, these modifications pose no increase to TSS loading and no loss to water quality volume is associated with the subject modifications presented here. Consequently, proposed runoff leaving the site will not be detained or treated.

The existing drainage patterns will NOT be altered.

ATTACHMENT B
Narrative of Proposed Modification

Water Pollution Abatement Plan Application
for Regulated Activities
on the Edwards Aquifer Recharge Zone
and Relating to 30 TAC §213.5(b), Effective June 1, 1999

REGULATED ENTITY NAME: New Braunfels High School

REGULATED ENTITY INFORMATION

1. The type of project is:
   - ___ Residential: # of Lots: ___
   - ___ Residential: # of Living Unit Equivalents: ___
   - ___ Commercial
   - ___ Industrial
   - ✓ Other: Civic

2. Total site acreage (size of property): Limits of Construction = 4.12

3. Projected population: 0

4. The amount and type of impervious cover expected after construction are shown below:

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops		÷ 43,560 =	
Parking		÷ 43,560 =	
Other paved surfaces	142,037	÷ 43,560 =	3.26
Total Impervious Cover	142,037	÷ 43,560 =	3.26
Total Impervious Cover ÷ Total Acreage x 100 =			79 %

5. ✓ **ATTACHMENT A - Factors Affecting Water Quality.** A description of any factors that could affect surface water and groundwater quality is provided at the end of this form.

6. ✓ Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

FOR ROAD PROJECTS ONLY
Complete questions 7-12 if this application is exclusively for a road project.

7. Type of project:
   - ___ TXDOT road project.
   - ___ County road or roads built to county specifications.
   - ___ City thoroughfare or roads to be dedicated to a municipality.
   - ___ Street or road providing access to private driveways.
8. Type of pavement or road surface to be used:

__ Concrete
__ Asphaltic concrete pavement
__ Other: _____

9. Length of Right of Way (R.O.W.): _____ feet.
Width of R.O.W.: _____ feet.
L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

10. Length of pavement area: _____ feet.
Width of pavement area: _____ feet.
L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = ____% impervious cover.

11. __ A rest stop will be included in this project.
__ A rest stop will **not** be included in this project.

12. _____Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

STORMWATER TO BE GENERATED BY THE PROPOSED PROJECT

13. **ATTACHMENT B - Volume and Character of Stormwater.** A description of the volume and character (quality) of the stormwater runoff which is expected to occur from the proposed project is provided at the end of this form. The estimates of stormwater runoff quality and quantity should be based on area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

WASTEWATER TO BE GENERATED BY THE PROPOSED PROJECT

14. The character and volume of wastewater is shown below:
_____n/a__ % Domestic _____ gallons/day
_____n/a__ % Industrial _____ gallons/day
_____n/a__ % Commingled _____ gallons/day

TOTAL_____ gallons/day

15. Wastewater will be disposed of by:
__ **On-Site** Sewage Facility (OSSF/Septic Tank):
ATTACHMENT C - Suitability Letter from Authorized Agent. An on-site sewage facility will be used to treat and dispose of the wastewater. The appropriate licensing authority's (authorized agent) written approval is provided at the end of this form. It states that the land is suitable for the use of an on-site sewage facility or identifies areas that are not suitable.
_____Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

__n/a__ Sewage Collection System (Sewer Lines):

__ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.

__ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

- __ The SCS was previously submitted on _____.
- __ The SCS was submitted with this application.
- __ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to executive director approval.

The sewage collection system will convey the wastewater to the (name) Treatment Plant. The treatment facility is :

- __ existing.
- __ proposed.

16. __n/a__ All private service laterals will be inspected as required in 30 TAC §213.5.

SITE PLAN REQUIREMENTS

Items 17 through 27 must be included on the Site Plan.

17. The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = __30__'.

18. 100-year floodplain boundaries

__ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.

__✓__ No part of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s):
FEMA Map Item ID: 4854930005D (05/15/1991)

19. __ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.

__✓__ The layout of the development is shown with existing contours. Finished topographic contours will not differ from the existing topographic configuration and are not shown.

20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

__ There are __(#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

- __ The wells are not in use and have been properly abandoned.
- __ The wells are not in use and will be properly abandoned.
- __ The wells are in use and comply with 30 TAC §238.

__✓__ There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:

__ All **sensitive and possibly sensitive** geologic or manmade features identified in the

Geologic Assessment are shown and labeled.

✓ No **sensitive and possibly sensitive** geologic or manmade features were identified in the Geologic Assessment.

___ **ATTACHMENT D - Exception to the Required Geologic Assessment.** An exception to the Geologic Assessment requirement is requested and explained in ATTACHMENT D provided at the end of this form. Geologic or manmade features were found and are shown and labeled.

___ **ATTACHMENT D - Exception to the Required Geologic Assessment.** An exception to the Geologic Assessment requirement is requested and explained in ATTACHMENT D provided at the end of this form. No geologic or manmade features were found.

22. ✓ The drainage patterns and approximate slopes anticipated after major grading activities.

23. ✓ Areas of soil disturbance and areas which will not be disturbed.

24. ✓ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

25. ✓ Locations where soil stabilization practices are expected to occur.

26. ✓ Surface waters (including wetlands).

27. ✓ Locations where stormwater discharges to surface water or sensitive features.
✓ There will be no discharges to surface water or sensitive features.

ADMINISTRATIVE INFORMATION

28. ✓ One (1) original and three (3) copies of the completed application have been provided.

29. ✓ Any modification of this WPAP will require TCEQ executive director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **WATER POLLUTION ABATEMENT PLAN APPLICATION FORM** is hereby submitted for TCEQ review and executive director approval. The form was prepared by:

Daryl Stoker
Print Name of Customer/Agent

Signature of Customer/Agent

6/6/08
Date

FACTORS AFFECTING WATER QUALITY

The planned modifications consist of the demolition and removal of approximately 100,177 square feet (sf) of existing pervious sod and organics from the site and approximately 2196 sf of existing impervious track and field flatwork as shown on Site Plan Sheet S1. Excavation of this area prepares the surface for the installation of approximately 81,640 sf of a proprietary synthetic field turf with a vertical flow drainage system, compacted sub base, and a 20 mil impermeable HDPE liner. Additionally, approximately 20,732 sf of rubberized "D" ends are proposed at both ends of the field. Other existing track and field components such as track, long jump, and pole vault areas are slated for resurfacing and sand renewal work. See Plan Sheet S1 for a table containing impervious/pervious cover calculations.

The existing site currently does not have runoff detention or treatment in place. The new artificial turf field will decrease nutrient/TSS loads by not requiring monthly applications of fertilizer/pesticides to maintain the field. The drainage provisions under the field also act as a limited storage facility for field runoff. All proposed "D" area flatwork improvements consist of a rubberized top coat. No vehicular travel or other pollutant contributing activity is planned for these new surfaces. Consequently, the subject modifications pose no increase to TSS hence; proposed runoff leaving the site will not be detained or treated.

There are no factors that would affect surface water or groundwater quality.

ATTACHMENT A
Factors Affecting Water Quality

VOLUME AND CHARACTER OF STORMWATER

The existing ground condition is a high school site. The planned modifications consist of the demolition and removal of approximately 100,177 square feet (sf) of existing pervious sod and organics from the site and approximately 2196 sf of existing impervious track and field flatwork as shown on Site Plan Sheet S1. Excavation of this area prepares the surface for the installation of approximately 81,640 sf of a proprietary synthetic field turf with a vertical flow drainage system, compacted sub base, and a 20 mil impermeable HDPE liner. Additionally, approximately 20,732 sf of rubberized "D" ends are proposed at both ends of the field. Other existing track and field components such as track, long jump, and pole vault areas are slated for resurfacing and sand renewal work. See Plan Sheet S1 for a table containing impervious/pervious cover calculations.

Approximately 80% of the proposed impervious cover will decrease nutrient/TSS loads by not requiring monthly applications of fertilizer/pesticides to maintain the pervious, natural turf field. The remaining 20% of proposed "D" area flatwork improvements consist of a rubberized top coat that will also replace pervious, natural turf field. No vehicular travel or other pollutant contributing activity is planned for these new surfaces. Consequently, the subject modifications pose no increase to TSS hence; proposed runoff leaving the site will not be detained or treated.

The existing flows of the storm water are:
2 year 9.99 cfs
10 year 18.29 cfs
25 year 24.04 cfs
100 year 36.83 cfs

The proposed flows of the storm water are:
2 year 16.44 cfs
10 year 28.90 cfs
25 year 37.09 cfs
100 year 54.08 cfs

The subject modifications pose no increase to TSS hence; proposed runoff leaving the site will not be detained or treated.

The character of the storm water would be classified as runoff associated with common commercial sites with buildings and parking lots and drives. There are no types of activities at a middle school to affect the character of the storm water.

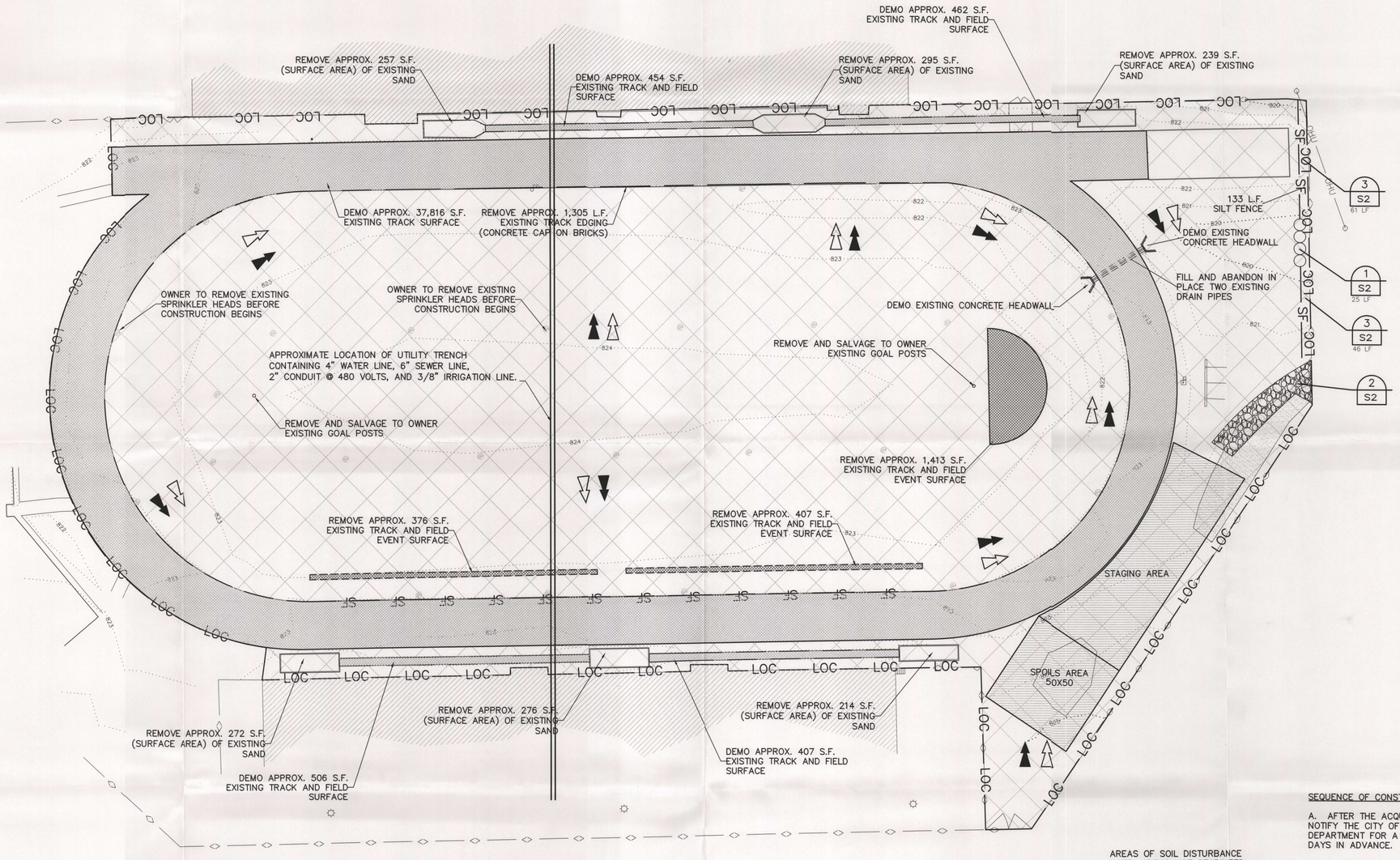
ATTACHMENT B
Volume and Character of Stormwater

PROJECT NOTES

1. CONTACT SCHOOL DISTRICT CONSTRUCTION AND MAINTENANCE REPRESENTATIVE BEFORE CONSTRUCTION TO LOCATE ANY UNDERGROUND UTILITIES WITHIN THE EXCAVATION AREA.
2. CONTRACTOR TO PROTECT EXISTING FACILITIES AND SURFACES DURING CONSTRUCTION AND KEEP ALL CONSTRUCTION WITHIN THE LIMITS OF CONSTRUCTION SHOWN HERE ON.
3. ALL ELEVATIONS AND LOCATIONS OF EXISTING ITEMS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED BY CONTRACTOR BEFORE CONSTRUCTION BEGINS AND ENGINEER CONTACTED IF ANY DISCREPANCIES OCCUR.
4. ALL FILL MUST BE COMPACTED TO 95% MAX DENSITY.
5. CONTRACTOR TO CONTACT OWNER BEFORE CONSTRUCTION BEGINS TO REMOVE EXISTING SPRINKLER HEADS.
6. CONTRACTOR TO CAP AND MARK EXISTING SPRINKLER PIPES/SYSTEM OUTSIDE OF TRACK.
7. CONTRACTOR TO PROPERLY DISPOSE OF REMOVED TRACK SURFACE, SAND, CONCRETE AND BRICKS.

NEW BRAUNFELS ISD STADIUM FOOTBALL FIELD

Description	Existing Impervious Cover			Removed Impervious Cover*			Proposed Impervious Cover			IMPERVIOUS COVER Total Net Impervious Cover		
	Sq. Ft.	Acres	% of Site	Sq. Ft.	Acres	% of Site	Sq. Ft.	Acres	% of Site	Sq. Ft.	Acres	% of Site
Buildings &					0.05	1.224%	0	0.00	0.000%		0.00	0.000%
Concrete	41,841	0.96	23.319%	2196	0.00	0.000%	102,392	2.35	57.064%	142,037	3.26	79.159%
Asphalt		0.00	0.000%		0.00	0.000%		0.00	0.000%	0	0.00	0.000%
Total I.C.	41,841	0.96	23.319%	2,196	0.05	1.224%	102,392	2.35	57.064%	142,037	3.26	79.159%
Site Totals	179,432	4.12	100.000%	Source: Existing Site Plan.dwg								



SITE PLAN

1 / S1 SCALE: 1"=30'

30 0 60 30

SCALE: 1" = 30"

AREAS OF SOIL DISTURBANCE NOTE: AREAS NOT STABILIZED BY CONCRETE OR RUBBERIZED TRACK SURFACE TO BE HYDROMULCHED OR SOD TO BE PLACED ON ALL 4:1 SLOPES

— LOC — LIMITS OF CONSTRUCTION; LINE SHOWS AREAS OF SOIL DISTURBANCE; NO SOIL DISTURBANCE WILL OCCUR OUTSIDE THE LIMITS OF CONSTRUCTION

EXISTING FLOW

PROPOSED FLOW

SEQUENCE OF CONSTRUCTION:

A. AFTER THE ACQUISITION OF ALL REQUIRED PERMITS, NOTIFY THE CITY OF NEW BRAUNFELS ENGINEERING DEPARTMENT FOR A PRE-CONSTRUCTION CONFERENCE 3 DAYS IN ADVANCE.

B. INSTALL THE TEMPORARY EROSION/SEDIMENTATION CONTROLS.

C. DEMOLITION AND ROUGH GRADING.

D. CONSTRUCTION OF D-AREA AND TERF SYSTEM.

E. CONSTRUCTION OF STORM WATER SYSTEM.

F. FINISH GRADING. INSTALL INLET SILT PROTECTION FOR THE STORM SEWER SYSTEM AFTER THE INLET IS CONSTRUCTED.

G. RESURFACING OF TRACK TO MATCHING EXISTING GRADE.

H. INSTALL PERMANENT EROSION CONTROLS.

I. OBTAIN CONCURRENCE LETTER FROM ENGINEER, AND THE FINAL INSPECTION WILL BE SCHEDULED UPON RECEIPT OF THE LETTER

J. REMOVE TEMPORARY EROSION CONTROLS AFTER ACCEPTANCE OF THE PERMANENT CONTROLS.

THE CONTRACTOR SHALL NOTIFY THE STREET INSPECTOR, MR. KEVIN BOWEN AT (830) 221-4031, TO SET AN ON SITE APPOINTMENT TO INSPECT ALL TEMPORARY EROSION/CONSTRUCTION CONTROL STRUCTURES. A 48-HOUR ADVANCE NOTIFICATION IS REQUIRED.

THE CONTRACTOR SHALL NOTIFY THE STREET INSPECTOR, MR. KEVIN BOWEN AT (830) 221-4031, TO SET AN ON SITE APPOINTMENT TO INSPECT ALL FORM, STEEL, AND CONCRETE FLATWORK OF ALL DRIVEWAY APPROACHES CONSTRUCTED WITHIN THE CITY RIGHT OF WAY. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED.

THE CONTRACTOR SHALL NOTIFY THE STREET INSPECTOR, MR. KEVIN BOWEN AT (830) 221-4031, TO SET AN ON SITE APPOINTMENT TO INSPECT ALL DRAINAGE STRUCTURES AND CHANNELS. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED.

GI Engineering Associates, Inc.
CONSULTING ENGINEERS – SURVEYORS
PLANNERS – DESIGNERS
506 E. Braker Lane, Austin Texas 78753 (512)835-4203

DATE: 6/9/08

NEW BRAUNFELS I.S.D.
NEW BRAUNFELS HIGH SCHOOL
TRACK AND FIELD IMPROVEMENTS
2551 LOOP 337 N
NEW BRAUNFELS, TX 78130

DRAWN: CFS
CHECKED: .

PROJECT TITLE: .

SHEET TITLE: SITE PLAN

VICTOR M. GIL 94984 LICENSED PROFESSIONAL ENGINEER

REVISIONS

SHEET NUMBER

S1

STANDARD NOTES FOR EROSION AND SEDIMENTATION CONTROL

1. The contractor shall install erosion / sedimentation controls and tree/natural area protective fencing prior to any site preparation work (clearing, grubbing or excavation.)

2. The placement of erosion / sedimentation controls shall be in accordance with the approved Erosion and Sedimentation Control Plan.

3. The placement of tree / natural area protective fencing shall be in accordance with the approved Grading / Tree and Natural Area Plan.

4. A pre-construction conference shall be held on-site with the contractor, design engineer/permit applicant and Environmental Inspector after installation of the erosion / sedimentation controls and tree/natural area protection measures and prior to beginning any site preparation work The contractor shall notify the City of New Braunfels, at least three days prior to the meeting date.

5. Any significant variation in materials or locations of controls or fences from those shown on the approved plan a must be approved by the reviewing Engineer, Environmental Specialist or City Arborist as appropriate.

6. The contractor is required to inspect the controls and fences at weekly intervals and after significant rainfall events to insure that they are functioning properly. The person(s) responsible for maintenance of controls and fences shall immediately make any necessary repairs to damaged areas. Silt accumulation at controls must be removed when the depth reaches six (6) inches.

7. Prior to final acceptance by the City, haul roads and waterway crossings constructed for temporary contractor access must be removed, accumulated sediment removed from the waterway and the area restored to the origind grade and revegetated All land clearing debris shall be disposed of in approved spoil disposal sites.

8. Field revisions to the Erosion and Sedimentation Control Plan may be required by the Environmental Inspector during the course of construction to correct control inadequacies. Major revisions must be approved by the City of New Braunfels.

9. Permanent Erosion Control:

All disturbed areas shall be restored as noted below.

(a) A minimum of four inches of topsoil shall be placed in all drainage channels (except rock) and between the curb and right-of-way line.

(b) The seeding for permanent erosion control shall be applied over areas disturbed by construction as follows:

i. From September 15 to March 1, seeding shall be with a combination of 1.0 pounds per 1000 square feet of unhulled Bermuda and 5.0 pounds per 1000 square feet of Winter rye with a purity of 95% with 90% germination.

ii. From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 1.0 pounds per 600 square feet with a purity of 95% with 85% germination.

(c) Fertilizer shall have an analysis of 15-15-15 and shall be applied at the rate of 600 pounds per acre.

(d) The planted area shall be irrigated or sprinkled in a manner that will not erode the topsoil, but will sufficiently soak the soil to a depth of six inches. The irrigation shall occur at ten-day intervals during the first two months. Rainfall occurrences of 1/2 inch or more shall postpone the watering schedule for one week.

(e) Mulch type used shall be cellulose, applied at a rate of 2000 pouds per acre.

(f) Restoration shall be acceptable when the grass has grown at leas 1-1/2 inches high with 95% coverage, provided no bare spots larger than 6 square feet exist.

(g) When required, native grass seeding shall comply with requirements of the City of New Braunfels.

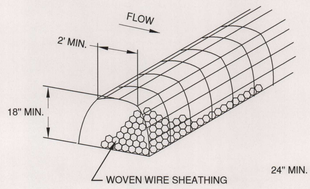
10. Developer Information:

Owner: New Braunfels Indpendent School District Phone #: (830) 643-700
Address: 430 W. Mill Street, New Braunfels, TX 78130
Owner's representative responsible for plan alterations:
GIL ENGINEERING (512)835-4203
Person or firm responsible for erosion/sedimintation control maintenance:

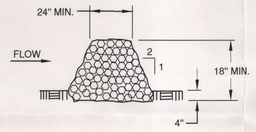
_____

Person or firm responsible for tree/natural area protection maintenance:

_____



ROCK BERM



CROSS SECTION

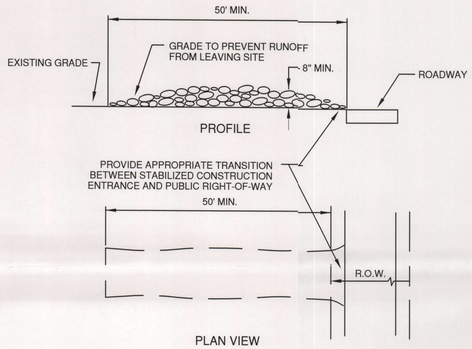
STANDARD SYMBOL FOR ROCK BERM (RB)

RB

NOTES:

1. USE ONLY OPEN GRADED ROCK 4" to 8" DIAMETER FOR STREAM FLOW CONDITIONS. USE OPEN GRADED ROCK 3" to 5" DIAMETER FOR OTHER CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE. ROCK BERMS IN CHANNEL APPLICATIONS SHALL BE ANCHORED FIRMLY INTO THE SUBSTRATE A MINIMUM OF 6 " WITH T-POSTS OR WITH #5 OR #6 REBAR, WITH MAXIMUM SPACING APART OF 48" ON CENTER.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 6", WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE-SERVICE ROCK BERMS; SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 6".
6. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

1 ROCK BERM
S2 NOT TO SCALE



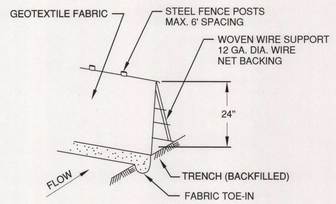
NOTES:
1. STONE SIZE: 3"-5" OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 50'.
3. THICKNESS: NOT LESS THAN 8".
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.

5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.

7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

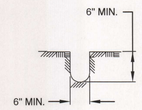
2 STABILIZED CONSTRUCTION ENTRANCE
S2 NOT TO SCALE



STANDARD SYMBOL FOR SILT FENCE (SF)

SF

L=



TRENCH CROSS SECTION

NOTES:

STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1".

THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CAN NOT BE TRENCHED INTO THE SURFACE (E.G. PAVEMENT), THE FABRIC FLAP SHALL BE WEIGHTED DOWN WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.

THE TRENCH MUST BE A MINIMUM OF 6 inches DEEP AND 6 inches WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.

INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 inches. THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

3 SILT FENCE
S2 NOT TO SCALE

GIL Engineering Associates, Inc.
CONSULTING ENGINEERS - SURVEYORS
PLANNERS - DESIGNERS
506 E. Braker Lane, Austin Texas 78753 (512)835-4203

DATE: 6/9/08
DRAWN: CFS
CHECKED: .
PROJECT TITLE: NEW BRAUNFELS I.S.D.
NEW BRAUNFELS HIGH SCHOOL
TRACK AND FIELD IMPROVEMENTS
2551 LOOP 337 N
NEW BRAUNFELS, TX 78130
SHEET TITLE: EROSION SEDIMENTATION DETAILS

VICTOR M. GIL 94694 LICENSED PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER M. GIL TEXAS LIC. #94694

REVISIONS

SHEET NUMBER
S2

Permanent Stormwater Section
for Regulated Activities
on the Edwards Aquifer Recharge Zone
and Relating to 30 TAC §213.5(b)(4)(C), (D)(li), (E), and (5), Effective June 1, 1999

REGULATED ENTITY NAME: New Braunfels High School Field House

Permanent best management practices (BMPs) and measures that will be used during and after construction is completed.

1. N/A Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

2. N/A These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

   __ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.
   __ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is provided below

3. N/A Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

4. N/A Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

   __ This site will be used for low density single-family residential development and has 20% or less impervious cover.
   __ This site will be used for low density single-family residential development but has more than 20% impervious cover.
   __ This site will not be used for low density single-family residential development.

5. N/A The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less

impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

__ **ATTACHMENT A - 20% or Less Impervious Cover Waiver.** This site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is found at the end of this form.

__ This site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.

__ This site will not be used for multi-family residential developments, schools, or small business sites.

6. **ATTACHMENT B - BMPs for Upgradient Stormwater.**

__ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is identified as **ATTACHMENT B** at the end of this form.

__ If no surface water, groundwater or stormwater originates upgradient from the site and flows across the site, an explanation is provided as **ATTACHMENT B** at the end of this form.

✓ If permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, an explanation is provided as **ATTACHMENT B** at the end of this form .

7. **ATTACHMENT C - BMPs for On-site Stormwater.**

__ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is identified as **ATTACHMENT C** at the end of this form.

✓ If permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, an explanation is provided as **ATTACHMENT C** at the end of this form.

8. N/A **ATTACHMENT D - BMPs for Surface Streams.** A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is provided at the end of this form. Each feature identified in the Geologic Assessment as "sensitive" or "possibly sensitive" has been addressed.

9. N/A The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

✓ The permanent sealing of or diversion of flow from a naturally-occurring "sensitive" or "possibly sensitive" feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed for any naturally-occurring "sensitive" or "possibly sensitive" features on this site.

N/A **ATTACHMENT E - Request to Seal Features.** A request to seal a naturally-occurring "sensitive" or "possibly sensitive" feature, that includes a justification as to why no reasonable and practicable alternative exists, is found at the end of this form. A request and justification has been provided for each feature.

THERE ARE NO SENSITIVE FEATURES ON SITE

10. N/A **ATTACHMENT F - Construction Plans.** Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information have been signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed permanent BMPs and measures are provided at the end of this form. Design Calculations, TCEQ Construction Notes, all man-made or naturally occurring geologic features, all proposed structural measures, and appropriate details must be shown on the construction plans.

11. N/A **ATTACHMENT G - Inspection, Maintenance, Repair and Retrofit Plan.** A plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is provided at the end of this form. The plan has been prepared and certified by the engineer designing the permanent BMPs and measures. The plan has been signed by the owner or responsible party. The plan includes procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofits as well as a discussion of record keeping procedures.

12. N/A The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

— Pilot-scale field testing (including water quality monitoring) may be required for BMPs that are not contained in technical guidance recognized by or prepared by the executive director.

— **ATTACHMENT H - Pilot-Scale Field Testing Plan.** A plan for pilot-scale field testing is provided at the end of this form.

13. ✓ **ATTACHMENT I -Measures for Minimizing Surface Stream Contamination.** A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is provided at the end of this form. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity which increase erosion that results in water quality degradation.

Responsibility for maintenance of permanent BMPs and measures after construction is complete.

14. N/A The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

15. ✓ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **PERMANENT STORMWATER SECTION** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Victor Gil, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent Date

BMPs FOR UP GRADIENT STORMWATER

Up gradient storm water currently flows through a grass lined channel beside Loop 337. This flow currently does not and will not commingle with any on site storm water.

ATTACHMENT B
BMPs for Upgradient Stormwater

BMPs FOR ONSITE STORMWATER

The existing site currently does not have runoff detention or treatment in place. The new artificial turf field will decrease nutrient loads by not requiring monthly applications of fertilizer to maintain the field. The drainage provisions under the field also act as a limited storage facility for field runoff. All proposed "D" area flatwork improvements consist of a rubberized top coat. No vehicular travel or other pollutant contributing activity is planned for these new surfaces. Consequently, the subject modifications pose no increase to TSS hence; proposed runoff leaving the site will not be detained or treated.

ATTACHMENT C
BMPs for Onsite Stormwater

Temporary Stormwater Section
for Regulated Activities
on the Edwards Aquifer Recharge Zone
and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

REGULATED ENTITY NAME: New Braunfels High School Field House

POTENTIAL SOURCES OF CONTAMINATION

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

   ___ Aboveground storage tanks with a cumulative storage capacity of less that 250 gallons will be stored on the site for less than one (1) year.

   ___ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.

   ___ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An **Aboveground Storage Tank Facility Plan** application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

   ✓ Fuels and hazardous substances will not be stored on-site.

2. ✓ **ATTACHMENT A - Spill Response Actions.** A description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is provided at the end of this form.

3. ✓ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

4. ___ **ATTACHMENT B - Potential Sources of Contamination.** Describe in an attachment at the end of this form any other activities or processes which may be a potential source of contamination.

   ✓ The are no other potential sources of contamination.

SEQUENCE OF CONSTRUCTION

5. ✓ **ATTACHMENT C - Sequence of Major Activities.** A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is provided at the end of this form. For each activity described, an estimate of the total area of the site to be disturbed by each activity is given.

6. ✓ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Panther Canyon

TEMPORARY BEST MANAGEMENT PRACTICES (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. **All structural BMPs must be shown on the site plan.**

7. ✓ **ATTACHMENT D - Temporary Best Management Practices and Measures.** A description of the TBMPs and measures that will be used during and after construction are provided at the end of this form. For each activity listed in the sequence of construction, include appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented.

✓ TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information has been provided in the attachment at the end of this form

a. A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.

b. A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.

c. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

d. A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

8. The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.

— **ATTACHMENT E - Request to Temporarily Seal a Feature.** A request to temporarily seal a feature is provided at the end of this form. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

✓ There will be no temporary sealing of naturally-occurring sensitive features on the site.

9. ✓ **ATTACHMENT F - Structural Practices.** Describe the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site. Placement of structural practices in floodplains has been avoided.

10. ✓ **ATTACHMENT G - Drainage Area Map**. A drainage area map is provided at the end of this form to support the following requirements.

___ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

___ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

___ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

✓ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

11. n/a **ATTACHMENT H - Temporary Sediment Pond(s) Plans and Calculations.** Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure has been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are provided as at the end of this form.

12. ✓ **ATTACHMENT I - Inspection and Maintenance for BMPs.** A plan for the inspection of temporary BMPs and measures and for their timely maintenance, repair, and, if necessary, retrofit is provided at the end of this form. A description of documentation procedures and recordkeeping practices is included in the plan.

13. ✓ All control measures must be properly selected, installed, and maintained in accordance with the manufacturers specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicates a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.

14. ✓ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

15. ✓ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.

16. ✓ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

SOIL STABILIZATION PRACTICES

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

17. ✓ **ATTACHMENT J - Schedule of Interim and Permanent Soil Stabilization Practices.** A schedule of the interim and permanent soil stabilization practices for the site is attached at the end of this form.

18. ✓ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

19. ✓ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

ADMINISTRATIVE INFORMATION

20. ✓ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

21. ✓ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

22. ✓ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **TEMPORARY STORMWATER SECTION** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Daryl Stoker
Print Name of Customer/Agent

Signature of Customer/Agent

6/6/08
Date

SPILL RESPONSE ACTIONS

(1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.

(2) Store hazardous materials and wastes in covered containers and protect from vandalism.

(3) Place a stockpile of spill cleanup materials where it will be readily accessible.

(4) Train employees in spill prevention and cleanup.

(5) Designate responsible individuals to oversee and enforce control measures.

(6) Spills should be covered and protected from stormwater runoff during rainfall to the extent that it doesn't compromise clean up activities.

(7) Do not bury or wash spills with water.

(8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.

(9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.

(10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.

(11) Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

(12) Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

(1) Clean up leaks and spills immediately.

(2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is

hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.

(3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

(1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.

(2) Use absorbent materials on small spills rather than hosing down or burying the spill.

(3) Absorbent materials should be promptly removed and disposed of properly.

(4) Follow the practice below for a minor spill:

(5) Contain the spread of the spill.

(6) Recover spilled materials.

(7) Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Spills should be cleaned up immediately:
(1) Contain spread of the spill.

(2) Notify the project foreman immediately.

(3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.

(4) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.

(5) If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

(1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.

(2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.

(3) Notification should first be made by telephone and followed up with a written report.

(4) The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.

(5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

ATTACHMENT A
Spill Response Actions

POTENTIAL SOURCES OF CONTAMINATION

Potential sources of contamination at the site include:

- Placement of asphalt, emulsions, or coatings for asphaltic pavement surfaces.
- Oil and other engine fluids from vehicles and equipment during and after construction.
- Short-term storage of road flexible base material, asphaltic products, pipe bedding materials, and miscellaneous soils, gravel, etc.
- Possible littering around the construction site.
- Short term exposure of soil surfaces during construction and prior to stabilization.
- Short term storage and use of fertilizers for use in establishing vegetation.

All activities will be conducted in a manner to minimize the potential for impact to the environment.

ATTACHMENT B
Potential Sources of Contamination

SEQUENCE OF MAJOR ACTIVITIES

A. After the acquisition of all required permits, notify the environmental inspector for a pre-construction conference 3 days in advance.

B. Install the temporary erosion / sedimentation controls. Erosion / Sedimentation controls rock berm, silt fence, and construction entrance, will be installed according to the plan. (5% site disturbed)

C. Install inlet silt protection for the existing water quality pond.

D. Demolition and rough grading.(50% site disturbed)

E. Construction of building and appurtenances. (Included in D.)

F. Placement of parking surface matching new grade. (Included in D.)

G. Check existing permanent erosion controls. Ensure that existing permanent erosion controls are in good working order. (50% site disturbed)

H. Obtain concurrence letter from engineer, and the final inspection will be scheduled upon receipt of the letter.

I. Remove temporary erosion controls after acceptance of the existing permanent controls.

ATTACHMENT C
Sequence of Major Activities

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

A. After the acquisition of all required permits, notify the environmental inspector for a pre-construction conference 3 days in advance.

B. Install the temporary erosion / sedimentation controls. Erosion / Sedimentation controls will be installed.
Stabilized construction exit, silt fences shall be placed according to the erosion / sedimentation plan.

C. Rough grade the water quality pond as a sediment trap. (5% site disturbed) Contractor required to remove spoils and dispose of in an approved landfill.

D. Demolition and rough grading. (50% site disturbed) Contractor required to check all silt fences and clean if required after every rain event or major water usage.

E. Construction of building and appurtenances. (Included in D.) Contractor required to check all silt fences and clean if required after every rain event or major water usage.

F. Construction of storm water detention/filtration system. (Included in C.) Contractor required to remove spoils and dispose of in an approved landfill.

G. Finish grading. Install inlet silt protection for the water quality pond after the inlet is constructed. (Included in D.) Contractor required to remove spoils and dispose of in an approved landfill

H. Placement of parking surface matching new grade. (Included in D.)

I. Install permanent erosion controls. (50% site disturbed) Contractor required to hydromulch all abraded areas

J. Obtain concurrence letter from engineer, and the final inspection will be scheduled upon receipt of the letter

K. Remove temporary erosion controls after acceptance of the permanent controls. This can only be done after grass is established to prevent erosion.

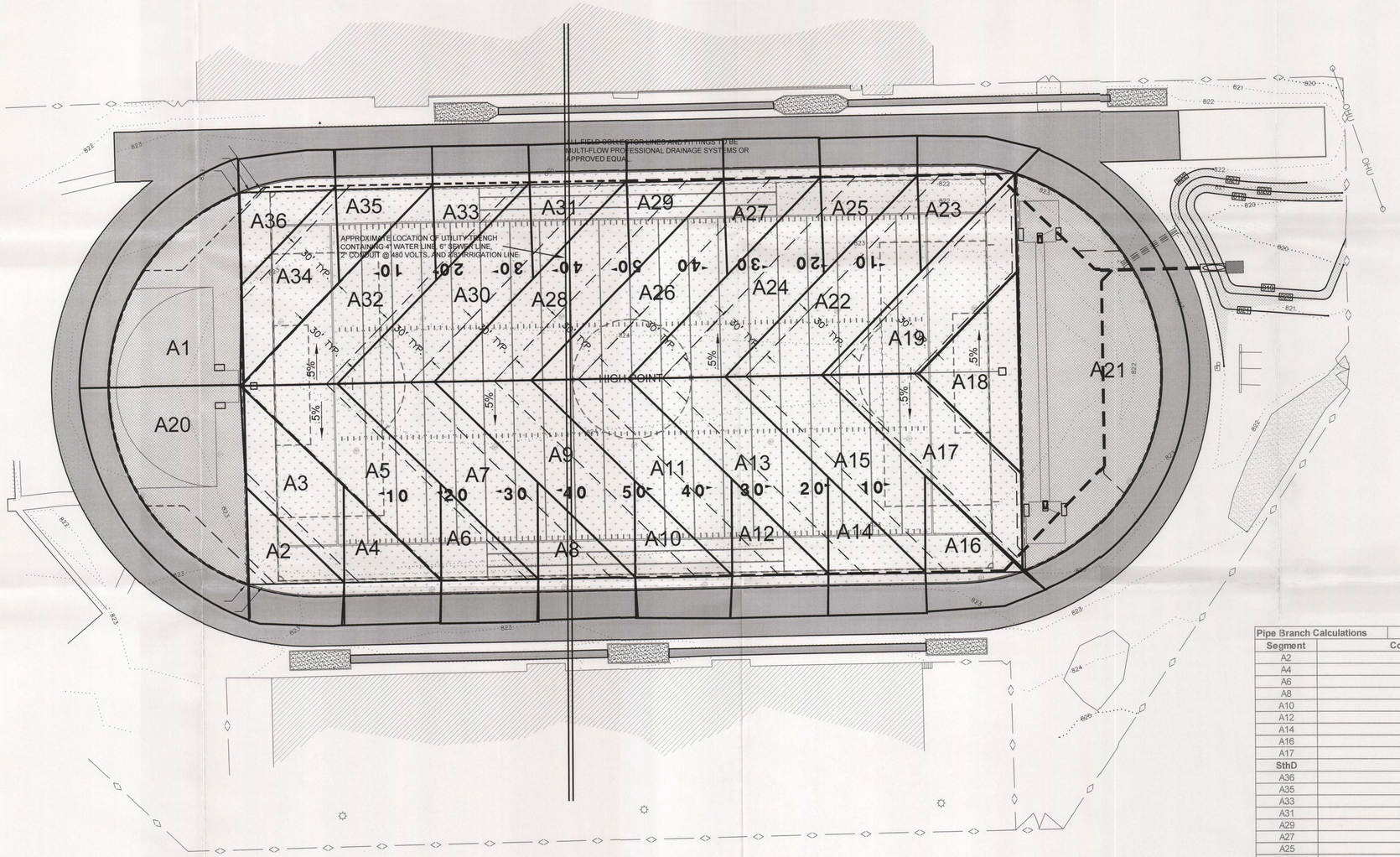
ATTACHMENT D

Temporary Best Management Practices and Measures

STRUCTURAL PRACTICES

Before construction, silt fence will be placed to store flows and to limit runoff discharge of pollutants from exposed areas of the site. Rock berm will be placed to divert flows away from exposed soils and to limit runoff discharge of pollutants. Placement of structural practices in floodplains has been avoided. There is no silt fence or rock berm placed in any flood plain.

ATTACHMENT F
Structural Practices



FOOTBALL FIELD DRAINAGE CALCULATIONS																				
Area No.	Total Area (sf)	I.C. (sf)	Pervious (sf)	Area (ac)	C2	C10	C25	C100	Tc		i2	i10	i25	i100	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
A1	6,906	6,906	0	0.16	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.73	1.26	1.61	2.33
A2	2,174	2,174	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.23	0.40	0.51	0.73
A3	1,440	1,440	0	0.03	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.15	0.26	0.34	0.49
A4	2,233	2,233	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.23	0.41	0.52	0.75
A5	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A6	2,240	2,240	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.24	0.41	0.52	0.76
A7	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A8	2,198	2,198	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.23	0.40	0.51	0.74
A9	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A10	2,186	2,186	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.23	0.40	0.51	0.74
A11	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A12	2,228	2,228	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.23	0.41	0.52	0.75
A13	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A14	2,215	2,215	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.23	0.41	0.52	0.75
A15	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A16	2,198	2,198	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.23	0.40	0.51	0.74
A17	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A18	2,596	2,596	0	0.06	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.27	0.48	0.61	0.88
A19	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A20	7,040	7,040	0	0.16	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.74	1.29	1.65	2.37
A21	14,321	14,321	0	0.33	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	1.50	2.62	3.35	4.83
A22	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A23	2,210	2,210	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.23	0.40	0.52	0.75
A24	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A25	2,156	2,156	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.23	0.39	0.50	0.73
A26	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A27	2,160	2,160	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.23	0.40	0.51	0.73
A28	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A29	2,139	2,139	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.22	0.39	0.50	0.72
A30	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A31	2,134	2,134	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.22	0.39	0.50	0.72
A32	3,677	3,677	0	0.08	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.39	0.67	0.86	1.24
A33	2,111	2,111	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.26	0.45	0.57	0.82
A34	2,438	2,438	0	0.06	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.26	0.45	0.57	0.82
A35	2,101	2,101	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.22	0.38	0.49	0.71
A36	2,017	2,017	0	0.05	0.75	0.83	0.88	0.96		5	6.10216	9.61246	11.5756	15.305	0.21	0.37	0.47	0.68

Pipe Branch Calculations		
Segment	Contributing Flow	Q2 Flow (cfs)
A2	A20+A2	0.97
A4	A2+A3+A4	1.35
A6	A4+A5+A6	1.98
A8	A6+A7+A8	2.59
A10	A8+A9+A10	3.21
A12	A10+A11+A12	3.83
A14	A12+A13+A14	4.45
A16	A14+A15+A16	5.07
A17	A17+1/2A18	0.52
SthD	**Sum A16:A17**	**5.59**
A36	A1+A36	0.94
A35	A36+A34+A35	1.41
A33	A35+A32+A33	2.02
A31	A33+A30+A31	2.63
A29	A31+A28+A29	3.24
A27	A29+A26+A27	3.86
A25	A27+A24+A25	4.47
A23	A25+A22+A23	5.09
A19	A19+1/2A18	0.52
NrthD	**Sum A23:A19**	**5.61**
A21	A21*.5	0.75
Outfall	**SthD+NrthD**	**11.20**

COLLECTOR LINE DESIGN		
Nos of Collector Lines		22
GPM		17
Capacity (gpm)		374
Time (min)		60
Gallons Per Hour		22440
Field Surface (sf)		81640
Gallons/sf/hr		0.27
Gallons/1 " rain		0.623
Rainfall/hr (in)		0.44

1 G2 **DRAINAGE AND GRADING PLAN**

SCALE: 1"=30'

30 0 60 30

SCALE: 1" = 30"

GII Engineering Associates, Inc.
CONSULTING ENGINEERS – SURVEYORS
PLANNERS – DESIGNERS
506 E. Braker Lane, Austin Texas 78753 (512)835-4203

DATE: 6/9/08

NEW BRAUNFELS I.S.D.
NEW BRAUNFELS HIGH SCHOOL
TRACK AND FIELD IMPROVEMENTS
2551 LOOP 337 N.
NEW BRAUNFELS, TX 78130

DRAWN: CFS
CHECKED: .

PROJECT TITLE: .

SHEET TITLE: GRADING PLAN

STATE OF TEXAS VICTOR M. GIL 94994 LICENSED PROFESSIONAL ENGINEER
ENGINEER: ANTON M. GIL
TEXAS LIC. #94994

REVISIONS

SHEET NUMBER
G2

INSPECTION AND MAINTENANCE FOR BMPs

All temporary BMPs shall be inspected weekly for damage by workers, machinery, and any other activity that may cause damage to silt fences and triangular dikes. The temporary BMPs shall be inspected after every rain event and after water usage or leakage. If there is any silt accumulation 6 inches or greater the contractor will be required to clean the temporary BMPs and dispose of silt at an approved landfill location. Contractor will be required to repair or replace any temporary BMPs that are damaged and fail to stop erosion or sediment transport.

If a discharge occurs or if the project receives a written notice or order from any regulatory agency, the contractor will immediately notify the Engineer and will file a written report to the regulatory agency within 7 days of the discharge event, notice, or order. Corrective measures will be implemented immediately following the discharge, notice or order.

The report to the regulatory agency will contain the following items:

- The date, time, location, nature of operation, and type of discharge, including the case or nature of the notice or order;
- The BMPs deployed before the discharge event, or prior to receiving notice or order;
- The date of deployment and type of BMPs deployed after the discharge event, or after receiving the notice or order, including additional BMPs installed or planned to reduce or prevent re-occurrence;
- An implementation and maintenance schedule for any affected BMPs

Recordkeeping:
A qualified inspector will inspect the site each week and/or after each rain event. Regular weekly reports of compliance or non-compliance will be kept. The Weekly reports shall be kept on site during the construction period. After the project has ended the contractor shall keep the weekly reports for a period of 3 years after the certificate of occupancy has been delivered to the owner. A Copy of the Weekly report to be completed by the qualified inspector is attached.

ATTACHMENT I
Inspection and Maintenance for BMPs

NPDES STORM WATER CONSTRUCTION COMPLIANCE INSPECTION REPORT FOR CONTRACTORS

NPDES PERMIT NO.:_____ **DATE OF INSPECTION:**_____
PROJECT NAME:_____ **COUNTY:**_____
PROJECT DESCRIPTION (check one): ___**Residential** _____**Commercial** _____ **Other:**_____

I. TYPE OF INSPECTION:

___ 1) At least once every 7 calendar days, or

___ 2) At least once every 14 calendar days and within 24 hrs of the end of a storm event of 0.5 inches or greater.

II. WEATHER CONDITIONS

1) Weather conditions during inspection:_____

2) Weather conditions since last inspection, including rainfall information: _____

_____

III. SITE AND PLAN REVIEW

Are the following required items available for regulatory review:

Y N 1) SWPPP
Y N 2) Copy of the General Permit
Y N 3) NOI
Y N 4) DHEC Coverage Letter
Y N 5) Co-permittee agreements or contractor certification statements
Y N 6) Weekly inspection forms

IV. BEST MANAGEMENT PRACTICES

Y N 1) Is the Construction entrance/exit properly installed according to plans
Y N 2) Is the perimeter silt fence and/or other controls properly installed
Y N 3) Did any BMPs fail to operate as designed or prove inadequate? *If Yes, Identify BMPs and location(s):

_____
_____
_____
_____
_____

Y* N 4) Are additional BMPs needed? *If Yes, identify BMPs needed and which location(s):

_____
_____
_____
_____
_____

Y* N 5) Do any BMPs require maintenance? * If Yes, provide location(s) and description(s):

_____
_____

Y N 6) Is construction activity following the phasing and sequencing plan?
Y N 7) Has construction activity on the site ceased for 14 days or more?

Y N* 8) If activity has ceased, have temporary stabilization measures been installed within 14 days? *If No, identify location(s) needing stabilization: _____

_____

Y N* 9) Are litter, construction debris, oils, fuels, building products & construction chemicals being properly addressed and or removed? *If No, identify location(s): _____

_____

_____

_____

V. FINAL STABILIZATION

Y* N Have all land disturbing activities at the site permanently ceased? "'If Yes, complete the following questions:

Y N 1) Are there any areas of active erosion evident? If Yes, location(s): _____

_____

_____

Y N 2) Does the permitted area have 70% permanent vegetative cover (i.e. grass or other cover) **OR** have equivalent measures such as riprap, or geotextiles been installed?

VI. OFFSITE IMP ACTS FROM PROJECT

1) Are there any offsite impacts? __**No** ___ **Yes**, where? ____Public Right of Way ____ Adjoining Property Owner ____Wetlands ___ Creek/River _____ Lake/Pond _____Other (please specify):_____

2) If answering "Yes" to the previous question, indicate the location and describe the impact: _____

_____

_____

_____

VII. DEFICIENCIES/ CORRECTIVE ACTIONS

Were deficiencies noted in this inspection previously listed in a monthly report? ___Yes ___No
Corrective Action needed as a result of this inspection, including date to be completed: _____

_____

_____

_____

VIII. STORM WATER POLLUTION PREVENTION PLAN UPDATES

Y N 1) Does the SWPPP need to be modified as a result of the inspection?
Y N 2) Has the SWPPP been modified since the last inspection? If so, note the date(s): _____

IX. COMMENTS

_____

_____

_____

_____

_____

_____

_____

Inspector:_____ **Title/Qualifications:**_____

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

The site is part of a larger existing High School site. At this time there is some mature vegetation on the site. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently cased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable. Hydromulching will be required on all abraded areas for permanent soil stabilization. Temporary BMPs shall not be removed until grass from hydromulching is established to prevent erosion. On all 4:1 slopes, grass sod is required. There are no slopes greater than 4:1 on site.

ATTACHMENT J
Schedule of Interim and Soil Stabilization Practices

Recharge And Transition Zone
Exception Request Form
30 TAC §213.9 Effective June 1, 1999

Regulated Entity Name: New Braunfels High School Field House

1. ✓ **ATTACHMENT A - Nature of Exception.** A narrative description of the nature of each exception requested is provided as **ATTACHMENT A** at the end of this form. All provisions of 30 TAC §213 Subchapter A for which an exception is being requested have been identified in the description.

2. ✓ **ATTACHMENT B - Documentation of Equivalent Water Quality Protection.** Documentation demonstrating equivalent water quality protection for the Edwards Aquifer is provided as **ATTACHMENT B** at the end of this form.

ADMINISTRATIVE INFORMATION

3. ✓ One (1) original and three (3) copies of the completed application has been submitted to the appropriate regional office of the TCEQ.

4. ✓ The applicant understands that no exception will be granted for a prohibited activity in Chapter 213.

5. ✓ The applicant understands that prior approval under this section must be obtained from the executive director for the exception to be authorized.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **RECHARGE AND TRANSITION ZONE EXCEPTION REQUEST FORM** application is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Victor Gil, P.E.

Print Name of Customer/Agent

6.10.08

Signature of Customer/Agent Date

NATURE OF EXCEPTION

An exception to 30 TAC Section 213.5(b)4(D)ii-Permanent BMPs and measures, is requested.

Per 30 TAC Section 213 Subchapter A

- the requestor can demonstrate equivalent water quality protection for the Edwards Acquifer
- the exception does not involve a prohibited activity

ATTACHMENT A
Nature of Exception

DOCUMENTATION OF EQUIVALENT WATER QUALITY PROTECTION

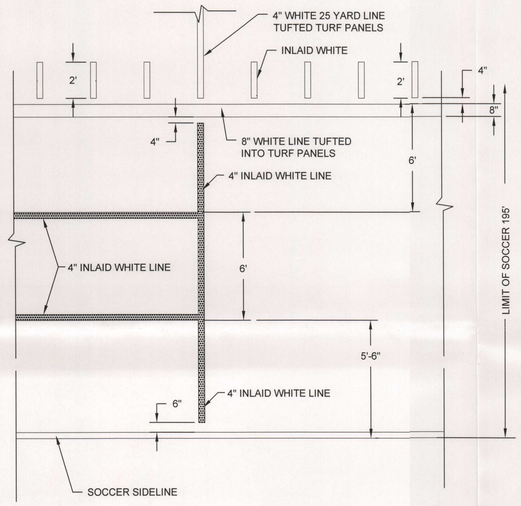
The existing stadium football field site within the Limits of Construction currently does not have runoff detention or water quality treatment in place. The new artificial turf field will DECREASE nutrient/TSS loads to the runoff by eliminating the need for monthly applications of fertilizer/pesticide/herbicide required to maintain a natural turf field. Current fertilizer application rates are approximately 200lbs per week (during the growing season). Further, regular field watering of the natural turf field is eliminated as well.

The drainage provisions under the artificial turf field act as a limited storage facility for field runoff.

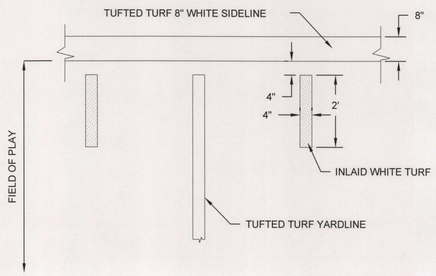
All proposed "D" area flatwork improvements consist of a rubberized top coat. No vehicular travel or other pollutant contributing activity is planned for these new surfaces.

Consequently, the subject modifications present conditions conducive to decreasing/eliminating TSS and nutrient loading and pose no new increase to TSS and nutrient loading. The improved quality of the proposed runoff leaving the improved site should qualify for an exception to the requirement for permanent detention and treatment BMPs.

ATTACHMENT B
Documentation of Equivalent Water Quality Protection



1 COACHES BOX DETAIL
L3 NOT TO SCALE



2 SIDELINE DETAIL
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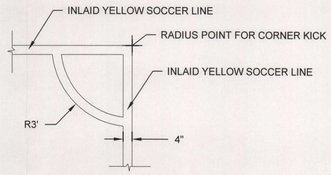

3 CORNER KICK DETAIL
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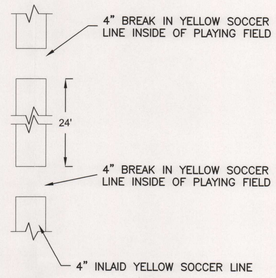

4 SOCCER GOAL ALIGNMENT SQUARES
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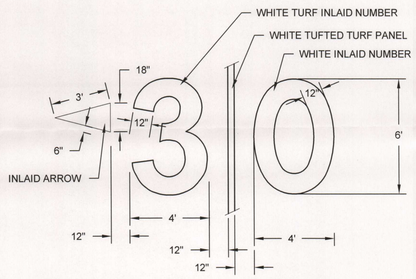
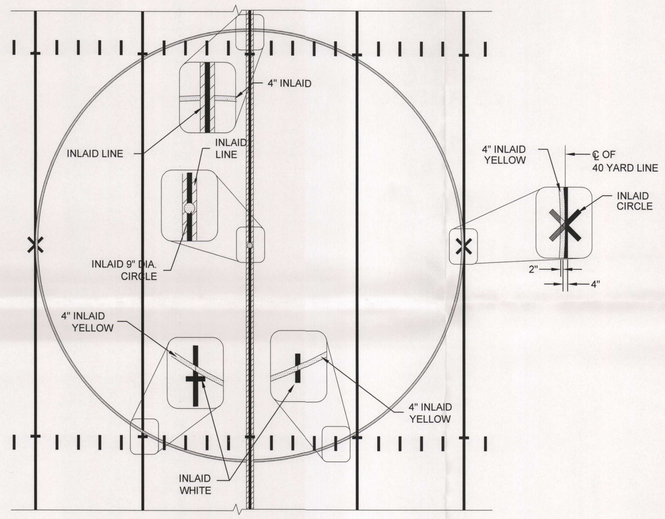


NOTE: USE APPROPRIATE DIRECTIONAL ARROW AS REQUIRED

5 YARDLINE NUMBER DETAIL
L3 NOT TO SCALE



6 MID-FIELD LINE AND SOCCER CIRCLE
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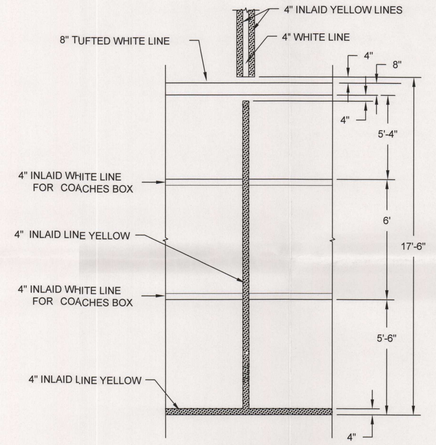

7 MID-FIELD LINE AND SIDELINE
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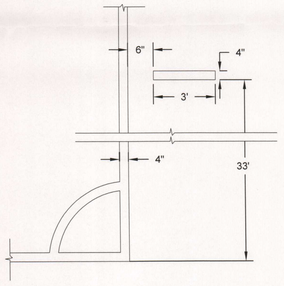

8 SOCCER HASH MARKS
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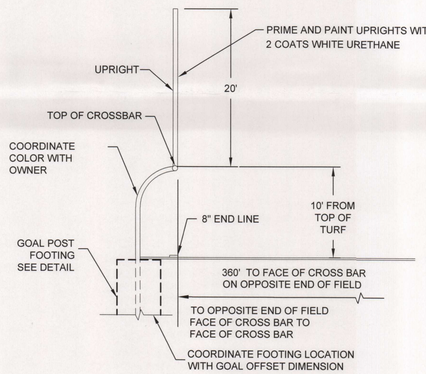

9 FOOTBALL GOAL POST
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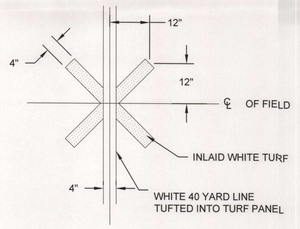

10 KICK OFF MARKER
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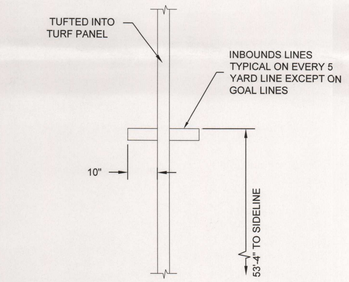


11 INBOUND LINE DETAIL
L3 NOT TO SCALE

GI Engineering Associates, Inc.
CONSULTING ENGINEERS – SURVEYORS
PLANNERS – DESIGNERS
506 E. Broker Lane, Austin Texas 78753 (512)835-4203

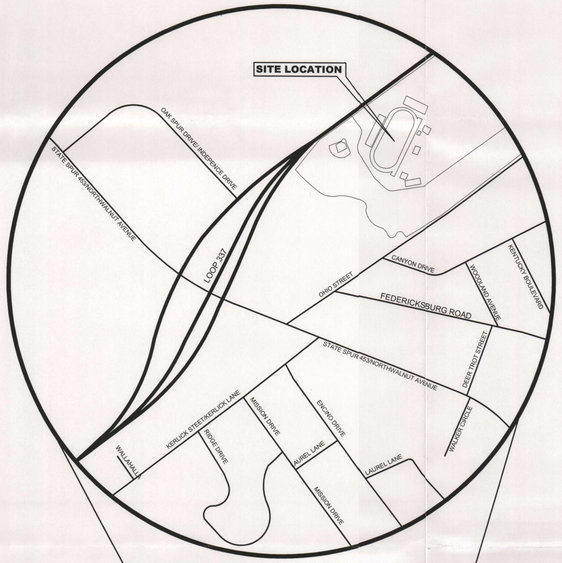
DATE: 6/9/08
DRAWN: CFS
CHECKED: .
PROJECT TITLE: NEW BRAUNFELS I.S.D.
NEW BRAUNFELS HIGH SCHOOL
TRACK AND FIELD IMPROVEMENTS
2551 LOOP 337 N
NEW BRAUNFELS, TX 78130
SHEET TITLE: LAYOUT DETAILS

VICTOR M. GIL 94994 LICENSED PROFESSIONAL ENGINEER
ENGINEER'S SEAL OF VICTOR M. GIL, TEXAS LIC. #94994

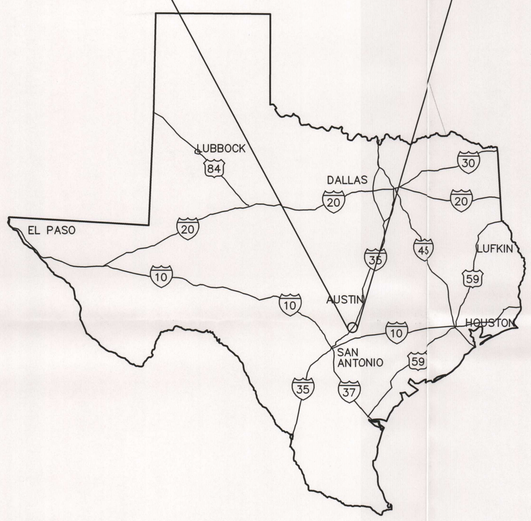
REVISIONS

SHEET NUMBER
L3

NEW BRAUNFELS I.S.D.
TRACK AND FIELD
RENOVATION
2551 LOOP 337
NEW BRAUNFELS, TEXAS 78130



NEW BRAUNFELS I.S.D.
TRACK AND FIELD



LOCATION MAP
STATE OF TEXAS

New Braunfels
Independent School District

GENERAL NOTES

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL WORK IS PROPERLY LOCATED AS REQUIRED BY THE DRAWINGS, SPECIFICATIONS, AND/OR SITE CONDITIONS, OR THE BEST PRACTICE OF THE TRADES INVOLVED.

2. DRAWINGS MAY BE SCALED FOR LOCATIONS, SIZES, AND LIMITS WHERE OTHERWISE NOT SHOWN OR DIMENSIONED. LARGER SCALE DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS UNLESS OTHERWISE DIRECTED BY ENGINEER.

3. SPECIFICATIONS GOVERN MATERIAL REQUIREMENTS AND SPECIAL REQUIREMENT FOR INSTALLATION PROCEDURES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE INFORMATION SHOWN ON THE SPECIFICATIONS (BUT NOT CALLED FOR ON THE DRAWINGS) TO HIS SUBCONTRACTOR'S AND WORKMEN SO THAT THE ITEMS CALLED FOR IN THE SPECIFICATIONS CAN BE ACCOMPLISHED.

4. CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCING ANY WORK ON SITE.

5. QUANTITIES GIVEN IN THE CONTRACT DOCUMENTS ARE APPROXIMATE AND IN NO WAY LIMIT THE OBLIGATION OF THE CONTRACTOR TO FULFILL THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IN REGARD TO CONSTRUCTING COMPLETE AND USABLE FACILITIES.

6. TESTS CALLED FOR IN THE SPECIFICATIONS AND NOT OTHERWISE DESIGNATED, SHALL BE PERFORMED AT THE REQUEST OF THE ENGINEER AND AT THE OWNER'S EXPENSE. HOWEVER, CONTRACTOR IS OBLIGATED TO ASSIST BY MAKING AVAILABLE THE AREAS AND/OR MATERIALS TO BE TESTED.

7. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE HIS OR HER OWN TEMPORARY ELECTRICAL POWER FOR THE CONSTRUCTION EFFORT.

8. METHODS AND MATERIALS USED IN CONSTRUCTION OF THE IMPROVEMENTS HEREIN SHALL CONFORM TO THE PERTINENT SPECIFICATIONS, CODES, BEST PRACTICES OF THE TRADE INVOLVED, ETC. AND SHALL BE CERTIFIED TO SO CONFORM WHEN REQUESTED BY THE ENGINEER AND/OR HIS REPRESENTATIVE.

9. AFTER LAYOUT AN ESTABLISHMENT OF CONSTRUCTION LIMITS BUT PRIOR TO THE COMMENCEMENT OF THE CONSTRUCTION EFFORT, THE ENGINEER SHALL BE NOTIFIED TO REVIEW LAYOUT AND MAKE ANY NECESSARY ADJUSTMENTS.

10. STEEL REINFORCEMENT FOR REINFORCED CONCRETE SHALL BE DEFORMED BARS OF BILLET OR RAIL STEEL GRADE 60 CONFORMING TO A.S.T.M. A615, A616, AND A617 SPECIFICATIONS. UNLESS OTHERWISE NOTED, DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING STEEL ARE GIVEN TO OUTSIDE SURFACES.

11. "BRAND" NAMES ARE USED TO REFLECT STYLE AND/OR QUALITY CHARACTERISTICS ONLY, AND ARE NOT INTENDED TO BE RESTRICTIVE OF OTHER "EQUAL" PRODUCTS. "EQUAL" PRODUCTS SHALL BE APPROVED BY THE ENGINEER.

12. CONTRACTOR SHALL BE AWARE THAT OTHER PIPING EXISTS ON SITE AND NOT SHOWN AS A PART OF THIS CONTRACT MAY EXIST AND ARE TO REMAIN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREVENT DAMAGE TO SAID PIPES, AND IF DAMAGE OCCURS, CONTRACTOR SHALL REPAIR SAID DAMAGE AT NO ADDITIONAL COST TO OWNER.

13. CONCRETE FOR CONCRETE STRUCTURES SHALL BE 6 SACK PORTLAND CEMENT PER CUBIC YARD, 3600 PSI 28 DAY STRENGTH.

INDEX OF DRAWINGS

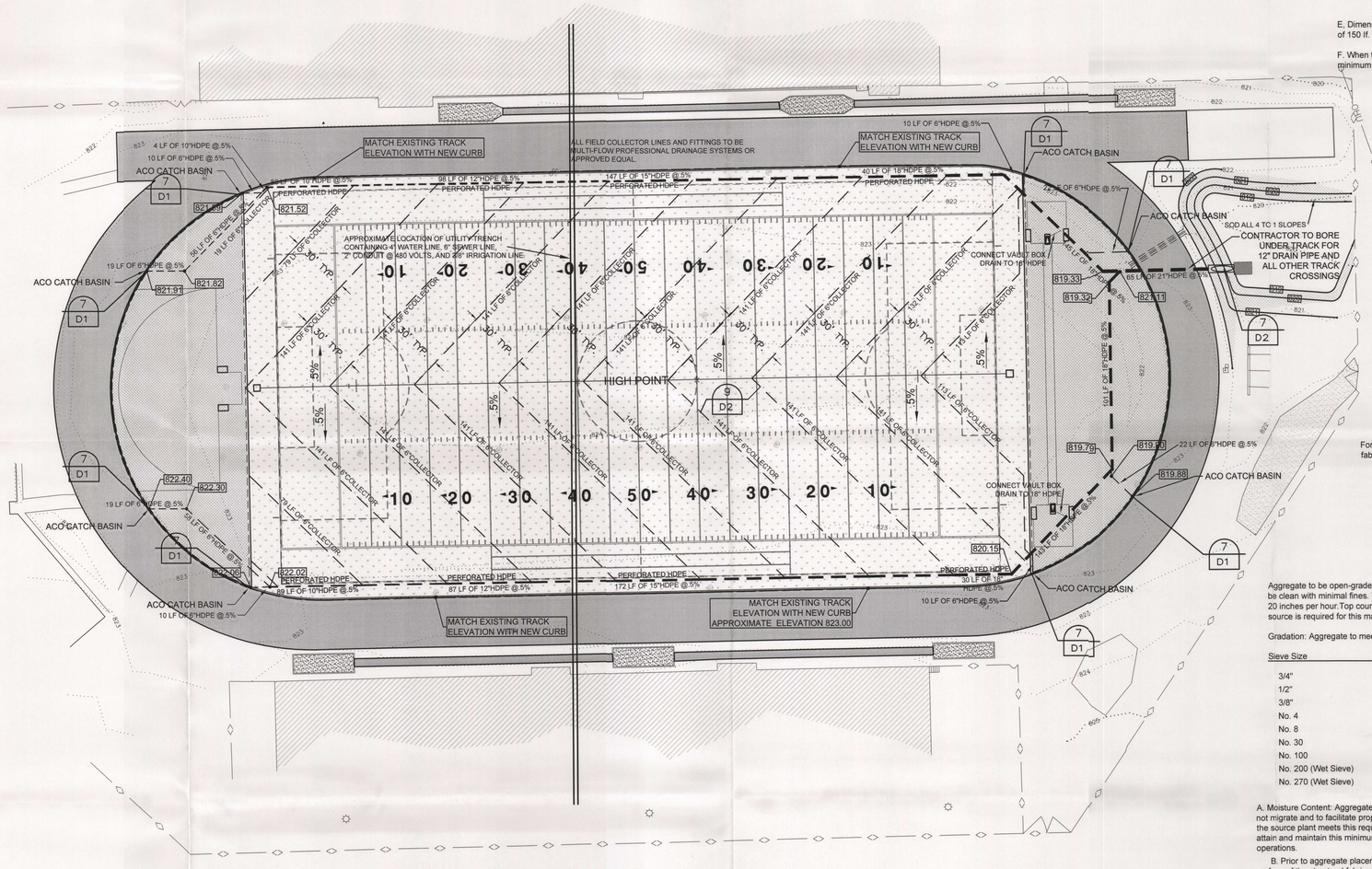
GII Engineering Associates, Inc.
CONSULTING ENGINEERS – SURVEYORS
PLANNERS – DESIGNERS
506 E. Braker Lane, Austin Texas 78753 (512)835-4203

DATE: 6/9/08
DRAWN: CFS
CHECKED: .
PROJECT TITLE: NEW BRAUNFELS I.S.D.
NEW BRAUNFELS HIGH SCHOOL
TRACK AND FIELD IMPROVEMENTS
2551 LOOP 337 N
NEW BRAUNFELS, TX 78130
SHEET TITLE: TITLE SHEET

VICTOR M. GIL 94894 LICENSED PROFESSIONAL ENGINEER
PROJECT ARTIFACT M. GIL TEXAS LIC. #94894

REVISIONS

SHEET NUMBER
TS



DRAINAGE AND GRADING PLAN

1 / G1 SCALE: 1"=30'

30 0 60 30

SCALE: 1" = 30"

IMPERVIOUS STRUCTURAL SOIL-BEARING FABRIC:

Material: Hercushield 2400 heavy duty fabric with a minimum weight of 6.0 oz/sy
With the following Physical Properties:
Tensile Strength, lbs., (ASTM D-75-1):200 lbs
Thickness, (nominal):12 mils
Grab Strength:1701bs
Tear Strength, (ASTM D75-1):600 lbs
Tongue Method:50 lbs
Mullen Burst, (ASTM D75-1):350 psi

No loose material is allowed on subgrade prior to placement of structural fabric. Loose material is to be removed prior to placement.

B. Fabric to be laid on smooth, compacted, subgrade surface between drainage trenches and in trenches. Fabric to be laid in a shingle like pattern with 24" overlap.

The Engineer prior to placement of structural-bearing fabric

requires approval of subgrade conditions. Structural fabric must be

flat on stabilized subgrade for full width.

E, Dimensions to be a minimum width of 12.5' and minimum continuous length of 150 lf.

F. When the length of the fabric is not continuous, the lateral seam shall have a minimum overlap of 24".

For perforated piping, utilize "MULTIFLOW" flat pipe, 1" x 6" with geotextile fabric wrapping. See Detail 9 / D2 for sand specifcation.

1. Fittings shall be as furnished by the manufacturer of the pipe.
2. Connections of tubing lengths shall be with split coupling or snap-in-type couplings utilizing polyethylene or construction tape.
3. Tubing is to be inserted into sockets for the full socket length. "Slip-fit" connections will not be permitted.
4. All split coupling connections are to be fully taped. All connections at fittings and connections are to be taped at interface of exposed joint.

Aggregate to be open-graded, fractured, friction course. To ensure free drainage, material to be clean with minimal fines. The compacted permeable aggregate minimum infiltration rate of 20 inches per hour.Top course material to be 100% fractured crushed rock material. A quarry source is required for this material.

Gradation: Aggregate to meet the following particle size limitations:

Sieve Size	Percent Passing by Weight
3/4"	100
1/2"	60 - 100
3/8"	40 - 80
No. 4	30 - 60
No. 8	15 - 40
No. 30	10 - 20
No. 100	2-10
No. 200 (Wet Sieve)	0-3.0
No. 270 (Wet Sieve)	0-1.5

A. Moisture Content: Aggregate to contain 3.5% to 4.0% moisture content to ensure that fines do not migrate and to facilitate proper compaction. Contractor must ensure that aggregate leaving the source plant meets this requirement and is required to apply water to aggregate on site to attain and maintain this minimum moisture content in stockpile and during all placement operations.

B. Prior to aggregate placement, remove any foreign material or contamination from the surface of the structural fabric and drainage trench or lateral piping.

C. Surface must be free of standing water and subgrade stabilized with structural fabric in place prior to placement.

D. Materials to be placed in layers not exceeding 6" compacted in depth. Each layer must be spreed uniformly with equipment that will not cause perceptible separation in gradation (segregation), preferably a self-propelled paving machine.

E. Should there occur, during any stage of the spreading or stockpiling, a separation of the material particles, the Contractor must immediately remove and dispose of segregated material and correct or change handling procedures to prevent any further separation.

Compaction of Aggregate to a minimum of 95% of the maximum dry density.

The surface of the permeable aggregate shall not deviate from designated compacted grade with the range of -0.00 and +0.25".

TESTING

The Contractor shall coordinate directly with the Owner's testing firm relative to the delivery schedules of the imported materials. Sampling will be scheduled each day deliveries occur.

The Contractor shall provide testing and surveillance as required to assure materials and work fully comply with contract requirements.

GI Engineering Associates, Inc.
CONSULTING ENGINEERS – SURVEYORS
PLANNERS – DESIGNERS
506 E. Broker Lane, Austin Texas 78753 (512)835-4203

DATE: 6/9/08
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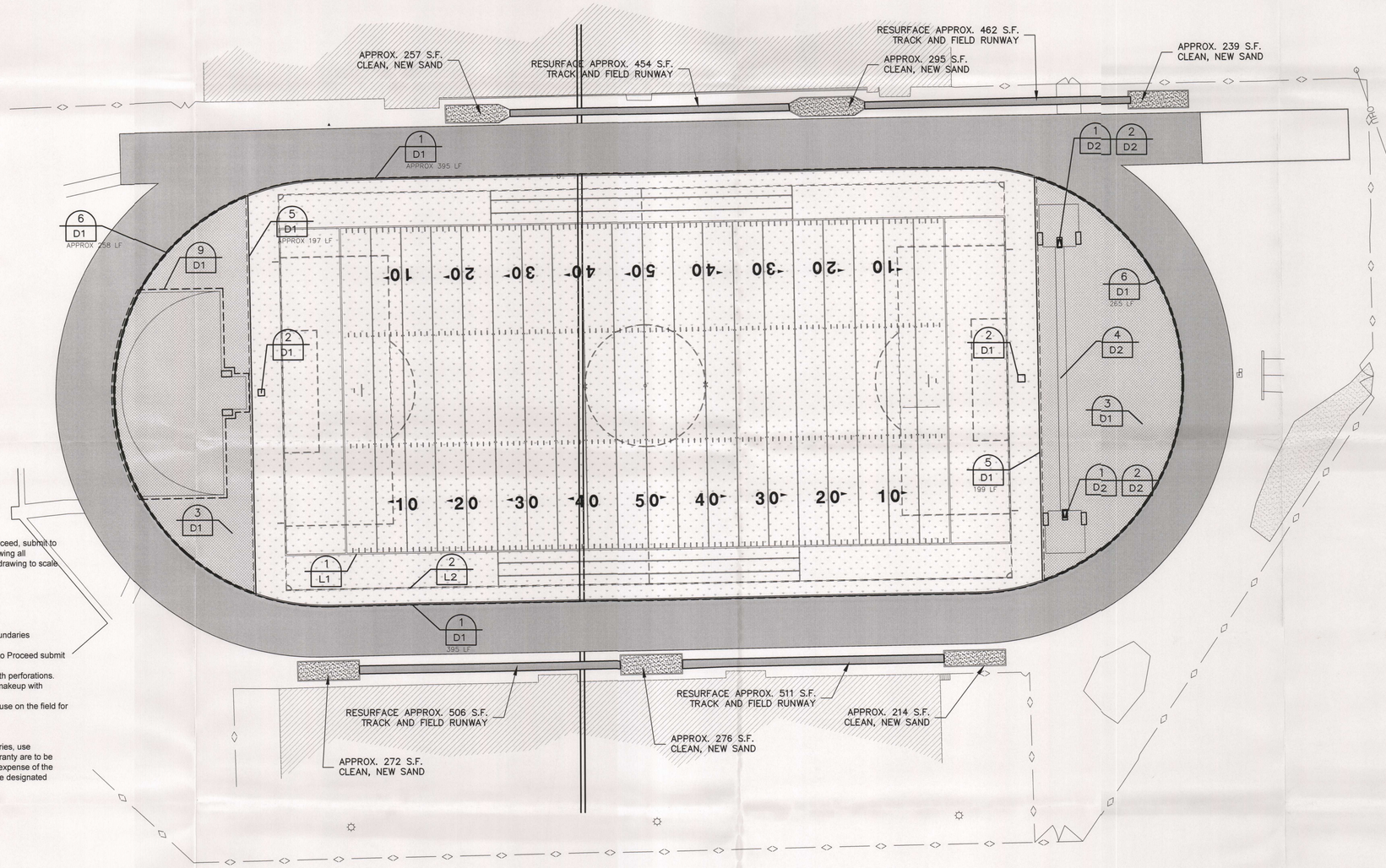
CHECKED: .
PROJECT TITLE: NEW BRAUNFELS I.S.D.
NEW BRAUNFELS HIGH SCHOOL
TRACK AND FIELD IMPROVEMENTS
2551 LOOP 337 N
NEW BRAUNFELS, TX 78130
SHEET TITLE: GRADING PLAN

VICTOR M. GIL 94984 LICENSED PROFESSIONAL ENGINEER
ENGINEER: VICTOR M. GIL
TEXAS LIC. #94984

REVISIONS

SHEET NUMBER
G1



SYNTHETIC TURF SURFACING

The flowing vendors are owner approved for use:

Mondo PF	Mondo (817) 421-7861
Gameday XP	General Sports (210) 367-0709
OmniGrass XPS	Sportexe (512) 246-7100
Prestige XT	Field Turf (512) 401-2645
Sprinturf G4 Ultrablade	Sprinturf (314) 566-2683
Real Grass Pro	Hellas (512)250-2910

A. Shop Drawings: Within 14 calendar days after issuance of Notice to Proceed, submit to the Project Engineer five (5)copies of complete and detailed drawings showing all component parts of the synthetic turf system. The shop drawings shall be drawing to scale (1"=30' minimum) and shall include:

1. edging details
2. insert details including backing material
3. seam details
4. seam layout
5. gluing patterns
6. dimensional shop drawing for all field lines, markings and boundaries

Synthetic Turf Samples: Within 14 calendar days after issuance of Notice to Proceed submit to the Project Engineer:

1. Two 6"x 12" samples each of each green turf showing backing with perforations.
2. Two 6" x 12" samples each of turf showing method of seam makeup with perforations. One sample to have example of inlaid lines.
3. Two 6" x 12" samples each of the other colors proposed for use on the field for lines and markings.
4. Two 1-pound samples of the proposed In-fill material.

Warranty shall cover, in general, the usability of the turf surface, accessories, use characteristics, and suitability of the installation. All items covered by warranty are to be replaced or repaired with new materials, including installation at the sole expense of the warranting contractor for the period of eight (8) years to the Owner, for the designated uses enumerated as follows:

1. Soccer
2. Football
3. Lacrosse
4. Marching band
5. Physical exercises
6. Physical education activities
7. Pneumatic rubber-tired maintenance and service vehicles
8. Pedestrian traffic and other similar uses
9. Ceremonial and Entertainment Events

Minimum Lining and Marking Requirements: All lines, numbers and field markings shall be tufted in or installed as synthetic turf inlays without the use of paint.

Soccer:

All playing field boundaries, lines and position symbols shall be 4" wide, yellow/gold color as shown on the plans.

Football:

1. Playing field boundaries: 8" wide white lines
2. Goal line: 8" wide white line
3. Each 5 -yard line: 4" wide white lines
4. 50 yard line: 4" wide white line with 4" wide yellow/gold framing
5. Each 5-yard inbound line: 4" wide x 2' white lines
6. 3-yard line: 4" wide white line

3 D1 — ASPHALT PAVING WITH NEW TRACK SURFACE

TRACK RE-SURFACING ONLY SEE GENERAL TRACK NOTES FOR SPECS

8 D2 — NEW SYNTHETIC TURF SURFACE SEE SYNTHETIC TURF NOTES.

THE MATERIAL SHALL BE CLEAN, NATURAL SAND, DRY, CONFORMING TO ASTM "FINE AGGREGATE". THE SAND TO MEET THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING
NO. 4	100
NO. 8	95– 100
NO. 16	75– 85
NO. 30	40– 50
NO. 50	5–15
NO. 100	0–4
NO. 200 (WET SIEVE)	0–2

1 L1 LAYOUT AND PAVING PLAN

SCALE: 1"=30'

30 0 60 30

SCALE: 1" = 30"

GENERAL TRACK NOTES:

Include all labor, material, equipment, transportation, and services to install complete all-weather running track surfacing as shown on the plans and as specified herein

Track and field events, striping and surfaces shall confor to the latest Track and Field Rules, latest edition of the National Federation of State High School Associations (NFSHSA).

System to be rubber base bound with polyurethane.

The primer shall be polyurethane base as specified by the surfacing system manufacturer.

SBR Rubber Granules (Base Layer):

1. The granules shall be recycled styrene butadiene rubber (SBR). There shall be no traces of fiber or steel with granulate.
2. Granulate particles shall meet the following gradation requirements:

Particle Size	Percentage by Weight
0-1.0 mm	3.5%
1.0-2.0 mm	15-25%
2.0-3.0mm	30-40%
3.0-4.0mm	30-40%
Larger than 4.0 mm	0-5%

Polyurethane (Base Layer)

1. For the base layer utilize single component polyurethane.
2. No mercury, lead or other heavy metals are to be present.
3. No solvent or fillers are to be added.

Color: (to be approved by Owner).

Hardness (D-2240)

Elongation at Break (D-412-61T)

Tensile Strength (D-412-61T)

Impact Resilience (D-2632)

Compression Set (D-395-b)

Spike Resistance Weathering/UV Resistance Compression Modulus (D-575-49)

Gliding Behavior Resistance to oil and normal cleaning solutions

Shore A-2-35-50

150% 300psi 0% 90%-95% No restriction

No significant changes in hardness or resilience 10% and 50% Skp190kp Wet 0% - Dry 0% Favorable

1.For the base layer utilize single component polyurethane.

2. No mercury, lead or other heavy metals are to be present.

3. No solvent or fillers are to be added.

The surface of all rubberized surfaces must have homogeneous texture. All areas, such as abutting seams, that do not have uniform texture must be cut out and resurfaced with acceptable texture and finish appearance

MARKING PAINT: TRACK STRIPING

The paint shall be polyethylene based, specifically manufactured to be compatible with and formulated for application on polyurethane synthetic track surfaces

Track Striping Shop Drawings

1. The Contractor shall submit a minimum of 30 calendar days prior to the scheduled commencement of the surfacing installation, complete and detailed track striping and marking plan with calculations showing all conditions of installation; connection to other work, dimensions, size, shape, color, and location of all lines and markings, including hurdle markers, lane numbers, etc. Drawings shall show the entire track on one sheet at 1 "=30' scale.

2. This shop drawing is for Owner/Engineer review. The Contractor is not to proceed with painting until the drawing is approved by Owner or, as may be required, resubmitted for approval with revision.

3. Provide painted lines and striping as specified.

A. A complete track lining and marking system shall be provided.

B. All lines and markings are to have true sharp edges with no weeping

Provide layouts in accordance with NFSHSA for the following events:

100 METER HURDLES	
110 METER HURDLES	
300 METER HURDLES	I Turn Stagger
400 METER HURDLES	2 Turn Stagger
100 METER DASH	Both directions
200 METER DASH	I Turn Stagger
400 METER DASH	2 Turn Stagger
800 METER RUN	3 Turn Stagger
1600 METER RUN	Waterfall start
3200 METER RUN	Waterfall start
4 x 100 METER RELAY	2 Turn Stagger
4 x 200 METER RELAY	3 Turn Stagger
4 x 400 METER RELAY	3 Turn Stagger 4 Turn Stagger

Exchange Zones: Provide 2 sets of exchange zone and acceleration zone markings in the northeast and southwest corners.

Lane Numbers: Five sets of white lane numbers "1" through "6", inclusive, with black shadowing as approved by the Owner. Separate templates are to be utilized for shadowing. Lane numbers shall be not less than 3" stroke and not less than 24" high. Lane Lines shall be white.

White lane lines for triple jump/long jump and Pole Vault runways.

WARRANTY PACKAGE.

Warranty shall cover in general the usability of the installed surfacing system, accessories use characteristics, suitability of the installation for the period specified, and for the designated uses enumerated as follows:

1. Track and field events with spiked shoes
2. Physical exercises
3. Physical education activities
4. Marching band
5. Cheerleading activities
6. Access to adjacent soccer field
7. Pneumatic rubber-tired maintenance and service vehicles
8. Pedestrian traffic and other similar uses
9. Community running and jogging
10. Handicap wheelchair traffic

Warranty shall agree to promptly repair or replace work, which deteriorates excessively or otherwise fails to perform as required due to failures of materials and workmanship. Striping and other painted markings are excluded from the warranty. For the purposes of this warranty, excessive deterioration is defined as a loss of twenty (20%) of the wearing surface or granular loss. Failure of material and workmanship is defined to include, but is not limited to, delaminating of the track from its asphaltic concrete base, or from integral layers of surfacing material, and leaching of binders or other surfacing components. All defects are to be promptly repaired.

GI Engineering Associates, Inc.
CONSULTING ENGINEERS – SURVEYORS
PLANNERS – DESIGNERS
506 E. Braker Lane, Austin Texas 78753 (512)835-4203

DATE: 6/9/08

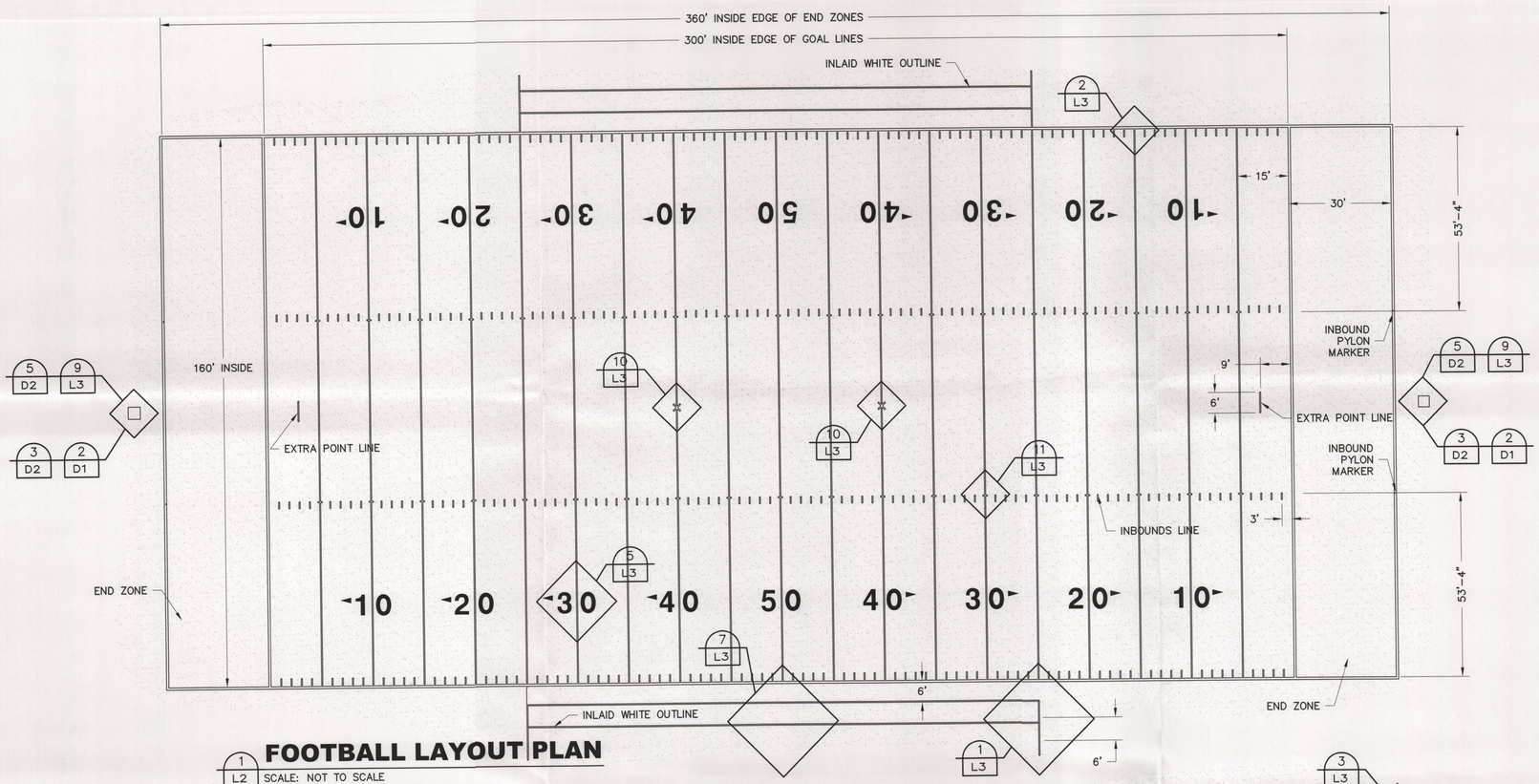
NEW BRAUNFELS I.S.D.
NEW BRAUNFELS HIGH SCHOOL
TRACK AND FIELD IMPROVEMENTS
2551 LOOP 337 N
NEW BRAUNFELS, TX 78130

DRAWN: CFS
CHECKED: .
PROJECT TITLE: .
SHEET TITLE: LAYOUT AND PAVING PLAN

VICTOR M. GIL LICENSED PROFESSIONAL ENGINEER 94994 STATE OF TEXAS

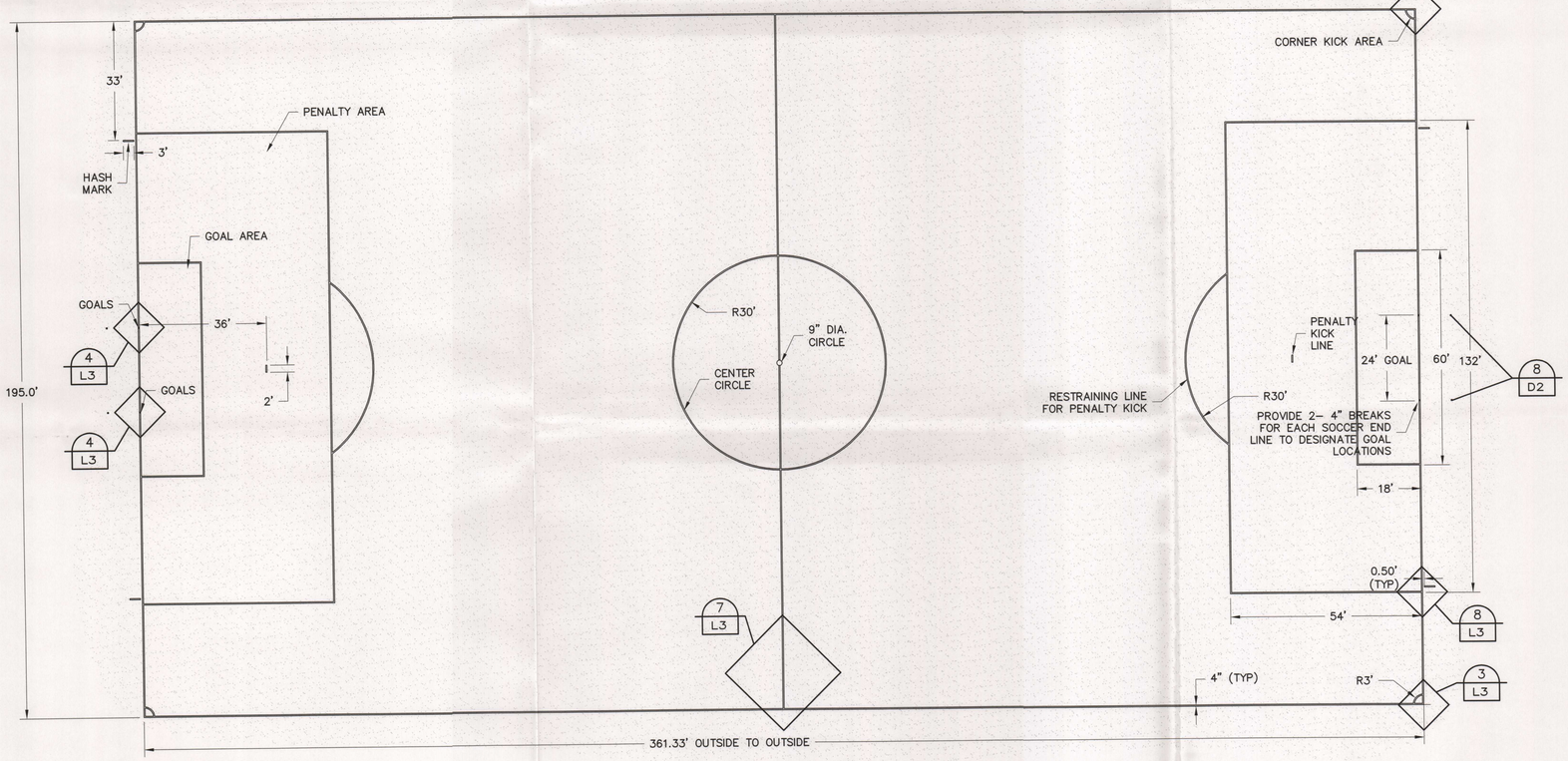
REVISIONS

SHEET NUMBER
L1



FOOTBALL LAYOUT PLAN

1 L2 SCALE: NOT TO SCALE



SOCCER LAYOUT PLAN

2 L2 SCALE: NOT TO SCALE

LAYOUT NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ALL LINE WORK SHALL BE LAID OUT WITH A TOLERANCE OF 1/4 INCH.
2. ALL FOOTBALL YARDLINES SHALL BE 4 INCH, WHITE, TUFTED INTO THE TURF PANELS, THE GOAL LINES SHALL BE 8 INCHES, WHITE, TUFTED INTO THE TURF PANELS.
3. AN 8 INCH WHITE LINE, TUFTED INTO THE TURF SHALL SURROUND THE ENTIRE FOOTBALL PLAYING FIELD.
4. 24 INCH YARDLINE EXTENSIONS, 4 INCHES FROM THE SIDELINES SHALL BE 4 INCHES WIDE, WHITE, INLAID LINES.
5. THE FOOTBALL COACHING BOX AND TEAM AREA SHALL BE PER NFSHSA RULES AND SHALL BE OUTLINE IN WHITE INLAID TURF.
6. THE TWO INBOUNDS LINES ARE 53 FEET 4 INCHES FROM THE SIDELINES. INBOUNDS LINES AND SHORT YARDLINE EXTENSIONS SHALL BE 24 INCHES LONG AND 4 INCHES WIDE, INLAID, WHITE LINES.
7. THE EXTRA POINT LINES ARE 6 FEET LONG, 4 INCHES WIDE, WHITE INLAID LINES AT THE CENTERLINE OF THE FIELD AND THE 3 YARDLINE ON EACH END OF THE FIELD.
8. WHITE YARDLINE NUMBERS MEASURING 6 FEET IN HEIGHT AND 4 FEET IN WIDTH WITH THE TOP OF THE NUMBERS 27 FEET FROM THE SIDELINES ARE INLAID WHITE TURF.
9. DIRECTIONAL ARROWS POINT TOWARD RESPECTIVE ENDZONES AND ARE WHITE, INLAID TURF. THERE ARE NO ARROWS ON THE 50 YARDLINE.
10. AN X WILL MARK THE SPOT OF THE KICKOFF AT THE 40 YARDLINE ON EACH END OF THE FIELD. THE 40 YARDLINE IS WHITE TUFTED INTO THE TURF PANELS AND THE EXTENSIONS TO FORM THE X ARE INLAID WHITE TURF.
11. PYLON LOCATIONS AT THE INTERSECTIONS OF THE GOAL LINES AND THE ENDLINES WITH THE SIDELINES, AND THE ENDLINES AND THE EXTENSION OF THE INBOUNDS LINE SHALL BE 4 INCHES BY 4 INCHES. THE PY_ONS SHALL BE FREE-STANDING, WEIGHTED TYPE.
12. THE 50 YARDLINE SHALL BE OUTLINED IN YELLOW INLAID TURF ON EACH SIDE OF THE WHITE YARDLINE.
13. ALL SOCCER LINES ARE 4 INCH YELLOW/GOLD INLAID TURF AS DIMENSIONED ON SOCCER LAYOUT PLAN
14. THE THE SOCCER GOAL AREA IS 18 FEET BY 60 FEET. REFER TO PLAN FOR LOCATION.
15. THE SOCCER PENALTY AREA IS 54 FEET BY 132 FEET.
16. THE PENALTY MARK IS A 2 FOOT LINE, 4 INCHES WIDE, 36 FEET FROM THE END LINE AND CENTERED ON THE GOAL. THE RESTRAINING LINE FOR PENALTY KICK AN ARC 30 FEET FROM THIS MARK OUTSIDE OF THE PENALTY AREA.
17. THE HALFWAY LINE FOR THE SOCCER FIELD IS A 4 INCH YELLOW INLAID LINE WITH A CIRCLE, 30 FEET IN RADIUS IN THE CENTER OF THE FIELD. THE RADIUS POINT OF THE MIDFIELD CIRCLE WILL BE INLAID YELLOW DOT WITH A 9 INCH DIAMETER. THE FOOTBALL LINES WILL PASS THROUGH THE SOCCER LINES.
18. THE 50 YARD LINE OF THE FOOTBALL FIELD WILL BE WHITE WITH 4 INCHES OF YELLOW INLAID TURF ON EACH SIDE AND WILL EXTEND TO THE SIDELINE OF THE FOOTBALL FIELD. THE SOCCER LINE WILL EXTEND BEYOND THE FOOTBALL SIDELINE BEGINNING 4 INCHES OUTSIDE THE 8 INCH SIDELINE AND EXTENDING THROUGH THE COACHES BOX.
19. THE CORNERS OF THE SOCCER FIELD SHALL HAVE A 3 FOOT RADIUS IN YELLOW TURF DESIGNATING THE CORNER KICK AREA.
20. THE HASH MARK IS A 3 FOOT LINE, 4 INCHES WIDE, 33 FEET FROM THE SIDE LINE, 6 INCHES FROM THE END LINE, AND EXTENDS AWAY FROM THE FIELD OF PLAY.

GII Engineering Associates, Inc.
CONSULTING ENGINEERS – SURVEYORS
PLANNERS – DESIGNERS
506 E. Braker Lane, Austin Texas 78753 (512)835-4203

DATE: 6/9/08

NEW BRAUNFELS I.S.D.
NEW BRAUNFELS HIGH SCHOOL
TRACK AND FIELD IMPROVEMENTS
2551 LOOP 337 N
NEW BRAUNFELS, TX 78130

DRAWN: CFS
CHECKED: .

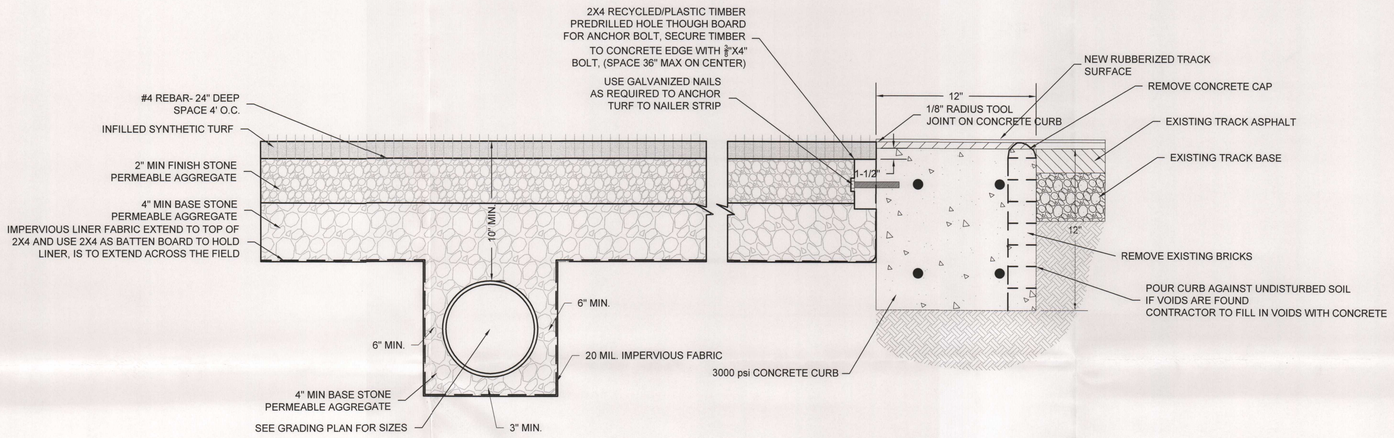
PROJECT TITLE: .

SHEET TITLE: FIELD LAYOUTS

STATE OF TEXAS · VICTOR M. GIL · 94994 · LICENSED · ENGINEER · VICTOR M. GIL · TEXAS LIC. #94994

REVISIONS

SHEET NUMBER
L2



1 D1 CONCRETE CURB AT EXISTING TRACK AND TURF

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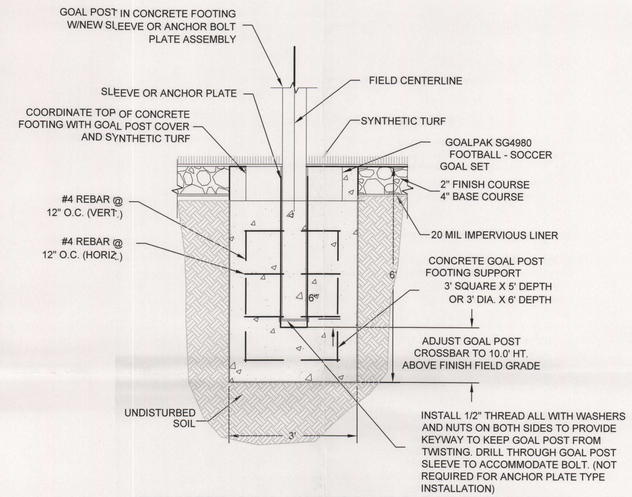

2 D1 FOOTBALL GOAL POST FOOTING

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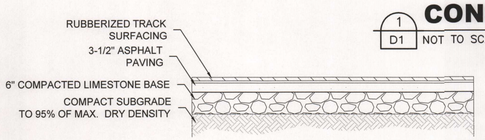

3 D1 RUBBERIZED "D" ZONE SECTION

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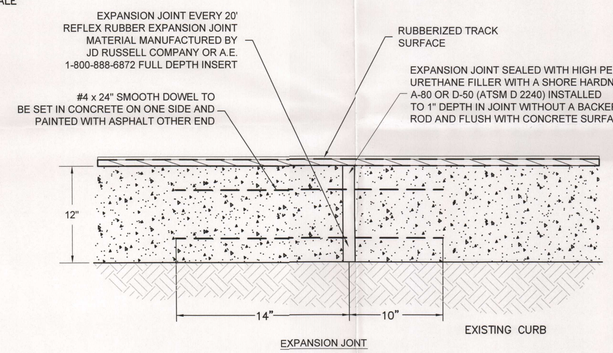

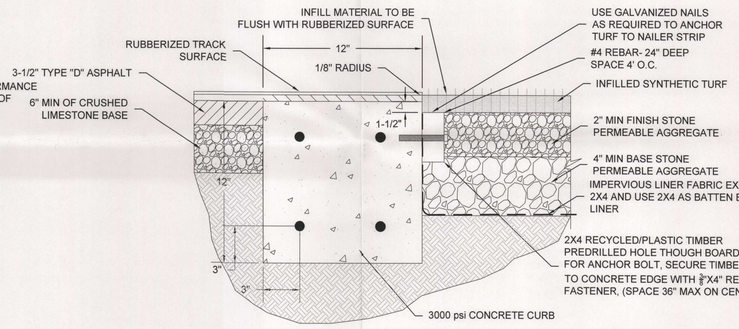

5 D1 SYNTHETIC TURF EDGE ANCHOR AT D-AREA

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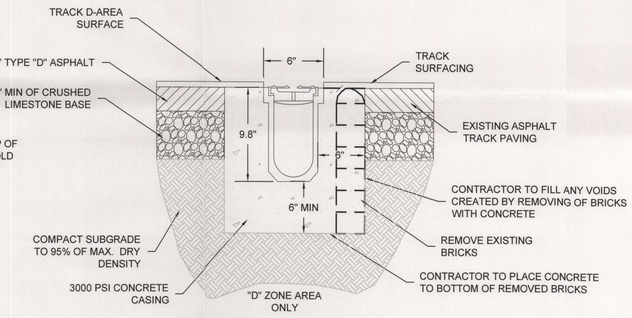

6 D1 ACO TRACK TRENCH DRAIN

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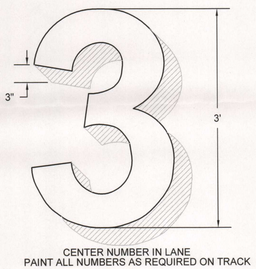

4 D1 TRACK NUMBER

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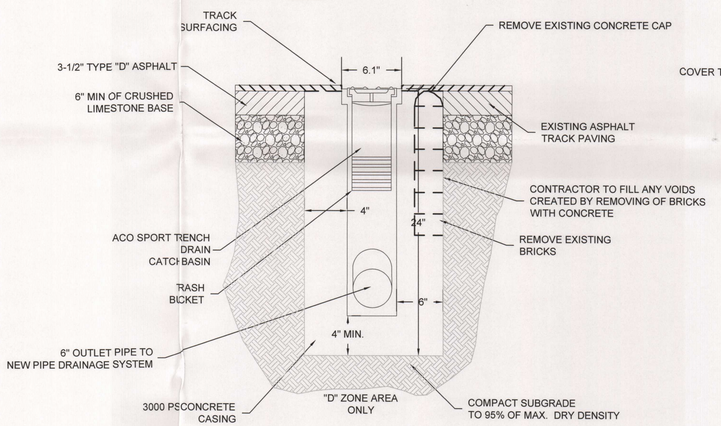

7 D1 ACO TRACK CATCH BASIN

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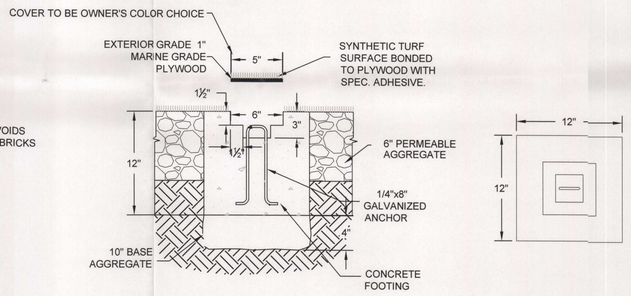

8 D1 SOCCER GOAL ANCHOR

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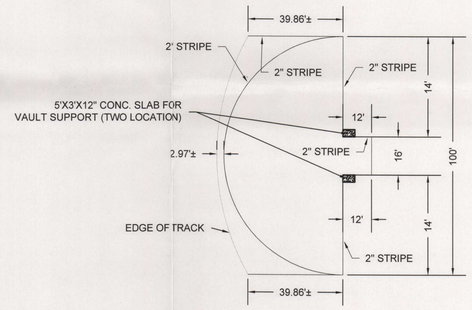


9 D1 HIGH JUMP DETAIL

NOT TO SCALE

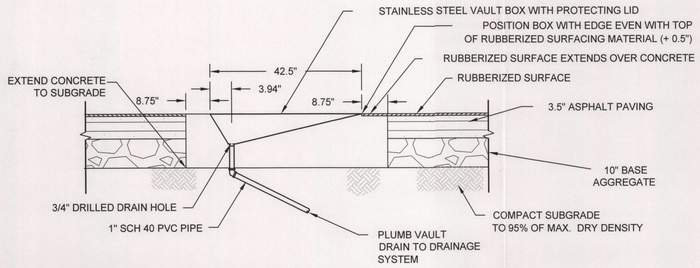
GI Engineering Associates, Inc.
CONSULTING ENGINEERS – SURVEYORS
PLANNERS – DESIGNERS
506 E. Broker Lane, Austin Texas 78753 (512)835-4203

DATE: 6/9/08
DRAWN: CFS
CHECKED: .
PROJECT TITLE: NEW BRAUNFELS I.S.D. NEW BRAUNFELS HIGH SCHOOL TRACK AND FIELD IMPROVEMENTS 2551 LOOP 337 N NEW BRAUNFELS, TX 78130
SHEET TITLE: DETAILS

STATE OF TEXAS VICTOR M. GIL 94994 LICENSED PROFESSIONAL ENGINEER VICTOR M. GIL LIC. #94994

REVISIONS

SHEET NUMBER
D1



1 D2 VAULT BOX-SECTION

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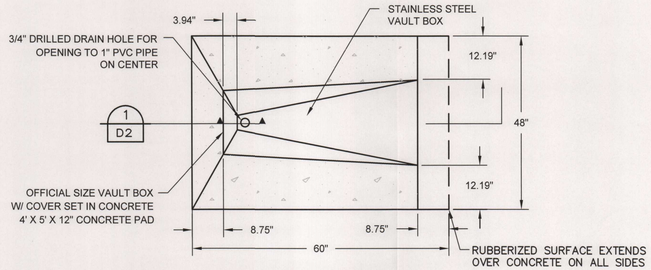

2 D2 VAULT BOX-PLAN VIEW

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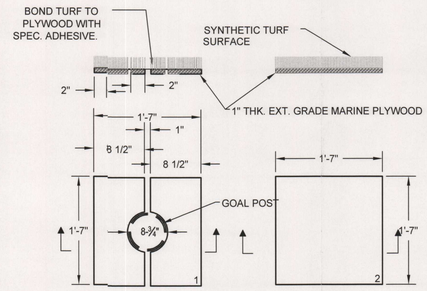

3 D2 FOOTBALL GOAL POST TURF COVERS

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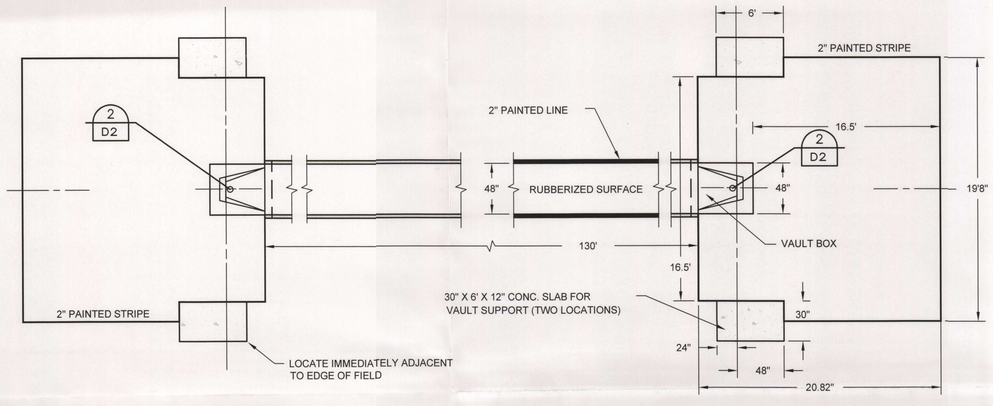

4 D2 POLE VAULT-PLAN VIEW

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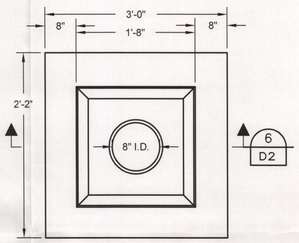
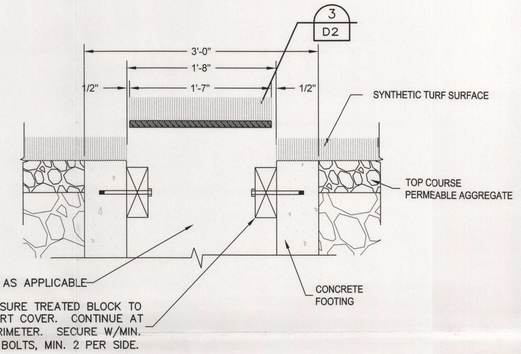


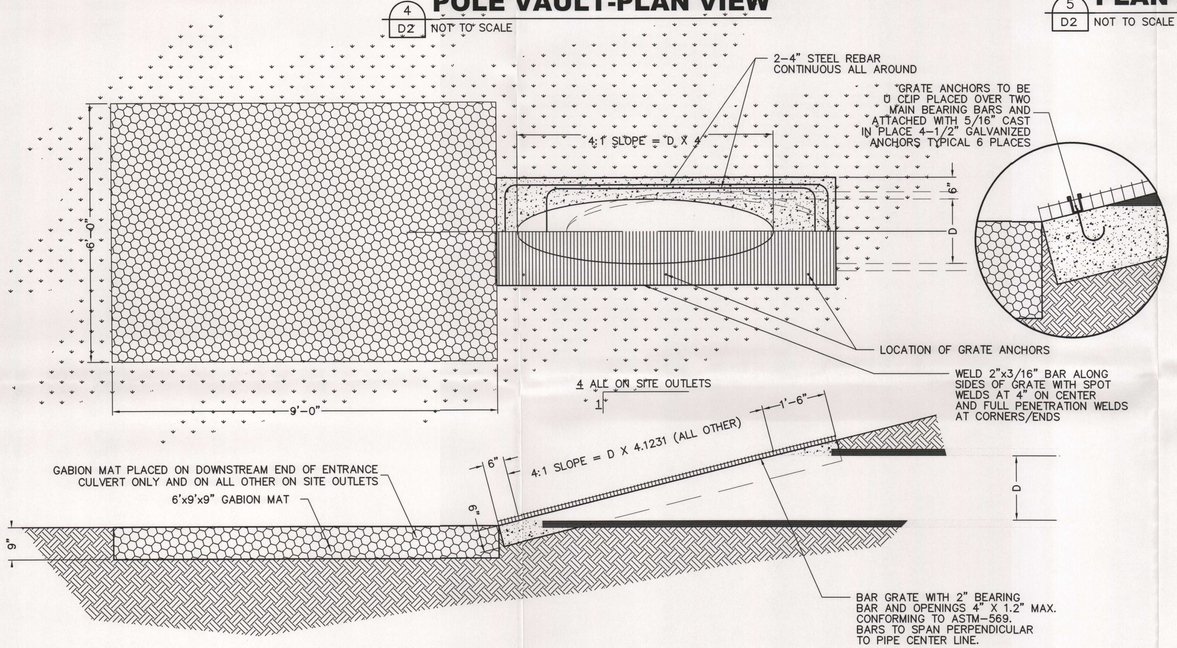
5 D2 PLAN AT FOOTBALL GOAL POST

NOT TO SCALE



6 D2 SECTION AT FOOTBALL GOAL POST

NOT TO SCALE

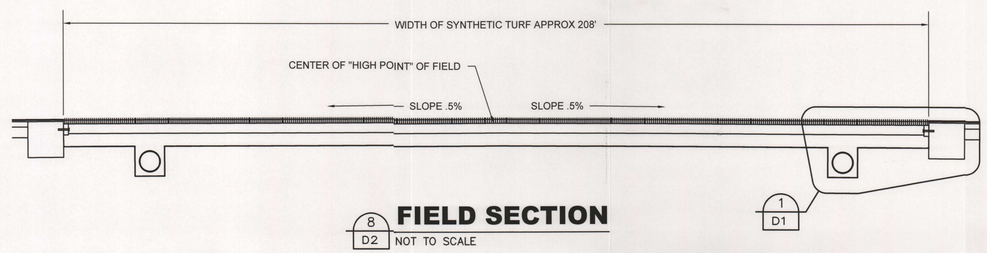


*** NOTE ***
1. CONTRACTOR WILL CONSTRUCT OUTLET TO A NEAT AND FINISH APPEARANCE.

2. CONTRACTOR TO PAINT BAR GRATE AND FACE OF CONCRETE WITH SEMI-GLOSS BLACK POLYURETHANE PAINT TO CREATE A FINISH APPEARANCE.

7 D2 PIPE END TREATMENT DETAIL

NOT TO SCALE



8 D2 FIELD SECTION

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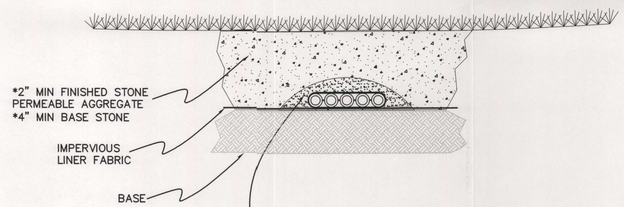

9 D2 COLLECTOR DETAIL

NOT TO SCALE

Gil Engineering Associates, Inc.
CONSULTING ENGINEERS – SURVEYORS
PLANNERS – DESIGNERS
506 E. Broker Lane, Austin Texas 78753 (512)835-4203

DATE: 6/9/08
NEW BRAUNFELS I.S.D.
NEW BRAUNFELS HIGH SCHOOL
TEXAS LOOP 337 IMPROVEMENTS
2561 LOOP 337 N
NEW BRAUNFELS, TX 78130
DRAWN: CFS
CHECKED: .
PROJECT TITLE: .
SHEET TITLE: DETAILS

REVISIONS

SHEET NUMBER
D2