TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 30, 2008

Mr. Michael Vonderhaar
Cibolo Creek Community Church, Inc.
30395 Ralph Fair Road
Fair Oaks Ranch, Texas 78015

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Cibolo Creek Community Church; Located at 30395 Ralph Fair Road; Fair Oaks Ranch, 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. 1704.02; Investigation No. 654295; Regulated Entity No. RN102748167

Dear Mr. Vonderhaar:

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 Alamo Consulting Engineering & Surveying, Inc. on behalf of Cibolo Creek Community Church, Inc. on April 21, 2008. Final review of the WPAP was completed after additional material was received on June 11, 2008. 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 Cibolo Creek Community Church WPAP site (EAPP # 1704.00) was previously approved, by letter dated September 24, 2001, for the construction of church buildings, to include chapels, rectories and classrooms, along with associated paved parking areas and 21,000 additional square feet of future church facilities. Two approved sedimentation/filtration ponds, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (1999) provide treatment for the site.

A technical clarification letter (EAPP # 1704.01), dated December 5, 2001, approved the use of on-site sewage facilities in lieu of the originally approved sewage collection system.
The WPAP modification application was submitted as compliance documentation for the Notice of Violation (NOV) issued to Cibolo Creek Community Church, Inc. for failure to build the water quality basins as designed and approved (CCEDS Inv # 599309). The application addresses the modifying of the

basins' shapes, inlet locations and basin discharge points, as well as adding sediment depth markers, filtration drain shut-off valves and replacing the filter sand media. This application satisfies the technical requirements of Violation No. 291615, and the violation will be resolved by a separate investigation.

However, since both basins were not constructed as originally designed or approved, even though they were certified by a Texas Licensed Professional Engineer, both basins will be required to be recertified, in writing, that they were constructed as designed with this modification. The letter must include, but not be limited to, all the requirements specified in special condition II of this letter.

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 8.9 acres. The modification consists of as-built conditions showing the changes to the two basins: shape, inlet location and discharge point. In addition, the shape of proposed buildings and parking areas and the locations of the future church facilities have also been modified. The impervious cover will remain at 3.6 acres (40 percent). According to a letter dated, June 13, 1995, signed by Monica M. Wallace, with Comal County, the site in the development is acceptable for the use of on-site sewage facilities.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two sedimentation/filtration basins, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (1999), were constructed to treat stormwater runoff. Each basin was designed to provide treatment for approximately 3 acres of the site with a minimum capture volume of 8,102 cubic feet and a minimum sand filter area of 1,105 square feet.

A basin certification letter was received by the TCEQ, San Antonio Regional Office, on October 29, 2007. The letter, dated June 10, 2003, stated that the two basins were built in general conformity with the plans and specifications.

GEOLOGY

According to the geologic assessment, dated February 5, 2001, included with the previously approved application, only one "possibly sensitive" feature (closed depression) was identified on site. The San Antonio Regional Office did not conduct a site assessment. A site investigation was conducted on September 28, 2007 for the purpose of a complaint investigation. During the site investigation, no new geologic features were discovered.

SPECIAL CONDITIONS

I. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letter dated September 24, 2001.

II. Since the basins were not built as originally designed or approved, a Texas Licensed Professional Engineer shall recertify, in writing, that the permanent BMPs or measures were constructed as designed with this modification, as required by standard condition 18 in this letter. Include the water quality volume and sand filter area of each basin in the certification letter. The certification letter must also address that the sediment depth markers and the filtration drain shut-off valves have been installed for both basins and that the filter sand media has been replaced for both basins.

III. Any future modifications submitted to the TCEQ shall conform to the design criteria current at the time the application is received.

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 application.

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.

During Construction:

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. Zero 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 Javier Anguiano of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4019.

Sincerely,

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

MRV/JA/eg

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

cc: Mr. Paul A. Shroeder, P.E., R.P.L.S., Alamo Consulting Engineering & Surveying, Inc.
Mr. Thomas H. Hornseth, P.E., Comal County
Mr. Daniel E. Kasprowicz, Mayor, City of Fair Oaks Ranch
Ms. Velma Danielson, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC212

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 28, 2008

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: Cibolo Creek Church, located at 30395 Ralph Fair Road, Fair Oaks Ranch, 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.: 1704.02

Dear Mr. Hornseth:

The enclosed WPAP application received on April 25, 2008, 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 May 24, 2008.

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

94410.00

TCEQ COPY

1704.02

MODIFICATION OF A WATER POLLUTION ABATEMENT PLAN

FOR

CIBOLO CREEK CHURCH
CITY OF SAN ANTONIO
COMAL COUNTY, TEXAS
FEBRUARY 2008
(REVISED APRIL 9, 2008)

SUBMITTED FOR:

Cibolo Creek Community Church, Inc.
Michael Vonderhaar, Executive Pastor
30395 Ralph Fair Road
Fair Oaks Ranch, TX 78015

SUBMITTED BY:

PAUL A. SCHROEDER, P.E., R.P.L.S.

ALAMO CONSULTING ENGINEERING & SURVEYING, INC.
140 HEIMER ROAD, STE. 617 SAN ANTONIO, TEXAS 78232
PHONE: 828-0691

TABLE OF CONTENTS

TCEQ CORE DATA FORM

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission *(If other is checked please describe in space provided)*

☐ New Permit, Registration or Authorization *(Core Data Form should be submitted with the program application)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☒ Other **WPAP MODIFICATION**

2. Attachments **Describe Any Attachments:** *(ex. Title V Application, Waste Transporter Application, etc.)*

☒ Yes ☐ No MODIFICATION OF A PREVIOUSLY APPROVED PLAN (TCEQ-0590)

3. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	4. Regulated Entity Reference Number *(if issued)*
CN		RN

SECTION II: Customer Information

5. Effective Date for Customer Information Updates (mm/dd/yyyy) 2/19/2008

6. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check only one of the following:*

☒ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other: _____

7. General Customer Information

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State) ☐ No Change**

If "No Change" and Section I is complete, skip to Section III – Regulated Entity Information.

8. Type of Customer:	☒ Corporation	☐ Individual	☐ Sole Proprietorship- D.B.A
☐ City Government	☐ County Government	☐ Federal Government	☐ State Government
☐ Other Government	☐ General Partnership	☐ Limited Partnership	☐ Other:

9. Customer Legal Name *(If an individual, print last name first: ex: Doe, John)* *If new Customer, enter previous Customer below* *End Date:*

CIBOLO CREEK COMMUNITY CHURCH, INC.

10. Mailing Address: 30395 RALPH FAIR ROAD

City	FAIR OAKS RANCH	State	TX	ZIP	78015	ZIP + 4	

11. Country Mailing Information *(if outside USA)*

12. E-Mail Address *(if applicable)* mvonderhaar@cibolocreek.com

13. Telephone Number	14. Extension or Code	15. Fax Number *(if applicable)*
(830) 981-8989		(830) 981-8991

16. Federal Tax ID *(9 digits)*	17. TX State Franchise Tax ID *(11 digits)*	18. DUNS Number*(if applicable)*	19. TX SOS Filing Number *(if applicable)*
742781755			

20. Number of Employees ☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

21. Independently Owned and Operated? ☒ Yes ☐ No

SECTION III: Regulated Entity Information

22. General Regulated Entity Information *(If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information ☐ No Change** *(See below)*

If "NO CHANGE" is checked and Section I is complete, skip to Section IV, Preparer Information.

23. Regulated Entity Name *(name of the site where the regulated action is taking place)*

CIBOLO CREEK CHURCH

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission *(If other is checked please describe in space provided)*

☐ New Permit, Registration or Authorization *(Core Data Form should be submitted with the program application)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☒ Other **WPAP MODIFICATION**

2. Attachments **Describe Any Attachments:** *(ex. Title V Application, Waste Transporter Application, etc.)*

☒ Yes ☐ No MODIFICATION OF A PREVIOUSLY APPROVED PLAN (TCEQ-0590)

3. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**4. Regulated Entity Reference Number *(if issued)***
CN		**RN**

SECTION II: Customer Information

5. Effective Date for Customer Information Updates (mm/dd/yyyy) 2/19/2008

6. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check only one of the following:*

☒ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other: _____

7. General Customer Information

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State) ☐ No Change**

If "No Change" and Section I is complete, skip to Section III – Regulated Entity Information.

8. Type of Customer:	☒ Corporation	☐ Individual	☐ Sole Proprietorship- D.B.A
☐ City Government	☐ County Government	☐ Federal Government	☐ State Government
☐ Other Government	☐ General Partnership	☐ Limited Partnership	☐ Other:

9. Customer Legal Name *(If an individual, print last name first: ex: Doe, John)* *If new Customer, enter previous Customer below* *End Date:*

CIBOLO CREEK COMMUNITY CHURCH, INC.

10. Mailing Address: 30395 RALPH FAIR ROAD

City	FAIR OAKS RANCH	**State**	TX	**ZIP**	78015	**ZIP + 4**	

11. Country Mailing Information *(if outside USA)*

12. E-Mail Address *(if applicable)* mvonderhaar@cibolocreek.com

13. Telephone Number	**14. Extension or Code**	**15. Fax Number** *(if applicable)*
(830) 981-8989		(830) 981-8991

16. Federal Tax ID *(9 digits)*	**17. TX State Franchise Tax ID** *(11 digits)*	**18. DUNS Number***(if applicable)*	**19. TX SOS Filing Number** *(if applicable)*
742781755			

20. Number of Employees ☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

21. Independently Owned and Operated? ☒ Yes ☐ No

SECTION III: Regulated Entity Information

22. General Regulated Entity Information *(If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information ☐ No Change** *(See below)*

"If "NO CHANGE" is checked and Section I is complete, skip to Section IV, Preparer Information.

23. Regulated Entity Name *(name of the site where the regulated action is taking place)*

CIBOLO CREEK COMMUNITY CHURCH

24. Street Address of the Regulated Entity: *(No P.O. Boxes)*	30395 RALPH FAIR ROAD							
	City	F.O.R.	**State**	TX	**ZIP**	78015	**ZIP + 4**	
25. Mailing Address:	SAME AS ABOVE							
	City		**State**		**ZIP**		**ZIP + 4**	

26. E-Mail Address:	mvonderhaar@cibolocreek.com		
27. Telephone Number	**28. Extension or Code**	**29. Fax Number** *(if applicable)*	
(830) 981-8989		(830) 981-8991	
30. Primary SIC Code (4 digits)	**31. Secondary SIC Code** (4 digits)	**32. Primary NAICS Code** (5 or 6 digits)	**33. Secondary NAICS Code** (5 or 6 digits)
8661		83110	

34. What is the Primary Business of this entity? *(Please do not repeat the SIC or NAICS description.)*

CHURCH - PLACE OF WORSHIP

Questions 34 – 37 address geographic location. Please refer to the instructions for applicability.

35. Description to Physical Location:	30395 RALPH FAIR ROAD		
36. Nearest City	**County**	**State**	**Nearest ZIP Code**
FAIR OAKS RANCH	COMAL	TX	78015

37. Latitude (N) In Decimal:			**38. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29°	44'	44.3"	98°	37'	27.5"

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form or the updates may not be made. If your Program is not listed, check other and write it in. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Industrial Hazardous Waste	☐ Municipal Solid Waste
☐ New Source Review – Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS	☐ Sludge
☐ Stormwater	☐ Title V – Air	☐ Tires	☐ Used Oil	☐ Utilities
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	PAUL A. SCHROEDER/ALAMO CONSULT.	**41. Title:**	DIR. OF ENG./PRESIDENT

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(210) 828-0691		(210) 824-3055	pas@aces-sa.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 9 and/or as required for the updates to the ID numbers identified in field 39.

(See the Core Data Form instructions for more information on who should sign this form.)

Company:	CIBOLO CREEK COMM. CHURCH	**Job Title:**	EXECUTIVE PASTOR
Name *(In Print)* :	MICHAEL VONDERHAAR	**Phone:**	(830) 981-8989
Signature:		**Date:**	2/20/08

GENERAL INFORMATION FORM

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: Cibolo Creek Church
COUNTY: Comal STREAM BASIN: Cibolo Creek

EDWARDS AQUIFER: X RECHARGE ZONE
__ TRANSITION ZONE

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

CUSTOMER INFORMATION

1. Customer (Applicant):

Contact Person: Michael Vonderhaar
Entity: Cibolo Creek Community Church, Inc.
Mailing Address: 30395 Ralph Fair Road
City, State: Fair Oaks Ranch, Texas Zip: 78015
Telephone: (830)981-8989 FAX:(830)981-8991

Agent/Representative (If any):

Contact Person: Paul A. Schroeder, P.E., R.P.L.S.
Entity: Alamo Consulting Engineering & Surveying, Inc.
Mailing Address: 140 Heimer Road, Suite 617
City, State: San Antonio, Texas Zip: 78232
Telephone: (210)828-0691 FAX: (210)824-3055

2. X This project is inside the city limits of Fair Oaks Ranch.
__ 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.

Cibolo Creek Church, 30395 Ralph Fair Road, Fair Oaks Ranch, TX 78015

4. X **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. X **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. X 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. X **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:
X Existing commercial site
___ Existing industrial site
___ Existing residential site
___ Existing paved and/or unpaved roads
___ Undeveloped (Cleared)
___ Undeveloped (Undisturbed/Uncleared)
___ Other: _____

PROHIBITED ACTIVITIES

9. X 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. X 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:

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

13. X 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. X 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:

Paul A. Schroeder, P.E., R.P.L.S.
Print Name of Customer/Agent

Signature of Customer/Agent

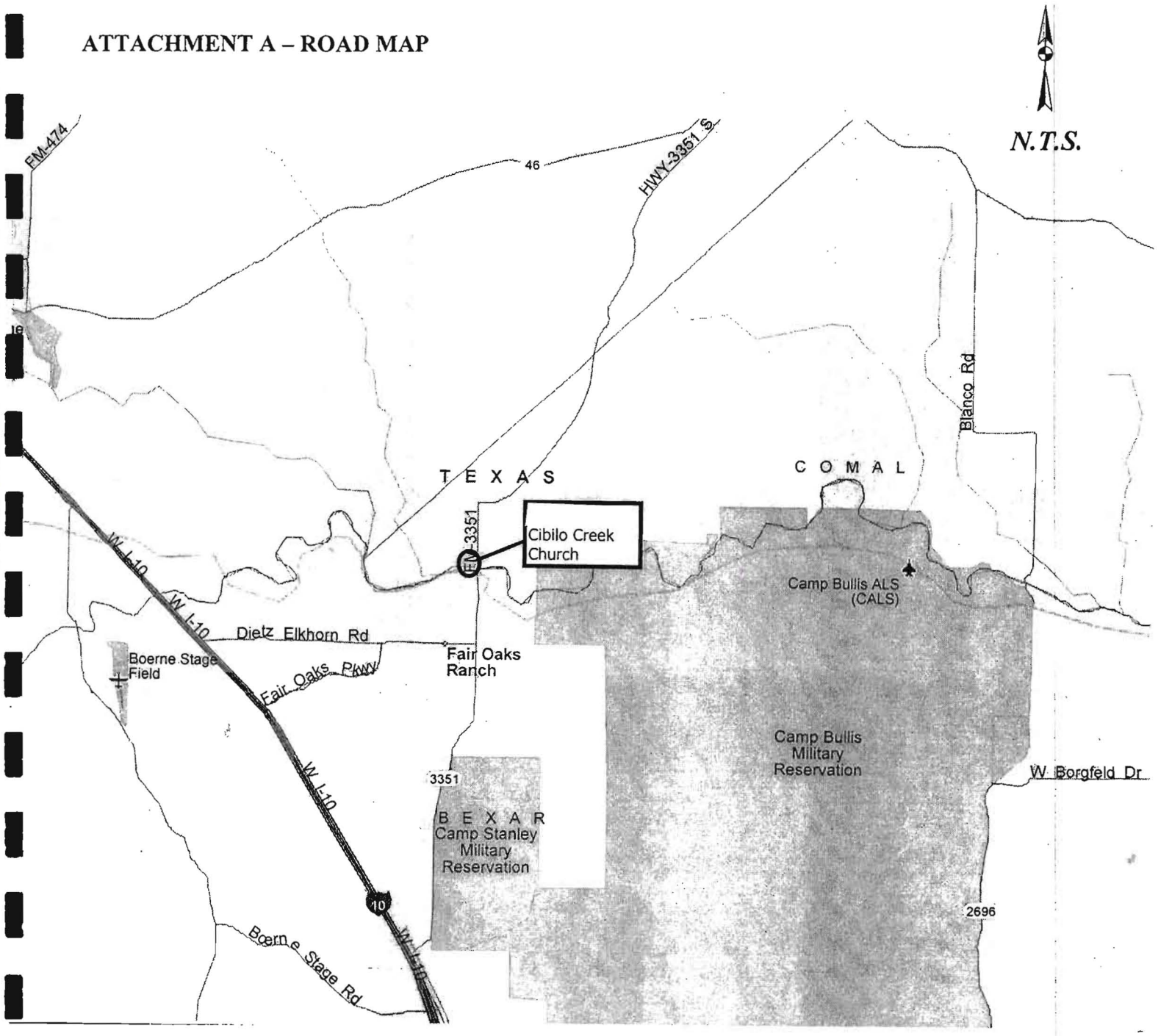
04/09/08
Date

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

ATTACHMENT A – ROAD MAP

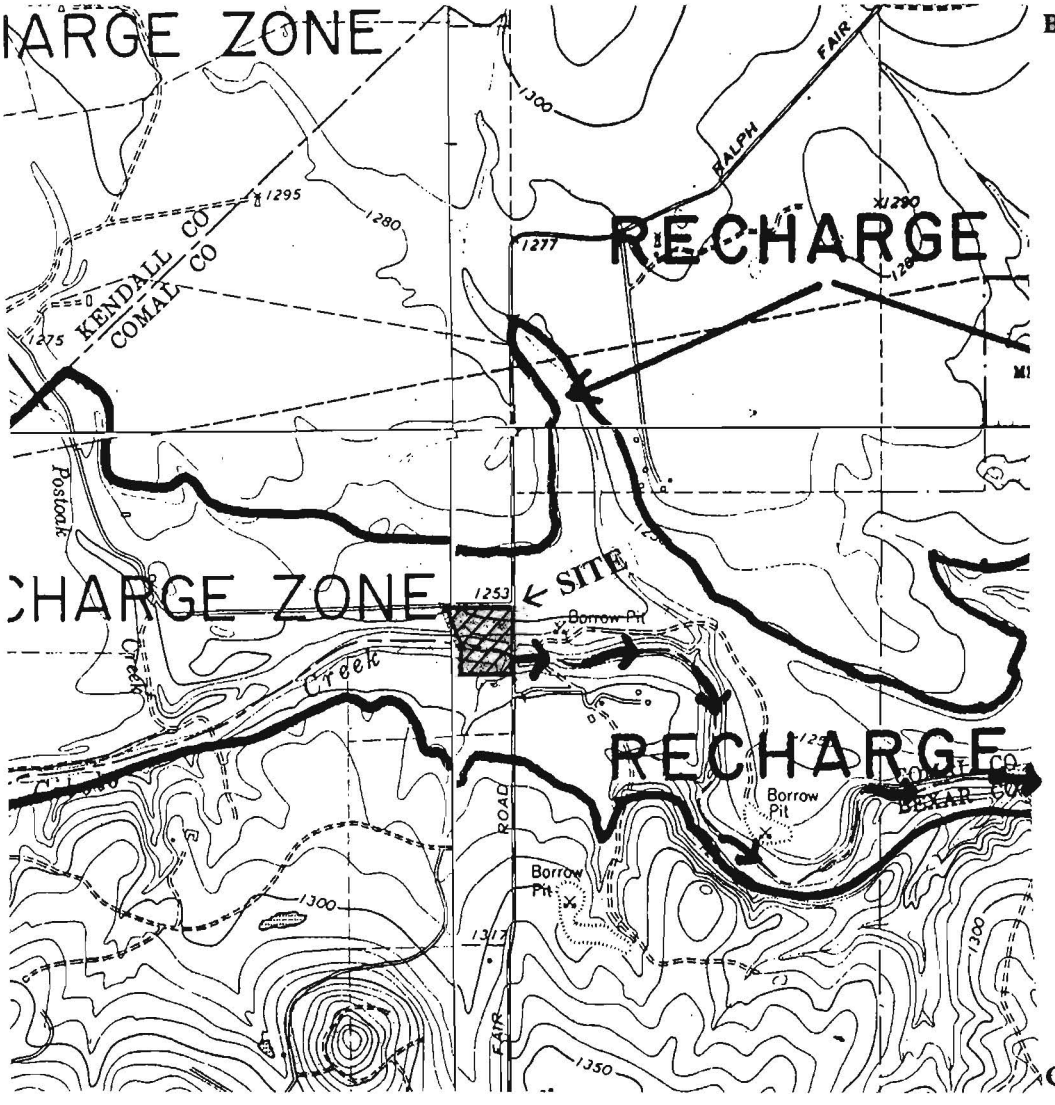


ATTACHMENT "B"
RECHARGE ZONE MAP

ATTACHMENT B – USGS / EDWARDS RECHARGE ZONE MAP

BOERNE QUAD

BERGHEIM QUAD



1" = 2000'

VAN RAUB QUAD

CAMP BULLIS QUAD

NOTE:

CIBOLO CREEK CONTINUES TO FLOW ACROSS THE RECHARGE ZONE FOR APPROXIMATELY 39 MILES AS SHOWN ON THE CAMP BULLIS, BULVERDE AND SCHERTZ U.S.G.S. QUAD MAPS.

ATTACHMENT "C"
PROJECT DESCRIPTION

PROJECT DESCRIPTION

This project is the modification of an approved WPAP for 8.93 acres of land in the City of Fair Oaks Ranch, Comal County, Texas.

The modification consist of as-built conditions showing changes to the basin shape, inlet location, discharge point, shape of proposed building facilities and parking areas.

The changes to buildings and parking areas did not result in an increase in pollutant loadings. The changes to the basin configuration does not cause a decrease in storage value nor sand filter area. Therefore, based on these two observations, the modifications do not have an adverse effect on the treatment of stormwater for this project.

It is also proposed to add sedimentation depth gage maker , filtration drain shut off valves and replace the sand in both basins.

These modification will address the items in the "Notice of Violations".

The original site was undeveloped agricultural land. The current site is a church site with related facilities for a total of three existing buildings and one future structure.

The original project disturbed approximately 4.5 acres of the site. The modification will disturb approximately 0.06 acres consisting of the sand filter areas. The proposed impervious cover of 3.6 acres (approximately 60% of the site) remains unchanged.

GEOLOGICAL ASSESSMENT
(As taken from the originally approved WPAP)

GEOLOGICAL ASSESSMENT

The Geologic Assessment (GA) included with this modification is a copy of the original GA. There is no need for an update due to existing conditions of the site and the fact that no new features were found during construction. The GA site map is now included.

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

PROJECT NAME: FAIR OAKS RANCH - COMAL COUNTY UNIT 3
LOT 1801 (8.93 ACRES) CIBOLO CREEK CHURCH

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 25-30 feet thick. In general, the soil present appears to have the ability to:

__ transmit fluid flow to the subsurface.
X impede fluid flow to the subsurface.

3. X **SOILS ATTACHMENT.** A narrative description of soil units and a soil profile, including thickness and hydrologic characteristics are attached at the end of this form.

4. 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.

5. 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.

6. 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" = 50 '
Site Geologic Map Scale 1" = 50 '

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

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

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

10. 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.

11. X The Recharge Zone boundary is shown and labeled, if appropriate.

12. 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 §76.

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

ADMINISTRATIVE INFORMATION

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

Date(s) Geologic Assessment was performed: 2-2-2001
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 213.

DAVID P. SEAGRAVES

DAVID P. SEAGRAVES (210) 377-1603

Print Name of Geologist Telephone

Fax

David P. Seagraves 2-5-01

Signature of Geologist Date

Representing: INDEPENDENT CONSULTANT
(Name of Company)

FAIR OAKS RANCH - COMAL COUNTY UNIT 3
LOT 1801 (8.93 ACRES)

SOIL UNIT

The site contains a soil cover of clay and silty clay with some limestone fragments which is several feet thick and greater at higher elevations (approximately 50% of the tract). The clayey soil cover overlies the gravelly terrace deposit, which for practical purposes is included in the overall thickness of 25' to 30' of soil cover over the Lower Glen Rose Fm.. The site contains a good natural grass cover with a moderate cover of trees at the lower elevations of the site.
Overall, the soil cover at the site has the capacity to impede fluid movement into the subsurface, with the exception of some exposures of the gravelly loam within the channelized drainageway.

FAIR OAKS RANCH - COMAL COUNTY UNIT 3

LOT 1801 (8.93 Acres)

STRATIGRAPHIC COLUMN

GEOLOGIC FORMATION	APPROXIMATE THICKNESS(FT.)	MEMBER	GEOLOGIC DESCRIPTION	WATER BEARING/PERMEABILITY PROPERTIES
ALLUVIUM (Qal)	45 *		Silt, sand, and gravel.	In places yields water for stock and domestic wells
SITE FLUVIATILE TERRACE DEPOSITS (Qt)	30 *		Gravel, limestone, dolomite and chert, sand, silt, and clay	In places yields water for stock and domestic wells.
LEONA FORMATION (Qle)	30 *		Fine grained calcareous silt and coarse gravel	In places yields water for stock and domestic wells.
UVALDE GRAVEL (Q-Tu)	30 *		Coarse flinty gravel in matrix of clay or silt.	Not known to yield water to wells in Bexar County.
WILCOX GROUP — UNDIFFERENTIATED DEPOSITS (Ewi)	1,070		Thin-bedded sand and sandstone and some clay, lignite, and calcareous concretions.	Yields moderate supplies of water of good to poor quality.
MIDWAY GROUP — WILLS POINT FORMATION (Emi)	490		Arenaceous clay containing numerous arenaceous and calcareous concretions.	Not known to yield water to wells in Bexar County.
NAVARRO GROUP — MARLBROOK MARL (Kknm)	1,000		Glauconitic marl and calcareous clays.	Not known to yield water to wells in Bexar County.
PECAN GAP MARL (Kpg)	185		Calcareous shale and marl with some bentonitic zones.	Not known to yield water to wells in Bexar County.
AUSTIN CHALK (Kau)	170		Limestone and argillaceous chalky limestone.	Yields small to large supplies of good to poor quality water.
EAGLE FORD SHALE (Kef)	30		Calcareous and sandy shale and some argillaceous limestone.	Not known to yield water to wells in Bexar County.
BUDA LIMESTONE (Kbu)	60		Dense, hard limestone.	Yields sufficient water near the outcrop for stock and domestic use.
DEL RIO CLAY (Kdr)	40-60		Calcareous shale; clays.	Not water bearing.
EDWARDS AND ASSOCIATED LIMESTONE — GEORGETOWN FORMATION (Ked)	20-40		Dense, shaley limestone, mudstone and wackestone; isolated fossil molds.	Maybe water bearing, fractures are few and closed matrix permeability very low, total porosity less than 5%.
EDWARDS GROUP — PERSON FORMATION (Ked)	80-100	CYCLIC MARINE	Hard, dense, recrystallized limestone; mudstone; rudistid biomicrite; some moldic porosity.	Many open fractures, low matrix permeability, total porosity 5-10%.
	60-90	LEACHED COLLAPSED	Recrystallized, leached limestone; burrowed mudstone and wackestone, highly leached in places; solution breccias, vuggy, honeycombed.	Many open fractures, several cavernous zones, matrix permeability low to high, total porosity generally less than 20%, most porous and permeable part of Person Formation.
	20-24	REGIONAL DENSE MEMBER	Limestone, shaley to wispy, dense; mudstone; no open fractures.	Yields no water, total porosity less than 5%
EDWARDS GROUP — KAINER FORMATION (Ked)	50-60	GRAINSTONE	Limestone; chalky to hard cemented miliold grainstone with associated beds of mudstones and wackestones; locally honeycombed in burrowed beds.	Yields little water, few open fractures, matrix permeability low to moderate, total porosity 5-15%.
	50-70	KIRSCHBERG EVAPORATE	Limestone and leached evaporitic rocks with boxwork porosity; most porous subdivision.	Many open fractures, cavernous layers, matrix permeability low to very high, total porosity 5-25%, most porous and permeable part of Edwards Group.
	110-150	DOLOMITIC	Limestone, recrystallized from dolomite, honeycombed in a few burrowed beds; more cavernous in upper part.	Many open fractures, matrix permeability, total porosity 5-20%.
EDWARDS GROUP — WALNUT FORMATION (Ked)	40-60	SOMETIMES INCLUDED AS BASAL NODULAR MEMBER OF KAINER	Limestone, hard, dense; clayey mudstone to wackestone, nodular wispy, stylolitic, mottled; isolated molds.	Few open fractures, low matrix permeability, total porosity less than 10%.
GLEN ROSE FORMATION (Kgr)	650-700		Calcareous limestone; varying amounts of clay and sand; upper member karst structures and springs.	Upper member yields small to moderate quantities of generally poor quality water. The lower member yields fairly good water.

* Variable up to thickness given

(modified after Maclay and Small, 1976; Metcalf and Eddy, 1979)

FAIR OAKS RANCH - COMAL COUNTY UNIT 3
LOT 1801 (8.93 ACRES)

SITE-SPECIFIC GEOLOGY

The site consists of alluvium deposits within a fluviatile terrace along the Cibolo Creek. The thickness of the unit is 25' to 30' of gravelly loams and includes a capping surface clay layer which is several feet thick.
The alluvium unit overlies the Lower Glen Rose Fm. which is not exposed at the site.
No structural or karstic features were observed on the site.
Overall, the alluvium unit at the site and specifically the surface clay cover appears to impede fluid movement into the subsurface.

[redacted]

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: UNIT 3 - LOT 1801 (8.93 Ac)

FEATURE ID			FEATURE CHARACTERISTICS																												PHYSICAL SETTING													
1A	1B	1C	2	3			4			5	6		7			8			9				10			11	12			13				14					15	16			17
LOCATION	TYPE (1)	POINTS	GEOLOGIC FORMATION	VERTICAL FEATURE (FEET)			HORIZONTAL FEATURE (FEET)			LENGTH & WIDTH (FEET)	TREND (C, CD, FR, FZ, SC, SH)		DENSITY (FR, VF)			APERTURE (FR, VR)			INFILLING (CD, FR, FZ, SC, SH, VR)				RELATIVE INFILTRATION RATE			SUB-TOTAL	SENSITIVITY			DRAINAGE AREA (ACRES)				TOPOGRAPHY (2)					SUB-TOTAL	POTENTIAL RECHARGE			COM-MENTS
				C, CD, SC, SH			C, SC			FZ, FR, VR, Z		10	0	5	10	0	5	10	0	5	10	15	0	10	30					0	5	10	15	0	5	10	15	20					
				X	Y	Z	X	Y	Z		DIRECTION	DOMINANT	LOW	MODERATE	HIGH	SMALL	MEDIUM	LARGE	CEMENTED	FINE	COARSE	NONE	NONE/LOW	MODERATE	HIGH		NOT <25	POSSIBLE 25 - 60	SENSITIVE >60	<1	<10	<50	>50	WALL	HILLTOP	HILLSIDE	FLOODPLAIN	STREAM BED		NONE/LOW <15	MODERATE 15 -20	HIGH >20	YES
S-1	CD	10	QAL	10	10	3															✓			✓		30		✓				✓						✓	30			✓	✓

(1) C = 35, CD = 10, FR = 0, FZ = 15, MM = 35, SC = 10, SH = 20, VR = 0, ZONE = 35

(2) WALL = Vertical/near veritical wall above 100-yr floodplain
FLOODPLAIN = 100-yr floodplain
STREAM BED = Ordinary High Water Mark

TNRCC - 0629 ~~(2/1/97)~~ DPH 6-1-99

I have read, understood, and followed the Texas Natural Resource Conservation Commission's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

David P. Heagraves 2-2-01

Geologist signature Date

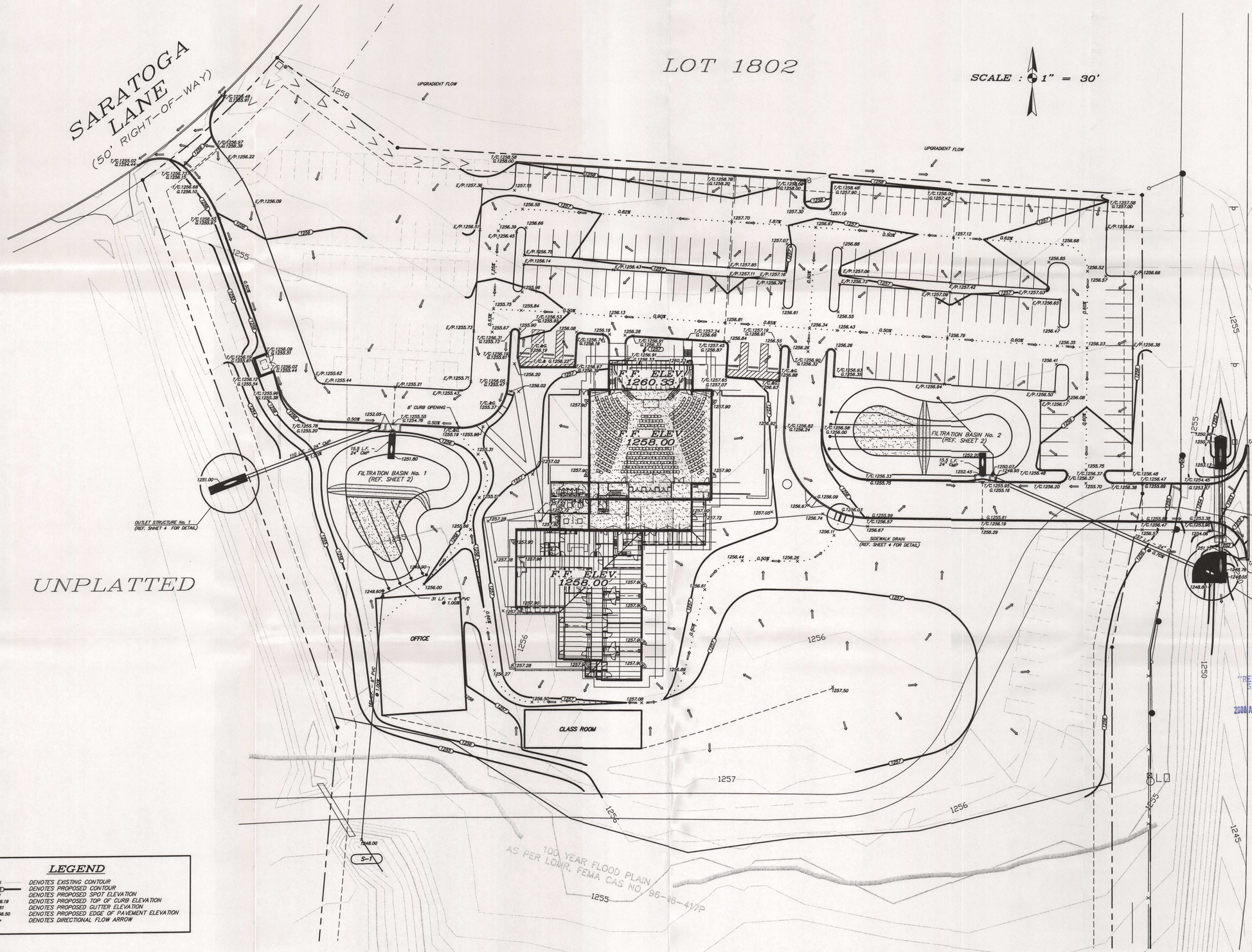
Sheet 1 of 1

FAIR OAKS RANCH - COMAL COUNTY UNIT 3
LOT 1801 (8.93 ACRES)

COMMENTS

S-1 CLOSED DEPRESSION, scour feature at the base of two culverts. Scouring is within moderately cemented gravels and gravelly loam. Does not appear to retain water and when observed was dry. This feature appears to partially impede and/or filter fluid movement into the subsurface.

GEOLOGICAL SITE MAP



LEGEND

1256	DENOTES EXISTING CONTOUR
(1258)	DENOTES PROPOSED CONTOUR
× 1256.29	DENOTES PROPOSED SPOT ELEVATION
× T/C.1256.19	DENOTES PROPOSED TOP OF CURB ELEVATION
× G.1255.61	DENOTES PROPOSED GUTTER ELEVATION
× E/P.1256.50	DENOTES PROPOSED EDGE OF PAVEMENT ELEVATION
⟹	DENOTES DIRECTIONAL FLOW ARROW

"RECEIVED TCEQ"
SAN ANTONIO
REGION
2008 APR 14 PM 1:44

NOTE:

1. FOR THE PROPOSED MODIFICATION PLAN THE ONLY AREA TO BE DISTRUBED IS THE SAND FILTER AREA.
2. DUE TO THE DISTRUBED AREA BEING LIMITED TO THE SAND FILTER AREA, NO TEMPORAY BMP'S ARE REQUIRED.
3. THE PERMANENT BMP CONSISTS OF THE TWO BASINS SHOWN. NOTE CONFIGURATION AND OUTLETS HAVE BEEN REVISED.
4. SEE SHEET 1A FOR CONSTRUCTION NOTES.

NOTE :
REFERENCE SHEET 4 FOR ALL SITE GRADING DETAILS.

PLAT No.
N/A

REVISIONS

	DATE	DESCRIPTION	APPRVD
0		RELEASED FOR CONSTRUCTION	
1	11-27-02	REVISED SIDEWALK ELEV. ON WEST SIDE OF BLDG.	G.G.M.
2	2-20-08	REVISION UPDATE BASIN	P.S.
3			
4			
5			

STATE OF TEXAS
PAUL A. SCHROEDER
57564
REGISTERED PROFESSIONAL ENGINEER
4/1/08

ALAMO
CONSULTING ENGINEERING & SURVEYING, INC.
ACES
140 HEIMER RD., STE. 617, SAN ANTONIO, TX. 78232
PHONE: (210)828-0691 FAX: (210)824-3055

CIBOLO CREEK CHURCH

SITE GRADING PLAN

JOB NO.: 094400
HORIZ. SCALE: 1" = 30'
VERT. SCALE: N/A
CONTOUR INT.: 1'
DRAWN BY: G.G.M.
DESIGNED BY: G.G.M.
CHECKED BY: P.A.S.
FILE NAME: PLANG
SHEET: 2 OF 4
PAGE: 2 OF 4

MODIFICATION
OF A
PREVIOUSLY APPROVED PLAN
APPLICATION

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. Regulated Entity Name: Cibolo Creek Church
2. Original Regulated Entity Name: Cibolo Creek Church

3. X **ATTACHMENT A - Original Approval Letter.** A copy of the original approval letter and copies of any letters approving modifications are found at the end of this form.

4. A modification of a previously approved plan is requested for: (INDICATE ALL THAT APPLY)

   X 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.

5. X **ATTACHMENT B - Narrative of Proposed Modification.** A narrative description of the nature of each proposed modification is provided at the end of this form.

6. Original Project:

Type:	WPAP X SCS __ UST __ AST __
Size:	8.93 acres
Population:	0 (transient)
Wastewater Volume:	4,300 gal/day
Sewer Pipe:	0 linear ft
Hydrocarbon Storage:	0 # of tanks
Impervious Cover:	60 %

7. Proposed Modification:

Type:	WPAP X SCS __ UST __ AST __
Size:	8.93 acres
Population:	0 (transient)
Wastewater Volume:	4,300 gal/day
Sewer Pipe:	0 linear ft
Hydrocarbon Storage:	0 # of tanks
Impervious Cover:	60 %

8. **ATTACHMENT C - Site Plan.** A Site Plan showing the existing conditions of the site, the location of proposed modification(s), and, as applicable, geologic or man-made features, temporary erosion and sedimentation controls, and permanent BMPs is found at the end of this form.

9. X One (1) original and three (3) copies of a completed 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:

Paul A. Schroeder, P.E., R.P.L.S.
Print Name of Customer/Agent

Signature of Customer/Agent

02/21/08
Date

ATTACHMENT A
ORIGINAL APPROVAL LETTERS
September 24, 2001
December 5, 2001

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

September 24, 2001

Mr. Robert Artle
Cibolo Creek Church
29745 Mellow Wind Dr.
Fair Oaks Ranch, TX 78015

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Cibolo Creek Church;30390 Saratoga Lane; Fair Oaks Ranch, 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. 1704.00

Dear Mr. Artle:

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 Mr. Robert J. Browning, P.E. of Alamo Consulting Engineering and Surveying, Inc. on behalf of Cibolo Creek Church on June 20, 2001. Final review of the WPAP submittal was completed after additional material was received on August 13, 2001, and September 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 proposed church project will have an area of approximately 8.9 acres. It will include construction of approximately 25,000 square feet of church buildings, to include chapels, rectories, and classrooms. An estimated additional 21,000 square feet of church facilities are planned for future development. Approximately 205,000 square feet of asphalt paved parking area is proposed. The impervious cover will be 3.6 acres (60 percent). Project wastewater will be disposed of by conveyance to the existing Fair Oaks Ranch Treatment Plant owned by the Fair Oaks Ranch Utilities.

PERMANENT POLLUTION ABATEMENT MEASURES

Two sedimentation/filtration basins designed using the TNRCC technical guidance document, *Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices* (June 1999) will be constructed to treat storm water runoff. Each basin is designed to provide treatment for approximately 3

acres of the site with a minimum capture volume of 8,102 cubic feet and a minimum sand filter area of 1,105 square feet. The approved measures have been presented to 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, one "possibly sensitive" closed depression was identified on the site. The San Antonio Regional Office did not perform site assessment inspection.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to use of any of the facilities.
II. All sediment and or media removed from the sedimentation/filtration basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335 as applicable.

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.

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 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 Lynn M. Bumguardner of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403.4023.

Sincerely,

Bobby D. Caldwell

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

JAS/LMB/eg

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

cc: Robert J. Browning, P.E., Alamo Consulting Engineering and Surveying, Inc.
The Honorable E. L. Boots Gaubatz, Fair Oaks Ranch
Mr. Tom Hornseth, Comal County
Mr. Greg Ellis, Edwards Aquifer Authority
TNRCC Field Operations

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

December 5, 2001

Mr. Robert Artle
Cibolo Creek Church
29745 Mellow Wind Dr.
Fair Oaks Ranch, TX 78015

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Cibolo Creek Church; 30390 Saratoga Lane; Fair Oaks Ranch, Texas
TYPE OF PLAN: Technical Assistance Related to a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program File No. 1704.01

Dear Mr. Artle:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the request for revision of the approved plans for the referenced project submitted to the San Antonio Regional Office by Robert Browning, P.E. of Alamo Consulting Engineering, and Surveying, Inc. on behalf of Cibolo Creek Church on October 29, 2001. Final review was completed after additional material was received on December 4, 2001. This 8.9 acre project was originally approved by letter on September 24, 2001.

As presented, the modification will consist of changing the method of wastewater disposal of the facility from conveyance to Fair Oaks Ranch wastewater treatment plant to disposal by an on-site sewage facility. According to a letter dated, June 13, 1995, signed by Monica M. Wallace, with Comal County, the site is acceptable for the use of on-site sewage facilities. Therefore, based on the engineer's concurrence of compliance, the changes are approved subject to applicable state rules and all Special and Standard Conditions listed in the WPAP approval letter of September 24, 2001.

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, modification to a plan, or exception. 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% of the construction has commenced on the project or an extension of time has been requested.*

If you have any questions or require additional information, please contact Lynn M. Bumguardner of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4023.

Sincerely,

Bobby D. Caldwell

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

JAS/LMB/eg

cc: Mr. Robert J. Browning, Alamo Consulting Engineering, & Surveying, Inc.
Mr. Tom Hornseth, Comal County
Mr. E. L. "Boots" Gaubatz, Mayor, Fair Oaks Ranch
Mr. Greg Ellis, Edwards Aquifer Authority
TNRCC Field Operations, Austin

ATTACHMENT B
NARRATIVE OF PROPOSED MODIFICATION

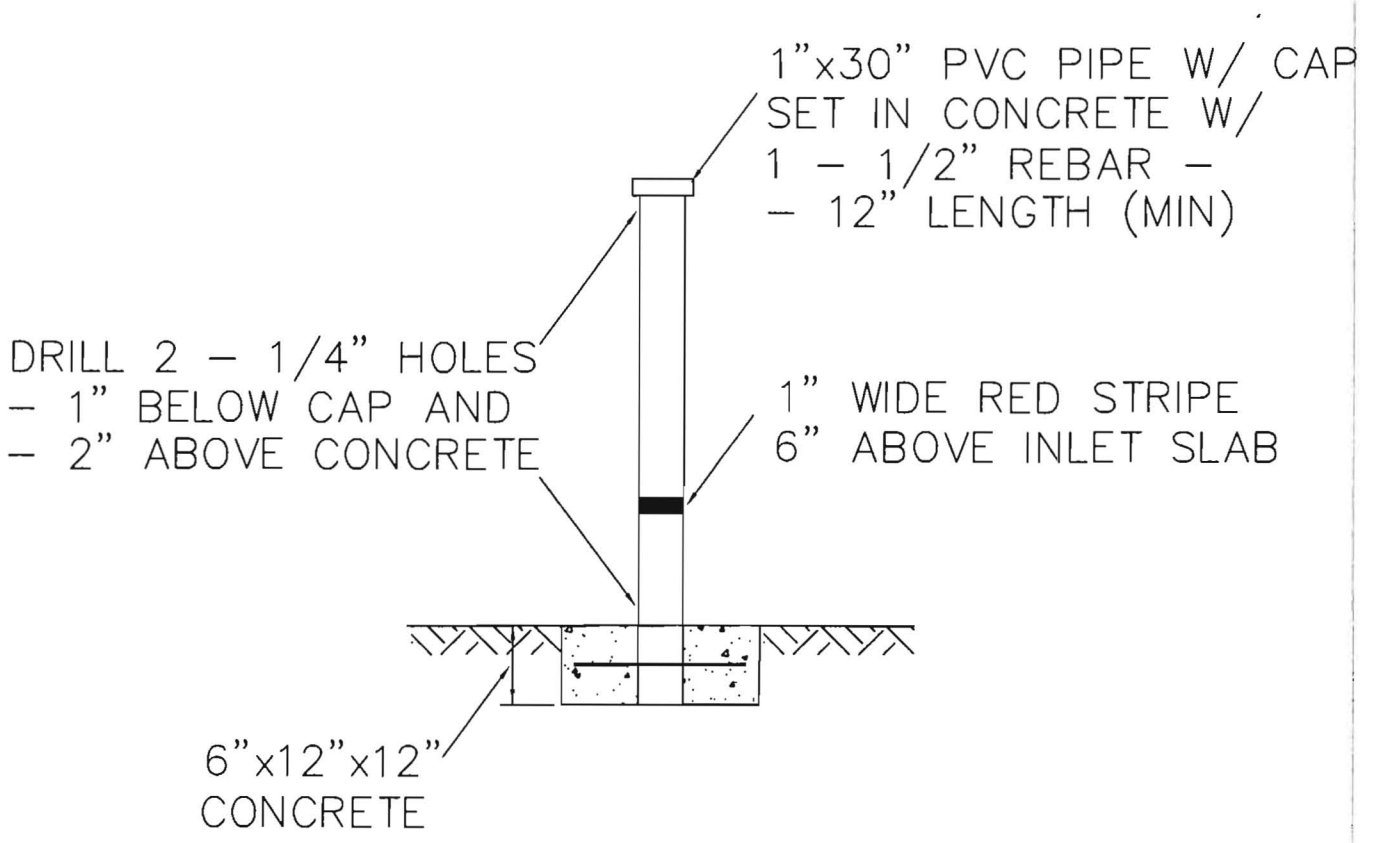
NARRATIVE OF PROPOSED MODIFICATION

The modification consist of as-built conditions showing changes to the basin shape, inlet location, discharge point, shape of proposed building facilities and parking areas.

The changes to buildings and parking areas did not result in an increase in pollutant loadings. The changes to the basin configuration does not cause a decrease in storage value nor sand filter area. Therefore, based on these two observations, the modifications do not have an adverse effect on the treatment of stormwater for this project.

It is also proposed to add sedimentation depth gage maker , filtration drain shut off valves and replace the sand in both basins.

These modification will address the item in the "Notice of Violations".



SEDIMENTATION DEPTH GAGE MARKER

(TYP)

NTS

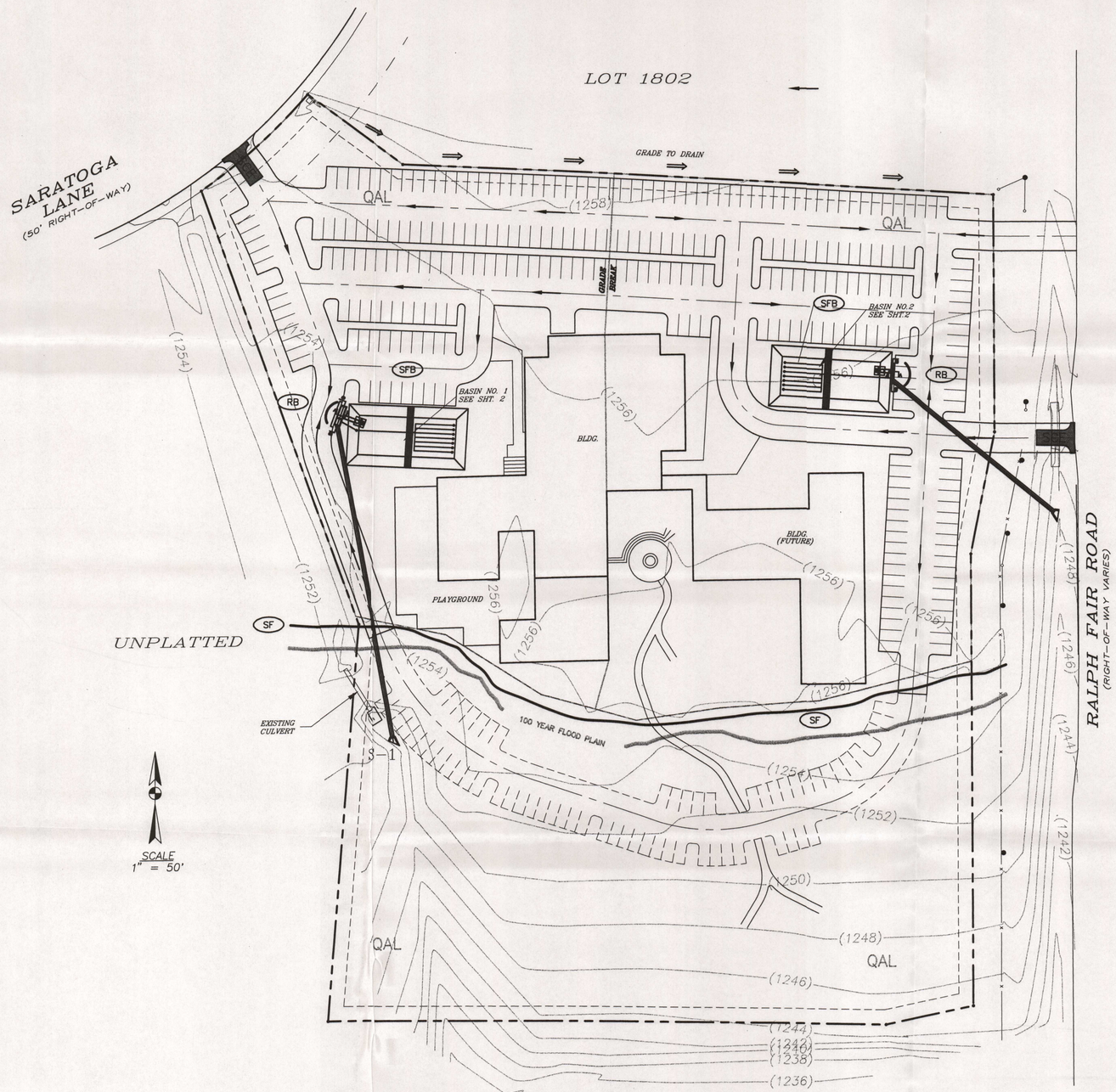
ALAMO CONSULTING ENGINEERING & SURVEYING, INC.
140 HEIMER RD., STE. 617, SAN ANTONIO, TX. 78232
PHONE:(210)828-0691 FAX:(210)824-3055

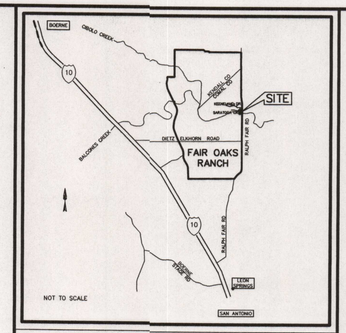
CIBOLO CREEK CHURCH
DEPTH GAGE DETAIL

JOB NUMBER:	94400
HORIZ. SCALE:	NTS
VERT. SCALE:	
DRAWN BY:	LWD
DESIGNED BY:	PAS
FILE:	PLANG-Basins.dwg

20, 2008, 2:53pm ACES11 Layout: Layout1
F:\PROJECT\0900\094400\dwg\PLANG-Basins.dwg

ATTACHMENT C
SITE PLAN





VICINITY MAP

LEGEND

- ⟹ PROPOSED EARTHEN SWALE (FLOW DIRECTION) (GRADE = 0.5% MIN., 3 % MAX.)
- S-1 GEOLOGIC (DRAINGE & RECHARGE) FEATURES
  - S1 DRAINAGE WAY

TEMPORARY BEST MANAGEMENT PRACTICES (BMPs) (SEE DETAILS AND NOTES, PAGE 3)

- SF — SILT FENCE
- RB — ROCK BERM
- SCE — STABILIZED CONSTRUCTION EXIT

PERMANENT BEST MANAGEMENT PRACTICES (BMPs)

- SFB — SAND FILTRATION BASIN (See details, Page 2)
- QAL — SOIL CLASSIFICATIONS (per Geologic Assessment)
  - QAL Alluvium (25'-30' over lower Glen Rose Formation)

PROJECT DEVELOPMENT NOTES

PROPERTY DESCRIPTION
SINGLE LOT – PROPOSED CIBILO CREEK CHURCH 30390 SARATOGA LANE; FAIR OAKS RANCH, TX 78015

PROPOSED LAND USE INFORMATION:
–LAND USE: CHURCH (COMMERCIAL)
–TOTAL LOT ACREAGE: 8.9 ACRES ACREAGE TO BE DEVELOPED: 6.0 ACRES WITH APPROX. 60% IMPERVIOUS COVER.
–TOTAL NUMBER OF LOTS = 1

ENGINEER/SURVEYOR INFORMATION:
ALAMO CONSULTING, ENGINEERING, AND SURVEYING, INC.\
ROBERT BROWNING, P.E.
140 HEIMER RD., STE. 617
SAN ANTONIO, Tx 78232
PHONE: (210) 828-0691
FAX: (210) 824-3055

OWNER INFORMATION:
CIBILO CREEK CHURCH
MR. ROBERT ARTLIE
CHAIRMAN, BUILDING COMMITTEE
29745 MEADOW WIND DR.
FAIR OAKS RANCH, Tx 78015
PHONE: (210)308-9444

UTILITY PROVIDERS:
SEWER: FAIR OAKS RANCH UTILITIES
WATER: FAIR OAKS RANCH UTILITIES
TELEPHONE: GAUADALUPE VALLEY TELEPHONE (GVTC)
ELECTRIC: CITY PUBLIC SERVICE (CPS)

OTHER NOTES:

1. THE SUBDIVSION IS LOCATED ENTIRELY WITHIN THE LIMITS OF ~~SAN ANTONIO, TEXAS~~ FAIR OAKS RANCH, TEXAS
2. A 100 YEAR FLOOD PLAIN EXISTS ON THE SUBJECT PROPERTY AND IS SHOWN HEREON. THE FLOOD PLAIN LIMITS SHOWN ARE PER THE ENGINEER'S CALCULATIONS. (APPROVED CONDITIONAL LETTER OF MAP REVISION, FEMA CASE NO. 96-06-417P, APPROVED AGAUST 15, 1996)
3. ALL DRIVEWAYS SHALL BE PRIVATE AND SHALL BE MAINTAINED BY THE PROPERTY OWNER.
4. ALL OF THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE EDWARD'S AQUIFER RECHARGE ZONE.
5. TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THIS PLAN ACCURATELY DEPICTS THE GENERAL LOCATION OF ALL KNOWN DRAINAGE PATTERNS AND EDWARD'S AQUIFER RECHARGE FEATURES.
6. ALL BEARINGS AND DISTANCES SHOWN ARE APPROXIMATE.

POLLUTION ABATEMENT NOTES

1. The individual Temporary Best Management Practices (BMPs, Silt Fences and Rock Berms) shall be installed before soil is disturbed upgradient thereof, and shall remain until vegetation is re-established on soil disturbed by construction.
2. All areas disturbed by construction shall be seeded, sodded, or mulched for erosion protection.
3. AREAS TO BE DISTURBED BY CONSTRUCTION:

   For commercial developments, all areas of the property being developed may be disturbed by construction. The contractor shall disturb as little property as possible while working in a particular portion of the property, and shall insure that temporary erosion control measures are in place downgradient of any work area.
4. Temporary BMPs shall be removed after vegetation is re-established on areas disturbed by construction upgradient of the BMPs.
5. After construction is complete, it shall then be the complex manager's responsibility for maintaining vegetation on areas of pervious cover.
6. All earthen swales shall be designed to flow with a maximum velocity of six (6) feet per second during a twenty-five (25) year frequency storm.
7. Refer to page 2 of this Water Pollution Abatement Site Plan for additional Stormwater Pollution Prevention Notes.

POLLUTION ABATEMENT NOTES

Geologic Features shown heron are per Geologic Assessement prepared by:

David P. Seagraves
(210) 377-1603

Permanent Pollution Abatement Measures
TSS Load Removal Calculations

"RECEIVED TCEQ"
SAN ANTONIO
REGION
2008 APR 14 PM 1:43

N/A

PLAT No.
N/A

REVISIONS

	DATE	DESCRIPTION	APPR'D
0	6/20/01	RELEASED FOR T.N.R.C.C. REVIEW	
1			
2			
3			
4			
5			

ALAMO
CONSULTING ENGINEERING
& SURVEYING, INC.
140 HEIMER RD., STE. 617, SAN ANTONIO, TX. 78232
PHONE: (210)828-0691 FAX: (210)824-3055

CIBILO CREEK CHURCH

WATER POLLUTION ABATEMENT SITE GEOLOGIC MAP

JOB NO.: 94400
HORIZ. SCALE: 1" = 50'
VERT. SCALE: N/A
CONTOUR INT.: 2'
DRAWN BY: R.B.
DESIGNED BY: R.B
CHECKED BY: PAS/RB
FILE NAME: P-WPAP-...
SHEET: OF
PAGE: 1 OF 1

F:\sdsk0pr\\0944\dwg\b-wpap-geo.dwg Thu Jun 21 09:25:44 2001

ORIGINAL WPAP APPLICATION
(APPROVED DECEMBER 5, 2001)

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

PROJECT NAME: *Cibilo Creek Church (Lot 1801, Comal County Unit 3, Fair Oaks Ranch)*

PROJECT INFORMATION

1. The type of project is:
   - ___ Residential: # of Lots: ___
   - ___ Residential: # of Living Unit Equivalents: _____
   - ___ Commercial
   - ___ Industrial
   - X Other: *Church*

2. Total site acreage (size of property): *8.9 Total , 6.0 to be disturbed by construction.*

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	*46,500*	÷ 43,560 =	*1.1*
Parking */ Driveways*	*105,000*	÷ 43,560 =	*2.4*
Other paved surfaces *(sidewalks/ patios)*	*5,100*	÷ 43,560 =	*0.1*
Total Impervious Cover	*156,600*	÷ 43,560 =	*3.6*
Total Impervious Cover ÷ Total *disturbed* Acreage x 100 =			*60 %*

5. X **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. X Only inert materials as defined by 30 TAC 330.2 will be used as fill material.

FOR ROAD PROJECTS ONLY *N/A*

Complete questions 7-12 if this application is exclusively for a road project.

7. Type of project: *N/A*
   - ___ 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: *N/A*

___ Concrete
___ Asphaltic concrete pavement
___ Other: _____

9. Length of Right of Way (R.O.W.): _____ feet. *N/A*
Width of R.O.W.: _____ feet.
L x W = _____ Ft² ÷ 43,560 Ft²/Acre = _____ acres.

10. Length of pavement area: _____ feet. *N/A*
Width of pavement area: _____ feet.
L x W = _____ Ft² ÷ 43,560 Ft²/Acre = _____ acres.
Pavement area _____ Acres ÷ R.O.W. area _____ acres x 100 = _____ % impervious cover.

11. ___ A rest stop will be included in this project. *N/A*
___ A rest stop will **not** be included in this project.

12. *N/A* Maintenance and repair of existing roadways that do not require approval from the TNRCC 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 TNRCC.

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:

100	% Domestic	*16,200*	gallons/day
_____	% Industrial	_____	gallons/day
	% Commingled	_____	gallons/day
	TOTAL:	*16,200*	gallons/day

6.0 Ac. @ 2700 gpd/ Ac.
= **16,200** gpd

15. Wastewater will be disposed of by:

X **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.

X 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 §285.

___ 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. X 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" = *50'*

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.

X 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):

Approved Conditional Letter of Map Revision, FEMA Case No. 96-06-417P, approved August 15 ,1996.

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.

X 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.

X 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:

X 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.

Note: The attached Geologic Assessment covers an additional 3.7 Acre "Out-Parcel" which does contain three recharge features.

__ **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. X The drainage patterns and approximate slopes anticipated after major grading activities.

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

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

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

26. N/A Surface waters (including wetlands).

27. __ Locations where stormwater discharges to surface water or sensitive features.

X There will be no discharges to surface water or sensitive features.

ADMINISTRATIVE INFORMATION

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

29. X Any modification of this WPAP will require TNRCC 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 TNRCC review and executive director approval. The form was prepared by:

Robert J. Browning, P.E.
Alamo Consulting Engineering and Surveying, Inc.
Print Name of Applicant/Owner/Agent

Signature of Applicant/Owner/Agent — Date: 6/20/01

ATTACHMENT A – Factors Affecting Water Quality

This project is not anticipated to have any factors that could affect surface water and groundwater quality, other than

1. *hydrocarbons typically present on residential streets and driveways, and*
2. *fertilizers, pesticides, and other miscellaneous home use chemicals typically present on residential home sites.*

All stormwater runoff from on-site private streets (driveways) or parking areas will be directed to one of two sand filtration basins, which will reduce pollutant loads containing hydrocarbons.

Stormwater runoff from rooftop, sidewalk, patio, and landscape areas will also be directed to one of the aforementioned sand filtration basins. Both of these Permanent Pollution Prevention features will reduce pollutant loads containing fertilizers, pesticides, or home use chemicals.

ATTACHMENT B – Volume and Character of Stormwater

This project is exclusively for the development of a church facility. As is typical with such developments, stormwater runoff from roofs, patios, and sidewalks shall be directed (whenever possible) onto lawns and other landscape areas. Runoff from these lawns, typically remaining in sheet flow, will drain into private driveways. These private driveways will direct stormwater to one of two Sand Filtration Basins. Per T.N.R.C.C. requirements, the capacity of these basins will be such that 80% of the increase in pollutant load (TSS) resulting from development of the area disturbed by construction will be removed. Note that the site will be graded such that approximately have of the area disturbed by construction (6.0 Ac./2 = 3.0 Ac.) will be drained to each of the two basins. Therefore, each basin will be sized identically as per the attached calculations.

These basins will be located to facility drainage (through overflow pipe culverts) to one of two existing graded earthen swales. One swale exists adjacent to the east lot line, the other exists adjacent to the west lot line.

ATTACHMENT C – Suitability Letter from Authorized Agent

Septic suitability letter from Comal County (the T.N.R.C.C. Authorized Agent) is attached behind this sheet.

ATTACHMENT D – Exception to the Required Geologic Assessment

NOT APPLICABLE

The required Geologic Assessment is attached to this application.

TEMPORARY STORMWATER SECTION

Not Applicable

PERMANENT STORMWATER SECTION

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

REGULATED ENTITY NAME: Cibolo Creek Church

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

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

2. X 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.

   X 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. X 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. X 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.

   X This site will not be used for low density single-family residential development.

5. X 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.

X 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.

X 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.**

X 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. X **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. X 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.

X 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.

__ **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.

10. X **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. X **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. X 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. X **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. X 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. X 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:

Paul A. Schroeder, P.E., R.P.L.S.
Print Name of Customer/Agent

STATE OF TEXAS
PAUL A. SCHROEDER
57564
REGISTERED
PROFESSIONAL ENGINEER

02/21/08
Signature of Customer/Agent Date

ATTACHMENT A - 20% or Less Impervious Cover Waiver. NOT APPLICABLE

This is a church (non-residential) development with approximately 60% impervious cover. 20% impervious cover is, therefore not requested.

ATTACHMENT B - BMPs for Up-gradient Stormwater.

Stormwater originating upgradient of (i.e. north of) the subject property will be directed (via a proposed earthen swale) to an existing roadside swale adjacent to Ralph Fair Road and the subject property.

Therefore, (since pollution of said stormwater will not be increased as a result of this development) permanent BMPs are not required to mitigate pollution of stormwater originating upgradient of the project site.

ATTACHMENT C - BMPs for On-site Stormwater.

Pollution of stormwaters originating onsite will be mitigated by one of two Sand Filtration Basins.

The design details for the basin are included as part of the Water Pollution Abatement Site Plan attached to the Water Pollution Abatement Section of this report.

ATTACHMENT D - BMPs for Surface Streams.

The previously noted Sand Filtration Basins will prevent pollution from this development from entering the adjacent surface stream (Cibolo Creek).

One recharge feature was identified by the Geologic Assessment as existing on the subject property. Stormwater runoff from the development area will be directed to locations downstream of this recharge feature. Therefore, no permanent (or temporary) BMPs are required to protect this feature from pollution.

ATTACHMENT E - Request to Seal Features. NOT APPLICABLE

No permanent or temporary sealing of recharge features is proposed.

ATTACHMENT F - Construction Plans.

The design layout of the Sand Filtration Basins is included as part of the attached Water Pollution Abatement Site Plan.

Design calculations are included directly after this page.

Cibolo Creek Church
TSS Load Removal Calculations

Impervious Cover Calculations

Tributary to Basin No. 1

$$IC = \frac{A_{IMP}}{A_{TRIB}} = \%\ \text{Impervious Cover}$$

A_{IMP} = Impervious Cover Area

$A_{IMP} = A_{ROOFTOPS} + A_{SIDEWALKS} + A_{PAVEMENT}$

$A_{PAVEMENT}$ = Asphalt or Concrete Driveways and Parking

$A_{IMP} = 19{,}240\text{s.f.} + 1{,}220\text{s.f.} + 51{,}100\text{s.f.}$

$A_{IMP} = 71{,}560\text{s.f.}$

$A_{TRIB} = 120{,}820\text{s.f.} \cong 2.8\ \text{Acres}$ = Area tributary to basin

$$IC = \frac{A_{IMP}}{A_{TRIB}} = IC = \frac{71{,}560}{120{,}820} = 0.59$$

$IC = 59\%$

STATE OF TEXAS
ROBERT A. BROWNING
79873
REGISTERED
PROFESSIONAL ENGINEER
9/13/01

Tributary to Basin No. 2

$$IC = \frac{A_{IMP}}{A_{TRIB}} = \%\ \text{Impervious Cover}$$

A_{IMP} = Impervious Cover Area

$A_{IMP} = A_{ROOFTOPS} + A_{SIDEWALKS} + A_{PAVEMENT}$

$A_{PAVEMENT}$ = Asphalt or Concrete Driveways and Parking

$A_{IMP} = 14{,}040\text{s.f.} + 6{,}730\text{s.f.} + 53{,}920\text{s.f.}$

$A_{IMP} = 74{,}690\text{s.f.}$

$A_{TRIB} = 130{,}060\text{s.f.} \cong 3.0\ \text{Acres}$ = Area tributary to basin

$$IC = \frac{A_{IMP}}{A_{TRIB}} = IC = \frac{74{,}690}{130{,}060} = 0.57$$

$IC = 57\%$

A_{trib} & IC values used in attached calculations

As shown on the attached Water Pollution Abatement Site Plan, two Sand Filtration Basins ar proposed. (As required, these two basins will remove 80% of the increase in Total Suspended Solids resulting from this development.)

As shown above, the drainage area tributary to each basin, as well as the Impervious Cover percentage proposed over each said area, is expected to be approximately equivalent. **Therefore,** two identical basins are proposed. (i.e. The following calculations are for one basin, but shall apply to both basins.)

The most conservative (i.e. largest) A_{TRIB} and IC values found for either basin, as shown and/ or calculated above, are used in the attached calculations. (Note, however, that 2.9 acres and 59% are conservatively rounded to 3.0 acres and 60%.)

TSS Removal Required

$L_R = 0.8 \times (L_D - L_B)$

L_R = Required TSS load removal

L_D = Post - Development TSS Load

L_B = Existing (pre - development, bacground) TSS Load

L_D or $L_B = P \times (A_U \times 0.54 + A_d \times R_v \times 38.4)$ (Eq.3.4, TNRCC T.G.M.)

$P = 33$ in. = Anual Rainfall, Comal County, Texas (Tbl.3.2, TRNCC T.G.M.)

$R_v = (0.546 \times IC^2) + (0.328 \times IC) + 0.03$

$IC = 0.60 = 60\%$ impervious cover

$R_v = (0.546 \times 0.60^2) + (0.328 \times 0.60) + 0.03$

$R_v = 0.423$

$A_U = A_d = 3$ Ac. = Total area tributary to one basin.

$L_D = 33 \text{ in.} [(0 \text{ Ac.} \times 0.54) + (3 \text{ Ac.} \times 0.423 \times 38.4)]$

$L_D = 1608.1 \text{ lb./yr.}$

$L_B = 33 \text{in.} [(3 \text{ Ac.} \times 0.54) + (0 \text{ Ac.} \times 0.423 \times 38.4)]$

$L_B = 53.5 \text{ lb./yr.}$

$L_R = 0.8 \times (1608.1 - 53.5) \text{ lb./yr.}$

$L_R = 1243.7 \text{ lb./yr.}$

TSS Removal

Sedimenttaton / Filtration Basin

$L_R = L_I \times F \times$ Fraction of Site Treated $\times$ TSS Removal Efficiency

$L_I = 1608.1\ ^{lb.}/_{yr.}$ = Post Development Load

$L_R = 1243.7\ ^{lb.}/_{yr.}$ = Load Removal Required

F = Fraction of Load Treated

Fraction of Site Treated = 1.0

TSS Removal Efficiency = 89 % (for sand filter systems)

$$F = \frac{L_R}{L_I \times \text{Fract. of Site} \times \text{TSS Eff.}}$$

$$F = \frac{1243.7\ ^{lb.}/_{yr.}}{1608.1\ ^{lb.}/_{yr.} \times 1.0 \times 0.89} = 0.87$$

$WQV_R = A_B \times d_r \times$ Siltation Factor = Required Water Quality Volume for one basin

$A_B = 3$ Ac. = Area tributary to the one basin

$d_r = 0.62"$ = runoff depth, based on F (above) and 60% IC

Siltation Factor = 1.20 (additional 20% to accomodate reduction in basin volume due to siltaion build up)

$$WQV_R = 3 \text{ Ac.} \times 0.62 \text{ in.} \times 1.20 \times \frac{43560 \text{ s.f.}}{\text{Ac.}} \times \frac{1 \text{ ft.}}{12 \text{ in.}}$$

$WQV_R = \underline{\underline{8102 \text{ c.f.}}}$

$$A_f = \frac{WQV_R \times L}{k \times (h + L) \times t}$$ = Required sand filtration bed area.

$WQV_R = 8102$ c.f. (above)

L = 1.5 ft. = sand thickness

$k = 2\ ^{ft.}/_{day}$ = percolation rate, for partial sedimentation

h = 1.25 ft. = average depth of water over sand

t = 2 days = min. required drawdown time

$$A_f = \frac{8102 \text{ ft.}^3 \times 1.5 \text{ ft.}}{2 \text{ ft.} \times (1.25 + 1.5) \text{ ft.} \times 2 \text{ ft.}}$$

$A_f = \underline{\underline{1105 \text{ s.f.}}}$

Summary

Required TSS load Removal per basin = 1243.7 lb./yr.

Required WQV per basin = 8102 c.f.
Provided WQV per basin = 8770 c.f.

Required A_f per basin = 1105 s.f.
Provided A_f per basin = 1136 s.f.

ATTACHMENT G - Inspection, Maintenance, Repair and Retrofit Plan.

Detention Basins have moderate to high maintenance requirements, depending on the extent to which future maintenance needs are anticipated during the design stage. Responsibilities for both routine and nonroutine maintenance tasks need to be clearly understood and enforced. If regular maintenance and inspections are not undertaken, the basin will not achieve its intended purposes.

There are many factors that may affect the basin's operation and that should be periodically checked. These factors can include mowing, control of pond vegetation, removal of accumulated bottom sediments, removal of debris from all inflow and outflow structures, unclogging of orifice perforations, and the upkeep of all physical structures that are within the detention pond area. One should conduct periodic inspections and after each significant storm. Remove floatables and correct erosion problems in the pond slopes and bottom. Pay particular attention to the outlet control perforations for signs of clogging. If the orifices are clogged, remove sediment and other debris.

The generic aspects that must be considered in the maintenance plan for a detention facility are as follows:

· *Inspections.* Basins should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. When possible, inspections should be conducted during wet weather to determine if the pond is meeting the target detention times. In particular, the extended detention control device should be regularly inspected for evidence of clogging, or conversely, for too rapid a release. If the design drawdown times are exceeded by more than 24 hours, then repairs should be scheduled immediately. The upper stage pilot channel, if any, and its flow path to the lower stage should be checked for erosion problems. During each inspection, erosion areas inside and downstream of the BMP should be identified and repaired or revegetated immediately.

· *Mowing.* The upper stage, side slopes, embankment, and emergency spillway of an extended detention basin must be mowed regularly to discourage woody growth and control weeds. Grass areas in and around basins should be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. When mowing of grass is performed, a mulching mower should be used, or grass clippings should be caught and removed.

· *Debris and Litter Removal.* Debris and litter will accumulate near the extended detention control device and should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the control device or riser.

· *Erosion Control.* The pond side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion, although this should not occur often if the soils are properly compacted during construction. Regrading and revegetation may be required to correct the problems. Similarly, the channel

connecting an upper stage with a lower stage may periodically need to be replaced or repaired.

· *Structural Repairs and Replacement.* With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. These repairs should include patching of cracked concrete, sealing of voids, and removal of vegetation from cracks and joints. The various inlet/outlet and riser works in a basin will eventually deteriorate and must be replaced. Public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 yr, whereas reinforced concrete barrels and risers may last from 50 to 75 yr.

· *Nuisance Control.* Standing water (not desired in a extended detention basin) or soggy conditions within the lower stage of the basin can create nuisance conditions for nearby residents. Odors, mosquitoes, weeds, and litter are all occasionally perceived to be problems. Most of these problems are generally a sign that regular inspections and maintenance are not being performed (e.g., mowing, debris removal, clearing the outlet control device).

· *Sediment Removal.* When properly designed, dry extended detention basins will accumulate quantities of sediment over time. Sediment accumulation is a serious maintenance concern in extended detention dry ponds for several reasons. First, the sediment gradually reduces available stormwater management storage capacity within the basin. Second, unlike wet extended detention basins (which have a permanent pool to conceal deposited sediments), sediment accumulation can make dry extended detention basins very unsightly. Third, and perhaps most importantly, sediment tends to accumulate around the control device. Sediment deposition increases the risk that the orifice will become clogged, and gradually reduces storage capacity reserved for pollutant removal. Sediment can also be resuspended if allowed to accumulate over time and escape through the hydraulic control to downstream channels and streams. For these reasons, accumulated sediment needs to be removed from the lower stage when sediment buildup fills 20% of the volume of the basin or at least every 10 years.

Sand Filter Systems

Regular, routine maintenance is essential to effective, long-lasting performance of sand filters. Neglect or failure to service the filters on a regular basis will lead to poor performance and eventual costly repairs. It is recommended that sand filter BMPs be inspected on a quarterly basis and after large storms for the first year of operation. This intensive monitoring is intended to ensure proper operation and provide maintenance personnel with a feel for the operational characteristics of the filter. Subsequent inspections can be limited to semi-annually or more often if deemed necessary (Young et al., 1996).

Certain construction and maintenance practices are essential to efficient operation of the filter. The biggest threat to any filtering system is exposure to heavy sediment loads that clog the filter media. Construction within the watershed should be complete prior to

exposing the filter to stormwater runoff. All exposed areas should be stabilized to minimize sediment loads. Runoff from any unstabilized construction areas should be treated via a separate sediment system that bypasses the filter media.

Another important consideration in constructing the filter bed is to ensure that the top of the media is completely level. The filter design is based on the use of the entire filter media surface area; a sloped filter surface would result in disproportionate use of the filter media.

Other recommended maintenance guidelines include:

- *Inspections.* BMP facilities must be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. During each inspection, erosion areas inside and downstream of the BMP must be ident ified and repaired or revegetated immediately. With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) must be identified and repaired immediately. Cracks, voids and undermining should be patched/filled to prevent additional structural damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage.
- *Sediment Removal.* Remove sediment from the inlet structure and sedimentation chamber when sediment buildup reaches a depth of 6 inches or when the proper functioning of inlet and outlet structures is impaired. Sediment should be cleared from the inlet structure at least every year and from the sedimentation basin at least every 5 years.
- *Media Replacement.* Maintenance of the filter media is necessary when the drawdown time exceeds 48 hours. When this occurs, the upper layer of sand should be removed and replaced with new material meeting the original specifications. Any discolored sand should also be removed and replaced. In filters that have been regularly maintained, this should be limited to the top 2 to 3 inches.
- *Debris and Litter Removal.* Debris and litter will accumulate near the sedimentation basin outlet device and should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the control device or riser.
- *Filter Underdrain.* Clean underdrain piping network to remove any sediment buildup as needed to maintain design drawdown time.
- *Mowing.* Grass areas in and around sand filters must be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. Vegetation on the pond embankments should be mowed as appropriate to prevent the establishment of woody vegetation.

Michael Vonderhaar, Executive Pastor — Date 2/20/08

Owner's Agent/Engineer — Date 2/20/08

STATE OF TEXAS
PAUL A. SCHROEDER
57564
REGISTERED PROFESSIONAL ENGINEER

ATTACHMENT H - Pilot-Scale Field Testing Plan. NOT APPLICABLE

Permanent BMPs were designed using the T.C.E.Q. Technical Guidance Manual.

ATTACHMENT I - Measures for Minimizing Surface Stream Contamination.

The previously noted Sand Filtration Basins will prevent contamination of stormwater originating on the project site and will detain runoff, therefore, avoiding "flash" runoffs. The surface stream which exists adjacent to the subject property (and downstream of the development area) will, therefore, be protected from contamination resulting from this development. Stormwater from the site and from the basins flow into existing channels where it is conveyed to the surface stream (Cibolo Creek). These channels convey said storm water without an increase in volicity, therefore, avoiding increases in contamination to the Cibolo Creek.

AGENT AUTHORIZATION FORM

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Michael Vonderhaar,
Print Name

Executive Pastor
Title - Owner/President/Other

of CIBOLO CREEK COMMUNITY CHURCH, INC
Corporation/Partnership/Entity Name

have authorized Paul A. Schroder, P.E., R.P.L.S.
Print Name of Agent/Engineer

of ALAMO CONSULTING ENGINEERING & SURVEYING, INC.
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For applicants who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

Applicant's Signature — Date: 2/20/08

THE STATE OF TEXAS §

County of COMAL §

BEFORE ME, the undersigned authority, on this day personally appeared MICHAEL VONDERHAAR known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 20 day of FEB, 08.

LARRY W. DOLLE
Notary Public, State of Texas
My Commission Expires
MAY 6, 2008

NOTARY PUBLIC

LARRY W DOLLE
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: MAY 6, 08

APPLICATION FEE FORM

Texas Commission on Environmental Quality
Edwards Aquifer Protection Plan
Application Fee Form

NAME OF PROPOSED REGULATED ENTITY: CIBOLO CREEK CHURCH
REGULATED ENTITY LOCATION: 30395 Ralph Fair Road, Fair Oaks Ranch, TX 78015
NAME OF CUSTOMER: Cibolo Creek Community Church
CONTACT PERSON: Michael Vonderhaar PHONE: (830)981-8989
(Please Print)

Customer Reference Number (if issued): CN _____ (nine digits)
Regulated Entity Reference Number (if issued): RN _____ (nine digits)

AUSTIN REGIONAL OFFICE (3373)
☐ Hays
☐ Travis
☐ Williamson

SAN ANTONIO REGIONAL OFFICE (3362)
☐ Bexar
X Comal
☐ Kinney
☐ Medina
☐ Uvalde

APPLICATION FEES MUST BE PAID BY CHECK, CERTIFIED CHECK, OR MONEY ORDER, PAYABLE TO THE Texas Commission on Environmental Quality. YOUR CANCELED CHECK WILL SERVE AS YOUR RECEIPT. **THIS FORM MUST BE SUBMITTED WITH YOUR FEE PAYMENT.** THIS PAYMENT IS BEING SUBMITTED TO (CHECK ONE):

X **SAN ANTONIO REGIONAL OFFICE**
☐ **Mailed to TCEQ:**
TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ **AUSTIN REGIONAL OFFICE**
☐ **Overnight Delivery to TCEQ:**
TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
512/239-0347

Type of Plan	Size		Fee Due
Water Pollution Abatement, One Single Family Residential Dwelling		Acres	$
Water Pollution Abatement, Multiple Single Family Residential and Parks		Acres	$
Water Pollution Abatement, Non-residential	8.93	Acres	$4,000.00
Sewage Collection System		L.F.	$
Lift Stations without sewer lines		Acres	$
Underground or Aboveground Storage Tank Facility		Tanks	$
Piping System(s)(only)		Each	$
Exception		Each	$
Extension of Time		Each	$

Signature

2/20/08
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.

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program
Application Fee Schedule
30 TAC §213.14 (effective 11/14/97) & 30 TAC §213.9 (effective 6/1/99)

Water Pollution Abatement Plans and Modifications

PROJECT	PROJECT AREA IN ACRES	FEE
One Single Family Residential Dwelling	<5	$500
Multiple Single Family Residential and Parks	<5 5 < 10 10 < 50 ≥50	$1,000 $2,000 $3,000 $5,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 ≥10	$2,000 $3,000 $4,000 $5,000

Organized Sewage Collection Systems and Modifications

PROJECT	COST PER LINEAR FOOT	MINIMUM FEE MAXIMUM FEE
Sewage Collection Systems	$0.50	$500 - $5,000

Underground and Aboveground Storage Tank System Facility Plans and Modifications

PROJECT	COST PER TANK OR PIPING SYSTEM	MINIMUM FEE MAXIMUM FEE
Underground and Aboveground Storage Tank Facility	$500	$500 - $5,000

Exception Requests

PROJECT	FEE
Exception Request	$250

Extension of Time Requests

PROJECT	FEE
Extension of Time Request	$100

Texas Commission on Environmental Quality
Edwards Aquifer Protection Plan
Application Fee Form

NAME OF PROPOSED REGULATED ENTITY: Cibolo Creek Community Church
REGULATED ENTITY LOCATION: 30395 Ralph Fair Road, Fair Oaks Ranch, TX 78015
NAME OF CUSTOMER: Cibolo Creek Community Church
CONTACT PERSON: Michael Vonderhaar PHONE: (830)981-8989
(Please Print)

Customer Reference Number (if issued): CN _____ (nine digits)
Regulated Entity Reference Number (if issued): RN _____ (nine digits)

AUSTIN REGIONAL OFFICE (3373)
☐ Hays
☐ Travis
☐ Williamson

SAN ANTONIO REGIONAL OFFICE (3362)
☐ Bexar
X Comal
☐ Kinney
☐ Medina
☐ Uvalde

APPLICATION FEES MUST BE PAID BY CHECK, CERTIFIED CHECK, OR MONEY ORDER, PAYABLE TO THE Texas Commission on Environmental Quality. YOUR CANCELED CHECK WILL SERVE AS YOUR RECEIPT. **THIS FORM MUST BE SUBMITTED WITH YOUR FEE PAYMENT.** THIS PAYMENT IS BEING SUBMITTED TO (CHECK ONE):

X **SAN ANTONIO REGIONAL OFFICE**
☐ **Mailed to TCEQ:**
TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ **AUSTIN REGIONAL OFFICE**
☐ **Overnight Delivery to TCEQ:**
TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
512/239-0347

Type of Plan	Size		Fee Due
Water Pollution Abatement, One Single Family Residential Dwelling		Acres	$
Water Pollution Abatement, Multiple Single Family Residential and Parks		Acres	$
Water Pollution Abatement, Non-residential	8.93	Acres	$4,000.00
Sewage Collection System		L.F.	$
Lift Stations without sewer lines		Acres	$
Underground or Aboveground Storage Tank Facility		Tanks	$
Piping System(s)(only)		Each	$
Exception		Each	$
Extension of Time		Each	$

Signature

2/20/08
Date

Evelyn Lopez

RECEIVED TCEQ
2008 FEB 21 PM 4:36
SAN ANTONIO REGION

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.

TCEQ-0574 (Rev. 10/01/04) Page 1 of 2

CIBOLO CREEK COMMUNITY CHURCH
PH. 210-698-5417
8000 FAIR OAKS PARKWAY, SUITE 211
FAIR OAKS RANCH, TX 78015

WELLS FARGO BANK, N.A.
TEXAS
WELLSFARGO.COM

9981
37-85-1119
2/20/2008

PAY TO THE ORDER OF Texas Commission on Environmental Quality $**4,000.00

Four Thousand and 00/100********** DOLLARS

Texas Commission on Environmental Quality
14250 Judson Road
San Antonio, TX 78233-4480

VOID AFTER 90 DAYS

MO TCEQ Case #599309

⑈009981⑈ ⑆111900659⑆ 9288908560⑈

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

September 24, 2001

Mr. Robert Artle
Cibolo Creek Church
29745 Mellow Wind Dr.
Fair Oaks Ranch, TX 78015

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Cibolo Creek Church;30390 Saratoga Lane; Fair Oaks Ranch, 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. 1704.00

Dear Mr. Artle:

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 Mr. Robert J. Browning, P.E. of Alamo Consulting Engineering and Surveying, Inc. on behalf of Cibolo Creek Church on June 20, 2001. Final review of the WPAP submittal was completed after additional material was received on August 13, 2001, and September 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 proposed church project will have an area of approximately 8.9 acres. It will include construction of approximately 25,000 square feet of church buildings, to include chapels, rectories, and classrooms. An estimated additional 21,000 square feet of church facilities are planned for future development. Approximately 205,000 square feet of asphalt paved parking area is proposed. The impervious cover will be 3.6 acres (60 percent). Project wastewater will be disposed of by conveyance to the existing Fair Oaks Ranch Treatment Plant owned by the Fair Oaks Ranch Utilities.

PERMANENT POLLUTION ABATEMENT MEASURES

Two sedimentation/filtration basins designed using the TNRCC technical guidance document, *Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices* (June 1999) will be constructed to treat storm water runoff. Each basin is designed to provide treatment for approximately 3

acres of the site with a minimum capture volume of 8,102 cubic feet and a minimum sand filter area of 1,105 square feet. The approved measures have been presented to 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, one "possibly sensitive" closed depression was identified on the site. The San Antonio Regional Office did not perform site assessment inspection.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to use of any of the facilities.
II. All sediment and or media removed from the sedimentation/filtration basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335 as applicable.

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.

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 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 Lynn M. Bumguardner of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403.4023.

Sincerely,

Bobby D. Caldwell

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

JAS/LMB/eg

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

cc: Robert J. Browning, P.E., Alamo Consulting Engineering and Surveying, Inc.
The Honorable E. L. Boots Gaubatz, Fair Oaks Ranch
Mr. Tom Hornseth, Comal County
Mr. Greg Ellis, Edwards Aquifer Authority
TNRCC Field Operations

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

September 24, 2001

RECEIVED
SEP 2 5 2001
COUNTY ENGINEER

Mr. Robert Artle
Cibolo Creek Church
29745 Mellow Wind Dr.
Fair Oaks Ranch, TX 78015

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Cibolo Creek Church;30390 Saratoga Lane; Fair Oaks Ranch, 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. 1704.00

Dear Mr. Artle:

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 Mr. Robert J. Browning, P.E. of Alamo Consulting Engineering and Surveying, Inc. on behalf of Cibolo Creek Church on June 20, 2001. Final review of the WPAP submittal was completed after additional material was received on August 13, 2001, and September 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 proposed church project will have an area of approximately 8.9 acres. It will include construction of approximately 25,000 square feet of church buildings, to include chapels, rectories, and classrooms. An estimated additional 21,000 square feet of church facilities are planned for future development. Approximately 205,000 square feet of asphalt paved parking area is proposed. The impervious cover will be 3.6 acres (60 percent). Project wastewater will be disposed of by conveyance to the existing Fair Oaks Ranch Treatment Plant owned by the Fair Oaks Ranch Utilities.

PERMANENT POLLUTION ABATEMENT MEASURES

Two sedimentation/filtration basins designed using the TNRCC technical guidance document, *Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices* (June 1999) will be constructed to treat storm water runoff. Each basin is designed to provide treatment for approximately 3

acres of the site with a minimum capture volume of 8,102 cubic feet and a minimum sand filter area of 1,105 square feet. The approved measures have been presented to 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, one "possibly sensitive" closed depression was identified on the site. The San Antonio Regional Office did not perform site assessment inspection.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to use of any of the facilities.
II. All sediment and or media removed from the sedimentation/filtration basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335 as applicable.

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.

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 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.

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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 Lynn M. Bumguardner of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403.4023.

Sincerely,

Bobby D. Caldwell

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

JAS/LMB/eg

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

cc: Robert J. Browning, P.E., Alamo Consulting Engineering and Surveying, Inc.
The Honorable E. L. Boots Gaubatz, Fair Oaks Ranch
Mr. Tom Hornseth, Comal County
Mr. Greg Ellis, Edwards Aquifer Authority
TNRCC Field Operations

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

December 5, 2001

Mr. Robert Artle
Cibolo Creek Church
29745 Mellow Wind Dr.
Fair Oaks Ranch, TX 78015

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Cibolo Creek Church; 30390 Saratoga Lane; Fair Oaks Ranch, Texas
TYPE OF PLAN: Technical Assistance Related to a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program File No. 1704.01

Dear Mr. Artle:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the request for revision of the approved plans for the referenced project submitted to the San Antonio Regional Office by Robert Browning, P.E. of Alamo Consulting Engineering, and Surveying, Inc. on behalf of Cibolo Creek Church on October 29, 2001. Final review was completed after additional material was received on December 4, 2001. This 8.9 acre project was originally approved by letter on September 24, 2001.

As presented, the modification will consist of changing the method of wastewater disposal of the facility from conveyance to Fair Oaks Ranch wastewater treatment plant to disposal by an on-site sewage facility. According to a letter dated, June 13, 1995, signed by Monica M. Wallace, with Comal County, the site is acceptable for the use of on-site sewage facilities. Therefore, based on the engineer's concurrence of compliance, the changes are approved subject to applicable state rules and all Special and Standard Conditions listed in the WPAP approval letter of September 24, 2001.

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, modification to a plan, or exception. 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% of the construction has commenced on the project or an extension of time has been requested.*

If you have any questions or require additional information, please contact Lynn M. Bumguardner of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4023.

Sincerely,

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

JAS/LMB/eg

cc: Mr. Robert J. Browning, Alamo Consulting Engineering, & Surveying, Inc.
Mr. Tom Hornseth, Comal County
Mr. E. L. "Boots" Gaubatz, Mayor, Fair Oaks Ranch
Mr. Greg Ellis, Edwards Aquifer Authority
TNRCC Field Operations, Austin

ACES

FACSIMILE TRANSMITTAL SHEET

TO	FROM
Lynn Bumguardner	Bob Browning
COMPANY	DATE
T.N.R.C.C.	June 21, 2001
FAX NUMBER	TOTAL NO. OF PAGES INCLUDING COVER:
(210)545-4329	2
PHONE NUMBER	SENDER'S REFERENCE NUMBER
(210)403-4023	94400
RE	YOUR REFERENCE NUMBER
Cibilo Creek Church Water Pollution Abatement Plan	---

☐ URGENT ☐ FOR REVIEW ☑ AS REQUESTED ☐ PLEASE REPLY ☐ FOR YOUR FILES

NOTES/COMMENTS

Lynn:

As requested, I have clarified our response in Attachment B, Permanent Abatement Section, of the above referenced WPAP. Attached is a copy of the corrected attachment. Please insert this revised sheet in the four copies of this WPAP that we submitted yesterday for review.

Please contact me at (210)828-0691 or rbrowning@aces sa.com if you have any questions or require anything else. Thank you for your time and consideration.

Sincerely,

Alamo Consulting Engineering and Surveying, Inc.

Robert J. Browning, P.E

Project Manager

ALAMO CONSULTING ENGINEERING AND SURVEYING, INC.
140 HEIMER ROAD, STE. 617, SAN ANTONIO, TX. 78232
PHONE: (210) 828-0691 FAX: (210) 824-3055

ATTACHEMNT B – BMP's for upgradient Stormwater

NOT APPLICABLE

Stormwater originating upgradient of (i.e. north of) the subject property will be directed (via a proposed earthen swale) to an existing roadside swale adjacent to Ralph Fair Road and the subject property.

Therefore (since pollution of said stormwater will not be increased as a result of this development) permanent BMPs are not required to mitigate pollution of stormwater originating upgradient of the project site.

094400

T.N.R.C.C.

Water Pollution Abatement Plan Application

for

Cibilo Creek Church

(Lot 1801, Comal County Unit 3, Fair Oaks Ranch Subdivision)

June 19, 2001

Prepared for:

Cibilo Creek Church
30390 Saratoga Lane, Fair Oaks Ranch, Tx. 78015
Robert Artle, Chairman, Building Committee
29745 Mellow Wind Dr., Fair Oaks Ranch, Tx. 78015
(830) 755-4012

Prepared by:

Robert J. Browning, P.E.
Alamo Consulting Engineering and Surveying, Inc.
140 Heimer Road, Ste. 617, San Antonio, Tx. 78232
Phone: (210) 828-0691 Fax: (210) 824-3055

ACES

TABLE OF CONTENTS

GENERAL INFORMATION FORM

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

PROJECT NAME: *Cibilo Creek Church (Lot 1801, Comal County Unit 3, Fair Oaks Ranch)*
COUNTY: *Comal* STREAM BASIN: *Cibilo Creek*

EDWARDS AQUIFER: X RECHARGE ZONE
__ TRANSITION ZONE

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

APPLICANT INFORMATION

1. Applicant:

Contact Person:	*Mr. Robert Artle (Chairman, Building Committee)*		
Entity:	*Cibilo Creek Church*		
Mailing Address:	*29745 Mellow Wind Dr.*		
City, State:	*Fair Oaks Ranch, Tx.*	Zip:	*78015*
Telephone:	*(830)755-4102*	FAX:	*(830)755-4103*

2. Agent/Representative (If any):

Contact Person:	*Robert J. Browning, P.E.*		
Entity:	*Alamo Consulting Engineering and Surveying, Inc.*		
Mailing Address:	*140 Heimer Road, Ste. 617*		
City, State:	*San Antonio, Tx.*	Zip:	*78232*
Telephone:	*(210) 828-0691*	Fax:	*(210) 824-3055*

PROJECT LOCATION

3. Site Address: *Cibilo Creek Church*
Street: *30390 Saratoga Lane*
City: *Fair Oaks Ranch, Tx.* Zip: *78015*

4.

X This project is inside the city limits of *Fair Oaks Ranch, Texas*

___ 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.

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

Cibilo Creek Church is to be located on 8.9 at 30390 Saratoga Lane, in Fair Oaks Ranch, Texas. This lot was recorded as "Lot 1801, Comal County Unit 3, Fair Oaks Ranch Subdivision". The property is bounded by Ralph Fair Road on the East, Saratoga Lane on at the northwest corner, and Cibilo Creek on the South. Entrances are proposed from both Saratoga Lane and Ralph Fair Road. An existing asphalt driveway presently provides access to the property from Ralph Fair Road.

6. X **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.

7. X **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:

X Project site.

X USGS Quadrangle Name(s).

X Boundaries of the Recharge Zone (and Transition Zone, if applicable).

X Drainage path from the project to the boundary of the Recharge Zone.

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

9. X **ATTACHMENT C – PROJECT DESCRIPTION**. Attached at the end of this form is a detailed narrative description of the proposed project.

10. Existing project site conditions are noted below:

___ Existing commercial site

___ Existing industrial site

___ Existing residential site

X Existing paved and/or unpaved roads *(driveway)*

___ Undeveloped (Cleared)

X Undeveloped (Undisturbed/Uncleared)

___ Other: _____

PROHIBITED ACTIVITIES

11. X 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).

12. N/A 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

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

X 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.

14. Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TNRCC 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:

___ TNRCC cashier
___ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
X San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

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

16. X 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.

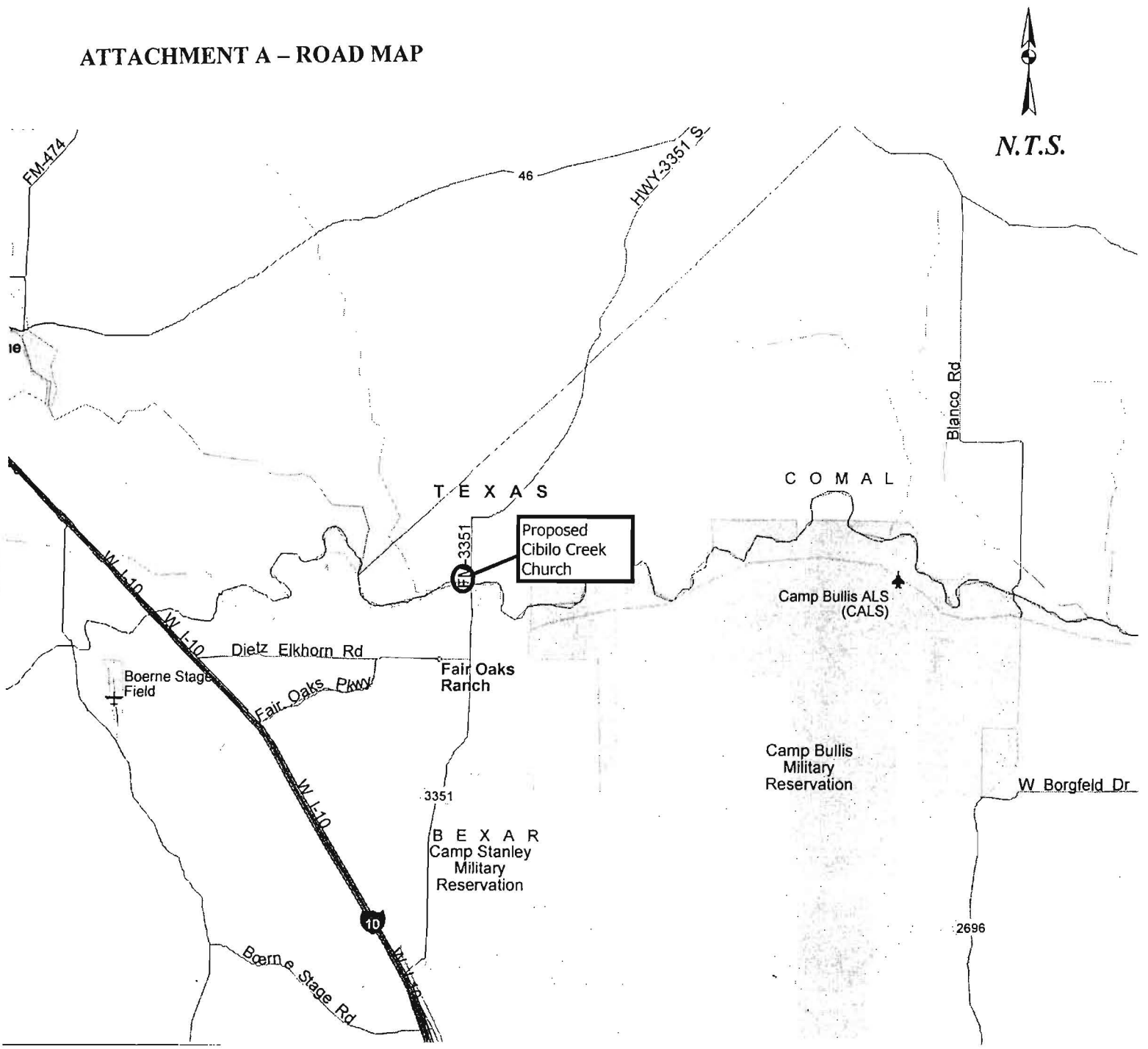
__ No person shall commence any regulated activity until the Contributing Zone Plan for the activity has been filed with the executive director.

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 TNRCC review. The application was prepared by:

Robert J. Browning, P.E.
Alamo Consulting Engineering and Surveying, Inc.
Print Name of Applicant/Owner/***Agent***

Signature of Applicant/Owner/***Agent*** 6/20/01 Date

ATTACHMENT A – ROAD MAP

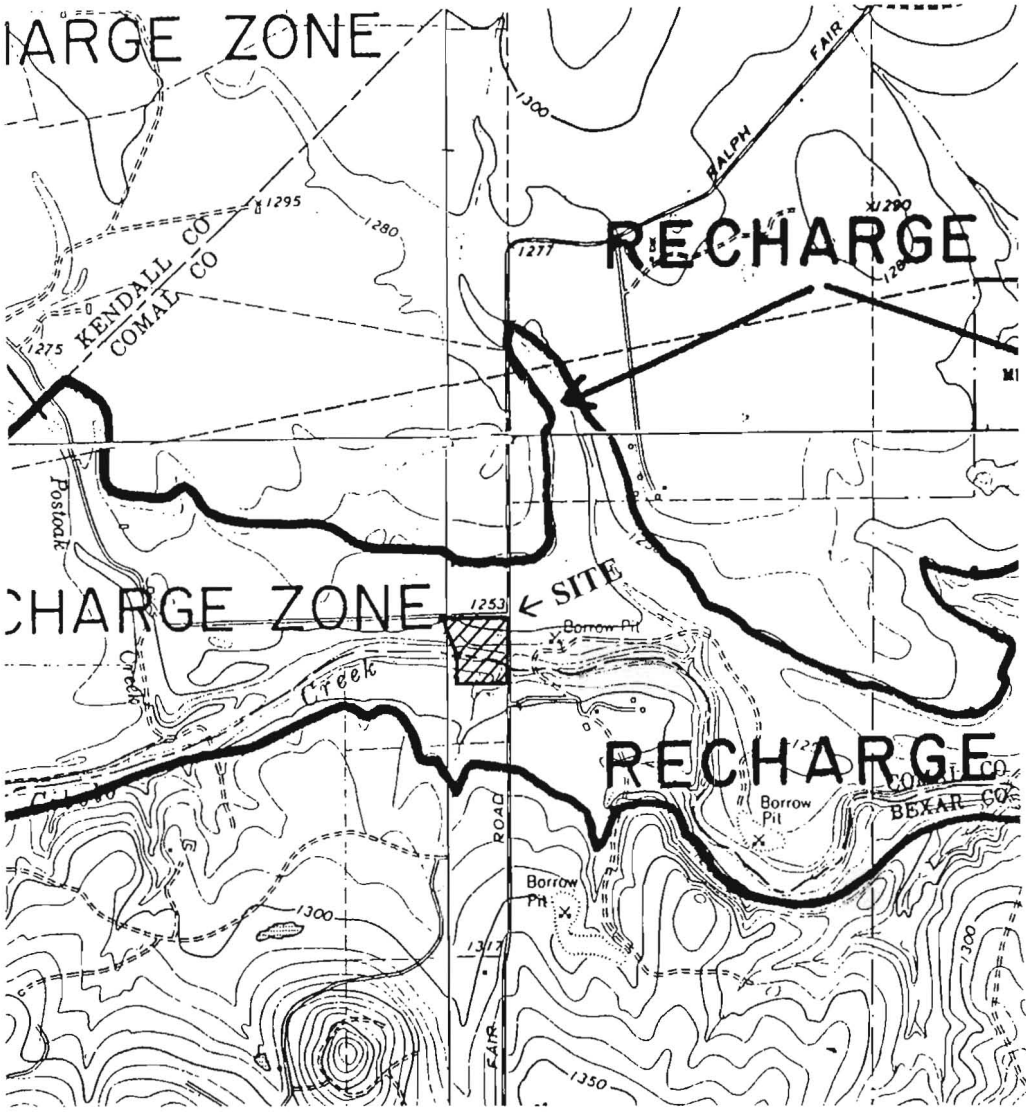


Proposed Cibilo Creek Church

ATTACHMENT B – USGS / EDWARDS RECHARGE ZONE MAP

BOERNE QUAD

BERGHEIM QUAD



1" = 2000'

VAN RAUB QUAD

CAMP BULLIS QUAD

Proposed Cibilo Creek Church

ATTACHMENT C – PROJECT DESCRIPTION

Cibilo Creek Church will be located on 8.9 acres at 30390 Saratoga Lane in Fair Oaks Ranch Texas. This property is recorded as Lot 1801, Comal County Unit 3, Fair Oaks Ranch Surbdivision. The lot includes frontage on both Saratoga Lane and Ralph Fair Road, and is bordered by Cibilo Creek on the south.

The first phase of development will include construction of roughly 25,000 square feet of church buildings (conceivably to include chapels, rectories, classrooms, etc.). An additional 21,000 square feet, more or less of church facilities are planned for future development. Approximately 205,000 square feet (2.4 acres) of asphalt paved parking area is proposed for the first phase of development.

Domestic water and sanitary sewer service will be provided by Fair Oaks Ranch Utility. The electric utility purveyor will be City Public Service. The telephone purveyor will be Guadelupe Valley Telephone Company.

Sand filtration basins. Note that these basins will be designed to mitigate pollution of stormwater originating on-site after ultimate development of the project site. The 'ultimate development' includes the phase one and future buildings described above, as well as the paved parking areas to be constructed with phase one. No additional paved parking areas are anticipated for future development.

On-site stormwater runoff will be directed through the above noted sand filtration basins. Outfall from these basins will be directed to earthen channels which exist adjacent to the east and west property boundaries. These open channels direct stormwater to Cibilo Creek. Stormwater originating off-site and to the north of the project site will be directed to the existing earthen swale which lies adjacent to the east property boundary.

GEOLOGIC ASSESSMENT

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

PROJECT NAME: FAIR OAKS RANCH - COMAL COUNTY UNIT 3
LOT 1801 (8.93 ACRES)

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 25-30 feet thick. In general, the soil present appears to have the ability to:

__ transmit fluid flow to the subsurface.
X impede fluid flow to the subsurface.

3. X **SOILS ATTACHMENT**. A narrative description of soil units and a soil profile, including thickness and hydrologic characteristics are attached at the end of this form.

4. 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.

5. 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.

6. 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" = 50'
Site Geologic Map Scale 1" = 50'

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

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

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

10. 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.

11. X The Recharge Zone boundary is shown and labeled, if appropriate.

12. 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 §76.

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

ADMINISTRATIVE INFORMATION

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

Date(s) Geologic Assessment was performed: 2-2-2001
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 213.

DAVID P. SEAGRAVES

DAVID P. SEAGRAVES (210) 377-1603

Print Name of Geologist Telephone

Fax

David P. Seagraves 2-5-01

Signature of Geologist Date

Representing: INDEPENDENT CONSULTANT
(Name of Company)

FAIR OAKS RANCH - COMAL COUNTY UNIT 3
LOT 1801 (8.93 ACRES)

SOIL UNIT

The site contains a soil cover of clay and silty clay with some limestone fragments which is several feet thick and greater at higher elevations (approximately 50% of the tract). The clayey soil cover overlies the gravelly terrace deposit, which for practical purposes is included in the overall thickness of 25' to 30' of soil cover over the Lower Glen Rose Fm.. The site contains a good natural grass cover with a moderate cover of trees at the lower elevations of the site. Overall, the soil cover at the site has the capacity to impede fluid movement into the subsurface, with the exception of some exposures of the gravelly loam within the channelized drainageway.

FAIR OAKS RANCH - COMAL COUNTY UNIT 3

LOT 1801 (8.93 Acres)

STRATIGRAPHIC COLUMN

GEOLOGIC FORMATION	APPROXIMATE THICKNESS(FT.)	MEMBER	GEOLOGIC DESCRIPTION	WATER BEARING/PERMEABILITY PROPERTIES
ALLUVIUM (Qal) — SITE	45 *		Silt, sand, and gravel	In places yields water for stock and domestic wells
FLUVIATILE TERRACE DEPOSITS (Qt)	30 *		Gravel, limestone, dolomite and chert, sand, silt, and clay	In places yields water for stock and domestic wells.
LEONA FORMATION (Qle)	30 *		Fine grained calcareous silt and coarse gravel	In places yields water for stock and domestic wells.
UVALDE GRAVEL (O-Tu)	30 *		Coarse flinty gravel in matrix of clay or silt.	Not known to yield water to wells in Bexar County.
WILCOX GROUP — UNDIFFERENTIATED DEPOSITS (Ewi)	1,070		Thin-bedded sand and sandstone and some clay, lignite, and calcareous concretions.	Yields moderate supplies of water of good to poor quality.
MIDWAY GROUP — WILLS POINT FORMATION (Emi)	490		Arenaceous clay containing numerous arenaceous and calcareous concretions.	Not known to yield water to wells in Bexar County.
NAVARRO GROUP — MARLBROOK MARL (Kknm)	1,000		Glauconitic marl and calcareous clays.	Not known to yield water to wells in Bexar County.
PECAN GAP MARL (Kpg)	185		Calcareous shale and marl with some bentonitic zones.	Not known to yield water to wells in Bexar County.
AUSTIN CHALK (Kau)	170		Limestone and argillaceous chalky limestone.	Yields small to large supplies of good to poor quality water.
EAGLE FORD SHALE (Kef)	30		Calcareous and sandy shale and some argillaceous limestone.	Not known to yield water to wells in Bexar County.
BUDA LIMESTONE (Kbu)	60		Dense, hard limestone.	Yields sufficient water near the outcrop for stock and domestic use.
DEL RIO CLAY (Kdr)	40-60		Calcareous shale; clays.	Not water bearing.
EDWARDS AND ASSOCIATED LIMESTONE — GEORGETOWN FORMATION (Ked)	20-40		Dense, shaley limestone, mudstone and wackestone; isolated fossil molds.	Maybe water bearing, fractures are few and closed matrix permeability very low, total porosity less than 5%.
EDWARDS GROUP — PERSON FORMATION (Ked)	80-100	CYCLIC MARINE	Hard, dense, recrystallized limestone; mudstone; rudistid biomicrite; some moldic porosity.	Many open fractures, low matrix permeability, total porosity 5-10%.
	60-90	LEACHED COLLAPSED	Recrystallized, leached limestone; burrowed mudstone and wackestone, highly leached in places; solution breccias, vuggy, honeycombed.	Many open fractures, several cavernous zones, matrix permeability low to high, total porosity generally less than 20%, most porous and permeable part of Person Formation.
	20-24	REGIONAL DENSE MEMBER	Limestone, shaley to wispy, dense; mudstone; no open fractures.	Yields no water, total porosity less than 5%
EDWARDS GROUP — KAINER FORMATION (Ked)	50-60	GRAINSTONE	Limestone; chalky to hard cemented miliold grainstone with associated beds of mudstones and wackestones; locally honeycombed in burrowed beds.	Yields little water, few open fractures, matrix permeability low to moderate, total porosity 5-15%.
	50-70	KIRSCHBERG EVAPORATE	Limestone and leached axaporitic rocks with boxwork porosity; most porous subdivision.	Many open fractures, cavernous layers, matrix permeability low to very high, total porosity 5-25%, most porous and permeable part of Edwards Group.
	110-150	DOLOMITIC	Limestone, recrystallized from dolomite, honeycombed in a few burrowed beds; more cavernous in upper part.	Many open fractures, matrix permeability, total porosity 5-20%.
EDWARDS GROUP — WALNUT FORMATION (Ked)	40-60	SOMETIMES INCLUDED AS BASAL NODULAR MEMBER OF KAINER	Limestone, hard, dense; clayey mudstone to wackestone, nodular wispy, stylolitic, mottled; isolated molds.	Few open fractures, low matrix permeability, total porosity less than 10%.
GLEN ROSE FORMATION (Kgr)	650-700		Calcareous limestone; varying amounts of clay and sand; upper member karst structures and springs.	Upper member yields small to moderate quantities of generally poor quality water. The lower member yields fairly good water.

* Variable up to thickness given

(modified after Maclay and Small, 1976; Metcalf and Eddy, 1979)

FAIR OAKS RANCH - COMAL COUNTY UNIT 3
LOT 1801 (8.93 ACRES)

SITE-SPECIFIC GEOLOGY

The site consists of alluvium deposits within a fluviatile terrace along the Cibolo Creek. The thickness of the unit is 25' to 30' of gravelly loams and includes a capping surface clay layer which is several feet thick.
The alluvium unit overlies the Lower Glen Rose Fm. which is not exposed at the site.
No structural or karstic features were observed on the site.
Overall, the alluvium unit at the site and specifically the surface clay cover appears to impede fluid movement into the subsurface.

GEOLOGIC ASSESSMENT TABLE

FEATURE ID			FEATURE CHARACTERI													
1A	1B	1C	2	3			4			5	6		7			
LOCATION	TYPE (1)	POINTS	GEOLOGIC FORMATION	VERTICAL FEATURE (FEET)			HORIZONTAL FEATURE (FEET)			LENGTH & WIDTH (FEET)	TREND (C, CD, FR, FZ, SC, SH)		DENSITY (FR, VF)			APERT
				C, CD, SC, SH			C, SC			FZ, FR, VR, Z		10	0	5	10	0
				X	Y	Z	X	Y	Z		DIRECTION	DOMINANT	LOW	MODERATE	HIGH	SMALL
S-1	CD	10	QAL	10	10	3										

(1) C = 35, CD = 10, FR = 0, FZ = 15, MM = 35,
SC = 10, SH = 20, VR = 0, ZONE = 35

(2) WALL = Vertical/near veritical wall above 100-yr floodplain
FLOODPLAIN = 100-yr floodplain
STREAM BED = Ordinary High Water Mark

DPK

TNRCC - 0629 ~~(2/1/97)~~ 6-1-99

I have read, unders
information presen

Geologist s

FAIR OAKS RANCH - COMAL COUNTY UNIT 3
LOT 1801 (8.93 ACRES)

SITE-SPECIFIC GEOLOGY

The site consists of alluvium deposits within a fluviatile terrace along the Cibolo Creek. The thickness of the unit is 25' to 30' of gravelly loams and includes a capping surface clay layer which is several feet thick.
The alluvium unit overlies the Lower Glen Rose Fm. which is not exposed at the site.
No structural or karstic features were observed on the site.
Overall, the alluvium unit at the site and specifically the surface clay cover appears to impede fluid movement into the subsurface.

FAIR OAKS RANCH - COMAL COUNTY

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: UNIT 3 - LOT 1801 (8.93 AC)

FEATURE ID			FEATURE CHARACTERISTICS																						PHYSICAL SETTING																
1A	1B	1C	2	3			4			5	6		7			8			9				10			11	12			13				14					15	16			17
LOCATION	TYPE (1)	POINTS	GEOLOGIC FORMATION	VERTICAL FEATURE (FEET)			HORIZONTAL FEATURE (FEET)			LENGTH & WIDTH (FEET)	TREND (C, CD, FR, FZ, SC, SH)		DENSITY (FR, VF)			APERTURE (FR, VR)			INFILLING (CD, FR, FZ, SC, SH, VR)				RELATIVE INFILTRATION RATE			SUB-TOTAL	SENSITIVITY			DRAINAGE AREA (ACRES)				TOPOGRAPHY (2)					SUB-TOTAL	POTENTIAL RECHARGE			COMMENTS
				C, CD, SC, SH			C, SC			FZ, FR, VR, Z			0	5	10	0	5	10	0	5	10	15	0	10	30					0	5	10	15	0	5	10	15	20					
				X	Y	Z	X	Y	Z		DIRECTION	DOMINANT	LOW	MODERATE	HIGH	SMALL	MEDIUM	LARGE	CEMENTED	FINE	COARSE	NONE	NONE/LOW	MODERATE	HIGH		NOT <25	POSSIBLE 25 - 80	SENSITIVE >80	<1	<10	<50	>50	WALL	HILLTOP	HILLSIDE	FLOODPLAIN	STREAM BED		NONE/LOW <15	MODERATE 15 - 20	HIGH >20	YES
S-1	CD	10	QAL	10	10	3															✓			✓		30		✓			✓						✓	30			✓	✓

(1) C = 35, CD = 10, FR = 0, FZ = 15, MM = 35,
SC = 10, SH = 20, VR = 0, ZONE = 35

(2) WALL = Vertical/near veritical wall above 100-yr floodplain
FLOODPLAIN = 100-yr floodplain
STREAM BED = Ordinary High Water Mark

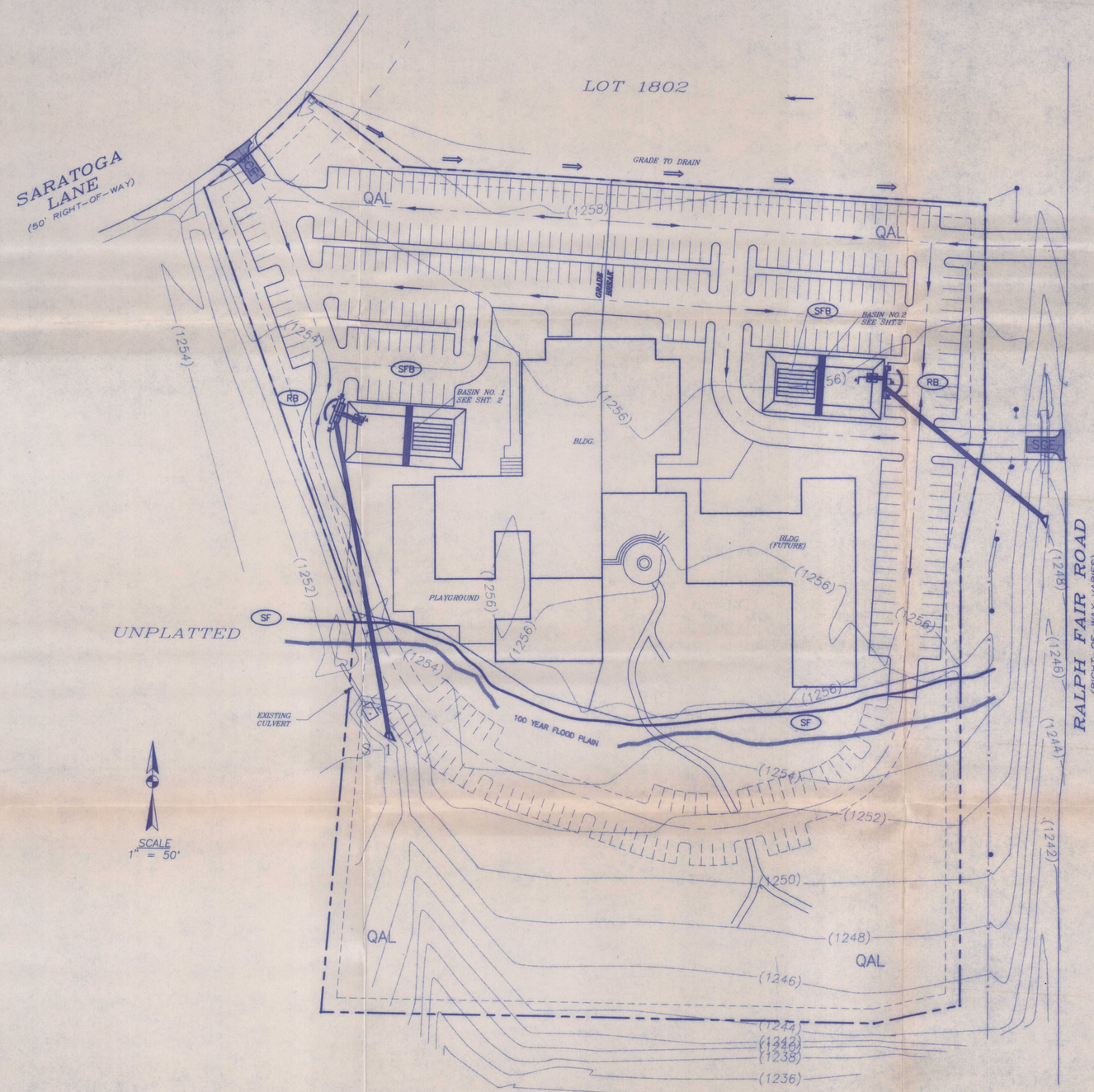
DPK
TNRCC - 0629 ~~(2/1/87)~~ 6-1-99

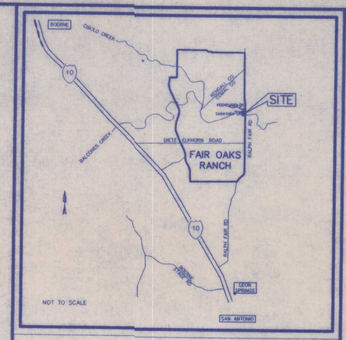
I have read, understood, and followed the Texas Natural Resource Conservation Commission's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

David P. Krueger 2-2-01

Geologist signature Date

Sheet 1 of 1





VICINITY MAP

LEGEND

PROPOSED EARTHEN SWALE (FLOW DIRECTION)
(GRADE = 0.5% MIN., 3 % MAX.)

S-1 GEOLOGIC (DRAINGE & RECHARGE) FEATURES

S1 DRAINAGE WAY

TEMPORARY BEST MANAGEMENT PRACTICES (BMPs)
(SEE DETAILS AND NOTES, PAGE 3)

SF SILT FENCE

RB ROCK BERM

SCE STABILIZED CONSTRUCTION EXIT

PERMANENT BEST MANAGEMENT PRACTICES (BMPs)

SFB SAND FILTRATION BASIN
(See details, Page 2)

QAL SOIL CLASSIFICATIONS (per Geologic Assessment)

QAL Alluvium (25'-30' over lower Glen Rose Formation)

PROJECT DEVELOPMENT NOTES

PROPERTY DESCRIPTION
SINGLE LOT - PROPOSED CIBILO CREEK CHURCH 30390 SARATOGA LANE; FAIR OAKS RANCH, TX 78015

PROPOSED LAND USE INFORMATION:
-LAND USE: CHURCH (COMMERCIAL)
-TOTAL LOT ACREAGE: 8.9 ACRES ACREAGE TO BE DEVELOPED: 6.0 ACRES WITH APPROX. 60% IMPERVIOUS COVER.
-TOTAL NUMBER OF LOTS = 1

ENGINEER/SURVEYOR INFORMATION:
ALAMO CONSULTING, ENGINEERING, AND SURVEYING, INC.\
ROBERT BROWNING, P.E.
140 HEIMER RD., STE. 617
SAN ANTONIO, TX 78232
PHONE: (210) 828-0691
FAX: (210) 824-3055

OWNER INFORMATION:
CIBILO CREEK CHURCH
MR. ROBERT ARTLIE
CHAIRMAN, BUIODING COMMITTEE
29745 MEADOW WIND DR
FAIR OAKS RANCH, TX 78015
PHONE: (210)308-9444

UTILITY PROVIDERS:
SEWER: FAIR OAKS RANCH UTILITIES
WATER: FAIR OAKS RANCH UTILITIES
TELEPHONE: GAUADALUPE VALLEY TELEPHONE (GVTC)
ELECTRIC: CITY PUBLIC SERVICE (CPS)

OTHER NOTES:

1. THE SUBDIVISION IS LOCATED ENTIRELY WITHIN THE LIMITS OF SAN ANTONIO, TEXAS.
2. A 100 YEAR FLOOD PLAIN EXISTS ON THE SUBJECT PROPERTY AND IS SHOWN HEREON. THE FLOOD PLAIN LIMITS SHOWN ARE PER THE ENGINEER'S CALCULATIONS. (APPROVED CONDITIONAL LETTER OF MAP REVISION, FEMA CASE NO. 96-06-417P, APPROVED AGAUST 15, 1996)
3. ALL DRIVEWAYS SHALL BE PRIVATE AND SHALL BE MAINTAINED BY THE PROPERTY OWNER.
4. ALL OF THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE EDWARD'S AQUIFER RECHARGE ZONE.
5. TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THIS PLAN ACCURATELY DEPICTS THE GENERAL LOCATION OF ALL KNOWN DRAINAGE PATTERNS AND EDWARD'S AQUIFER RECHARGE FEATURES.
6. ALL BEARINGS AND DISTANCES SHOWN ARE APPROXIMATE.

POLLUTION ABATEMENT NOTES

1. The individual Temporary Best Management Practices (BMPs, Silt Fences and Rock Berms) shall be installed before soil is disturbed upgradient thereof, and shall remain until vegetation is re-established on soil disturbed by construction.
2. All areas disturbed by construction shall be seeded, sodded, or mulched for erosion protection.
3. AREAS TO BE DISTURBED BY CONSTRUCTION:

   For commercial developments, all areas of the property being developed may be disturbed by construction. The contractor shall disturb as little property as possible while working in a particular portion of the property, and shall insure that temporary erosion control measures are in place downgradient of any work area.
4. Temporary BMPs shall be removed after vegetation is re-established on areas disturbed by construction upgradient of the BMPs.
5. After construction is complete, it shall then be the complex manager's responsibility for maintaining vegetation on areas of pervious cover.
6. All earthen swales shall be designed to flow with a maximum velocity of six (6) feet per second during a twenty-five (25) year frequency storm.
7. Refer to page 2 of this Water Pollution Abatement Site Plan for additional Stormwater Pollution Prevention Notes.

POLLUTION ABATEMENT NOTES

Geologic Features shown heron are per Geologic Assessement prepared by:

David P. Seagraves
(210) 377-1603

Permanent Pollution Abatement Measures
TSS Load Removal Calculations

PLAT No.
N/A

REVISIONS

	DESCRIPTION	DATE	APPR'D
A	RELEASED FOR T.N.R.C.C. REVIEW	6/20/01	
A			
A			
A			
A			

ALAMO
CONSULTING ENGINEERING
& SURVEYING, INC.
140 HEIMER RD., STE. 617, SAN ANTONIO, TX. 78232
PHONE: (210)828-0691 FAX: (210)824-3055

CIBILO CREEK CHURCH

WATER POLLUTION ABATEMENT SITE GEOLOGIC MAP

JOB NO.: 94400
HORIZ. SCALE: 1" = 50'
VERT. SCALE: N/A
CONTOUR INT.: N/A
DRAWN BY: R.B.
DESIGNED BY: R.B.
CHECKED BY: PAS/RB
FILE NAME: P-WPAP-...
SHEET: OF
PAGE: 1 OF 1

WATER POLLUTION ABATEMENT PLAN APPLICATION

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

PROJECT NAME: *Cibilo Creek Church (Lot 1801, Comal County Unit 3, Fair Oaks Ranch)*

PROJECT INFORMATION

1. The type of project is:
   ___ Residential: # of Lots: ___
   ___ Residential: # of Living Unit Equivalents: ___
   ___ Commercial
   ___ Industrial
   X Other: *Church*

2. Total site acreage (size of property): *8.9 Total , 6.0 to be disturbed by construction.*

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	*46,500*	÷ 43,560 =	*1.1*
Parking */ Driveways*	*105,000*	÷ 43,560 =	*2.4*
Other paved surfaces *(sidewalks/ patios)*	*5,100*	÷ 43,560 =	*0.1*
Total Impervious Cover	*156,600*	÷ 43,560 =	*3.6*
Total Impervious Cover ÷ Total ***disturbed*** Acreage x 100 =			*60 %*

5. *X* **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. *X* Only inert materials as defined by 30 TAC 330.2 will be used as fill material.

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

7. Type of project: *N/A*
   ___ 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: *N/A*

___ Concrete
___ Asphaltic concrete pavement
___ Other: _____

9. Length of Right of Way (R.O.W.): _____ feet. *N/A*
Width of R.O.W.: _____ feet.
L x W = _____ Ft² ÷ 43,560 Ft²/Acre = _____ acres.

10. Length of pavement area: _____ feet. *N/A*
Width of pavement area: _____ feet.
L x W = _____ Ft² ÷ 43,560 Ft²/Acre = _____ acres.
Pavement area _____ Acres ÷ R.O.W. area ____ acres x 100 = _____ % impervious cover.

11. ___ A rest stop will be included in this project. *N/A*
___ A rest stop will **not** be included in this project.

12. *N/A* Maintenance and repair of existing roadways that do not require approval from the TNRCC 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 TNRCC.

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:

100	% Domestic	*16,200*	gallons/day
_____	% Industrial	_____	gallons/day
	% Commingled	_____	gallons/day
	TOTAL:	*16,200*	gallons/day

6.0 Ac. @ 2700 gpd/ Ac.
= 16,200 gpd

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 §285.

X Sewage Collection System (Sewer Lines):

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

X 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.

X 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 ***Fair Oaks Ranch*** (name) Treatment Plant. The treatment facility is :

X existing.

___ proposed.

16. X 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" = ***50'***

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.

X 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):

Approved Conditional Letter of Map Revision, FEMA Case No. 96-06-417P, approved August 15 ,1996.

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.

X 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.

X 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:

X 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.

Note: The attached Geologic Assessment covers an additional 3.7 Acre "Out-Parcel" which does contain three recharge features.

___ **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. X The drainage patterns and approximate slopes anticipated after major grading activities.

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

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

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

26. N/A Surface waters (including wetlands).

27. ___ Locations where stormwater discharges to surface water or sensitive features.

X There will be no discharges to surface water or sensitive features.

ADMINISTRATIVE INFORMATION

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

29. X Any modification of this WPAP will require TNRCC 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 TNRCC review and executive director approval. The form was prepared by:

Robert J. Browning, P.E.
Alamo Consulting Engineering and Surveying, Inc.
Print Name of Applicant/Owner/Agent

Signature of Applicant/Owner/Agent — Date: 6/20/01

ATTACHMENT A – Factors Affecting Water Quality

This project is not anticipated to have any factors that could affect surface water and groundwater quality, other than

1. *hydrocarbons typically present on residential streets and driveways, and*
2. *fertilizers, pesticides, and other miscellaneous home use chemicals typically present on residential home sites.*

All stormwater runoff from on-site private streets (driveways) or parking areas will be directed to one of two sand filtration basins, which will reduce pollutant loads containing hydrocarbons.

Stormwater runoff from rooftop, sidewalk, patio, and landscape areas will also be directed to one of the aforementioned sand filtration basins. Both of these Permanent Pollution Prevention features will reduce pollutant loads containing fertilizers, pesticides, or home use chemicals.

ATTACHMENT B – Volume and Character of Stormwater

This project is exclusively for the development of a church facility. As is typical with such developments, stormwater runoff from roofs, patios, and sidewalks shall be directed (whenever possible) onto lawns and other landscape areas. Runoff from these lawns, typically remaining in sheet flow, will drain into private driveways. These private driveways will direct stormwater to one of two Sand Filtration Basins. Per T.N.R.C.C. requirements, the capacity of these basins will be such that 80% of the increase in pollutant load (TSS) resulting from development of the area disturbed by construction will be removed. Note that the site will be graded such that approximately have of the area disturbed by construction (6.0 Ac./2 = 3.0 Ac.) will be drained to each of the two basins. Therefore, each basin will be sized identically as per the attached calculations.

These basins will be located to facility drainage (through overflow pipe culverts) to one of two existing graded earthen swales. One swale exists adjacent to the east lot line, the other exists adjacent to the west lot line.

ATTACHMENT C – Suitability Letter from Authorized Agent, if OSSF is proposed

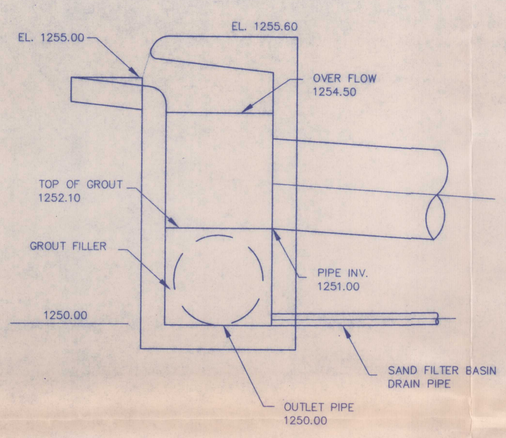
NOT APPLICABLE

Sanitary sewer service will be provided by Fair Oaks Ranch Utility. Therefore, on-site sewage facilities are not proposed for this development.

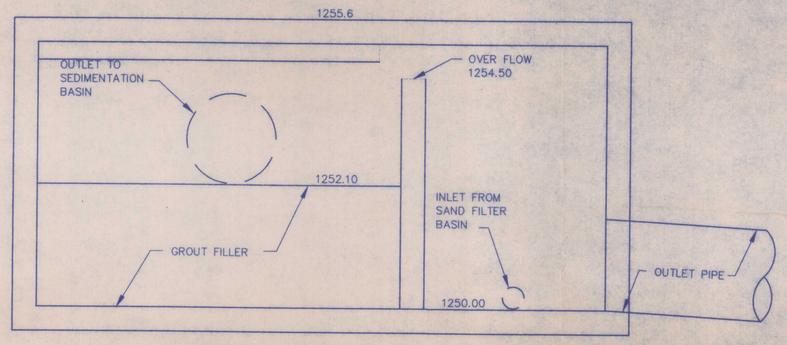
ATTACHMENT D – Exception to the Required Geologic Assessment

NOT APPLICABLE

The required Geologic Assessment is attached to this application.

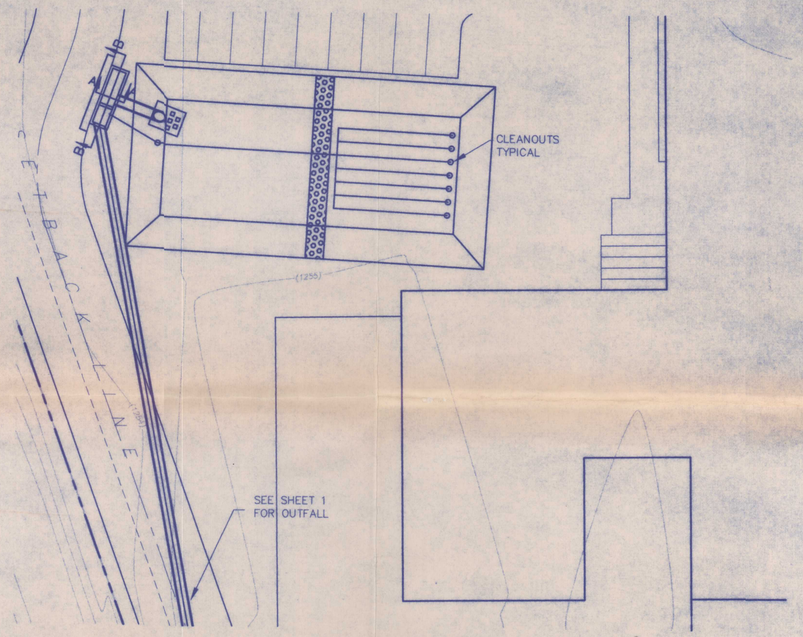


SECTION A–A
NOT TO SCALE

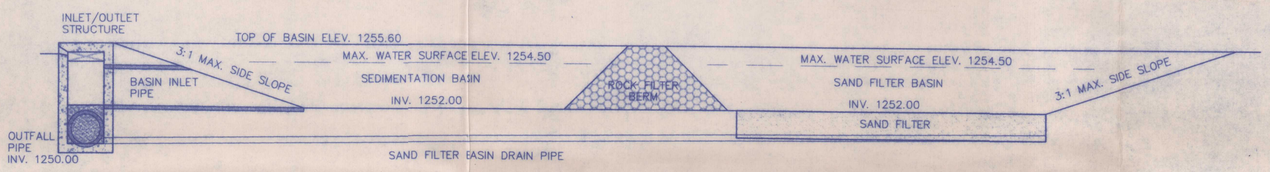


SECTION B–B
NOT TO SCALE

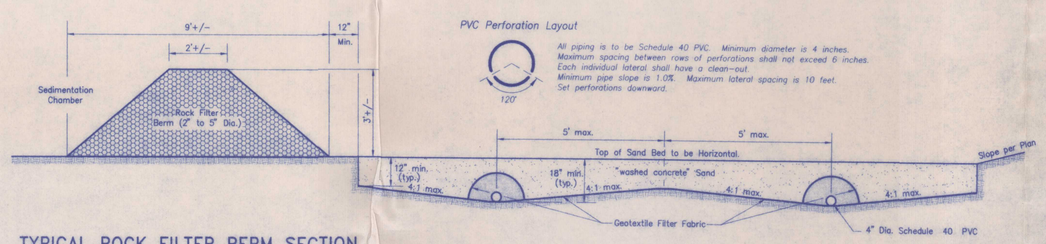
TYPICAL DROP INLET SECTIONS



BASIN #1
SCALE: 1" = 20'



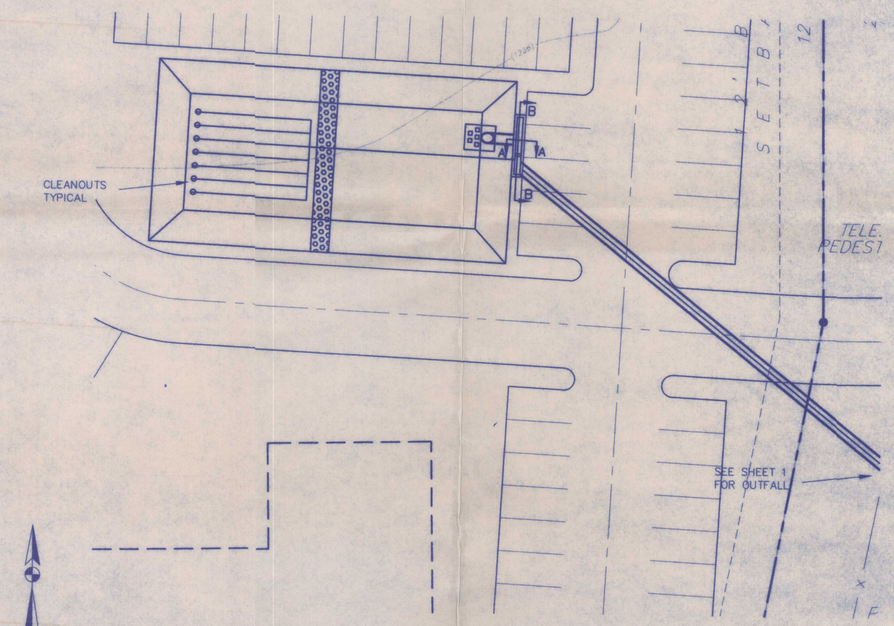
TYPICAL BASIN SECTION
NTS



TYPICAL ROCK FILTER BERM SECTION

SAND FILTER SECTION

ROCK BERM & SAND FILTER DETAILS
N.T.S.



BASN #2
SCALE: 1" = 20'

PLAT No.
N/A

REVISIONS

	DATE	DESCRIPTION	APPRVD
0	6/20/01	RELEASED FOR T.N.R.C.C. REVIEW	
1			
2			
3			
4			
5			

6/20/01

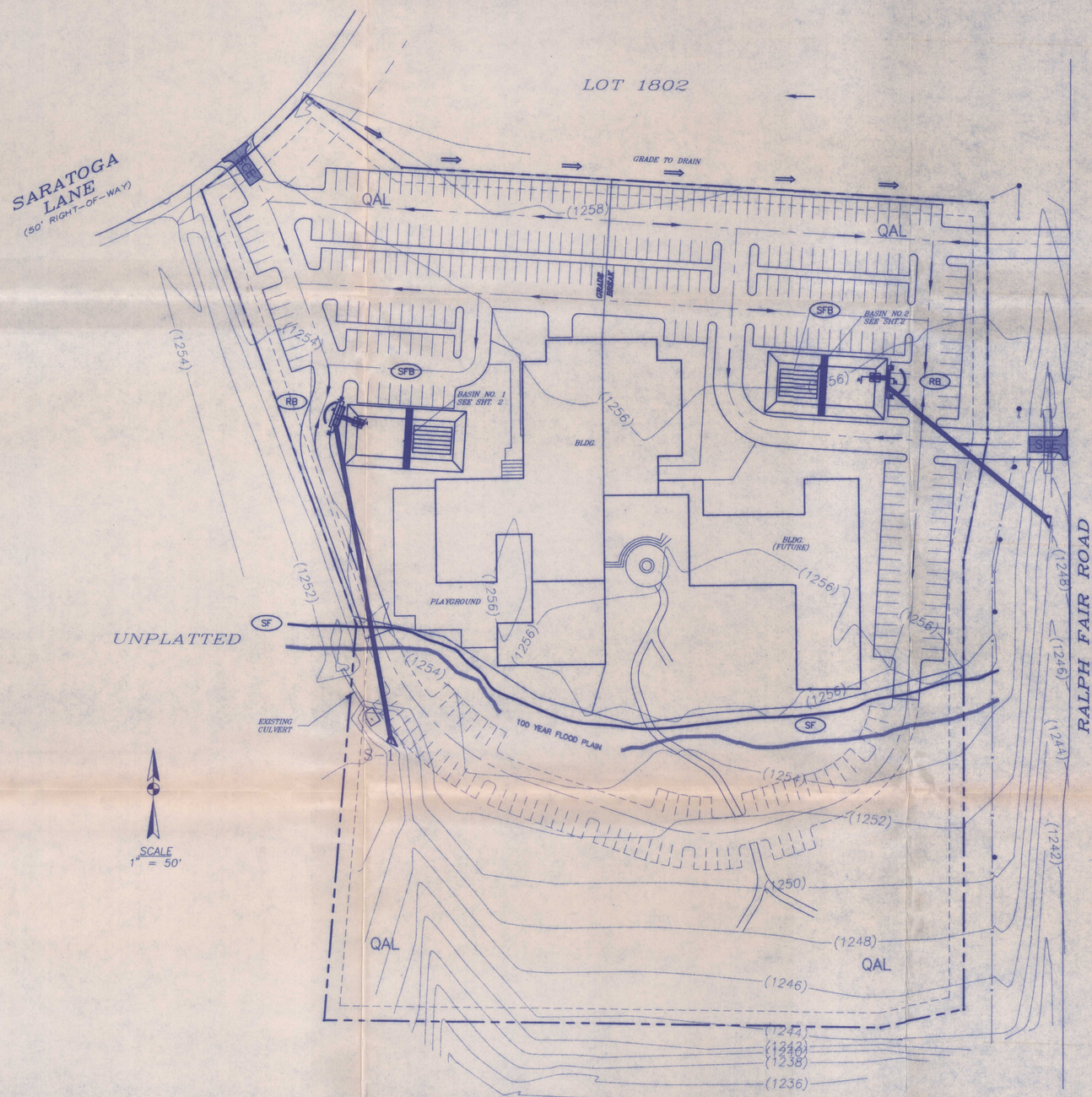
ALAMO
CONSULTING ENGINEERING
& SURVEYING, INC.
140 HEIMER RD., STE. 617, SAN ANTONIO, TX. 78232
PHONE: (210)828-0691 FAX: (210)824-3055

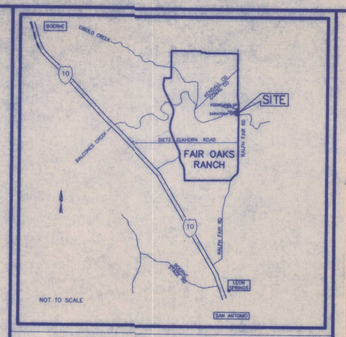
CIBILO CREEK CHURCH

WATER POLLUTION
W.P.A.P. SITE PLAN
FILTRATION BASIN DETAILS

JOB NO.: 94400
HORIZ. SCALE: VARIES
VERT. SCALE: N/A
CONTOUR INT.: 1'
DRAWN BY: R.M.
DESIGNED BY: R.B
CHECKED BY: PAS/RB
FILE NAME: P--WPAP--
SHEET: OF
PAGE: 2 OF 3

F:\sdsk3prj\0944\dwg\p-wpap-sht2.dwg Wed Jun 20 14:49:17 2001





VICINITY MAP

PROJECT DEVELOPMENT NOTES

PROPERTY DESCRIPTION
SINGLE LOT – PROPOSED CIBILO CREEK CHURCH 30390 SARATOGA LANE, FAIR OAKS RANCH, TX 78015

PROPOSED LAND USE INFORMATION:
- LAND USE: CHURCH (COMMERCIAL)
- TOTAL LOT ACREAGE: 8.9 ACRES ACREAGE TO BE DEVELOPED: 6.0 ACRES WITH APPROX. 60% IMPERVIOUS COVER.
- TOTAL NUMBER OF LOTS = 1

ENGINEER/SURVEYOR INFORMATION:
ALAMO CONSULTING, ENGINEERING, AND SURVEYING, INC.\
ROBERT BROWNING, P.E.
140 HEIMER RD., STE. 617
SAN ANTONIO, TX 78232
PHONE: (210) 828-0691
FAX: (210) 824-3055

OWNER INFORMATION:
CIBILO CREEK CHURCH
MR. ROBERT ARTLIE
CHAIRMAN, BUILDING COMMITTEE
29745 MEADOW WIND DR.
FAIR OAKS RANCH, TX 78015
PHONE: (210)308-9444

UTILITY PROVIDERS:
SEWER: FAIR OAKS RANCH UTILITIES
WATER: FAIR OAKS RANCH UTILITIES
TELEPHONE: GAUADALUPE VALLEY TELEPHONE (GVTC)
ELECTRIC: CITY PUBLIC SERVICE (CPS)

OTHER NOTES:

1. THE SUBDIVISION IS LOCATED ENTIRELY WITHIN THE LIMITS OF SAN ANTONIO, TEXAS.
2. A 100 YEAR FLOOD PLAIN EXISTS ON THE SUBJECT PROPERTY AND IS SHOWN HEREON. THE FLOOD PLAIN LIMITS SHOWN ARE PER THE ENGINEER'S CALCULATIONS. (APPROVED CONDITIONAL LETTER OF MAP REVISION, FEMA CASE NO. 96-06-417P, APPROVED AGAUST 15, 1996)
3. ALL DRIVEWAYS SHALL BE PRIVATE AND SHALL BE MAINTAINED BY THE PROPERTY OWNER.
4. ALL OF THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE EDWARD'S AQUIFER RECHARGE ZONE.
5. TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THIS PLAN ACCURATELY DEPICTS THE GENERAL LOCATION OF ALL KNOWN DRAINAGE PATTERNS AND EDWARD'S AQUIFER RECHARGE FEATURES.
6. ALL BEARINGS AND DISTANCES SHOWN ARE APPROXIMATE.

LEGEND

- PROPOSED EARTHEN SWALE (FLOW DIRECTION) (GRADE = 0.5% MIN., 3 % MAX.)
- S-1 GEOLOGIC (DRAINGE & RECHARGE) FEATURES
  - S1 DRAINAGE WAY
- TEMPORARY BEST MANAGEMENT PRACTICES (BMPs) (SEE DETAILS AND NOTES, PAGE 3)
  - SF — SILT FENCE
  - RB — ROCK BERM
  - SCE — STABILIZED CONSTRUCTION EXIT
- PERMANENT BEST MANAGEMENT PRACTICES (BMPs)
  - SFB — SAND FILTRATION BASIN (See details, Page 2)
- QAL SOIL CLASSIFICATIONS (per Geologic Assessment)
  - QAL Alluvium (25'-30' over lower Glen Rose Formation)

POLLUTION ABATEMENT NOTES

1. The individual Temporary Best Management Practices (BMPs, Silt Fences and Rock Berms) shall be installed before soil is disturbed upgradient thereof, and shall remain until vegetation is re-established on soil disturbed by construction.
2. All areas disturbed by construction shall be seeded, sodded, or mulched for erosion protection.
3. AREAS TO BE DISTURBED BY CONSTRUCTION:

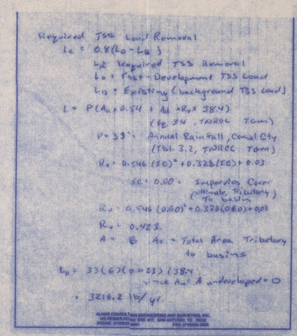
   For commercial developments, all areas of the property being developed may be disturbed by construction. The contractor shall disturb as little property as possible while working in a particular portion of the property, and shall insure that temporary erosion control measures are in place downgradient of any work area.
4. Temporary BMPs shall be removed after vegetation is re-established on areas disturbed by construction upgradient of the BMPs.
5. After construction is complete, it shall then be the complex manager's responsibility for maintaining vegetation on areas of pervious cover.
6. All earthen swales shall be designed to flow with a maximum velocity of six (6) feet per second during a twenty-five (25) year frequency storm.
7. Refer to page 2 of this Water Pollution Abatement Site Plan for additional Stormwater Pollution Prevention Notes.

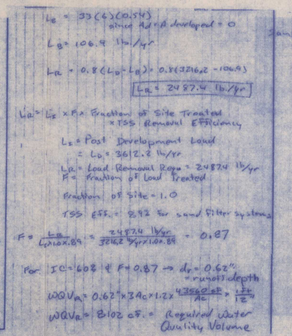
POLLUTION ABATEMENT NOTES

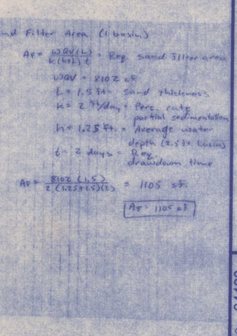
Geologic Features shown heron are per Geologic Assessement prepared by:

David P. Seagraves
(210) 377-1603

Permanent Pollution Abatement Measures
TSS Load Removal Calculations







PLAT No. N/A

REVISIONS

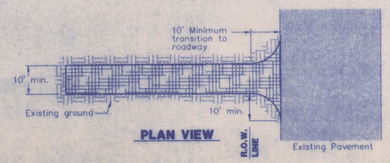
NO	DATE	DESCRIPTION	APPRVD
0	6/20/01	RELEASED FOR T.N.R.C.C. REVIEW	
1			
2			
3			
4			
5			

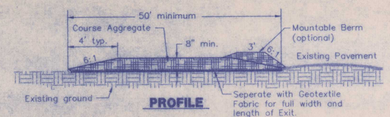
ALAMO
CONSULTING ENGINEERING
& SURVEYING, INC.
140 HEIMER RD., STE. 617, SAN ANTONIO, TX. 78232
PHONE: (210)828-0691 FAX: (210)824-3055

CIBILO CREEK CHURCH

WATER POLLUTION ABATEMENT SITE PLAN

JOB NO: 94400
HORIZ. SCALE: 1" = 50'
VERT. SCALE: N/A
CONTOUR INT.: N/A
DRAWN BY: R.B.
DESIGNED BY: R.B.
CHECKED BY: PAS/RB
FILE NAME: P-WPAP-...
SHEET: OF
PAGE: 1 OF 3





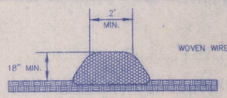
GENERAL NOTES:

1. Stone Size – 3" to 5" open graded rock or recycled concrete equivalent.
2. Length – As required, but not less than 50 feet.
3. Width – Ten foot minimum, but not less than the full width at points of ingress/egress.
4. Thickness – Not less than eight (8) inches.
5. Filter Cloth – Will be placed over entire area prior to placing of stone.
6. Surface Water – The area adjacent to the Exit shall be graded to prevent runoff from leaving the site while maintaining positive drainage. Where surface runoff is flowing or is diverted toward the Exit, water shall be piped across the Exit. In lieu of piping, a mountable berm in combination with one or more sections of Railroad Tie Exit and Diversion Dikes will be permitted to contain runoff.
7. Maintenance – The exit shall be maintained in a condition which will control tracking or flowing of sediment onto public roadways. This may require periodic top dressing with additional stone as conditions demand, and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed, or tracked onto public roadway shall be removed immediately.
8. Washing – Wheels shall be cleaned as necessary to remove sediment prior to exiting onto public roadway. When washing is required, it shall be done on an area stabilized with stone and which drains to an approved sediment trapping device. The stabilized area of the Exit may be widened or lengthened to accomodate a washing area.
9. All stabilized areas denoted on the construction drawings shall be constructed to the same standards as the Stabilized Construction Exit unless otherwise noted.

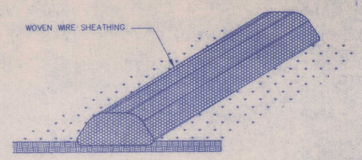
STABILIZED CONSTRUCTION EXIT

N.T.S.

SCE



ROCK BERM CROSS SECTION



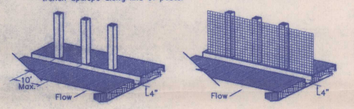
GENERAL NOTES:

1. Use only open graded rock 4–8 inch diameter for streamflow condition; use open graded rock 3–5 inches diameter for other conditions.
2. The rock berm shall be secured with a woven wire sheathing having maximum 1 inch opening and a minimum wire opening of 20 gauge.
3. The rock berm shall be inspected weekly or after each rain, and the stone and/or fabric core–woven wire 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 one foot , whichever is less, the silt shall be removed and disposed of in an approved site and in a manner as to not create a siltation problem.
5. Daily inspection shall be made on serve service rock berms; silt shall be removed when accumulation reaches 6" inches.
6. When the site is completely stabilized, the berm and accumulated silt shall be removed and disposed of in a approved manner.

ROCK BERM DETAIL

N.T.S.

RB



General Notes:

1. Filter cloth to be fastened securely to woven wire fence, with ties spaced every 24 inches at top and midsection.
2. When two sections of filter cloth odjoin each other, they shall be overlapped 6 inches at the posts, and folded.

SILT FENCE DETAIL

N.T.S.

SF

TEXAS NATURAL RESOURCE CONSERVATION COMISSION
WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES

1. Written construction notification must be given to the appropriate TNRCC regional office no later than 48 hours prior to commencement of the regulated activity. Information must include the date on which the regulated activity will commence, the name of the approved plan for the regulated activity, and the name of the prime contractor and the name and telephone number of the contact person.
2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan and the TNRCC letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on–site copies of the approved plan and approval letter.
3. If any sensitive feature is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TNRCC regional office must be immediately notified of any sensitive features encountered during construction. The regulated activities near the sensitive feature may not proceed until the TNRCC has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality.
4. No temporary aboveground hydrocarbon and hazardous substance storage tank system is installed within 150 feet of a domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
5. All temporary erosion and sedimentation (E&S) control measures must be properly selected, installed, and maintained in accordance with the manufacturers specifications and good engineering practices. Controls specified in the temporary storm water section of the approved Edwards Aquifer Protection Plan are required during construction. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. The controls must remain in place until disturbed areas are revegetated and the areas have become permanently stabilized.
6. 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).
7. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake must be provided that can indicate when the sediment occupies 50% of the basin volume.
8. 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).
9. All spoils (excavated material) generated from the project site must be stored on–site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.
10. 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 temporary 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 ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.
11. The following records shall be maintained and made available to the TNRCC 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.
12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:
    A. any 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;
    B. any 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;
    C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office
1921 Cedar Bend, Suite 150
Austin, Texas 78758–5336
Phone (512) 339–2929Phone
Fax (512) 339–3795Fax

San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233–4480
(210) 490–3096
(210) 545–4329

STORMWATER POLLUTION PREVENTION PLAN GENERAL NOTES.

I. PERMITTEE IDENTIFICATION

This Stormwater Pollution Prevention Plan (SW3P) is prepared in accordance with the guidelines in the Federal Register, Volume 57, No. 175, dated Wednesday, September 9, 1992, "Final NPDES General Permits for Storm Water Discharges from Construction Sites."

The Contractor and his subcontractors shall avoid the pollution of runoff water by adhering to the measures outlined in these "Notes" and/or specified on the "Plan". Contractor shall be held responsible for his actions and the actions of all of his subsequent subcontractors.

The Contractor shall provide the following Certification in writing to the Engineer prior to starting construction.

"I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (N.P.D.E.S.) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification."

SUBDIVISION: _____
COMPANY NAME: _____
ADDRESS: _____
RESPONSIBLE COMPANY OFFICER: _____
TITLE: _____

II. SITE DESCRIPTION

A. NATURE OF CONSTRUCTION ACTIVITY

This SW3P addresses specifically the infrastructure construction of the referenced development which is to involve the clearing and excavation for, and the installation of drainage, streets, and utilities (water, sanitary sewer, gas, electric, telephone, and cable television services).

The Contractor, in compliance with the N.P.D.E.S. General Permit, shall file a Notice of Intent (N.O.I.) with the E.P.A.

The Contractor shall file a "Notice of Termination" (N.O.T) for infrastructure construction activities after the areas disturbed by the infrastructure construction, and not being disturbed by any new–home construction activity, have been permanently stabilized.

B. INTENDED SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES

Typically the intended sequence of major activities disturbing the soil during commercial development construction are:

- *Implementation of SW3P;*
- *Clearing vegetation from street right–of–ways;*
- *Grading of streets to proposed subgrade elevation;*
- *Rough grading of lots (if applicable);*
- *Clearing vegetation, as needed, from utility easements;*
- *Construction of utilities within street right–of–ways and utility easements;*
- *Clearing vegetation, as needed, from drainage easements;*
- *Construction of drainage improvements;*
- *Construction of buildings*
- *Placement of roadway section (base, curbs, and asphalt);*
- *Site cleanup and revegetation of parkways, drainage and utility easements, and graded or otherwise disturbed areas.*

C. SITE AREA

For commercial developments, all areas of the property being developed may be disturbed by construction.
The contractor shall disturb as little property as possible while working in a particular portion of the property, and shall insure that temporary erosion control measures are in place downgradient of any work area.

D. SITE RUNOFF FACTORS

After infrastructure activities are completed and disturbed areas are stabilized, concentrations of suspended soils in the stormwater runoff from the site are expected to be approximately at pre–development levels. After building construction is complete, runoff may contain modest concentrations of organic wastes (from pets), small concentrations of fertilizers (lawn and shrub care) and hydrocarbons (from streets and vehicle drippings), and possibly trace amounts of pesticides and herbicides.

E. SITE MAP

A Stormwater Pollution Prevention Plan (this Water Pollution Abatement Site Plan) showing site topography, drainage patterns, and proposed soil erosion and sedimentation control measures has been prepared to meet the requirements of Article IV.C.1.a of the NPDES Requirements for Construction Site Permits.

III. SOIL EROSION AND SEDIMENT CONTROL MEASURES

Temporary control of stormwater pollution, soil erosion and sedimentation in particular, for this project will be accomplished through the installation of structural barriers to trap and filter silt from runoff waters and the temporary stabilization of disturbed areas. (The location of these temporary erosion control measures are shown on page 1 of this plan.)

Permanent control of stormwater pollution will be achieved by the Sand Filtration Basin shown hereon (and detailed on page 3 of these plans), as well as permanent stabilization of disturbed areas by sodding or seeding with standard lawn or native grasses.

The control measures specified on the "Stormwater Pollution Prevention Plan" for the site will be installed and maintained by the Contractor(s) during the entire time infrastructure construction is in progress and until the N.O.T. is filed.

The Contractor, as part of final site cleanup, will remove all installed TEMPORARY erosion control measures not being specifically turned over to other responsible parties.

A. INFRASTRUCTURE CONSTRUCTION

Soil disturbances shall be minimized by exposing only the smallest practical area of land required for the construction activity and for the shortest practical period of time. Trenching and associated backfilling for utilities and storm drainage shall be coordinated to minimize the time period of the disturbance. Maximum practical use of natural vegetation for erosion control will be used by leaving this vegetation in place until clearing is necessary. All clearing will be conducted as directed and approved by the Engineer.

1. STABILIZATION PRACTICES

Construction entrances, parking and staging areas, shall be stabilized with course aggregate or as otherwise directed.

All disturbed areas, other than proposed roadways, where construction has been completed, temporarily halted, or no further work is planned for 21 days or longer, shall be stabilized within 14 days of the last construction activity.

Landscaping may be substituted as may be provided for elsewhere within this contract or within a seperate contract.

2. STRUCTURAL PRACTICES

To intercept/divert off–site overland sheet flow, diversion dikes/swales will be constructed along the boundaries if necessary (or as shown on the Plan) before on–site construction begins. The channel areas of these dikes/swales will be lined as directed on the Plan or by the Engineer. These dikes and swales, which serve to protect the subdivision from overland flow from the adjacent upgradient areas, will be left in place until the protected disturbed area has been stabilized. Following stabilization, these dike/swales shall be promptly removed unless specifically directed otherwise.

NOTE: This item does not apply to the earthen swales and Sand Filtration Basin shown on page 1 of this WPAP Site Plan. These drainage structures are permanent site features, and shall remain in place.

B. ~~NEW HOME CONSTRUCTION~~ – NOT APPLICABLE

~~It is expect that new–home construction may have commenced on some of the platted lots prior to completion of the infrastructure construction. For the construction activity on these lots, individual home builders may be expected to install a silt fence or some other form of generally–accepted soil erosion barrier. Contractor has the right to file a Notice of Termination (N.O.T.) after the areas disturbed by the infrastructure construction, and not associated with any new–home construction activity, have been permanently stabilized and accepted by the Engineer.~~

~~Areas of lots that must have grade adjustments (excavation and/or fill) shall be revegetated within 14 days unless building construction, or some other construction activity, is to commence within 21 days. As much as possible, paleral vegetation will be left in place and undisturbed.~~

C. OTHER MISCELLANEOUS CONTROLS

In addition to any "best management practices" (BMPs) shown on this plan, the Contractor shall avoid the pollution of runoff water by using other BMPs, as necessary. Some best management practices which the Contractor shall be expected to conform to are as follows:

- *All construction and related activities shall comply with applicable state and/or local regulations.*
- *A stabilized construction exit is to be provided which will help to reduce vehicle tracking of sediments. All vehicular traffic leaving the construction site (prior to improved streets) will exit through this stabilized area as located on the SW3P. When soils have collected on the stabilized vehicular exit to an extent which reduces its intended effectiveness, the surface will be cleaned or, if needed, replaced.*
- *Construction materials for each phase of construction shall be stored within a designated storage area(s) whose size, shape, and location shall be approved by the Engineer.*
- *Construction equipment (except large, slow moving equipment) not removed from the site at night shall be stored in the designated area(s).*
- *Construction equipment/vehicles shall be limited to traveling within the street right–of–way and utility, drainage, grading, or construction easements unless otherwise specifically authorized.*
- *All soil, sand, gravel, excavated material, etc. to be stockpiled for more than two (2) days shall have appropriate control measures.*
- *Sediment collected behind silt fences or in sediment traps will be periodically collected and placed as fill material within the property as approved by the Engineer.*
- *The use of temporary construction fuel storage tanks on–site will not be allowed. Release of vehicle fluid(s) onto the ground shall not be allowed. Tainted soil resulting from any spill(s) shall be promptly removed and disposed of by the Contractor in accordance with all applicable regulations. Soil shall be replaced at Contractor's expense.*
- *Rinsing out concrete trucks will not be allowed unless a controlled area on site is designated and approved for a rinse–out pit. Pits shall be surrounded by a berm and/or silt fence to prevent runoff of contaminated water.*
- *Construction waste materials, debris, domestic garbage, etc. shall be periodically and regularly collected and properly disposed of off–site.*
- *All sanitary waste from any portable units shall be regularly collected and disposed of by a licensed sanitary waste management contractor.*
- *Chemicals, solvents, paints, and other potentially toxic materials must be protected from rainfall and surface runoff water while stored.*
- *In the event that hazardous waste materials are encountered, all hazardous waste will be disposed of in the manner specified by federal, state and/or local regulations, and as specified by the manufacturer.*

D. STATE AND LOCAL REQUIREMENTS

Contractor shall comply with all applicable Federal, state or local stormwater pollution prevention control regulations for construction activities that this project may be within the jurisdiction of.

IV. STORMWATER MANAGEMENT

Following the filing of a N.O.T., all remaining temporary soil erosion control measures (silt fences, rock berms, etc.) installed by the Contractor or his subcontractors shall be removed unless specifically instructed otherwise. In case of the latter, the responsible party will be identified which is to become fully responsible for those control measures. As previously noted, street parkways, utility easements, and any constructed earthen channels will be permanently stabilized.

V. MAINTENANCE

During construction, all control measures, as well as general site conditions, shall be inspected at least once every seven (7) calendar days and within 24 hours following any 1/2 inch, or greater, rainfall. Silt accumulations in excess of 12 inches or 1/4 of the height/depth of the control measure, whichever is less, shall be removed. Any sediment in the drainage structures/culverts in excess of the previous criteria shall likewise be removed. The removed silt shall be deposited within the Project limits at an approved location not subjected to concentrated runoff. Any damaged or non–functioning control measure(s) shall be repaired immediately. Until such time that the Construction Contract is 100% complete, the Contractor shall remain fully responsible for the maintenance of the erosion control measures installed for this Project.

Any silt fences or other erosion control barrier temporarily moved from its designated location to facilitate work shall be replaced at the end of each work day or if rain appears imminent. Control measures shall be removed after the appropriate disturbed areas become stabilized.

VI. INSPECTION OF CONTROL MEASURES

The Contractor shall designate a person(s) or entity to be responsible for the inspection of pollution prevention and erosion control measures for the subject site.

Reports of the weekly inspections shall be made recording the scope of the inspection, name of the inspector and date of the inspection, major observations related to the Plan's implementation, and the actions taken as a result of the inspection. A copy of each weekly report shall be immediately provided to the Engineer. As part of the Storm Water N.P.D.E.S., the Contractor shall retain these reports for three (3) years after the N.O.T for this Project is filed.

As a minimum, the inspector shall observe:

- *disturbed areas for evidence of unchecked erosion;*
- *storage areas for evidence of, or potential for, leakage from stored materials;*
- *control measures to ensure that they are functioning correctly;*
- *stabilized construction exits for evidence of off–site sediment tracking;*
- *vehicle storage areas for signs of leaking equipment or spills;*
- *concrete truck rinse–out pit for signs of potential failure;*
- *discharge locations to ascertain whether control measures are effective;*
- *vehicle/equipment wash area for proper drainage and maintenance of sediment trap and wash equipment.*

All deficiencies noted during the inspection will be documented and corrected within seven (7) calendar days following the inspection. Based upon the results of these inspections, the control measures of the SW3P will be modified where appropriate to provide more effective control.

All Stabilized areas shall be inspected at least once every four (4) weeks until the N.O.T. is filed.

VII. NON–STORM WATER DISCHARGES

Small discharges associated with activities such as pressure testing of newly–installed water system and sewer system facilities, water blasting curbs, and cleaning and testing activities for construction are expected. For such activities, the Contractor is hereby directed to use reasonable diligence to avoid causing unnecessary erosion. Any observed eroded areas shall be promptly corrected by Contractor.

PLAT No.
N/A

NO.	DATE	DESCRIPTION	APPRVD
1	08–20–01	RELEASED FOR T.N.R.C.C. REVIEW	CAS
2			
3			
4			
5			
6			

REVISIONS

ALAMO
CONSULTING ENGINEERING & SURVEYING, INC.
140 HEIMER RD., STE. 617, SAN ANTONIO, TX. 78232
PHONE: (210)828–0691 FAX: (210)824–3085

CIBILO CREEK CHURCH

T.N.R.C.C.
W.P.A.P. SITE PLAN
GENERAL NOTES AND DETAILS

JOB NO.: 94300
HORIZ. SCALE: N/A
VERT. SCALE: N/A
CONTOUR INT.: N/A
DRAWN BY: RM
DESIGNED BY: RJS
CHECKED BY: RJS/RJS
FILE NAME: P-SW3P-...
SHEET: 3 OF 3
PAGE: 3 OF 3

PROJECT: Cibolo Creek Church

JOB NO.:

DESCRIPTION:

PG. 1 OF ~~5~~ 3

BY:

DATE:

Required TSS Load Removal

$L_R = 0.8(L_D - L_B)$

L_R = Required TSS Removal

L_D = Post-Development TSS Load

L_B = Existing (background TSS Load)

$L = P(A_u \times 0.54 + A_d \times R_v \times 38.4)$

(Eq. 3.4, TNRCC TGM)

P = 33" = Annual Rainfall, Comal Cty.
(Tbl. 3.2, TNRCC TGM)

$R_v = 0.546(IC)^2 + 0.328(IC) + 0.03$

IC = 0.60 = Impervious Cover (Ultimate, Tributary To basin)

$R_v = 0.546(0.60)^2 + 0.328(0.60) + 0.03$

$R_v = 0.423$

A = 6 A_c = Total Area Tributary to basins

$L_D = 33(6)(0.423)(38.4)$

since A_u = A undeveloped = 0

= 3216.2 lb/yr.

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$L_B = 33(6)(0.54)$
since $Ad = A$ developed $= 0$

$L_B = 106.9$ lb./yr

$L_R = 0.8(L_D - L_B) = 0.8(3216.2 - 106.9)$

$\boxed{L_R = 2487.4 \text{ lb./yr}}$

$L_R = L_I \times F \times$ Fraction of Site Treated $\times$ TSS Removal Efficiency

L_I = Post Development Load
$= L_D = 3612.2$ lb/yr.

L_R = Load Removal Req'd = 2487.4 lb/yr.
F = Fraction of Load Treated

Fraction of Site = 1.0

TSS Eff. = 89% for sand filter systems

$$F = \frac{L_R}{L_I \times 1.0 \times .89} = \frac{2487.4 \text{ lb/yr}}{3216.2 \text{ lb/yr} \times 1.0 \times .89} = 0.87$$

For IC = 60% & F = 0.87 → $d_r = 0.62''$
= runoff depth

$$WQV_R = 0.62'' \times 3Ac \times 1.2 \times \frac{43560 \text{ sf}}{Ac} \times \frac{1 \text{ ft}}{12''}$$

$WQV_R = 810$ cf. = Required Water Quality Volume

PROJECT:
JOB NO.:
DESCRIPTION:

PG. 42 OF 43
BY:
DATE:

Sand Filter Area (1 basin)

$A_f = \frac{WQV(L)}{k(h+L)t}$ = Req. Sand Filter area

WQV = 8102 cf

L = 1.5 ft = Sand thickness

k = 2 ft/day = Perc. rate partial sedimentation

h = 1.25 ft. = Average water depth (2.5 ft. basin)

t = 2 days = Req. drawdown time

$A_f = \frac{8102\,(1.5)}{2\,(1.25+1.5)(2)} = 1105$ sf

$A_f = 1105$ sf

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TEMPORARY STORMWATER SECTION

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

PROJECT NAME: *Cibilo Creek Church (Lot 1801, Comal County Unit 3, Fair Oaks Ranch)*

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 TNRCC prior to moving the tanks onto the project.

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

2. *X* **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. *N/A* 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. *X* **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. *X* **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. *X* 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: *Cibilo Creek*

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. X **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.

X 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, TNRCC 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.

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

9. X **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. X **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.

X 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.

Temporary pollution abatement will be provided by silt fencing.

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

ADMINISTRATIVE INFORMATION

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

21. X 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 TNRCC Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TNRCC has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

22. X 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 TNRCC review and executive director approval. The application was prepared by:

Robert J. Browning, P.E.
Alamo Consulting Engineering and Surveying, Inc.
Print Name of Applicant/Owner/Agent

Signature of Applicant/Owner/Agent

6/20/01
Date

ATTACHMENT A – Spill Response Actions

During construction, any spill of hydrocarbons or other hazardous substances shall be contained immediately. Contaminated material shall be removed using an appropriate absorption compounds and shall be disposed of at an approved location. All materials required for emergency cleanup of hazardous substance spills should be kept on the project site until construction is complete.

Note that the Temporary Abatement Measures (silt fences and/or rock berms) shown on the attached Water Pollution Abatement Site Plan will intercept any spills occurring during a heavy rain. As noted on this plan, sediment must be removed from these measures when it reduces the capacity of the measure by 50%. As noted above, this sediment should be removed immediately, to an approved location, in the event of a hazardous substance spill.

ATTACHMENT B – Potential Sources of Contamination

Asphalt products will be used on this project. After placement of asphalt, emulsion or coatings (and for the duration of the product curing time), minimal amounts of these products can be expected to runoff in the event of an unexpected rain event. Any contamination from these sources will be intercepted by the temporary abatement measures proposed. These abatement measures shall include silt fencing and/ or rock berms, as well as a stabilized construction entrance. As the total area disturbed by construction upstream of any temporary abatement measure shall be less than 10 acres, no temporary sedimentation basins are proposed.

Fuels and other hazardous substances will be provided by off-site facilities and are therefore not potential sources for contamination.

ATTACHMENT C – Sequence of Major Activities

The approximate sequence of major soil disturbing activities during development of this single-family residential (manufactured home) development shall be:

A) Installation of off-site temporary pollution abatement measures
B) Installation of off-site drainage improvements
C) Installation of on-site temporary silt fencing
D) Clearing of drainage easement
E) Grading of earthen swale
F) Installation of temporary rock berms within earthen swale
G) Site clearing
H) Installation of permanent sand filtration basin
I) Installation of temporary rock berm adjacent to basin
J) Site grading
K) Installation of on-site (underground) utilities
L) Placement of aggregate base material
M) Building construction
N) Placement of asphalt or concrete pavement
O) Asphalt or concrete curing
P) Removal of stabilized construction entrance
Q) Establishment of vegetation in disturbed areas
R) Removal of temporary pollution abatement measures

Estimated total acreage of the site to be disturbed by each major activity:

	On-Site	*Off-Site*
Off-Site Drainage Improvements		*0 Ac.*
Private Driveway Construction	*2.4 Ac.*	*<0.1 Ac.*
Sidewalks/ Patios	*0.1 Ac.*	
Underground Utility Installation	*Inc. **	*<0.1 Ac.*
Building Construction	*1.1 Ac.*	
Finish Grading/ Landscaping	*2.4 Ac.*	*<0.1 Ac.*
TOTAL	*6.0 Ac.*	*<0.3 Ac.*

* *Note: Any on-site area disturbed for utility installation is <u>also</u> disturbed for one of the other construction activities noted.*

ATTACHMENT D – Temporary Best Management Practices and Measures

The following best management practices and measures will be used to prevent pollution of stormwater runoff during the construction process:

a. BMPs to prevent pollution of stormwater originating upgradient from the project site.

Earthen swales will be used to direct stormwater originating upgradient of the project site around the development site.

b. BMPs to prevent pollution of stormwater originating on the project site.

During construction, pollution of storm water originating on the project site will be prevented by silt fencing (along the south and east property lines) and rock berms (upgradient of the proposed sand filtration basins).

c. BMPs to prevent pollution from entering surface streams, sensitive features, or the aquifer.

NOT APPLICABLE. Concentrated stormwater runoff resulting from this projects development will not be directed toward any recharge feature located by the attached Geologic Assessment.

d. Maintaining flow to naturally occurring features.

NOT APPLICABLE. Existing drainage patterns upgradient of naturally occurring features will not be modified.

All of the above noted BMPs are noted on the included Water Pollution Abatement Site Plan.

ATTACHMENT E – Request to Temporarily Seal a Feature, if sealing a feature

NOT APPLICABLE

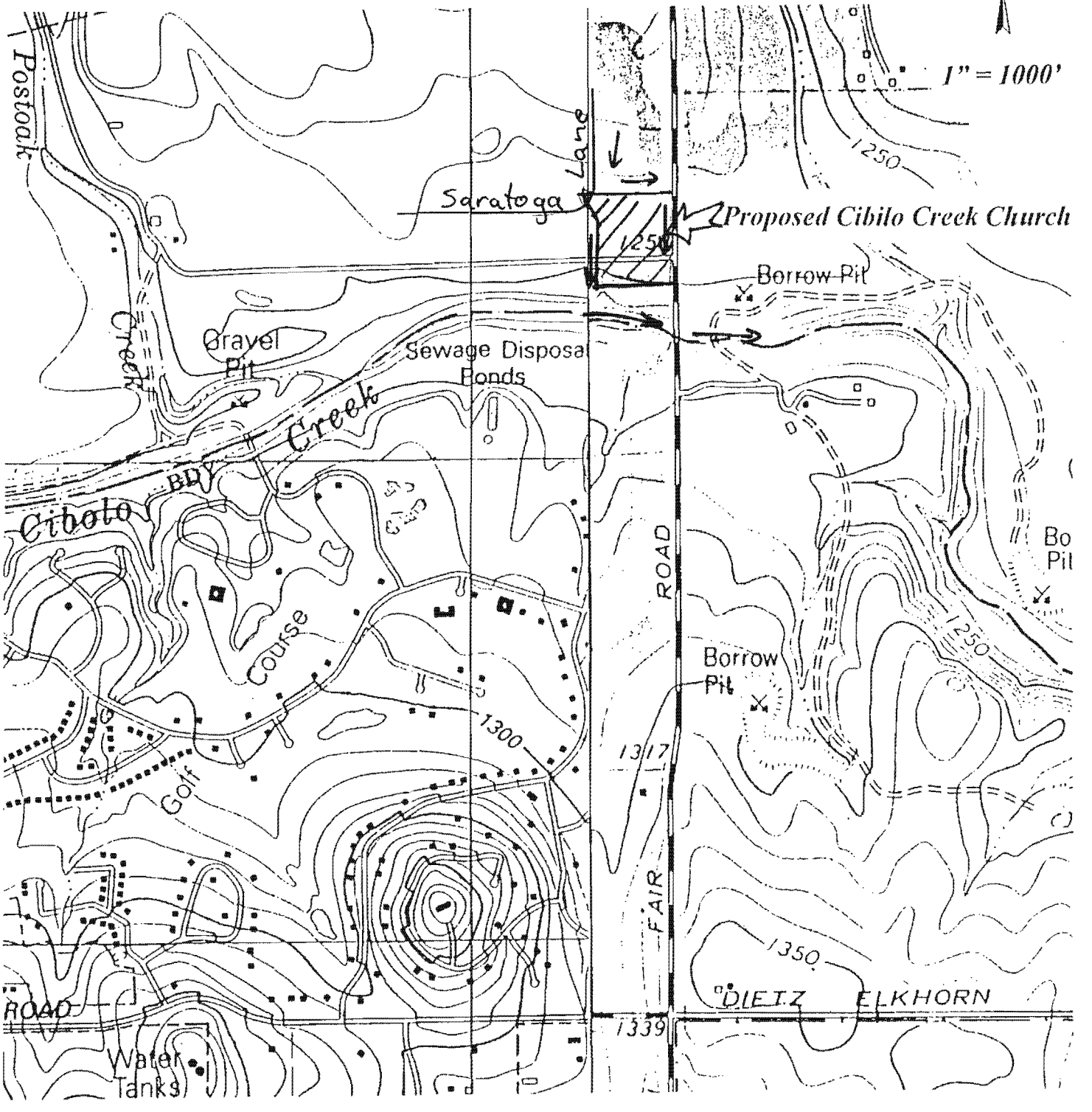
No temporary OR permanent sealing of recharge features is proposed.

ATTACHMENT F – Structural Practices

The silt fencing and rock berms previously described will constitute the temporary structural Best Management Practices (BMPs) used to mitigate pollution of stormwater during construction of this development.

The tributary area directed to each temporary (or permanent) BMP will include less than 10 acres of land disturbed by construction. Therefore, no temporary sedimentation ponds are required.

ATTACHMENT G – Drainage Area Map



ATTACHMENT H – Temporary Sediment Pond(s) Plans and Calculations

NOT APPLICABLE

As each of the temporary pollution abatement measures proposed for this development shall have a tributary area including less than 10 acres of land disturbed by construction, no temporary sedimentation ponds are proposed.

ATTACHMENT I – Inspection and Maintenance for BMPs

The contractor shall designate a person or entity to be responsible for the inspection of pollution prevention and erosion control measures for the subject site. Such measures are detailed on the included Water Pollution Abatement Site Plan.

During construction, inspections shall be made on a weekly basis at a minimum, and within 48 hours of a ½" or greater rainfall. Reports of these inspections shall be made recording the following information:

a) Date of Inspection.
b) Scope of Inspection.
c) Name of Inspector.
d) Major observations related to the plans implementation.
e) Actions taken as a result of the inspection.

As a minimum, the inspector shall observe:
a) Disturbed areas (for evidence of unchecked erosion).
b) Storage areas for evidence of, or potential for, leakage from stored materials.
c) Control measures to ensure that they are functioning correctly.
d) Stabilized construction exits for evidence of off-site sediment tracking.
e) Vehicle storage areas for signs of leaking equipment or spills.
f) Concrete truck rinse-out pit for signs of potential failure.
g) Discharge locations to ascertain whether control measures are effective.
h) *Vehicle/ equipment wash area for proper drainage and maintenance of sediment trap and wash equipment.*

Sediment shall be removed from behind any silt fence or rock berm when such silt reaches a depth of 12 inches or ¼ the height of the pollution abatement height, whichever is less.

A copy of each inspection report shall be provided immediately to the engineer. As part of the Storm Water N.P.D.E.S., the Contractor shall retain these reports for three (3) years after the Notice of Termination (N.O.T.) for this project is filed with the Environmental Protection Agency (E.P.A.).

All deficiencies noted during the inspection will be documented and corrected within seven (7) calendar days following the inspection. Based upon the results of these inspections, the Temporary BMPs (control measures) indicated on the Water Pollution Abatement Site Plan will be modified where appropriate to provide control that is more effective.

All stabilized areas shall be inspected at least once every four (4) weeks until the N.O.T. is filed.

ATTACHMENT J – Schedule of Interim and Permanent Soil Stabilization Practices

All disturbed areas where construction has been completed or temporarily halted (i.e. disturbed areas where no further work is planned within the next 3 weeks) shall be temporarily stabilized within 2 weeks of the last activity. Such stabilization shall be by some form of seeding or mulching which will provide appropriate and effective results in reducing erosion of the disturbed areas to the extent that is practical.

As part of the final grading and site cleanup, all disturbed areas (i.e. areas where the soil is exposed and unprotected from erosion) are to be sodded, seeded, or mulched as appropriate (or as instructed elsewhere in the Plans or by the Engineer) to provide effective results in preventing the erosion of these areas. The Contractor shall be responsible for maintaining the stabilization until responsibility can be assumed by the Owner or as stipulated by other construction documents. For example, the contractor is responsible for continuation watering of sod or seeded grass until the grass becomes established.

PERMANENT STORMWATER SECTION

PERMANENT STORMWATER SECTION
FOR REGULATED ACTIVITIES
ON THE EDWARDS AQUIFER RECHARGE ZONE
AND RELATING TO 30 TAC §213.5(b)(4)(C), (D)(ii), (E), and (5), EFFECTIVE JUNE 1, 1999

PROJECT NAME: *Cibilo Creek Church (Lot 1801, Comal County Unit 3, Fair Oaks Ranch)*

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

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

2. X 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.

   X The TNRCC Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

   ___ A technical guidance other than the TNRCC 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. X 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. X 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.

   X This site will not be used for low density single-family residential development.

5. X 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 The executive director may waive the requirement for other permanent BMPs for multi-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.

X 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.

X 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.**

X 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. X **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. X 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.

X 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.

___ **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.

10. X **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, TNRCC 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. X **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. X The TNRCC 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. X **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. X 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. X 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 TNRCC review and executive director approval. The application was prepared by:

Robert J. Browning, P.E.
Alamo Consulting Engineering and Surveying, Inc.
Print Name of Applicant/Owner/Agent

Signature of Applicant/Owner/Agent

6/20/01
Date

ATTACHMENT A – 20% or Less Impervious Cover Waiver.

NOT APPLICABLE

This is a church (non-residential) development with approximately 60% impervious cover. 20% impervious cover is therefore not requested.

ATTACHEMNT B – BMPs for upgradient Stormwater

NOT APPLICABLE

Permanent BMPs are not required to mitigate pollution of stormwaters originating upgradient of the project site.

ATTACHMENT C – BMPs for On-site Stormwater

Pollution of stormwaters originating on-site will be mitigated by one of two Sand Filtration Basins.

The design details for the basin are included as page 2 of the Water Pollution Abatement Site Plan attached to the Water Pollution Abatement Section of this report.

This permanent BMP design is justified by the calculations attached behind Attachment F of this section.

ATTACHMENT D – BMPs for Surface Streams

The previously noted Sand Filtration Basins will prevent pollution resulting from this development from entering the adjacent surface stream (Cibilo Creek).

One recharge feature was identified by the Geologic Assessment as existing on the subject property. Stormwater runoff from the development area will be directed to locations downstream of this recharge feature. Therefore, no permanent (or temporary) BMPs are required to protect this feature from pollution.

ATTACHMENT E – Request to Seal Features

NOT APPLICABLE

No permanent OR temporary sealing of recharge features is proposed.

ATTACHMENT F – Construction Plans

The design layout of the Sand Filtration Basin is included as Page 2 of the attached Water Pollution Abatement Site Plan.

Design calculations are attached behind this sheet.

ATTACHMENT G – Inspection, Maintenance, Repair and Retrofit Plan

Basins

- *Inspections.* Inspections are to be documented in writing and shall include the date, all pertinent observations, and any actions taken. Basins should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. When possible, inspections should be conducted during wet weather to determine if the pond is meeting the target detention times. In particular, the extended detention control device should be regularly inspected for evidence of clogging, or conversely, for too rapid a release. If the design drawdown times are exceeded by more than 24 hours, then repairs should be scheduled immediately. The upper stage pilot channel, and its flow path to the lower stage should be checked for erosion problems. During each inspection, erosion areas inside and downstream of the BMP should be identified and repaired or revegetated immediately.

- *Mowing.* The upper stage, side slopes, and embankment, the detention basin must be mowed regularly to discourage woody growth and control weeds. Grass areas in and around basins should be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. When mowing of grass is performed, a mulching mower should be used, or grass clippings should be caught and removed.

- *Debris and Litter Removal.* Debris and litter will accumulate near the extended detention rock berm and should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the rock berm.

- *Erosion control.* The pond side slopes, and embankment all may periodically suffer slumping and erosion.

- *Structural Repairs and Replacement.* With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) Should be identified and repaired immediately. These repairs should include patching of cracked concrete, sealing of voids, and removal of vegetation from cracks and joints.

- *Nuisance Control.* Standing water or soggy conditions within the lower stage of the basin can create nuisance conditions for nearby residents. Odors, mosquitoes, weeds, and litter are all occasionally perceived to be problems. Most of these problems are generally a sign that regular inspections and maintenance are not being performed.

- *Sediment Removal.* Sediment accumulation is a serious maintenance concern in ponds for several reasons. First, the sediment gradually reduces available stormwater management storage capacity within the basin. Second, unlike wet extended detention basins (which have a permanent pool to conceal deposited sediments), sediment accumulation can make dry extended detention basins very unsightly. Third, and perhaps most importantly, sediment tends to accumulate around the control device. Sediment deposition increases the risk that the outlet will become clogged, and gradually reduces storage capacity reserved for pollutant removal. Sediment can also be re-suspended if allowed to accumulate over time and escape through the hydraulic control to downstream channels and streams. For these reasons, accumulated sediment needs to be removed from the lower stage when sediment buildup fills the 20% of the volume allocated for sediment accumulation or when the proper functioning of inlet and outlet structures is impaired. Sediment should be cleared from the sedimentation chamber at least every 10 years.

Grassy Swales

Maintenance for grassy swales aimed at keeping the grass cover dense and vigorous.
Maintenance practices are intended to alleviate maintenance problems in the future.

- *Pest Management.* An Integrated Pest Management (IPM) Plan should be developed for vegetated areas. This plan should specify how problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides.

- *Seasonal Mowing and Lawn Care.* Lawn mowing should be performed routinely, as needed throughout the growing season. Grass height should be maintained at 2 inches. Grass cuttings should be collected and disposed offsite, or a mulching mower can be used. Regular mowing should also include weed control practices; however, herbicide use should be kept to a minimum. Healthy grass can be maintained without using fertilizers because runoff usually contains sufficient nutrients.

- *Inspection.* Inspect swales at least twice annually for erosion or damage to vegetation; however, additional inspection after periods of heavy runoff is required. The swale should be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. More frequent inspections (once monthly) during the first two years after establishment is required. Bare spots and areas of erosion identified during inspections should be replanted and restored to meet specifications.

- *Debris and litter Removal.* Trash tends to accumulate in swale areas. Any swale structures should be kept free of obstructions to reduce floatables being flushed downstream, and for aesthetic reasons. The need for this practice is determined through periodic inspection, but should be performed no less than once a month

- *Sediment Removal.* Sediment accumulating near culverts and in channels needs to be removed when they build up to 3" at in any spot, or cover vegetation. Excess sediment should be removed by hand or with flat-bottomed shovels. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level with the bottom of the swale. Sediment removal should be performed periodically, as determined through inspection. Depending on the type of pollutants accumulated, some sediments may be considered hazardous waste or toxic material, and are therefore subject too restrictions for disposal.

- *Grass Reseeding and mulching.* A healthy dense grass should be maintained in the channel and side slopes. Grass damage during the sediment removal process should be promptly replaced using the same seed mix used during swale establishment. If possible, flow should be diverted from the damage areas until the grass is firmly established.

Sand Filter Systems

- *Inspections.* BMP facilities must be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. During each inspection, erosion areas inside and downstream of the BMP must be identified and repaired or revegetated immediately. With each inspection, any damage to the structural elements of the system (pipes, concrete and drainage structures, retaining walls, etc.) Must be identified and repaired immediately. Cracks, voids and undermining should be patched/filled to prevent additional structural damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage.

- *Sediment Removal.* Remove sediment from the inlet structure and sedimentation chamber when sediment buildup fills the 20% volume allocated for sediment accumulation, or when the proper functioning of inlet and outlet structures is impaired. Sediment should be cleared from the inlet structure at least every year, and from the sedimentation basin at least every 5 years. Silt accumulated on the surface of the filter media should be removed when it has reached a depth of about 0.5 inch or the drainage time has increased to more that 48 hours.

- *Media Replacement.* More extensive maintenance of the filter media is required when the drawdown time begins to exceed the target time of 48 hours. Non-routine maintenance or corrective maintenance should be performed when the drawdown time exceeds 72 hours. When this occurs, the upper layer of geotechnical material and gravel ballast should be removed and replaced with new materials meeting the original specifications. Any discolored sand should also be removed and replaced. In filters that have been regularly maintained, this should be limited within the top 2 to 3 inches.

- *Debris and Litter Removal.* Debris and litter will accumulate near the sedimentation basin outlet device and should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the control device or riser.

- *Filter Underdrain.* Clean underdrain piping network to remove any sediment buildup every 2 years, or as needed to maintain design drawdown time.

- *Mowing.* Grass areas in and around sand filters must be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas.

Responsibility for the inspections and maintenance / repair of the filtration basin will be transferred from the Developer to the Property Management Company upon formation of such an entity, or any time there after as stipulated elsewhere by other documents.

Robert E. Artle — 6/19/2001

Mr. Robert Artle — Date
Chairman, Building Committee
Cibilo Creek Church

Prepared and Certified by:
ALAMO CONSULTING ENGINEERING & SURVEYING, INC.

Robert J. Browning — 6/20/01

Robert J. Browning, P.E. — Date
Project Manager

STATE OF TEXAS
ROBERT J. BROWNING
79373
REGISTERED
ENGINEER

ATTACHMENT H – Pilot-Scale Field Testing Plan.

NOT APPLICABLE

Permanent BMPs were designed using the T.N.R.C.C. Technical Guidance Manual.

ATTACHMENT I – Measures for Minimizing Surface Stream Contamination

NOT APPLICABLE

The previously noted Sand Filtration Basins will prevent contamination of storm water originating on the project site. The surface stream which exists adjacent to the subject property (and downstream of the development area) will there fore be protected from contamination resulting from this development.

AGENT AUTHORIZATION FORM
FEE FORM

AGENT AUTHORIZATION FORM

FOR REQUIRED SIGNATURE
EDWARDS AQUIFER PROTECTION PROGRAM
RELATING TO 30 TAC CHAPTER 213
EFFECTIVE JUNE 1, 1999

I, ***Robert Artle***
Print Name

Chairman of the Building Committee for
Title - Owner/President/Other

of ***Cibolo Creek Church***
Corporation/Partnership/Entity Name

have authorized ***Robert J. Browning, P.E.***
Print Name of Agent/Engineer

of ***Alamo Consulting Engineering and Surveying, Inc.***
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Natural Resource Conservation Commission (TNRCC) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TNRCC's approval letter. The TNRCC is authorized to assess administrative penalties of up to $10,000 per day per violation.
2. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and the forms must accompany the completed application.
3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TNRCC cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.
4. For applicants who are not the property owner, but who have the right to control and possess and control the property, additional authorization is required from the owner.

Robert E. Artle
Applicant's Signature

6/19/2001
Date

THE STATE OF TEXAS §

County of BEXAR §

BEFORE ME, the undersigned authority, on this day personally appeared ROBERT ARTLE known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 19 day of JUNE, 2001.

Larry W. Dolle
Notary Public, State of Texas
My Commission Expires
MAY 06, 2004

Larry W. Dolle
NOTARY PUBLIC
LARRY W. DOLLE
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: MAY 6, 2004

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
EDWARDS AQUIFER PROTECTION PLAN
APPLICATION FEE FOR

NAME OF PROPOSED PROJECT: *Cibilo Creek Church (Lot 1801, Comal County Unit 3, Fair Oaks Ranch)*

PROJECT LOCATION: *30390 Saratoga Lane, Fair Oaks Ranch, Tx. 78015*

NAME OF APPLICANT: *Cibilo Creek Church, c/o Mr. Robert Artle (Chairman, Building Committee)*

APPLICANT'S ADDRESS: *29745 Mellow Wind Dr., Fair Oaks Ranch, Tx. 78015*

CONTACT PERSON: *Robert J. Browning, P.E.* Alamo Consulting Engineering and Surveying, Inc. PHONE: **(210) 828-0691**
Please Print

AUSTIN REGIONAL OFFICE (3373)
- ☐ Hays
- ☐ Travis
- ☐ Williamson

SAN ANTONIO REGIONAL OFFICE (3362)
- ☐ Bexar
- X Comal
- ☐ Kinney
- ☐ Medina
- ☐ Uvalde

APPLICATION FEES MUST BE PAID BY CHECK, CERTIFIED CHECK, OR MONEY ORDER, PAYABLE TO THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION. YOUR CANCELED CHECK WILL SERVE AS YOUR RECEIPT. **THIS FORM MUST BE SUBMITTED WITH YOUR FEE PAYMENT**. THIS PAYMENT IS BEING SUBMITTED TO (CHECK ONE):

X **SAN ANTONIO REGIONAL OFFICE**
☐ **Mailed to TNRCC**:
TNRCC - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ **AUSTIN REGIONAL OFFICE**
☐ **Overnight Delivery to TNRCC**:
TNRCC - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
512/239-0347

Type of Plan	Size	Fee Due
Water Pollution Abatement, One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement, Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement, Non-residential	**8.9** Acres	**$ 4,000.00**
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature

6/20/01
Date

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

EDWARDS AQUIFER PROTECTION PLAN

APPLICATION FEE SCHEDULE

30 TAC §213.14 (effective 11/14/97) & 30 TAC §213.9 (effective 6/1/99)

WATER POLLUTION ABATEMENT PLANS AND MODIFICATIONS

PROJECT	PROJECT AREA IN ACRES	FEE
One Single Family Residential Dwelling	<5	$500
Multiple Single Family Residential and Parks	<5 5 < 10 10 < 50 >50	$1,000 $2,000 $3,000 $5,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 **5 < 10** > 10	$2,000 $3,000 **$4,000** $5,000

ORGANIZED SEWAGE COLLECTION SYSTEMS AND MODIFICATIONS

PROJECT	COST PER LINEAR FOOT	MINIMUM FEE MAXIMUM FEE
Sewage Collection Systems	$0.50	$500 - $5,000

UNDERGROUND AND ABOVEGROUND STORAGE TANK SYSTEM FACILITY PLANS AND MODIFICATIONS

PROJECT	COST PER TANK OR PIPING SYSTEM	MINIMUM FEE MAXIMUM FEE
Underground and Aboveground Storage Tank Facility	$500	$500 - $5,000

EXCEPTION REQUESTS

PROJECT	FEE
Exception Request	$250

EXTENSION OF TIME REQUESTS

PROJECT	FEE
Extension of Time Request	$100

3425

CIBOLO CREEK COMMUNITY CHURCH
PH. 210-698-5417
8000 FAIR OAKS PARKWAY SUITE 211
FAIR OAKS RANCH, TX 78015

FROST NATIONAL BANK
SAN ANTONIO, TEXAS 78296

30-9/1140

6/19/01

PAY TO THE ORDER OF **TNRCC**

$ **4,000.00

Four Thousand and 00/100********DOLLARS

TNRCC

MEMO **WPAP**

⑈003425⑈ ⑆114000093⑆ 31 0104523⑈

Details on back
Security Features Included