TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 9, 2010

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: Westpointe Village (11-521 Whataburger Project), located on the southwest corner of State Highway 46 and Loop 337, New Braunfels, 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.: 2873.04

Dear Mr. Hornseth:

The referenced application administratively complete on March 5, 2010, 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 April 4, 2010.

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

Joy Thurston-Cook

Lynn M. Bumguardner
for Water Section Manager
San Antonio Regional Office

LMB/eg

WATER POLLUTION ABATEMENT PLAN MODIFICATION

For

WESTPOINTE VILLAGE
(11-521 WHATABURGER PROJECT)

SH 46 and Loop 337
New Braunfels, Texas

MARCH 2010

Prepared By:

Bury + Partners
922 Isom Road, Suite 100
San Antonio, Texas 78216
Office: 210-525-9090/Fax: 210-525-0529
TBPE F-1048

I:\118\014\Reports\WPAP Modification\March 2010\Flysheet.doc.mm

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.

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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

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

☒ Yes ☐ No — Modification to an Approved Water Pollution Abatement Plan (WPAP)

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 603253170		RN 105739023

SECTION II: Customer Information

5. Effective Date for Customer Information Updates (mm/dd/yyyy): 3/5/2010

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:*

Whataburger Restaurants, LP

10. Mailing Address: 300 Concord Plaza

City	State	ZIP	ZIP + 4
San Antonio	TX	78216	6903

11. Country Mailing Information *(if outside USA)*	12. E-Mail Address *(if applicable)*
N/A	N/A

13. Telephone Number	14. Extension or Code	15. Fax Number *(if applicable)*
(210) 476-6000	0	( ) -

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)*
741693771			

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)*

24. Street Address of the Regulated Entity: *(No P.O. Boxes)*								
	City		State		ZIP	78130	ZIP + 4	
25. Mailing Address:								
	City		State		ZIP		ZIP + 4	

RECEIVED
MAR 11 2010
COUNTY ENGINEER

26. E-Mail Address:			
27. Telephone Number	28. Extension or Code	29. Fax Number *(if applicable)*	
( ) -		( ) -	

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)

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

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

35. Description to Physical Location:	SWC of State Highway 46 and Loop 337

36. Nearest City	County	State	Nearest ZIP Code
New Braunfels	Comal	TX	78130

37. Latitude (N) In Decimal:	29.714		38. Longitude (W) In Decimal:	-98.161	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	42	50.00	98	09	39.50

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
		WPAP #2873.01		
☐ 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:	Michael Sharp	41. Title:	Project Director

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210) 525-9090		(210) 525-0529	msharp@burypartners.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:	Bury+Partners	Job Title:	Principal/Senior Project Manager
Name *(In Print)* :	Mark R. Johnson	Phone:	(210) 525-9090
Signature:		Date:	3/5/10

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: WestPointe Village
COUNTY: Comal STREAM BASIN: Comal 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: William Vandenbosch, AIA
Entity: NB Retail, Ltd
Mailing Address: 801 Congress Ave., Suite 300
City, State: Austin, Texas Zip: 78701
Telephone: (512) 477-1212 FAX: (512) 495-9875

Agent/Representative (If any):

Contact Person: Mark R. Johnson, P.E.
Entity: Bury+Partners
Mailing Address: 922 Isom Road, Suite 100
City, State: San Antonio, Texas Zip: 78216
Telephone: (210) 525-9090 FAX: (210) 525-0529

2. X This project is inside the city limits of New Braunfels, 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.

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.

Located near the southwest corner of State Highway 46 and Loop 337, more specifically adjacent to the east bound lanes of State Highway 46 between Independence Drive and Loop 337.

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:

   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.

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.**
   (Note: Due to ongoing construction, staking may need to be re-set, please coordinate with our office for on-site review)

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:
   __ Existing commercial site
   __ Existing industrial site
   __ Existing residential site
   __ Existing paved and/or unpaved roads
   __ Undeveloped (Cleared)
   __ Undeveloped (Undisturbed/Uncleared)
   X Other: Commercial Site Under Construction

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. 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

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:

Mark R. Johnson, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

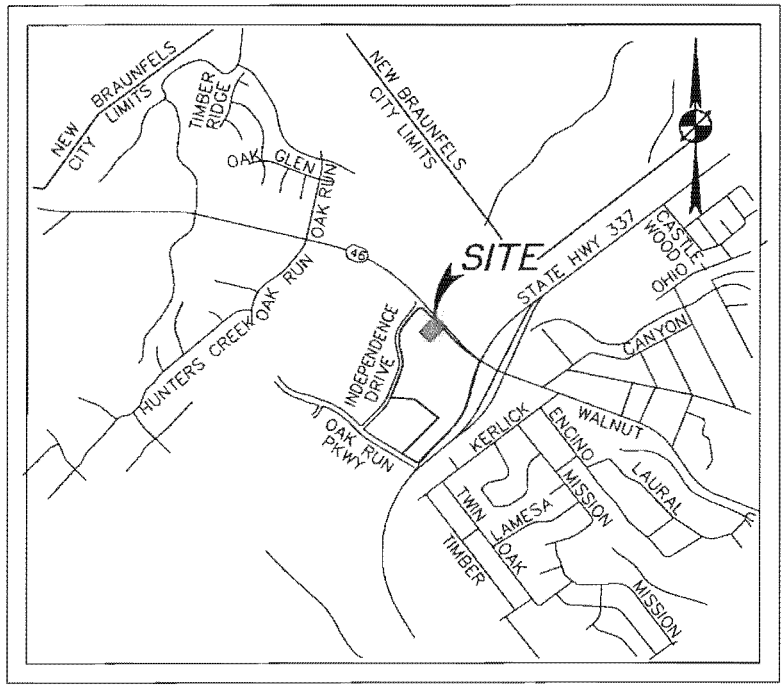
3/5/10
Date

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



VICINITY MAP

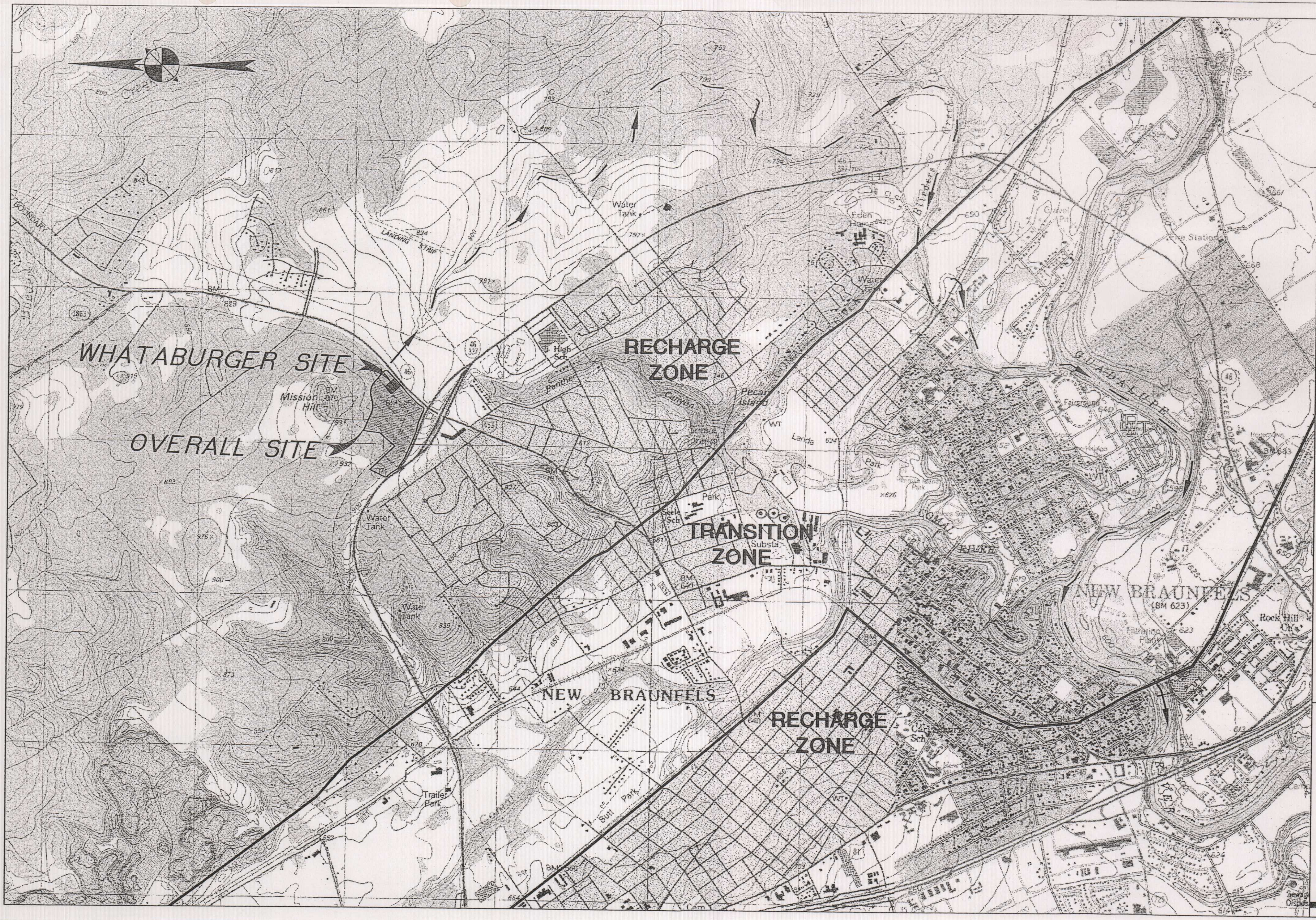
N.T.S.

NEW BRAUNFELS, TEXAS

SCALE: NTS	**WESTPOINTE VILLAGE UNIT 3 SWC SH 46 AND INDEPENDENCE DRIVE NEW BRAUNFELS, TEXAS**	Bury+Partners ENGINEERING SOLUTIONS 922 Isom Road, Suite 100 San Antonio, TX 78216 Tel. (210)525-9090 Fax (210)525-0529 TBPE Registration Number F-1048 Bury+Partners-SA, Inc. ©Copyright 2010
DRAWN: AL		
DATE: Mar 03, 2010		
SHEET 1 OF 1		

ATTACHMENT B

USGS/EDWARDS RECHARGE ZONE MAP
(Scale 1" = 2,000')



NEW BRUANFELS EAST, TX QUADRANGLE
NEW BRAUNFELS WEST, TX QUADRANGLE

PROJECT No.: 118-14.60

WESTPOINTE VILLAGE
(11-521 WHATABURGER PROJET)

ATTACHMENT B

FILE: G:\118\14\WPAP\11814WPAP01.DWG

Bury+Partners
ENGINEERING SOLUTIONS
922 Isom, Suite 100
San Antonio, TX 78216
Tel. (210)525-9090 Fax (210)525-0529
TBPE Registration Number F1048

DATE: 03-04-10 | SCALE: 1"=2000' | DRAWN BY: MS

Date: Mar 04, 2010, 5:00pm User ID: alongoria
File: G:\118\14\WPAP\11814WPAP01.dwg

ATTACHMENT C

PROJECT DESCRIPTION

PROJECT DESCRIPTION

This project consists of the final development of Lot 10, Block 1 of Westpointe Village Unit 2. Lot 10, a.k.a. Pad Site 3, is located along the northeastern side of the development and adjacent to State Highway 46. Lot 10 consists of 1.16 acres within the ±37.00-acre WestPointe Village Development within physical city limits of the City of New Braunfels in Comal County, Texas. The project is located entirely in the Edwards Aquifer Recharge Zone (EARZ), and is within the sub-watershed of Comal Creek, a tributary of the Guadalupe River.

Final Development of Lot 10 will result in a disturbance of approximately 1.3 acres of land for construction of the building, site improvements, and utilities. The development will result in an increase of 0.80 acres of impervious cover to the approved wet basin for the WestPointe Village Development. Development of Lot 10 results in an impervious cover percentage of 69.0% for this site which is below the anticipated build out of 80%.

Storm water from the property will be conveyed through a proposed stormsewer system for the site. The proposed storm sewer will connect to the development's existing storm water infrastructure and to the BMP in accordance with the approved Drainage Plans. Storm water will be detained within the wet basin prior to being released into the Texas Department of Transportation (TxDOT) drainage structure. Lastly, all areas not covered by the building footprint, sidewalks, or pavement will be stabilized with either sod or landscaping prior to the removal of all Temporary Best Management Practices (BMPs).

In summary, Development of Phase I of the Westpointe Village Subdivision resulted in ±16.12 aces of impervious cover per the approved WPAP. Development of Lot 10, a Phase II project, will disturb ±1.3 acres of land resulting in an increase of impervious cover for the overall development to ±16.92 total acres of impervious cover. The ±0.8 acre increase in impervious cover for the Whataburger Project, Lot 10, can be effectively treated in the Approved BMP, which is designed to treat ±25.96 acres of impervious cover for the WestPointe Village Subdivision, per approval EAPP #2873.01.

GEOLOGIC ASSESSMENT

GEOLOGIC ASSESSMENT
FOR THE
WESTPOINTE VILLAGE
SEWAGE COLLECTION SYSTEM TRACT

Comal County, Texas

May 2009

Prepared for:

H.E.B Grocery Company, LP and B&O Development G.P., L.L.C.
c/o
Barshop and Oles, Inc.
900 Isom Road, Suite 300
San Antonio, Texas 78216

Prepared by:

aci consulting
1001 Mopac Circle, Suite 100
Austin, Texas 78746

aci consulting
a division of aci group, LLC

Geologic Assessment

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

REGULATED ENTITY NAME: Westpoint Village Tract (approx. 50 Acre)– Comal County

TYPE OF PROJECT: X WPAP __ AST X SCS __ UST

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

PROJECT INFORMATION

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

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

Soil Units, Infiltration Characteristics & Thickness		
Soil Name	Group *	Thickness (feet)
Krum clay (Krb) – 1 to 3 percent slopes	C	4-5 ft
Medlin-Eckrant association (MED), undulating	D	1.5 ft
Rumple-Comfort association (RUD), undulating	D	2.5 ft

* Soil Group Definitions (Abbreviated)

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

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

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

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

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

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

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

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

Applicant's Site Plan Scale	1" = 100'
Site Geologic Map Scale	1" = 100'
Site Soils Map Scale (if more than 1 soil type)	1" = 100'

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

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

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

9. X Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Feature Map and are described in the attached Geologic Assessment Table.
__ Geologic or manmade features were not discovered on the project site during the field investigation.

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

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

__ There are water wells present within the project corridor study area 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 well are in use and complies with 16 TAC §76.
X There are no wells or test holes of any kind known to exist on the project site.

ADMINISTRATIVE INFORMATION

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

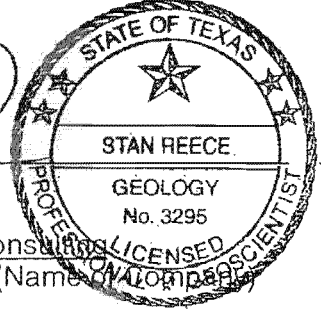
Date(s) Geologic Assessment was performed: July 25, 2007
Date(s)

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.

Stan Reece P.G.
Print Name of Geologist

(512) 347-9000
Telephone

(512) 306-0974
Fax



Signature of Geologist

5/19/09
Date

Representing: aci consultants
(Name of Company)

If you have questions on how to fill out this form or about the Edwards Aquifer Protection Program, please contact us at 512/939-2929 (Austin) or 210/403-4024 (San Antonio).

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.

aci
consulting

GEOLOGIC ASSESSMENT
FOR THE
WESTPOINTE VILLAGE
SEWAGE COLLECTION SYSTEM TRACT

Comal County, Texas

May 2009

Prepared for:

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Prepared by:

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1001 Mopac Circle, Suite 100
Austin, Texas 78746

aci consulting

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

May 2009

Geologic Assessment for the Westpointe Village Sewage Collection System Tract in Comal County, Texas

1.0 INTRODUCTION

The purpose of this task is to identify "karst" features during a pedestrian survey for the property known as the Westpointe Village Sewage Collection System tract in New Braunfels, Comal County, Texas. The approximate 50-acre property, hereafter referred to as the subject area, is located at the northwest corner of State Loop 337 and Highway 46 in New Braunfels, Comal County, Texas (Figure 1).

2.0 SCOPE

This report is intended to satisfy the requirements for a Geologic Assessment, which shall be included as a component of a Water Pollution Abatement Plan (WPAP). The scope of the report consists of a site reconnaissance and field survey and review of existing data and reports. Features identified during the field survey are ranked utilizing the Texas Commission on Environmental Quality (TCEQ) matrix for Edwards Aquifer Recharge Zone Features. The ranking of the features determines their viability as a recharge feature.

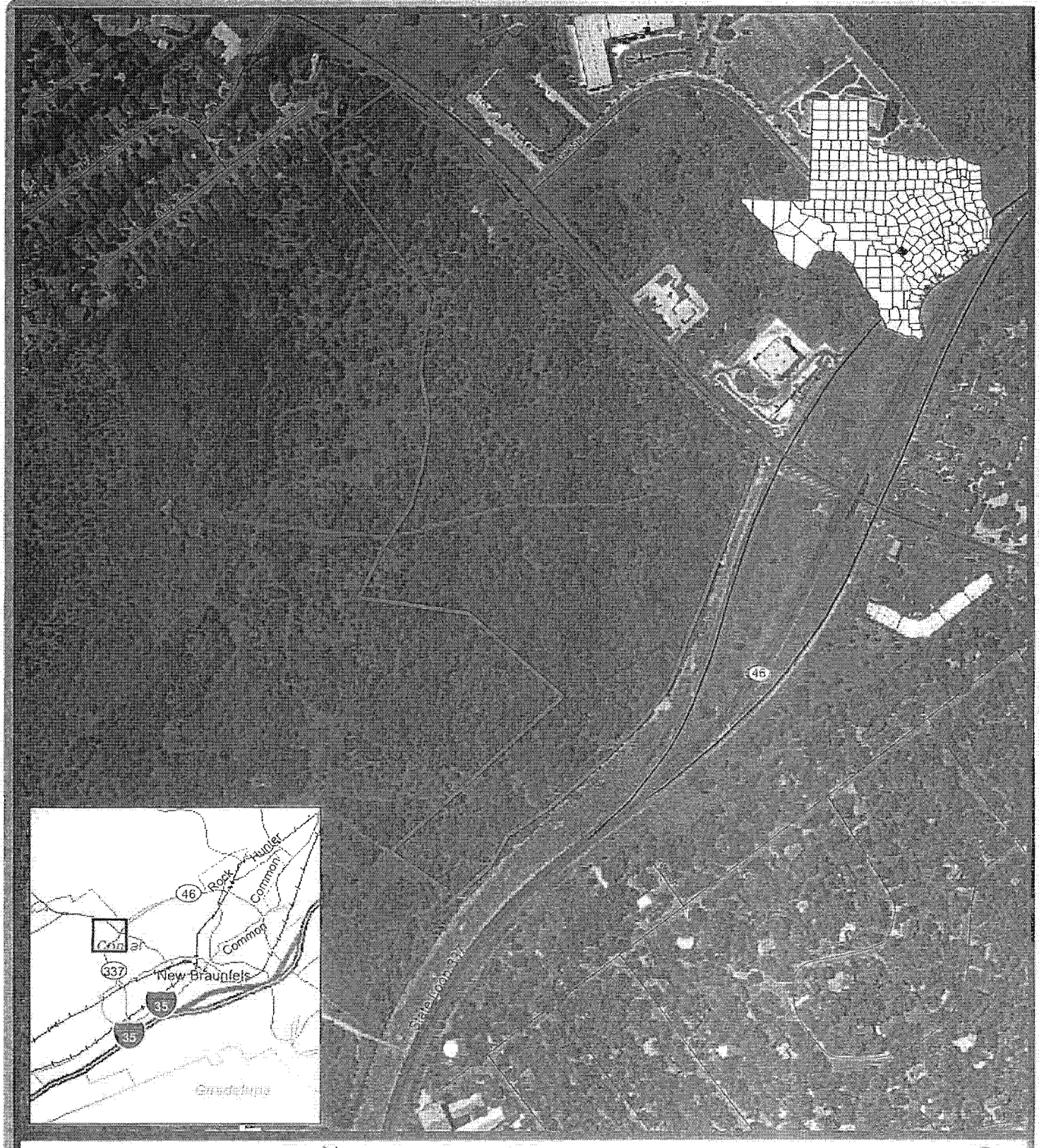
3.0 INVESTIGATION METHOD

The following investigation methods and activities were used to develop this report:

- A review of existing files and literature to determine the regional geology and known caves associated with the property;
- A review of past geological field reports, cave studies, and correspondence regarding the existing geologic features on the property;
- A site reconnaissance performed by a registered professional geologist to identify and examine caves, recharge features, and other significant geological features; and,
- Evaluation of collected field data and a ranking of features using the TCEQ Ranking Table 0585 for the Edwards Aquifer Recharge Zone.

Westpointe Village Geologic Assessment

Figure 1: Site Location



This map is intended for planning purposes only. Base mapping compiled from best available information. All map data should be considered preliminary and all boundaries and designations are subject to confirmation. This map is conceptual in nature and does not represent any regulatory approval. Plan is subject to change.

N

500 250 0 500

Feet

1:6,000 1 inch equals 500 Feet

aci consulting

a division of aci group, LLC

Map Document: (P:\Project Folders\Barshop and Oles\Westpointe Village SCS\GIS\Maps\fig1_site.mxd)
5/18/2009 -- 3:57:59 PM

4.0 PROPOSED SURVEY AREA USE

The site will be utilized for the construction of a commercial/retail complex.

5.0 REGIONAL AND SITE GEOLOGY

The site lies within the Edwards aquifer recharge zone as defined by the TCEQ (TCEQ 2001). The geologic strata associated with the Edwards aquifer include the Georgetown Formations overlying the Edwards Limestone Formation, interfingering with the Comanche Peak Formation in Williamson County. These rocks are underlain by the Walnut Formation, which has members including the Whitestone Member, Keys Valley Marl Member, the Cedar Park Member, the Bee Cave Member and the Bull Creek Member. The Glen Rose Formation, another marine limestone, is located below the Walnut Formation. The dominant structural trend of known faults in the area is to the northeast on a bearing of approximately 30 to 40 degrees and to the southwest on a bearing of approximately 210 to 220 degrees.

Surface geology of the area is dominated by consistent outcrops of the Edwards Formation which is contained within the Fredericksburg Group. Outcrops on the site occur as light-gray to gray, thick bedded limestone. Some outcrops are dolomitic in nature. Figure 2 depicts the stratigraphic column for the site. A topographic map with formation outcrops is included as Figure 3.

6.0 KARST FEATURES IN COMAL COUNTY, TEXAS

In limestone terrains, karst is expressed by erratically developed cavernous porosity and the manifestations of sinkholes, voids, and erratic surface drainage. Karst landscapes are typical of the Edwards Limestone, occurring across a vast region of Central Texas west of the Balcones Escarpment, and these processes are critical to understanding the Edwards Aquifer within its various segments. The features produced by karst processes (voids, holes, and solution layers) eventually provide conduits for surface water runoff and "point recharge" for the Edwards aquifer. The identification and protection of these features in established recharge areas is critical to maintaining groundwater quality and species habitat. The United States Fish and Wildlife Service (USFWS) and the TCEQ require protective strategies within these areas to ensure recharge and endangered species habitat protection prior to, during, and upon completion of construction activities. The subject area is located in Comal County which is not within an area where endangered karst invertebrates exist or may be known to exist.

Figure 2
Stratigraphic Column
Weston Tract

System	Group or Formation	Thickness	Description
Cretaceous	Del Rio Clay (Kdr)	Unknown	Dark gray to olive brown, calcareous clay, some pyritic
Cretaceous	Edwards Limestone (Ked)	Unknown	Mostly hard and dense, thin bedded, dark gray, fine to medium grained limestone, some dolomitic. Tree cover is sparse in western portion of formation.

7.0 SITE SOILS

The description of the site soils are derived from two sources:

- Utilization of the "Soil Survey of Comal County, Texas," January, 1984, compiled by the United States Department of Agriculture (USDA) Natural Resource Conservation Service; and,
- Field observations made during the site reconnaissance.

There are two main soil units identified within the subject area:

Krum clay (Krb) – 1 to 3 percent slopes – These are gently sloping soils occurring on stream terraces and valley hills. Typically, the surface layer consists of dark gray clay about 16 inches thick with subsoil to a depth of 58 inches consisting of grayish, brown clay. This soil is typically well-drained with moderate permeability.

Rumple-Comfort association (RUD), undulating – This association consists of shallow and moderately deep upland soils in the Edwards Plateau area. Rumple soils make up approximately 60 percent of the association, Comfort soils make up 20 percent and other soils, mainly Tarpley soils make up 20 percent. The typical surface layer consists of dark reddish-brown cherty clay loam about 10 inches thick. The subsoil to a depth of 28 inches is dark reddish brown extremely stony clay. The soil is mildly alkaline and non-calcareous throughout.

The surface layer of the Comfort soil is dark brown, extremely stony clay to about 7 inches. The subsoil to a depth of 12 inches is dark, reddish-brown, mildly alkaline, extremely stony clay. The underlying material is indurated non-calcareous fractured limestone throughout. All soils in this association are well-drained with moderate surface runoff. A site soils map is included as Figure 4 in this report.

8.0 PREVIOUS SITE INVESTIGATIONS

There are no known previous site investigations conducted for this property according to information received from the property developer.

9.0 DESCRIPTION OF SITE FEATURES

During a site visit conducted on July 25, 2007 there were no features identified within the site boundary (Figure 5). A GA Table is included in Appendix A. Following the completion of a realignment of the sewage collection system for Westpointe Village, an updated delineation of the alignment is included as figure 6.

10.0 SUMMARY OF FINDINGS

No geologic or manmade features were identified within the site boundary.

11.0 RECOMMENDATIONS

As there are no features found within the site boundary, there are no recommendations for the site.

aci consulting

12.0 REFERENCES

Barnes, V.E. 1974. Geologic Atlas of Texas, Austin Sheet. Bureau of Economic Geology, The University of Texas at Austin.

Soil Conservation Service. 1984. Soil Survey of Comal County, Texas. United States Department of Agriculture. Texas Agriculture Experiment Station. 136 pp.

(TCEQ) Texas Commission on Environmental Quality. 2001. "Edwards Aquifer Protection Program, Chapter 213 Rules - Recharge Zone, Transition Zone, Contributing Zone, and Contributing Zone within the Transition Zone." Map. Digital data. November 28, 2001. Austin, Texas.

aci consulting

APPENDIX A

GA Table

GEOLOGIC ASSESSMENT TABLE			PROJECT NAME: Westpointe Village Sewage Collection System																	
LOCATION			FEATURE CHARACTERISTICS											EVALUATION	PHYSICAL SETTING					
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
No Geologic or Manmade Features were identified within the 50-foot stand-off envelope for the SCS lines.																				

* DATUM: _____

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

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

12 TOPOGRAPHY

Cliff, Hillton, Hillside, Drainage, Floodplain, Streambed

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

My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

STATE OF TEXAS
STAN REECE
GEOLOGY
No. 3295
LICENSED
PROFESSIONAL GEOSCIENTIST

Date 5/19/09

Sheet 1 of 1

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

No features found within Subject Area

This map is intended for planning purposes only. Base mapping compiled from best available information. All map data should be considered preliminary and all boundaries and designations are subject to confirmation. This map is conceptual in nature and does not represent any regulatory approval. Plan is subject to change.

N

100 50 0 100 200 300 Feet

1:1,200 1 inch equals 100 Feet

5/19/09

STATE OF TEXAS
STAN REECE
GEOLOGY
No. 3295
LICENSED
PROFESSIONAL GEOSCIENTIST

aci consulting
a division of aci group, LLC

Map Document: (P:\Project Folders\Barshop and Oles\Westpointe Village SCS\GIS\Maps\fig5 features.mxd)
5/18/2009 — 5:00:51 PM

MODIFICATION OF PREVIOUSLY APPROVED PLAN

Modification of a Previously Approved Plan

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

1. Current Regulated Entity Name: WestPointe Village
   Original Regulated Entity Name: NA
   Assigned Regulated Entity Numbers (RN): 1) 105739023, 2) _____, 3) _____

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

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

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

   _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;
   _X_ development of land previously identified as undeveloped in the original water pollution abatement plan;
   ___ physical modification of the approved organized sewage collection system;
   ___ physical modification of the approved underground storage tank system;
   ___ physical modification of the approved aboveground storage tank system.

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

WPAP Modification Summary	Approved Project	Approved Modification	Proposed Modification
Acres	37.00		37.00
Type of Development	Commercial		Commercial
Number of Residential Lots	0		0
Impervious Cover (acres)	16.12*		16.92
Impervious Cover (%)	43.57%		45.73%
Permanent BMPs	Wet Basin		NA
Other			

SCS Modification Summary	Approved Project	Proposed Modification
Linear Feet	2,855	N/A
Pipe Diameter	8	
Other		

AST Modification Summary	Approved Project	Proposed Modification
Number of ASTs		N/A
Volume of ASTs		
Other		

*Note: Pond Designed for ±25.96 acres of impervious cover.

UST Modification Summary	Approved Project	Proposed Modification
Number of USTs	N/A	N/A
Volume of USTs		
Other		

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

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

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

___ The approved **(Phase I)** construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.

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

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

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

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

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

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

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

Mark R. Johnson, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

3/5/10
Date

ATTACHMENT A

ORIGINAL APPROVAL LETTER AND
APPROVED MODIFICATION LETTERS

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 25, 2009

Mr. William Vandenbosch, AIA
NB Retail, Ltd.
900 Isom Rd Ste 300
San Antonio TX 78216

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: WestPointe Village; Located at the southwest corner of Hwy. 46 and Loop 337; New Braunfels, Texas
TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program ID No. 2873.01; Investigation No. 748244; Regulated Entity No. RN105739023

Dear Mr. Vandenbosch:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the above-referenced project submitted to the San Antonio Regional Office by Bury+Partners on behalf of NB Retail, Ltd. on May 27, 2009. Final review of the WPAP was completed after additional material was received on July 17, 2009 and August 17, 2009. 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.*

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 37.00 acres. It will include the construction of a commercial shopping center and associated parking, driveways and utilities. The impervious cover will be 16.12 acres (43.57 percent). Project wastewater will be disposed of by conveyance to the existing Gruene Water Recycling Center owned by New Braunfels Utilities.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of storm water runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a wet basin, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best

Management Practices (2005), will be constructed to treat storm water runoff. The required total suspended solids (TSS) treatment for this project is 14,128 pounds of TSS generated from the 16.12 acres of impervious cover and 0.38 acres of existing impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The individual treatment measures will consist of a wet basin with a permanent pool volume of 126,728 cubic feet at the 852 foot elevation contour and a water quality volume of 246,881 cubic feet at the 854 foot elevation contour. The designed drainage area to the wet basin is 34.72 acres total and 14.78 acre of impervious cover from the development of Phase I. The wet basin will have two inlets and two separate forebays that lead to a main pool.

GEOLOGY

According to the geologic assessment included with the application, three non-sensitive geologic and manmade features exist at the site. The two geologic features were further excavated by hand and determined to have a low infiltration rating by the project geologist. The San Antonio Regional Office site assessment conducted on July 30, 2009 revealed the site as described by the revised geologic assessment. During the site assessment, regulated activities and soil disturbance was noted at the site.

SPECIAL CONDITIONS

I. The permanent pollution abatement measures shall be operational prior to occupancy or public use of the facility.

II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

III. As described in RG-348 (2005) a sediment depth marker is required in both sediment forebays.

IV. As stated in the application, impervious cover is not approved in areas designated as Phase II in the WPAP application. Future modifications to this WPAP application will be required for construction of impervious cover in area designated as Phase II.

V. Except for roadway and sidewalk construction to Oak Run Pkwy, regulated activities in the 5.54 acres along Loop 337 are not approved by this letter. The applicant is responsible for ensuring regulated activities approved in this application do not extend onto the 5.54 acres. Visible barriers should be considered to separate out the undisturbed areas.

VI. Regulated activities identified during the site assessment constitute construction without the prior approval of a water pollution abatement plan as required by Commission rules (30 TAC Chapter 213). Therefore, the applicant is hereby advised that the after-the-fact approval of the development, as provided by this letter, shall not absolve the applicant of any prior violations of commission rules related to this project, and shall not necessarily preclude the Commission from pursuing appropriate enforcement actions and administrative penalties associated with such violations, as provided in 30 TAC §213.10 of Commission rules.

VII. This approval letter is being issued for regulated activities (as defined in Chapter 213) and for best management practices presented in the application. This approval does not constitute a water right permit or authorization from the TCEQ Dam Safety Program. Failure to obtain all necessary authorizations could result in enforcement actions. For more information on Water Rights Permits, please refer to:

http://www.tceq.state.tx.us/permitting/water_supply/water_rights/wr_amiregulated.html

For more information on the Dam Safety program, please refer to:
http://www.tceq.state.tx.us/compliance/field_ops/dam_safety/damsafetyprog.html

STANDARD CONDITIONS

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

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

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

Prior to Commencement of Construction:

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

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

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

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

8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor storm water 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. No wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

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

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

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

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

After Completion of Construction:

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

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

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

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

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

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

Sincerely,

Richard Garcia

Mark R. Vickery
Executive Director
Texas Commission on Environmental Quality

MRV/CEF/eg

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

cc: Mr. Armando Niebla, P.E., Bury+Partners
Mr. James Klein, P.E., City Engineer, City of New Braunfels,
Mr. Thomas Hornseth, P.E., Comal County Engineer
Ms. Velma Danielson, General Manager, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC212

ATTACHMENT B

NARRATIVE OF PROPOSED MODIFICATION

NARRATIVE OF PROPOSED MODIFICATION

There are no proposed modifications to the existing Permanent Best Management Practices Structure, the Wet Basin, provided with the WestPointe Village Unit 2 Development.

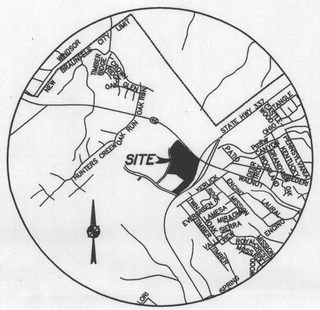
The existing Wet Basin has sufficient capacity to provide treatment of runoff for Whataburger Restaurant Project in accordance with the approved Water Pollution Abatement Plan; EAPP #2873.01.

ATTACHMENT C

CURRENT SITE PLAN OF THE APPROVED PROJECT

WESTPOINTE VILLAGE
SH 46 AND LOOP 337
NEW BRAUNFELS, TEXAS

WATER POLLUTION ABATEMENT PLAN



VICINITY MAP
N.T.S.
NEW BRAUNFELS, TEXAS

DEVELOPER: NB RETAIL, LTD.
801 CONGRESS AVE, STE 300
AUSTIN, TEXAS 78701
(512) 477–1212
ATTN.: MR. WILLIAM VANDENBOSCH

ENGINEER: BURY+PARTNERS, INC.
922 ISOM ROAD, SUITE 100
SAN ANTONIO, TEXAS 78216
(210) 525–9090
ATTN.: ARMANDO NIEBLA, P.E.

SURVEY PROVIDED BY: BURY+PARTNERS, INC.
922 ISOM ROAD, SUITE 100
SAN ANTONIO, TEXAS 78216
(210) 525–9090
ATTN.: HAL LANE, R.P.L.S.

BPI JOB NO: 50827–02.52

ADDRESS : SH46 AND LOOP 337
NEW BRAUNFELS, TEXAS 78701

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

WET POND NOTES:

1. CONTRACTOR IS TO CONSTRUCT ALL POND EMBANKMENT SECTIONS AND LINERS PER THE GEOTECHNICAL ENGINEERING STUDY FOR WESTPOINTE VILLAGE AS PREPARED BY TERRACON ENGINEERING.

2. WETLAND PLANTS PROVIDED IN BARE–ROOT FORM SHALL BE EQUAL IN ROOT BALL SIZE TO THE LISTED MINIMUM CONTAINER SIZES.

3. ALL WETLAND PLANTS WHICH FULFILL THE MINIMUM LANDSCAPE REQUIREMENTS SHALL BE PROPAGATED OR HARVESTED FROM REGIONALLY ADAPTED STOCK (WHENEVER POSSIBLE). THESE ARE PLANT SPECIES OR GENOTYPES WHICH ARE NATIVE TO A RANGE OF WITHIN 250 MILES OF THE PROJECT SITE.

4. A MINIMUM OF 90% OF THE VEGETATION SHALL BE ALIVE AND VIABLE FOR ONE YEAR FOLLOWING INSTALLATION.

5. WETLAND PLANTS MUST BE INSTALLED AT WATER DEPTHS APPROPRIATE TO THE SPECIES. THE WATER DEPTHS NOTED IN THE TABLE ON THIS SHEET SHOW THE RANGE OF NATURAL ZONES IN WHICH THESE PLANTS CAN BE FOUND. PLANTING DEPTHS ARE USUALLY SHALLOWER DUE TO THE SMALL SIZE OF THE PLANTS AT THE TIME OF INSTALLATION. IF USING THE MINIMUM–SIZED PLANT MATERIAL, PLANTS SHALL BE INSTALLED AT THE SHALLOW WATER DEPTH LISTED.

6. CATTAILS (TYPHA SPP.) TEND TO INVADE ALMOST ALL WETLANDS AND AGGRESSIVELY COLONIZE THE SHALLOW WATER BENCH. THEREFORE CATTAILS SHALL NOT BE SPECIFIED ON THE PLANTING PLAN.

7. THE DESIGNER IS NOT LIMITED TO THE SPECIES DESCRIBED. ADDITIONAL SPECIES USED FOR AESTHETIC REASONS, ETC. ARE ENCOURAGED. PLANTS NOT INTENDED TO MEET MINIMUM REQUIREMENTS DO NOT NEED TO BE NATIVE OR REGIONALLY ADAPTED STOCK.

8. MICROBIAL INITIATION: A SUBSTANTIAL PORTION OF THE POLLUTANT REMOVAL IN WET PONDS IS DUE TO BIOLOGICAL PROCESSES THAT OCCUR IN THE SEDIMENT. BACTERIA IN THE POND SUBSTRATE REMOVE NUTRIENTS THROUGH A PROCESS OF DENITRIFICATION. THESE MICROBIAL PROCESSES REQUIRE AN ORGANIC FOOD SOURCE, SUCH AS DECAYING PLANT LITTER. BECAUSE IT IS THE SUPPLY OF ORGANIC CARBON THAT DETERMINES NUTRIENT REMOVAL – MORE THAN UPTAKE BY LIVING PLANTS – DENITRICATION CAN BE EXPECTED TO CONTINUE EVEN DURING COLD–WEATHER PLANT DORMANCY. IN MATURE PONDS WITH ABUNDANT VEGETATION, AQUATIC PLANTS SUPPLY THE NECESSARY LITTER LAYER AND AEROBIC ZONE FOR MICROBIAL ACTIVITY. HOWEVER, SINCE NEW PONDS LACK A SUFFICIENT SOURCE OF ORGANIC MATTER, AN APPROPRIATE AMOUNT OF CARBON (STRAW, HAY, LEAF CLIPPINGS, AND OTHER NON–WOODY MATERIAL) SHALL BE INSTALLED DURING CONSTRUCTION. AFTER THE POND LINER IS IN PLACE YET PRIOR TO ALLOWING THE POND TO BE FILLED, SPREAD A MINIMUM OF ONE INCH OF PLANT LITTER EVENLY ON THE SIDES OF THE POND (BELOW THE PERMANENT POOL LEVEL). TREAT THE ENTIRE SHALLOW WATER BENCH IN THIS THIS MANNER AND ALL POND SLOPES (RANGING FROM 3:1 TO 10:1). CRIMP THE PLANT LITTER INTO THE POND SUBSTRATE TO PREVENT THE MATERIAL FROM BEING TRANSPORTED DOWNSTREAM AS THE POND FILLS.

9. ALGAE: HIGH NUTRIENT LOADS IN WET PONDS MAY CAUSE ALGAE BLOOMS TO OCCUR. PUNGENT ODOR IS OFTEN ASSOCIATED WITH THESE ALGAE BLOOMS. HOWEVER, TREATING WITH AN ALGACIDE IS NOT RECOMMENDED BECAUSE BLOOMS ARE USUALLY SHORT LIVED AND ARE CONSIDERED DESIRABLE FOR NUTRIENT REMOVAL. THE USE OF SUBMERGENTS AND FLOATING–LEAFED AQUATICS CAN REDUCE THE EXTENT OF ALGAE BLOOMS BY REDUCING NUTRIENT LOADS AND SHADING THE WATER.

10. NUTRIA: WILDLIFE, SUCH AS NUTRIAS, HAS BEEN REPORTED TO DESTROY THE VEGETATED ELEMENT OF WET PONDS. EVALUATION OF THE POTENTIAL OF SUCH WILDLIFE INHABITING OR BEING ATTRACTED TO THE PROPOSED POND SITE IS REQUIRED. WHEN THERE IS A POTENTIAL FOR SUCH ACTIVITY, FENCING (SUCH AS CHAIN LINK) SHOULD BE PROVIDED.

11. MOSQUITO CONTROL: MOSQUITOES ARE PROBLEMS IN URBAN AREAS. STANDING WATER IN WET PONDS BECOMES IDEAL BREEDING LOCALITIES. THE WET POND SHOULD BE STOCKED WITH THE FISH SPECIES GAMBUSIA AFFINIS TO SERVE AS A BIOLOGICAL CONTROL FOR MOSQUITOES. GAMBUSIA IS EFFECTIVE CONTROL FOR MOSQUITOES ELIMINATING THE NEED FOR CHEMICAL CONTROL. GAMBUSIA SHOULD BE STOCKED AT THE INITIAL DENSITY OF 200 INDIVIDUALS PER SURFACE ACRE.

12. DOMESTIC WATERFOWL: DOMESTIC WATERFOWL CAN DESTROY VEGETATION AND INCREASE POLLUTANT LOADING IN WET POND SYSTEMS IN ADDITION, WATERFOWL CAN BECOME NUISANCES TO PROPERTY OWNERS NEAR THE POND. FOR THESE REASONS, DOMESTIC WATERFOWL SHOULD NOT BE INTRODUCED INTO THESE SYSTEMS.

13. CARP AND GOLDFISH: CARP AND GOLDFISH ARE BOTTOM–FEEDERS THAT CAN CAUSE TURBIDITY AND OTHER PROBLEMS. THEY SHOULD NOT BE INTRODUCED INTO A WET POND.

14. INITIAL FILLING: WHILE THE POND IS IN CONSTRUCTION, IT IS INTENDED THAT NON POTABLE WATER, NOT POTABLE WATER, BE USED TO FILL UP THE POND.

15. UTILITY LINES: UTILITY LINES MAY NOT BE LOCATED WITHIN THE LIMITS OF THE MAXIMUM WATER SURFACE ELEVATION OF A WET POND.

16. HAZARDOUS MATERIAL TRAP: SPILLS OF HAZARDOUS LIQUIDS CAN SEVERELY DAMAGE OR KILL THE BIOTA OF A WET POND. THEREFORE, DEVELOPMENTS WHERE THE TRANSPORTATION, STORAGE, OR DISTRIBUTION OF HAZARDOUS MATERIALS IS ANTICIPATED SHOULD INCLUDE HAZARDOUS MATERIAL TRAPS IN THE DRAINAGE SYSTEM IMMEDIATELY UPSTREAM OF THE WET POND INLET.

17. AERATION AND RECIRCULATION UNIT (OPTIONAL): PRIVATELY MAINTAINED WET PONDS MAY INCLUDE SOME TYPE OF AERATION DEVICE (SUCH AS A FOUNTAIN) WHICH COULD ENHANCE THE DISSOLVED OXYGEN CONCENTRATION. INCREASED DISSOLVED OXYGEN PREVENTS THE POND FROM BECOMING ANAEROBIC, HENCE MINIMIZING PROBLEMS WITH ODOR FROM BACTERIAL DECOMPOSITION.

CONSTRUCTION NOTES:

1. PRIOR TO INITIALLY FILLING THE PERMANENT POOL, THE CLAY LINER WITHIN THE PERMANENT POOL SHALL BE KEEP MOIST UNTIL THE PERMANENT POOL VOLUME HAS BEEN REACHED TO PREVENT CRACKS FROM FORMING IN THE LINEAR.
2. ALL BACK FILL FOR THE INVERTED OUTFALL PIPE AND MAKE–UP WATER LINE SHALL BE OF CLAY MATCHING THE SPECIFICATIONS LISTED ON SHEET C14.3.
3. THE INVERTED OUTFALL PIPE SHALL HAVE WATER TIGHT JOINTS.
4. CONTRACTOR IS TO MONITOR THE SURFACE WATER ELEVATION OF THE PERMANENT POOL UNTIL CONSTRUCTION IS COMPLETE. THE CONTRACTOR SHALL CONTACT THE ENGINEER/OWNER IMMEDIATELY IF THE POND IS LOSING MORE THAN 1.5" OF WATER AT ANY GIVEN WEEK.

GENERAL CONSTRUCTION NOTES:

1. WRITTEN CONSTRUCTION NOTIFICATION MUST BE GIVEN TO THE APPROPRIATE TCEQ REGIONAL OFFICE NO LATER THAN 48 HOURS PRIOR TO COMMENCEMENT OF THE REGULATED ACTIVITY. INFORMATION MUST INCLUDE THE DATE ON WHICH HE 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 TCEQ 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 TCEQ 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 TCEQ 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 TCEQ 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.

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AUSTIN REGIONAL OFFICE
2800 S. IH–35, SUITE 100
AUSTIN, TEXAS 78704–5712
PHONE (512) 339–2929
FAX (512) 339–3795

STATE OF TEXAS
ARMANDO J. NIEBLA
102296
LICENSED
PROFESSIONAL ENGINEER
9/19

SUBMITTED BY :

ARMANDO NIEBLA, P.E. DATE
BURY+PARTNERS, INC.
922 ISOM ROAD, SUITE 100
SAN ANTONIO, TEXAS 78216
(210) 525–9090

SHEET INDEX

MAINTENANCE NOTES:

1. DURING SITE CONSTRUCTION – THE SEDIMENT LOAD TO THE SEDIMENT FOREBAY SHALL BE CLOSELY MONITORED AFTER EVERY STORM EVENT. IF HEAVY SEDIMENT LOADS ARE DETECTED DURING AN INSPECTION, THE SOURCE SHOULD BE CORRECTED. SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT FOREBAY WHEN ONE–THIRD OF THE FOREBAY VOLUME IS LOST.

2. UPON COMPLETION OF SITE REVEGETATION – ANY SEDIMENT BUILDUP (GREATER THAN 5% VOLUME LOSS) SHALL BE REMOVED FROM THE FOREBAY UPON COMPLETION OF SITE REVEGETATION. THE SEDIMENT BUILDUP IN THE MAIN POOL SHALL BE CHECKED AND IF MORE THE TEN–PERCENT OF THE VOLUME IS LOST, IT SHOULD BE CLEANED AT THAT TIME.

3. EVERY THREE MONTHS FOR THE FIRST TWO YEARS – DURING THE THREE MONTH INITIAL INSPECTION CYCLE, IF MORE THAN FIFTEEN PERCENT OF THE VOLUME OF THE FOREBAY IS LOST, IT SHALL BE CLEANED AT THAT TIME.

4. BI–ANNUALLY – THE BASIN SHOULD BE INSPECTED BI–ANNUALLY FOR SIDE SLOPE EROSION AND DETERIORATION OR DAMAGE TO STRUCTURE ELEMENTS. ANY DAMAGE SHALL BE REPAIRED. LARGE AREAS, WHICH HAVE DEAD OR MISSING VEGETATION, SHALL BE REPLANTED. TURF AREAS AROUND THE POND SHOULD BE MOWED. ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED BI–ANNUALLY OR AS NECESSARY. CATTAILS, COTTONWOODS, AND WILLOWS CAN QUICKLY COLONIZE SHALLOW WATER AND THE EDGE OF THE POND. THESE SPECIES, OR ANY AREAS OF PLANT OVERGROWTH MAY BE THINNED AT THIS TIME OR AS NEEDED.

5. EVERY TWO YEARS – THE SEDIMENT BUILDUP IN THE SEDIMENT FOREBAY SHALL BE REMOVED EVERY TWO YEARS OR WHEN MORE THAN ONE–THIRD OF THE FOREBAY VOLUME IS LOST. FOREBAY VOLUME SHALL BE REMOVED BY MEANS OF A PUMP AND SHALL BE DONE SO IN 24–HRS.

6. EVERY TWENTY YEARS – THE SEDIMENT BUILDUP IN THE SEDIMENT FOREBAY SHALL BE REMOVED EVERY TWENTY YEARS OR WHEN MORE THAN TWENTY PERCENT OF THE MAIN POOL VOLUME IS LOST. MAIN POOL VOLUME SHALL BE REMOVED BY MEANS OF A PUMP AND SHALL BE DONE SO IN 24–HRS.

SPECIAL CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL CONTACT NEW BRAUNFELS UTILITIES AND ALL UTILITY COMPANIES LOCATOR 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
2. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, GAS PROVIDER MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
3. THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48 HOURS PRIOR TO EXCAVATION. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANT DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL CONTACT NEW BRAUNFELS UTILITIES, WATER LINE LOCATOR 48 HOURS PRIOR TO EXCAVATION IN THE IMMEDIATE AREA OF WATER LINE.
5. DAMAGE TO ANY UNDERGROUND DRAINAGE SYSTEM SHALL BE REPORTED TO CITY OF NEW BRAUNFELS PUBLIC WORKS. THE CITY WILL INSTRUCT THE DAMAGING PARTY (CONTRACTOR) ON HOW TO REPAIR THE LINE AT THE CONTRACTORS COST.
6. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROTECTING THE INTEGRITY OF THE POWER POLES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE REQUIRED AT THEIR EXPENSE TO PROVIDE ACCEPTABLE BRACING OF SPECIFIC UTILITIES POLES DURING THE CONSTRUCTION OF THIS PROJECT AND/OR PROVIDE AT THEIR EXPENSE FOR THE ELECTRIC PROVIDER TO PROVIDE BRACING. IN ADDITION IT IS CRITICAL THE CONTRACTOR WORK CLOSELY WITH THE ELECTRIC PROVIDER'S CONSTRUCTION FORMAN FOR THE SAKE OF SAFETY TO ISOLATE AND/OR PROTECT CONTRACTOR FROM ENERGIZED ELECTRIC CONDUCTORS ABOVE AREAS OF PROPOSED EXCAVATION.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEM'S PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATION. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

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MAR 05 2010
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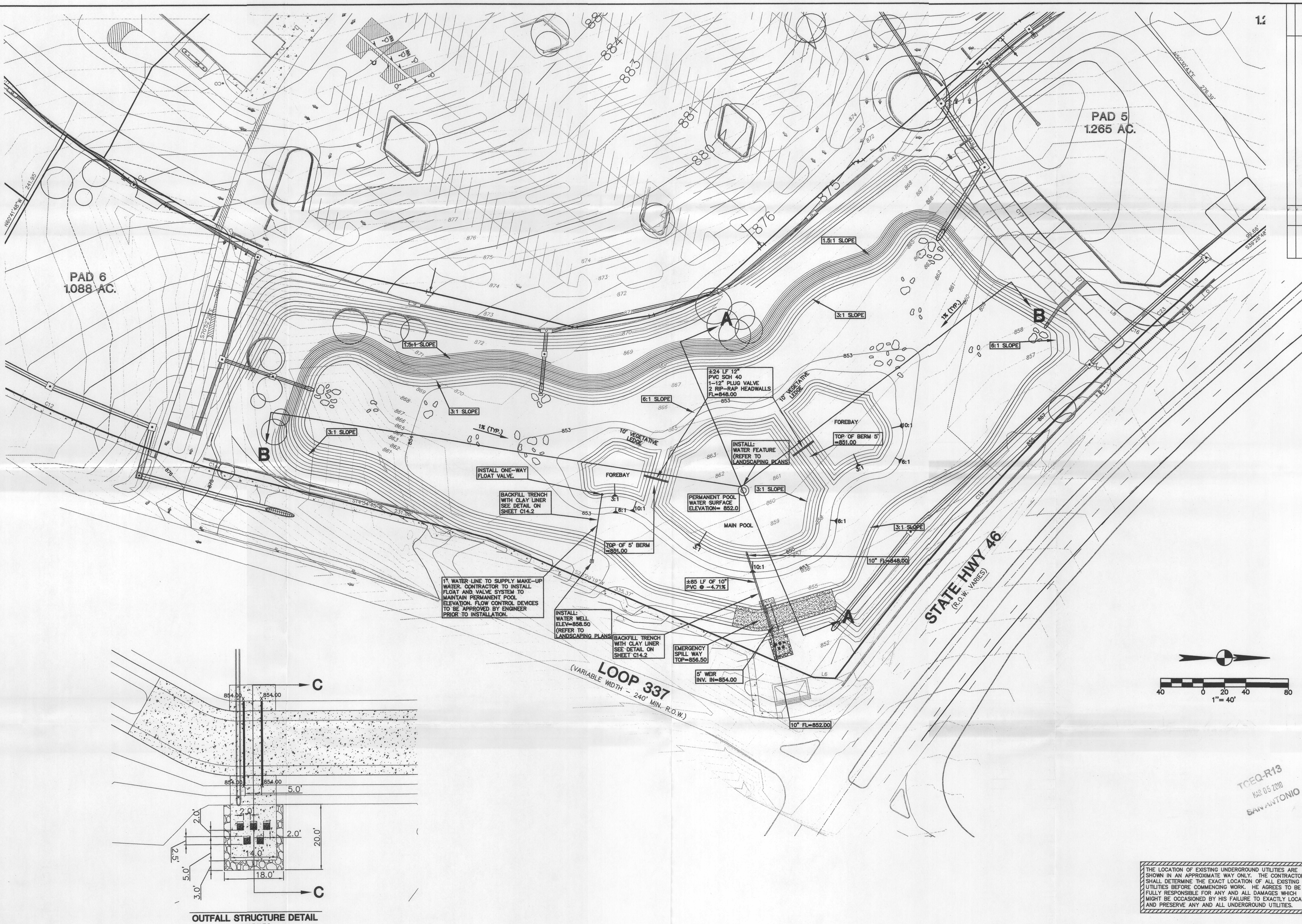
NO.	REVISION	APPROVAL

SHEET
C14.0



THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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SAN ANTONIO

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STATE OF TEXAS
ARMANDO J. NIEBLA
102296
LICENSED PROFESSIONAL ENGINEER

WATER QUALITY POND PLAN 1

WESTPOINTE VILLAGE

SH46 AND LOOP 337
NEW BRAUNFELS, TX

PLOTTING SCALE: 1"= 1'
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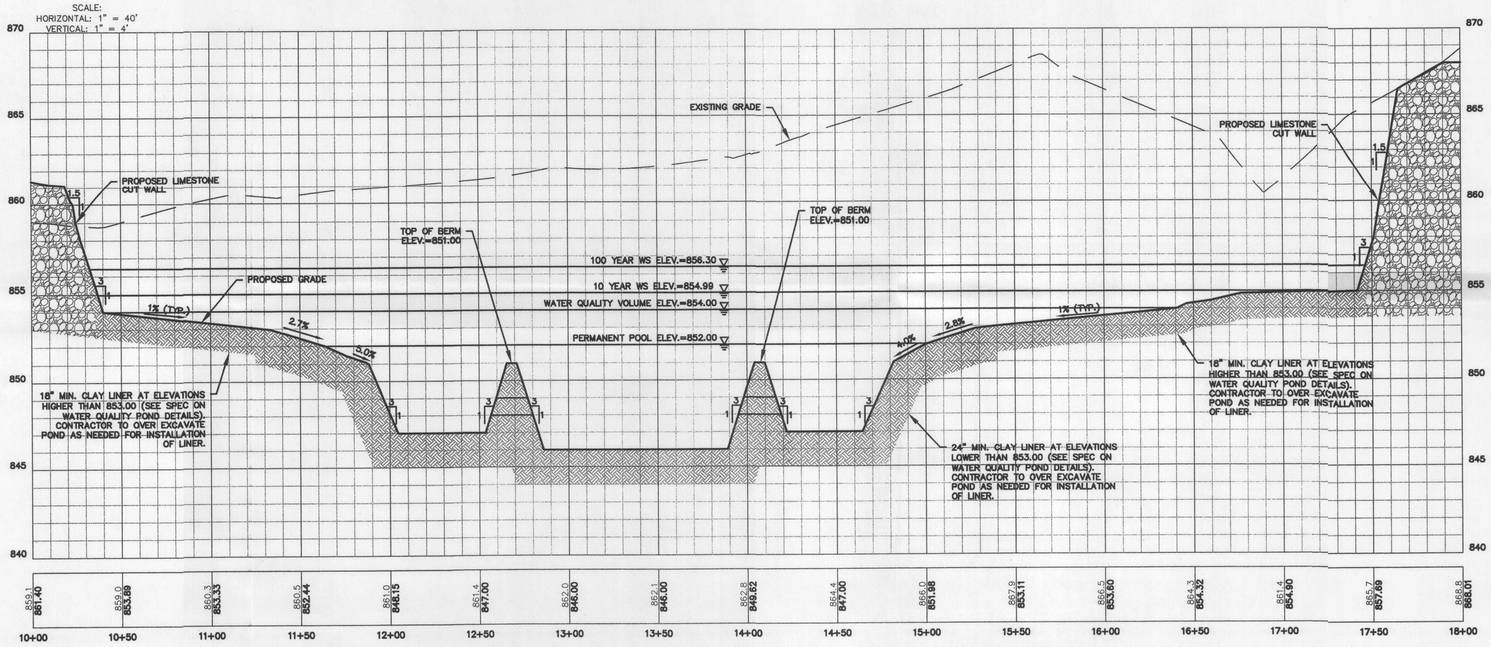
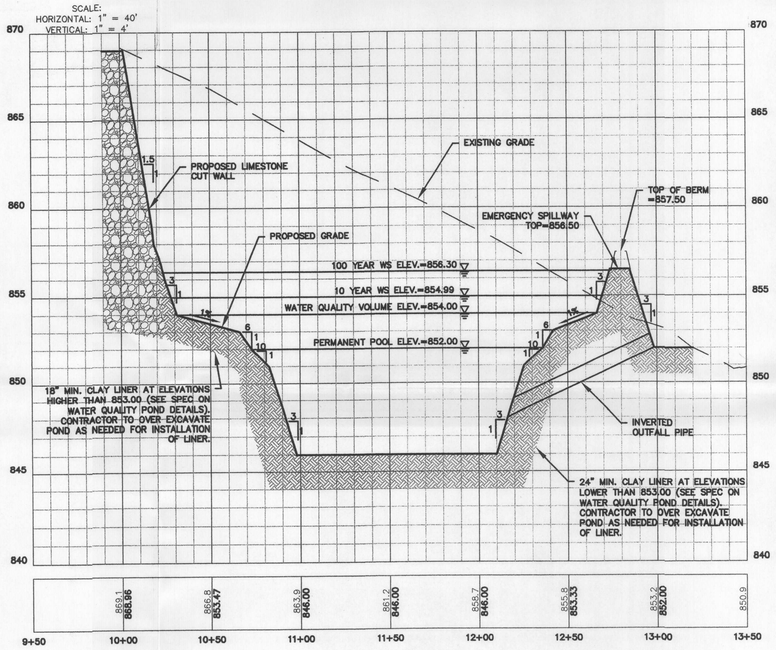
DRAWN BY: KB
DESIGNED BY: CC
REVIEWED BY: AN
PROJECT NO.: 827-02

SHEET
C14.1



SECTION A-A
SCALE: N.T.S

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



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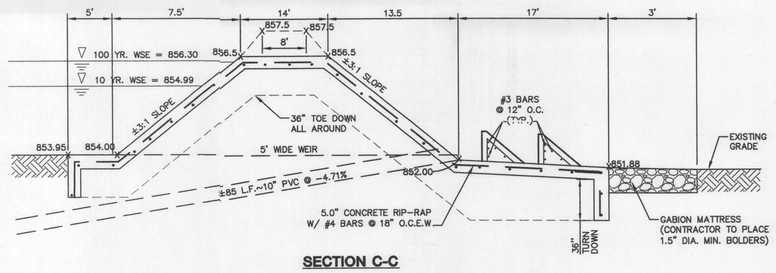

SECTION C-C

OUTFALL STRUCTURE DETAIL
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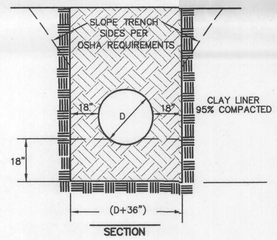

FLEXIBLE PIPE:
POLYVINYL CHLORIDE PIPE

1. BEDDING SHALL BE COMPACTED AT 95% STANDARD PROCTOR AND SHOULD CONFORM WITH THE CLAY LINER SPECS ON SHEET C14.3.

TRENCH AND BEDDING DETAIL
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STATE OF TEXAS
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LICENSED PROFESSIONAL ENGINEER
8/17/09

WATER QUALITY POND SECTIONS

WESTPOINTE VILLAGE

SH 46 AND LOOP 337
NEW BRAUNFELS, TEXAS

PLOTTING SCALE: 1"= 1'
DATE REVISED: Aug 17, 2009
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REVIEWED BY: AN
PROJECT NO.: 50827-02

SHEET
C14.2

*** NOTE: THE PLANT SCHEDULE ON THIS SHEET IS A MINIMUM REQUIREMENT NECESSARY IN ORDER FOR THE WET POND TO MEET WATER QUALITY REQUIREMENTS. PRIOR TO CONSTRUCTION, A PLANTING SCHEDULE MUST BE PREPARED BY A LICENSED LANDSCAPE ARCHITECT. THE SCHEDULE MUST MEET THE MINIMUMS DESCRIBED ON THIS SHEET, HOWEVER ADDITIONAL/ALTERNATE PLANTS MAY BE INCLUDED FOR AESTHETICS.

WETLAND PLANT LIST

INSTALL BULLRUSH IN CLUMPS, WITH INDIVIDUAL PLANTS SPACED APPROXIMATELY THREE TO FOUR FEET ON CENTER: AT LEAST TWO OF THE FOLLOWING SPECIES SHALL BE USED:

BULLRUSH	WATER DEPTH	NOTES
SCIRPUS VALIDUS BULLRUSH	1' – 3'	8' TALL EVERGREEN, RESISTS CATTAIL ENCROACHMENT
SCIRPUS CALIFORNICUS BULLRUSH	1' – 3'	8' TALL EVERGREEN, RESISTS CATTAIL ENCROACHMENT
SCIRPUS AMERICANUS THREE–SQUARE BULLRUSH	2' – 6"	2' TO 4' TALL, WITH 3 DISTINCT EDGES

INSTALL SPIKERUSH AT OR NEAR WATER'S EDGE, WITH INDIVIDUAL PLANTS SPACED APPROXIMATELY THREE TO SIX FEET ON CENTER. AT LEAST TWO OF THE FOLLOWING SPECIES SHALL BE USED:

SPIKEBRUSH	WATER DEPTH	NOTES
ELEOCHARIS MONTEVIDENSIS SPIKERUSH	0" – 6"	1' TALL, RHIZOMATOUS, REDUCES EROSION AT THE POND EDGE
ELEOCHARIS MACROSTACHYS SPIKERUSH	0" – 6"	1' TALL, RHIZOMATOUS, REDUCES EROSION AT THE POND EDGE
ELEOCHARIS QUADRANGULATA SPIKERUSH	3" – 1'	2' TO 2.5 TALL, RHIZOMATOUS, CAN ACCOMMODATE DEEPER WATER, 4–ANGLED

AT LEAST TWO SPECIES OF THE FOLLOWING MARSH SPECIES SHALL BE USED (ADDITIONAL SPECIES ARE ENCOURAGED). INSTALL IN CLUMPS IN SHALLOW WATER, WITH INDIVIDUAL PLANTS SPACED AT APPROXIMATELY THREE FEET ON CENTER.

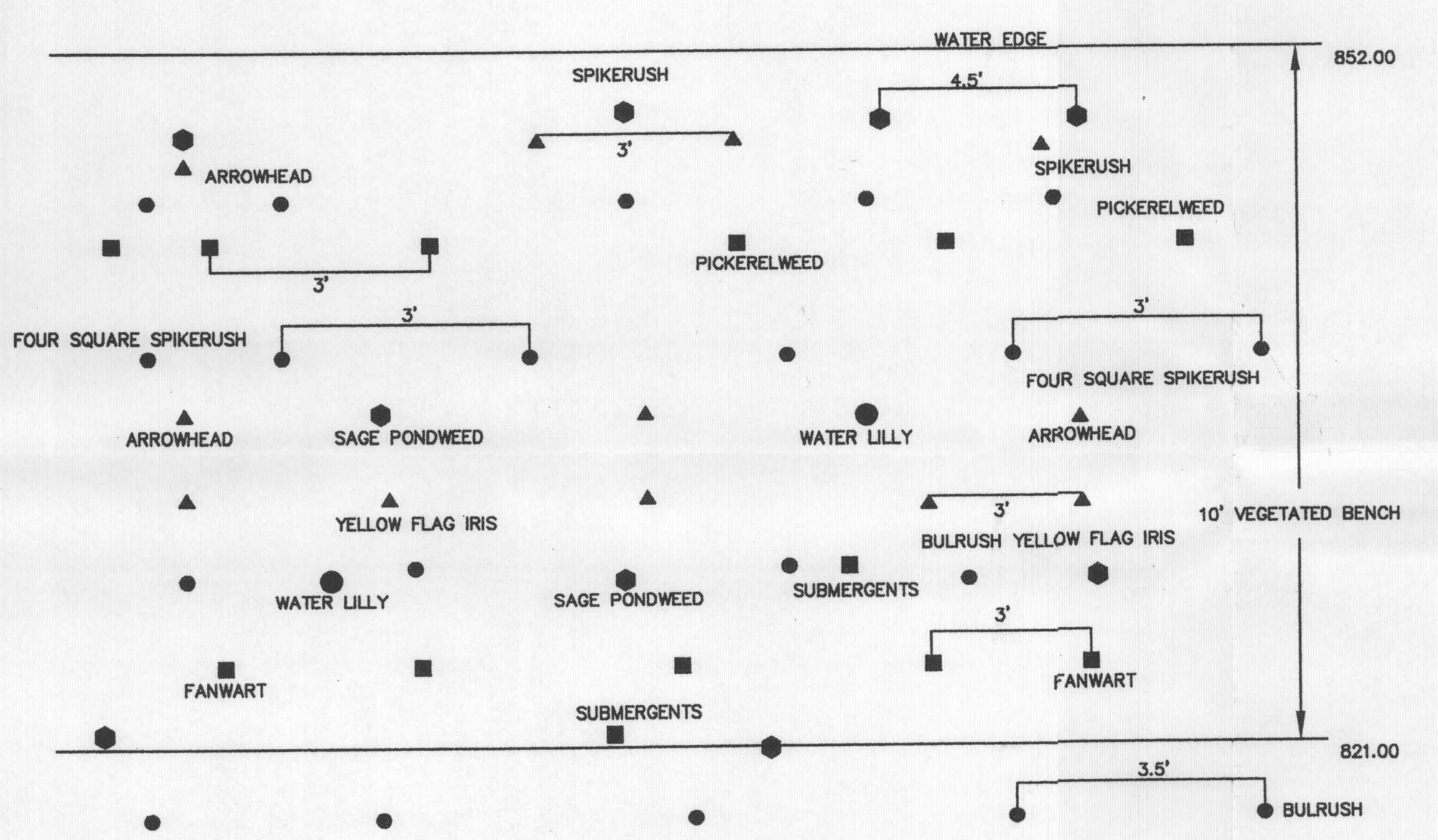
MARSH DIVERSITY	WATER DEPTH	NOTES
1. CYPERUS OCHARCEUS FLATSEDGE	2" –6"	1' TO 2' TALL, CLUMP–FORMING, COMMON TO CENTRAL TEXAS
2. DICHROMENA COLORATA WHITE–TOPPED SEDGE	2" – 6"	1' TO 2' TALL, WHITE BRACTS DURING WARM SEASON
3. ECHINODORUS ROSTRATUS BURHEAD	3" – 1'	1' TO 2' TALL, ANNUAL, HEART–SHAPED LEAVES, FLOWER SIMILAR TO ARROWHEAD
4. ELEOCHARIS QUADRANGULATA FOUR–SQUARE SPIKEBRUSH	6" – 1'	1' TO 2' TALL, COLONIZES, INHABITS DEEPER WATER THAN SPIKEBRUSHES
5. IRIS PSEUDACORUS YELLOW FLAG IRIS	1' – 2'	3' TO 4' TALL, CAN BE INVASIVE, DENSE GROWTH, YELLOW FLOWERS
6. JUNCUS EFFUSUS SOFT RUSH	6" – 1'	3' TO 4' TALL, FORMS A TIGHT CLUMP, EVERGREEN, VERY ATTRACTIVE
7. JUSTICIA AMERICANA WATER–WILLOW	2" – 6"	3' TO 4' TALL, COMMON, WHITE FLOWERS, HERBACEOUS, COLONIZES
8. MARSILEA MACROPODA WATER CLOVER	2" – 6"	LOOKS LOKE FLOATING FOUR–LEAF CLOVER, ENDEMIC TO TEXAS
9. NAJAS QUADALUPENSIS WATER–NAIAD	1' – 4'	SUBMERGENT, VALUABLE TO FISH AND WILDLIFE
10. PONTEDERIA CORDATA PICKERELWEED	2" – 1'	3' TALL, COLONIZES, COSMOPOLITAN, PURPLE FLOWERS
11. RHYNCHOSPORA CORNICULATA HORNED–RUSH	2" – 6"	2' TO 3' TALL, BRASS–COLORED FLOWERS IN MAY

INSTALL ARROWHEAD IN CLUMPS IN SHALLOW WATER, WITH INDIVIDUAL PLANTS SPACED APPROXIMATELY THREE FEET ON CENTER.

ARROWHEAD	WATER DEPTH	NOTES
SAGGITARIA LATIFOLIA ARROWHEAD	2" – 1'	2' HEIGHT, WILDLIFE VALUE, WHITE FLOWERS, PROVEN WATER QUALITY PERFORMER

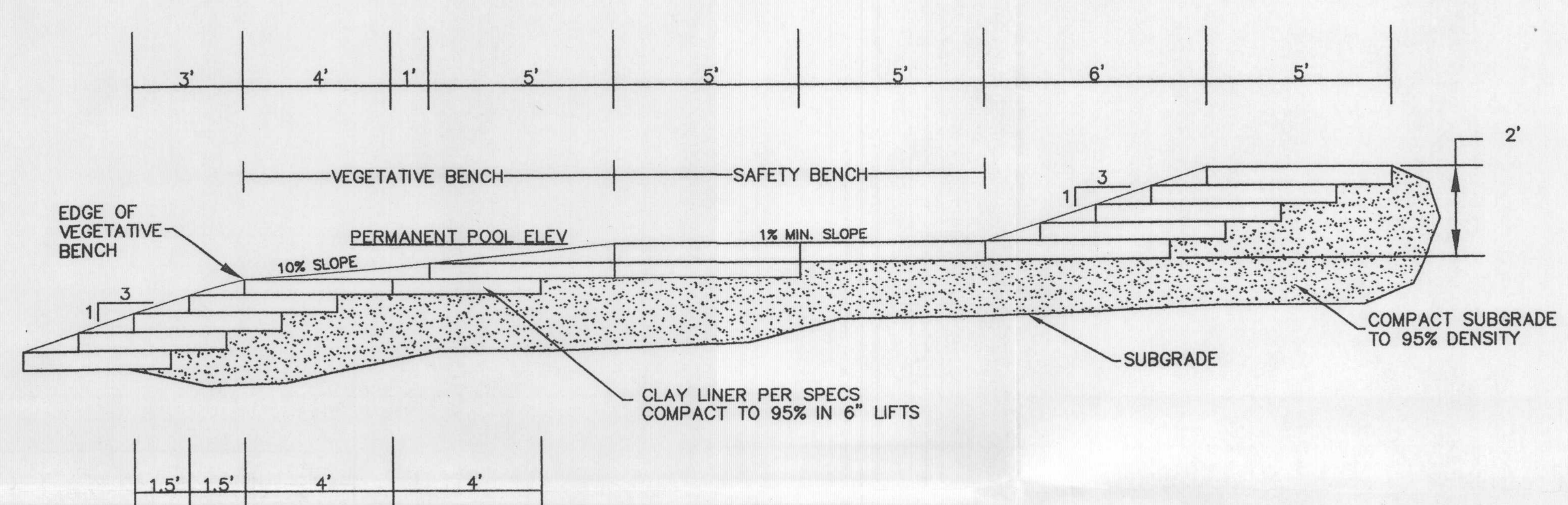
THE FOLLOWING CATEGORY, AQUATICS, INCLUDES SUBMERGENTS AND FLOATING–LEAVED AQUATICS. SUBMERGENTS ARE ROOTED IN THE SEDIMENT OF THE POND, AND ARE COMPLETELY SUBMERGED IN THE WATER. FLOATING–LEAVED AQUATIC PLANTS ARE ROOTED IN THE SEDIMENT OF THE POND, AND HAVE LEAVES THAT FLOAT ON THE SURFACE OF THE WATER. THESE LEAVES SHADE THE WATER, WHICH LIMITS POTENTIAL ALGAE GROWTH. AT LEAST TWO OF THE FOLLOWING SPECIES SHALL BE USED AND SHOULD BE PLACED AT RANDOM LOCATIONS THROUGHOUT THE POND:

AQUATICS	WATER DEPTH	NOTES
1. CABOMBA CAROLINIANA FANWORT	1' – 4'	APPROXIMATELY 6' LENGTH UNDERWATER, SUBMERGENT
2. CERATOPHYLLUM SPP. COON–TAIL	1' – 4'	MAXIMUM 8' LENGTH, TOLERANT OF TURBIDITY AND WATER FLUCTUATION, WILDLIFE FOOD
3. NYMPHAEA ODORATA WATER LILY	6" – 2'	A NATIVE, RELIABLY HARDY, FLOATING–LEAVED AQUATIC; WITH WHITE FLOWERS
4. POTOMAGETON PECTINATUS SAGO PONDWEED	8" – 3'	COLONIZES QUICKLY, VALUABLE TO FISH AND WILDLIFE; FLOATING–LEAVED AQUATIC

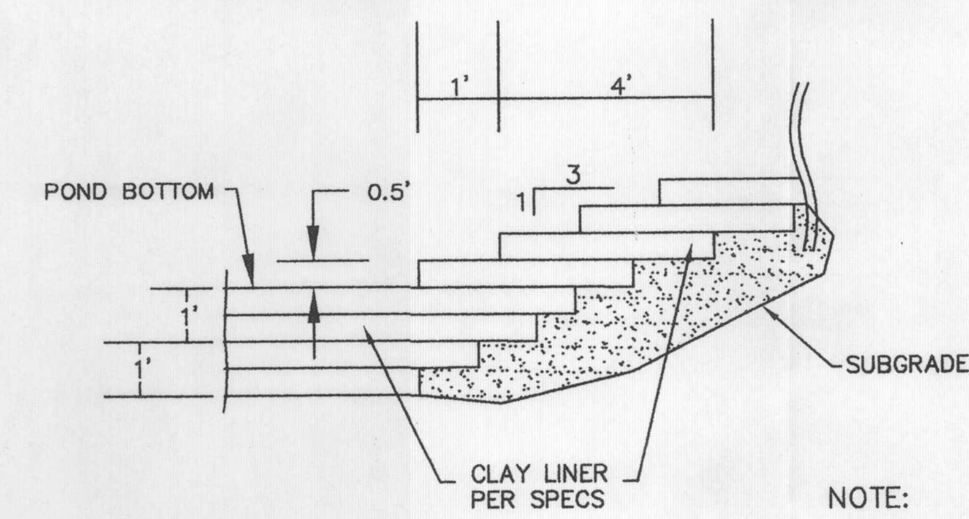


TYPICAL WET POND SPACING

N.T.S.



BENCH



AT POND BOTTOM

NOTE:

1. CONTRACTOR TO CONSTRUCT THE CLAY LINER PER THE "LINER REQUIREMENTS" STATED IN THE "GEOTECHNICAL ENGINEERING REPORT" BY TERRACON CONSULTANTS, INC.

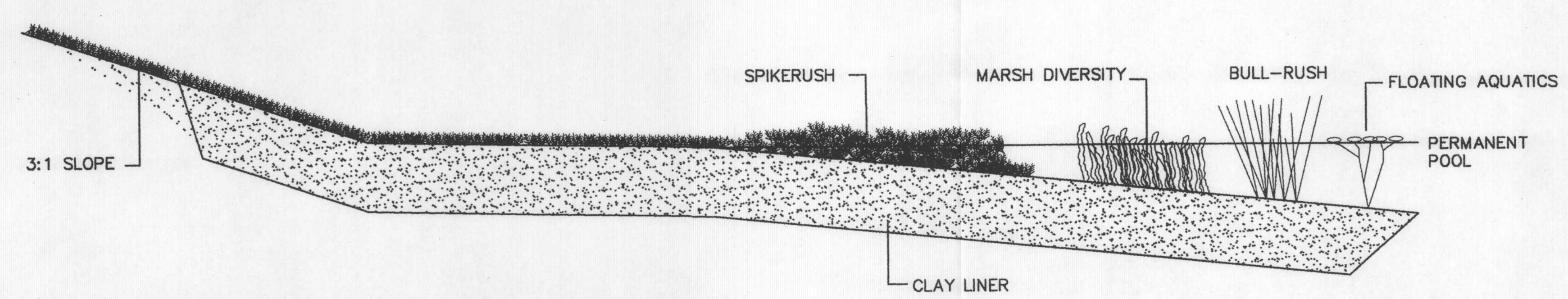
CLAY LINER

N.T.S.

CLAY LINER SPECIFICATIONS

PROPERTY	TEST METHOD	UNIT	SPECIFICATION
PERMEABILITY	ASTM D–2434	CM/SEC	(DEPTH 0" TO 12") 1 X 10^–7
PLASTIC INDEX OF CLAY	ASTM D–423 & D–424	%	NOT LESS THAN 30
LIQUID LIMIT OF CLAY	ASTM D–2216	%	NOT LESS THAN 50
CLAY PARTICLES PASSING	ASTM D–422	%	NOT LESS THAN 60
CLAY COMPACTION	ASTM D–2216	%	95% OF STANDARD PROCTOR DENSITY

* REFER TO RECOMMENDATION IN GEOTECHNICAL REPORT. ANY DISCREPANCIES BETWEEN THIS SET OF PLANS AND THE GEOTECHNICAL REPORT WILL FOLLOW THE RECOMMENDATION(S) OF THE GEOTECHNICAL REPORT.



CROSS SECTION OF A TYPICAL VEGETATED BENCH AREA

N.T.S.

PLANTING PLAN

SURFACE AREA OF PERMANENT POOL = 36,460 SQ FT
36,480 X 0.03 = 1,095 NUMBER OF PLANTS REQUIRED (MINIMUM)

PLANT CATEGORY	RATIO	MINIMUM NO. OF PLANTS	MINIMUM SIZE
A. BULLRUSH	40%	438	2 GALLON
B. SPIKERUSH	20%	219	2.5–INCH LINER
C. MARSH DIVERSITY	20%	219	1 GALLON
D. ARROWHEAD	10%	109	1 GALLON
E. SUBMERGENTS	5%	55	1 GALLON
F. FLOATING AQUATICS	5%	55	1 GALLON
TOTAL		1,095	

PLANT BREAKDOWN

PLANT CATEGORY	QTY	SPECIES
BULLRUSH	219	SCIRPUS VALIDUS
BULLRUSH	219	SCRIPUS CALIFORNICUS
SPIKERUSH	219	ELEOCHARIS MONTEVIDENSIS
MARSH DIVERSITY	73	ELOCHARIS QUADRANGULATA (FOUR SQUARE SPIKE RUSH)
MARSH DIVERSITY	73	IRIS PSEUDACORUS (YELLOW FLAG IRIS)
MARSH DIVERSITY	73	PONTEDERIA CORDATA (PICKERELWEED)
ARROWHEAD	109	SAGITTARIA LATIFOLIA (ARROWHEAD)
SUBMERGENTS	28	CERATOPHYLLUM ODORATA (COON–TAIL)
SUBMERGENTS	27	CABORMBA CAROLINA (FANWORT)
FLOATING AQUATICS	28	NYMPHAEA ODORATA (WATERLILY)
FLOATING AQUATICS	27	POTOMAGETON PECTINATUS (SAGE POND WEED)
TOTAL	1,095	

STORAGE TABLE

Northern Forbay

Stage (ft)	Elevation (ft)	Contour Area (SF)	Incremental Storage (CF)	Total Storage (CF)
0	847	3166	0	0
1	848	3863	3508	3508
2	849	4627	4239	7747
3	850	5459	5037	12784
4	851	6361	5904	18688
5	852	9084	7681	26369

Southern Forbay

Stage (ft)	Elevation (ft)	Contour Area (SF)	Incremental Storage (CF)	Total Storage (CF)
0	847	1219	0	0
1	848	1677	1442	1442
2	849	2202	1933	3375
3	850	2798	2494	5869
4	851	3467	3126	8995
5	852	5666	4521	13516

Main Pool

Stage (ft)	Elevation (ft)	Contour Area (SF)	Incremental Storage (CF)	Total Storage (CF)
0	846	10502	0	0
1	847	11672	11081	11081
2	848	12902	12281	23362
3	849	14192	13541	36903
4	850	15544	14861	51764
5	851	16957	16244	68008
6	852	20783	18835	86843

Detention Pond

Stage (ft)	Elevation (ft)	Contour Area (SF)	Incremental Storage (CF)	Total Storage (CF)
0	852	36480	0	0
1	853	45135	40727	40727
2	854	79376	79426	120153
3	855	104017	109973	230126
4	856	116061	118646	348772
5	857	121273	123865	472637

Texas Commission on Environmental Quality
TSS Removal Calculations

Project Name: WestPointe Village
Date Prepared: 7/17/2009

1. The Required Load Reduction for the total project:

Calculations from RG-348 — Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$
Pages 3-27 to 3-30

$L_{M\,TOTAL\,PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Comal	
Total project area included in plan * =	37.36	acres
Predevelopment impervious area within the limits of the plan * =	0.38	acres
Total post-development impervious area within the limits of the plan* =	25.96	acres
Total post-development impervious cover fraction * =	0.69	
P =	33	inches
$L_{M\,TOTAL\,PROJECT}$ =	22961	lbs.
Number of drainage basins / outfalls areas leaving the plan area =	1	

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. =	1	
Total drainage basin/outfall area =	34.72	acres
Predevelopment impervious area within drainage basin/outfall area =	0.38	acres
Post-development impervious area within drainage basin/outfall area =	24.62	acres
Post-development impervious fraction within drainage basin/outfall area =	0.71	
$L_{M\,THIS\,BASIN}$ =	21758	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	WB	abbreviation
Removal efficiency =	93	percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
$LR = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	34.72	acres
A_I =	24.62	acres
A_P =	10.10	acres
L_R =	26311	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\,THIS\,BASIN}$ =	23275	lbs.
F =	0.88	

11. Wet Basins

Required capacity of permanent Pool =	116811	cubic feet
Required capacity at WQV Elevation =	214153	cubic feet
Forebay North Volume =	26369	cubic feet
Forebay South Volume =	13516	cubic feet
Main Pool Volume =	86843	cubic feet
Permanent Pool Volume Provided =	126728	cubic feet
WQV at 24 hours =	23622	cubic feet

TCEQ-R13
MAR 05 2010
SAN ANTONIO

Bury+Partners
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San Antonio, TX 78216
Tel. (210)525–9090 Fax (210)525–0529
TBPE Registration Number F1048

STATE OF TEXAS
ARMANDO J. NIEBLA
102296
LICENSED
PROFESSIONAL ENGINEER
8/17/9

NO.	REVISION	DATE	APPROVAL

WATER QUALITY POND DETAILS AND POND CALCULATIONS

WESTPOINTE VILLAGE

SH46 AND LOOP 337
NEW BRAUNFELS, TX

PLOTTING SCALE: 1"= 1'
DATE REVISED: Aug 17, 2009
FILE: G:\827\02\WPAP\82702WQP03.dwg
DRAWN BY: KB
DESIGNED BY: CC
REVIEWED BY: AN
PROJECT NO.: 827–02

SHEET
C14.3

Date: Aug 17, 2009, 8:52am User ID: ccrim
File: G:\827\02\WPAP\82702WQP03.dwg

*** NOTE: THE PLANT SCHEDULE ON THIS SHEET IS A MINIMUM REQUIREMENT NECESSARY IN ORDER FOR THE WET POND TO MEET WATER QUALITY REQUIREMENTS. PRIOR TO CONSTRUCTION, A PLANTING SCHEDULE MUST BE PREPARED BY A LICENSED LANDSCAPE ARCHITECT. THE SCHEDULE MUST MEET THE MINIMUMS DESCRIBED ON THIS SHEET, HOWEVER ADDITIONAL/ALTERNATE PLANTS MAY BE INCLUDED FOR AESTHETICS.

WETLAND PLANT LIST

INSTALL BULLRUSH IN CLUMPS, WITH INDIVIDUAL PLANTS SPACED APPROXIMATELY THREE TO FOUR FEET ON CENTER: AT LEAST TWO OF THE FOLLOWING SPECIES SHALL BE USED:

BULLRUSH	WATER DEPTH	NOTES
SCIRPUS VALIDUS BULLRUSH	1' – 3'	8' TALL EVERGREEN, RESISTS CATTAIL ENCROACHMENT
SCIRPUS CALIFORNICUS BULLRUSH	1' – 3'	8' TALL EVERGREEN, RESISTS CATTAIL ENCROACHMENT
SCIRPUS AMERICANUS THREE-SQUARE BULLRUSH	2' – 6"	2' TO 4' TALL, WITH 3 DISTINCT EDGES

INSTALL SPIKERUSH AT OR NEAR WATER'S EDGE, WITH INDIVIDUAL PLANTS SPACED APPROXIMATELY THREE TO SIX FEET ON CENTER. AT LEAST TWO OF THE FOLLOWING SPECIES SHALL BE USED:

SPIKEBRUSH	WATER DEPTH	NOTES
ELEOCHARIS MONTEVIDENSIS SPIKERUSH	0" – 6"	1' TALL, RHIZOMATOUS, REDUCES EROSION AT THE POND EDGE
ELEOCHARIS MACROSTACHYS SPIKERUSH	0" – 6"	1' TALL, RHIZOMATOUS, REDUCES EROSION AT THE POND EDGE
ELEOCHARIS QUADRANGULATA SPIKERUSH	3" – 1'	2' TO 2.5 TALL, RHIZOMATOUS, CAN ACCOMMODATE DEEPER WATER, 4-ANGLED

AT LEAST TWO SPECIES OF THE FOLLOWING MARSH SPECIES SHALL BE USED (ADDITIONAL SPECIES ARE ENCOURAGED). INSTALL IN CLUMPS IN SHALLOW WATER, WITH INDIVIDUAL PLANTS SPACED AT APPROXIMATELY THREE FEET ON CENTER.

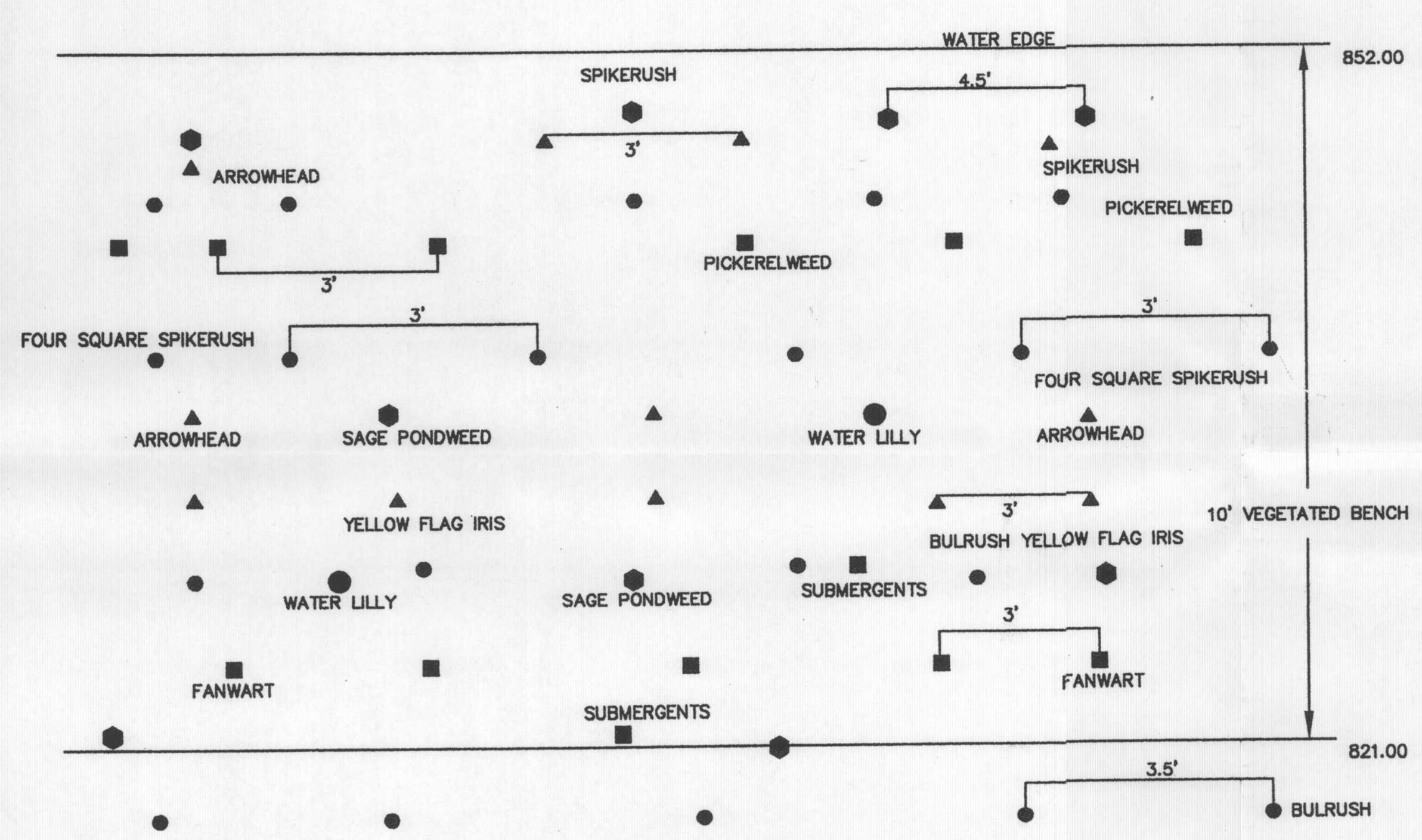
MARSH DIVERSITY	WATER DEPTH	NOTES
1. CYPERUS OCHARCEUS FLATSEDGE	2" -6"	1' TO 2' TALL, CLUMP-FORMING, COMMON TO CENTRAL TEXAS
2. DICHROMENA COLORATA WHITE-TOPPED SEDGE	2" – 6"	1' TO 2' TALL, WHITE BRACTS DURING WARM SEASON
3. ECHINODORUS ROSTRATUS BURHEAD	3" – 1'	1' TO 2' TALL, ANNUAL, HEART-SHAPED LEAVES, FLOWER SIMILAR TO ARROWHEAD
4. ELEOCHARIS QUADRANGULATA FOUR-SQUARE SPIKEBRUSH	6" – 1'	1' TO 2' TALL, COLONIZES, INHABITS DEEPER WATER THAN SPIKEBRUSHES
5. IRIS PSEUDACORUS YELLOW FLAG IRIS	1' – 2'	3' TO 4' TALL, CAN BE INVASIVE, DENSE GROWTH, YELLOW FLOWERS
6. JUNCUS EFFUSUS SOFT RUSH	6" – 1'	3' TO 4' TALL, FORMS A TIGHT CLUMP, EVERGREEN, VERY ATTRACTIVE
7. JUSTICIA AMERICANA WATER-WILLOW	2" – 6"	3' TO 4' TALL, COMMON, WHITE FLOWERS, HERBACEOUS, COLONIZES
8. MARSILEA MACROPODA WATER CLOVER	2" – 6"	LOOKS LOKE FLOATING FOUR-LEAF CLOVER, ENDEMIC TO TEXAS
9. NAJAS QUADALUPENSIS WATER-NAIAD	1' – 4'	SUBMERGENT, VALUABLE TO FISH AND WILDLIFE
10. PONTEDERIA CORDATA PICKERELWEED	2" – 1'	3' TALL, COLONIZES, COSMOPOLITAN, PURPLE FLOWERS
11. RHYNCHOSPORA CORNICULATA HORNED-RUSH	2" – 6"	2' TO 3' TALL, BRASS-COLORED FLOWERS IN MAY

INSTALL ARROWHEAD IN CLUMPS IN SHALLOW WATER, WITH INDIVIDUAL PLANTS SPACED APPROXIMATELY THREE FEET ON CENTER.

ARROWHEAD	WATER DEPTH	NOTES
SAGGITARIA LATIFOLIA ARROWHEAD	2" – 1'	2' HEIGHT, WILDLIFE VALUE, WHITE FLOWERS, PROVEN WATER QUALITY PERFORMER

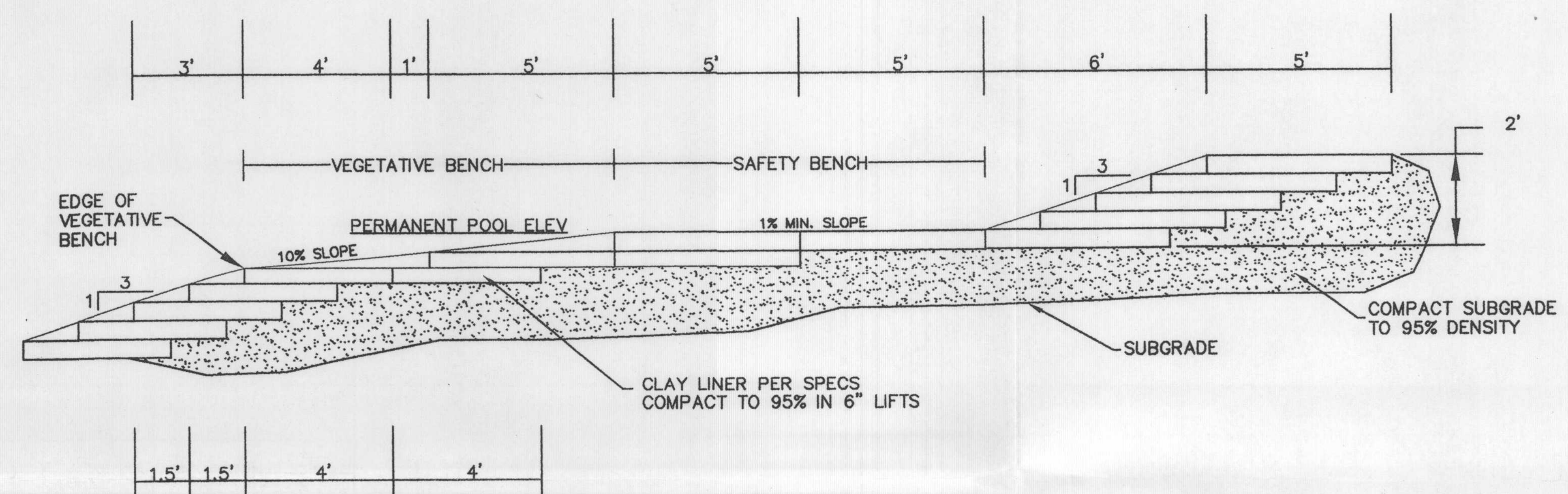
THE FOLLOWING CATEGORY, AQUATICS, INCLUDES SUBMERGENTS AND FLOATING-LEAVED AQUATICS. SUBMERGENTS ARE ROOTED IN THE SEDIMENT OF THE POND, AND ARE COMPLETELY SUBMERGED IN THE WATER. FLOATING-LEAVED AQUATIC PLANTS ARE ROOTED IN THE SEDIMENT OF THE POND, AND HAVE LEAVES THAT FLOAT ON THE SURFACE OF THE WATER. THESE LEAVES SHADE THE WATER, WHICH LIMITS POTENTIAL ALGAE GROWTH. AT LEAST TWO OF THE FOLLOWING SPECIES SHALL BE USED AND SHOULD BE PLACED AT RANDOM LOCATIONS THROUGHOUT THE POND:

AQUATICS	WATER DEPTH	NOTES
1. CABOMBA CAROLINIANA FANWORT	1' – 4'	APPROXIMATELY 6' LENGTH UNDERWATER, SUBMERGENT
2. CERATOPHYLLUM SPP. COON-TAIL	1' – 4'	MAXIMUM 8' LENGTH, TOLERANT OF TURBIDITY AND WATER FLUCTUATION, WILDLIFE FOOD
3. NYMPHAEA ODORATA WATER LILY	6" – 2'	A NATIVE, RELIABLY HARDY, FLOATING-LEAVED AQUATIC; WITH WHITE FLOWERS
4. POTOMAGETON PECTINATUS SAGO PONDWEED	8" – 3'	COLONIZES QUICKLY, VALUABLE TO FISH AND WILDLIFE; FLOATING-LEAVED AQUATIC

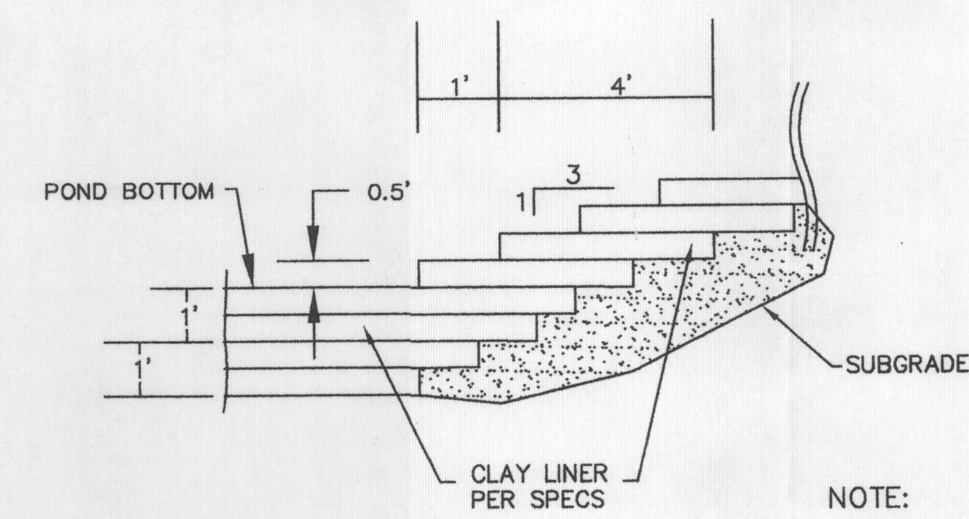


TYPICAL WET POND SPACING

N.T.S.



BENCH



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AT POND BOTTOM

CLAY LINER

N.T.S.

CLAY LINER SPECIFICATIONS

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CLAY PARTICLES PASSING	ASTM D-422	%	NOT LESS THAN 60
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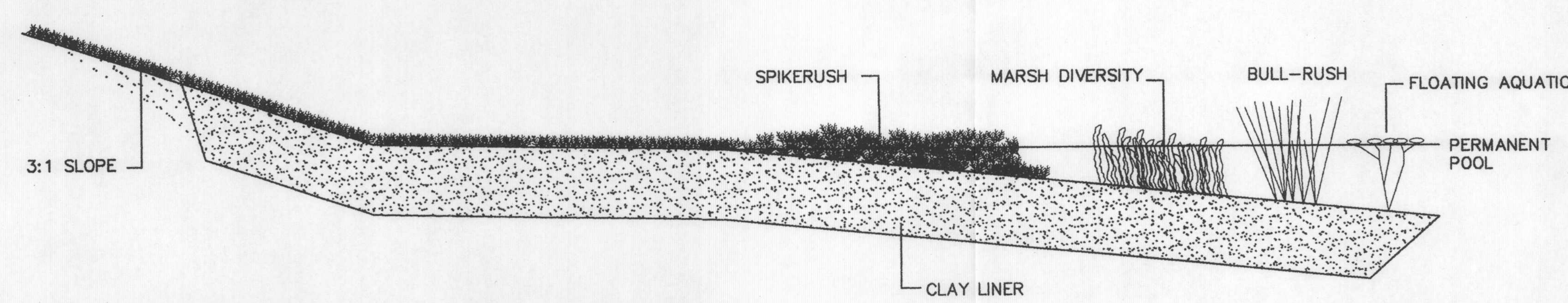

CROSS SECTION OF A TYPICAL VEGETATED BENCH AREA

N.T.S.

PLANTING PLAN

SURFACE AREA OF PERMANENT POOL = 36,460 SQ FT
36,480 X 0.03 = 1,095 NUMBER OF PLANTS REQUIRED (MINIMUM)

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FLOATING AQUATICS	27	POTOMAGETON PECTINATUS (SAGE POND WEED)
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Northern Forbay

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2	849	2202	1933	3375
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5	852	5666	4521	13516

Main Pool

Stage (ft)	Elevation (ft)	Contour Area (SF)	Incremental Storage (CF)	Total Storage (CF)
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1	847	11672	11081	11081
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3	849	14192	13541	36903
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Detention Pond

Stage (ft)	Elevation (ft)	Contour Area (SF)	Incremental Storage (CF)	Total Storage (CF)
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Texas Commission on Environmental Quality
TSS Removal Calculations

Project Name: WestPointe Village
Date Prepared: 7/17/2009

1. The Required Load Reduction for the total project:

Calculations from RG-348 — Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$
Pages 3-27 to 3-30

$L_{M TOTAL PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Comal	
Total project area included in plan * =	37.36	acres
Predevelopment impervious area within the limits of the plan * =	0.38	acres
Total post-development impervious area within the limits of the plan* =	25.96	acres
Total post-development impervious cover fraction * =	0.69	
P =	33	inches
$L_{M TOTAL PROJECT}$ =	22961	lbs.
Number of drainage basins / outfalls areas leaving the plan area =	1	

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. =	1	
Total drainage basin/outfall area =	34.72	acres
Predevelopment impervious area within drainage basin/outfall area =	0.38	acres
Post-development impervious area within drainage basin/outfall area =	24.62	acres
Post-development impervious fraction within drainage basin/outfall area =	0.71	
$L_{M THIS BASIN}$ =	21758	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	WB	abbreviation
Removal efficiency =	93	percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
$LR = (BMP\ efficiency) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	34.72	acres
A_I =	24.62	acres
A_P =	10.10	acres
L_R =	26311	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M THIS BASIN}$ =	23275	lbs.
F =	0.88	

11. Wet Basins

Required capacity of permanent Pool =	116811	cubic feet
Required capacity at WQV Elevation =	214153	cubic feet
Forebay North Volume =	26369	cubic feet
Forebay South Volume =	13516	cubic feet
Main Pool Volume =	86843	cubic feet
Permanent Pool Volume Provided =	126728	cubic feet
WQV at 24 hours =	23622	cubic feet

TCEQ-R13
MAR 05 2010
SAN ANTONIO

REVISION	NO.	DATE	APPROVAL

Bury+Partners
ENGINEERING SOLUTIONS
922 Isom, Suite 100
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Tel. (210)525-9090 Fax (210)525-0529
TBPE Registration Number F1048

STATE OF TEXAS
ARMANDO J. NIEBLA
102296
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8/17/9

WATER QUALITY POND DETAILS AND POND CALCULATIONS

WESTPOINTE VILLAGE

SH46 AND LOOP 337
NEW BRAUNFELS, TX

PLOTTING SCALE: 1"= 1'
DATE REVISED: Aug 17, 2009
FILE: G:\827\02\WPAP\82702WQP03.dwg
DRAWN BY: KB
DESIGNED BY: CC
REVIEWED BY: AN
PROJECT NO.: 827-02

SHEET
C14.3

Date: Aug 17, 2009, 8:52am User ID: ccrim
File: G:\827\02\WPAP\82702WQP03.dwg

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

REGULATED ENTITY NAME: WestPointe Village

REGULATED ENTITY INFORMATION

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

2. Total site acreage (size of property): 37.00 (Lots 1, 7-11)

3. Projected population: 0

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

Impervious Cover of Proposed Project **(Phase I) & Lot 10 Phase 2**	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	123,509	÷ 43,560 =	2.84
Parking	464,779	÷ 43,560 =	10.67
Other paved surfaces	148,702	÷ 43,560 =	3.41
Total Impervious Cover	736,990	÷ 43,560 =	16.92
Total Impervious Cover **(Phase I & Lot 10 Phase 2)** ÷ Total Acreage x 100 =			45.7%

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

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

~~8. Type of pavement or road surface to be used:~~
- ~~___ Concrete~~
- ~~___ Asphaltic concrete pavement~~

~~__ Other: _____~~

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

~~10. Length of pavement area: ____ feet.~~
~~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.~~
~~__ A rest stop will **not** be included in this project.~~

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

STORMWATER TO BE GENERATED BY THE PROPOSED PROJECT

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

WASTEWATER TO BE GENERATED BY THE PROPOSED PROJECT

14. The character and volume of wastewater is shown below:

100% Domestic	45,443 gallons/day
___% Industrial	_____ gallons/day
___% Commingled	_____ gallons/day

TOTAL 45,443 gallons/day

15. Wastewater will be disposed of by:

N/A **On-Site** Sewage Facility (OSSF/Septic Tank):

ATTACHMENT C - Suitability Letter from Authorized Agent. An on-site sewage facility will be used to treat and dispose of the wastewater. The appropriate licensing authority's (authorized agent) written approval is provided at the end of this form. It states that the land is suitable for the use of an on-site sewage facility or identifies areas that are not suitable.

__ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

X Sewage Collection System (Sewer Lines):

X 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 Gruene Wastewater Treatment Plant (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" = _100_'.

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):
FEMA FIRM Number 48091C0435F Effective Date September 2, 2009

19. _X_ 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.):
_N/A_ There are ____(#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)
___ The wells are not in use and have been properly abandoned.
___ The wells are not in use and will be properly abandoned.
___ The wells are in use and comply with 30 TAC §238.
___ There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:
___ All **sensitive and possibly sensitive** geologic or manmade features identified in the Geologic Assessment are shown and labeled.
_X_ No **sensitive and possibly sensitive** geologic or manmade features were identified in the Geologic Assessment.
_N/A_ **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.
_N/A_ **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. NA 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 TCEQ executive director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

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

Mark R. Johnson, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

3/5/10
Date

ATTACHMENT A

FACTORS AFFECTING WATER QUALITY

FACTORS AFFECTING WATER QUALITY

The materials listed below are anticipated to be present on-site during construction and as such may present a potential pollutant source: (This is not an all inclusive list).

1. Concrete/Masonry
2. Metal studs, Metal reinforcing bars, etc.
3. Tar
4. Fertilizers
5. Petroleum based products
6. Cleaning solvents/Detergents
7. Wood

Material management practices will be utilized to reduce the risk of spills, or other accidental exposure of the materials listed above to storm water runoff, including the following:

1. An effort shall be made to store only enough product required to complete the work as so defined in the approved construction documents.
2. All materials stored on-site shall be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
3. Products should be kept in their original containers with the original manufacturer's label.
4. Manufactures' recommendations for proper use and disposal shall be followed.
5. Substances shall not be mixed with one another unless recommended by the manufacturer.
6. Whenever possible, all of a product shall be used before disposing of its respective container.
7. The site superintendent should inspect daily to ensure proper use and disposal of on-site materials.

Post-Construction

The materials listed below are anticipated to be present on-site after construction and as such may present a potential pollutant source: (This is not an all inclusive list).

1. Vehicle Fluid and Petroleum based products (Motor Oil, Brake Fluid, Etc.)
2. Trash and Debris (Litter)
3. Discarded Food and Tobacco Products

These and other sources of pollutants which may affect storm water quality will be screened and filtered by proposed water quality ponds that will treat the storm water prior to releasing into the creek. All ponds will undergo periodic maintenance and cleaning to keep the integrity and effectiveness of treatment efficiency.

ATTACHMENT B

VOLUME AND CHARACTER OF STORM WATER

VOLUME AND CHARACTER OF STORM WATER

The existing drainage area, which is ±37.36-acres, will produce a peak flow of 92 cfs during a 25-year storm event. This existing watershed releases into a TxDOT culvert structure at the intersection of SH-46 and Loop 337. The entire ±37.36 acre drainage area is located within the Comal Creek Sub-Watershed within the Guadalupe River Watershed. The proposed drainage area consist of 34.72 acres that will be routed to the pond and 2.64 acres that will bypass the pond (0.36 acres being offsite improvements), and will produce a peak flow of 260 cfs during a 25-year storm event. The proposed watershed will utilize a wet basin to release runoff at its existing rate.

EXISTING CONDITIONS:

Drainage Area	Weighted C-Value	Q_{25}
Existing	0.38	92

PROPOSED CONDITIONS:

Drainage Area	Weighted C-Value	Q_{25}
DA-1	0.70	245
UNTREATED	0.49	15

ATTACHMENT C

SUITABILITY LETTER FROM AUTHORIZED AGENT
(Not Applicable)

ATTACHMENT D

EXCEPTION TO THE REQUIRED GEOLOGIC ASSESSMENT
(Not Applicable)

TEMPORARY STORM WATER 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

REGULATED ENTITY NAME: WestPointe Village

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

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

   ___ Aboveground storage tanks with a cumulative storage capacity of less that 250 gallons will be stored on the site for less than one (1) year.
   ___ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
   ___ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An **Aboveground Storage Tank Facility Plan** application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
   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.
   ___ There 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: Comal 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, TCEQ inspections, or during excavation, blasting, or construction.

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

   N/A **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.

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

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

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

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

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

12. X **ATTACHMENT I - Inspection and Maintenance for BMPs.** A plan for the inspection of temporary BMPs and measures and for their timely maintenance, repairs, 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 manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate 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 TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

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

Mark R. Johnson, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

Date 3/5/10

ATTACHMENT A

SPILL RESPONSE ACTIONS

SPILL RESPONSE ACTIONS

Potential Source:

Spills of Hydrocarbons or other hazardous substances.

Preventative Measures:

The following practices will be used to reduce the risks associated with hazardous materials, if hazardous materials are needed for the work:

Education/General Measures

1. Products will be kept in original containers unless they are not resealable.

2. Original labels and material safety data will be retained.

3. Modify the Storm Water Pollution Prevention Plan to include the information dealing with, and the steps needed to correct, the encountered hazardous waste spill.

4. Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.

5. Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.

6. Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).

7. Establish a continuing education program to indoctrinate new employees.

8. Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

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

10. Store hazardous materials and wastes in covered containers and protect from vandalism.

11. Place a stockpile of spill cleanup materials where it will be readily accessible.

12. Train employees in spill prevention and cleanup.

13. Designate responsible individuals to oversee and enforce control measures.

14. Spills should be covered and protected from storm water run-on during rainfall to the extent that it doesn't compromise clean up activities.

15. Do not bury or wash spills with water.

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

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

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

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

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

If surplus product must be disposed of, manufacturers' or local and state recommended methods for proper disposal will be followed.

Spill Measures:

In the event that hazardous wastes are encountered, they will be disposed of in the manner specified by local or state regulations.

Cleanup

1. Clean up leaks and spills immediately.

2. Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.

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

Minor Spills

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

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

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

4. Follow the practice below for a minor spill:

5. Contain the spread of the spill.

6. Recover spilled materials.

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

Semi-Significant Spills

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

Spills should be cleaned up immediately

1. Contain spread of the spill.

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

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

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

Significant/Hazardous Spills

Spills of hazardous waste in amounts that equal or exceed Reportable Quantity (RQ), as defined by the EPA through issued regulations (40 CFR Part 110, 40 CFR Part 117, 40 CFR Part 119 or 40 CFR Part 302), will be handled in the following steps:

1. Notify the National Response Center immediately at 1-800-424-8802.

2. Notify TCEQ immediately at 1-210-490-3096 between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.

3. Submit a written description of the release to the EPA Region 11 office providing the date and circumstances of the release and the steps to be taken to prevent another release:

   Attn: Hazardous Waste Dept.
   1445 Ross Ave. STE 1200
   Dallas, TX 75202
   1-214-665-2224 (Region 6 Emergency Line)

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

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

More information on spill rules and appropriate responses is available on the TCEQ website at: http://www.tnrcc.state.tx.us/enforcement/emergency_response.html

Vehicle Measures:

Vehicle and Equipment Maintenance

1. If maintenance must occur on-site, use a designated area and a secondary containment, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.

2. Regularly inspect on-site vehicles and equipment for leaks and repair immediately.

3. Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.

4. Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.

5. Place drip pans or absorbent materials under paving equipment when not in use.

6. Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.

7. Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.

8. Oil filters disposed of in trashcans or dumpsters can leak oil and pollute storm water. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.

9. Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

1. If fueling must occur on-site, use designated areas, located away from drainage courses, to prevent the run-on of storm water and the runoff of spills.

2. Discourage "topping off" of fuel tanks.

3. Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

ATTACHMENT B

POTENTIAL SOURCES OF CONTAMINATION

POTENTIAL SOURCES OF CONTAMINATION

Potential Source:	Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle dripping.
Preventative Measures:	Vehicle maintenance when possible will be performed within the construction staging area or at a local maintenance shop.
Potential Source:	Miscellaneous trash and litter from construction workers and material wrappings.
Preventative Measures:	Trash containers will be placed throughout the site to encourage proper trash disposal.
Potential Source:	Construction debris.
Preventative Measures:	Construction debris will be monitored daily by contractor. Debris will be collected and placed in disposal bins. Situations requiring immediate attention will be addressed on a case-by-case basis.
Potential Source:	Silt leaving the site.
Preventative Measures:	Contractor will monitor all vehicles leaving the site to prevent tracking silt and mud onto public streets. The contractor will ensure that trucks will be washed down to minimize the amount of silt leaving the site.
Potential Source:	Construction related portable toilets.
Preventative Measures:	Any on-site portable toilets will be in good working order with no defects that cause leaks. All portable toilets will be maintained to ensure no overflowing of sewage.

ATTACHMENT C

SEQUENCE OF MAJOR ACTIVITIES

SEQUENCE OF MAJOR ACTIVITIES

The sequence of work described below will be accomplished through the timing of proposed work relating the maintenance of service (i.e. proposed utility installation as compared to the removal/abandonment of existing utilities). The developer will deliver a cleared pad site graded to an elevation approximately consistent with approved WPAP Plan. Below is a general sequence of events to be followed:

1. Obtain all required permits. (May 2010)

2. Review and document through photographic record the condition and state of the Developments water quality basin.

3. Install all Erosion Control Measures. (±1.2 acres) (May 2010)

4. Begin construction of building foundation; install all underground utilities and construction of site improvements. (May 2010 – July 2010)

5. Maintain and replace erosion control measures as requires. (Ongoing)

6. Fine Grade site. (±1.2 acres) (June 2010)

7. Install pavement (June/July 2010)

8. Inspect and maintain all erosion control measures until all disturbed offsite and on-site areas have been hydromulched or sodded in accordance with the landscape plan and a mowable stand of grass is achieved.

Total Site Area/Total Disturbed Area

The total area of the site is ±1.16 acres. Approximately 1.3 Acres within Pad Site 2 and 3 will be disturbed through site excavation, grading, or other activities throughout the construction process for this project. Post-construction impervious coverage will total ±16.92 acres for the entire development.

ATTACHMENT D

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

TEMPORARY BMPS

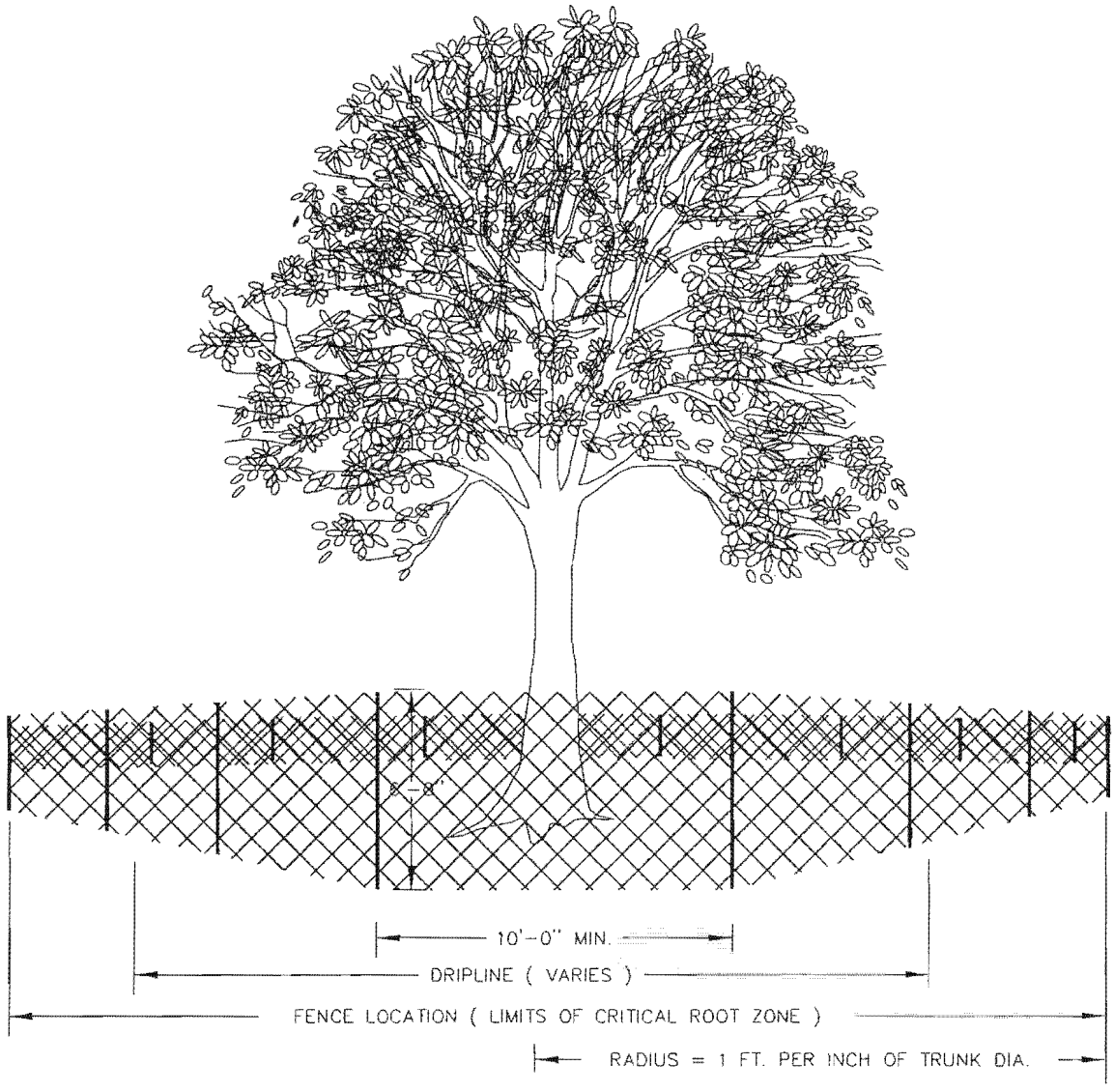
At the beginning of the project, Temporary Best Management Practices (BMPs) will be installed according to the attached Temporary BMP Details and placed as shown on the Site Plan.

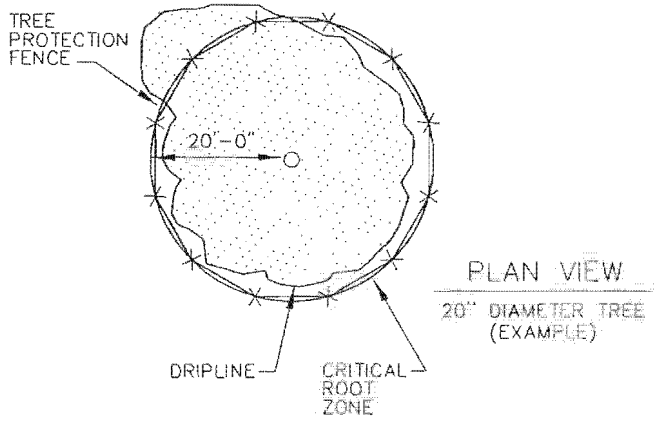
Upgradient Water

The site is located near the southwest corner of the State Highway 46 and Loop 337 intersection. Upgradient water from undeveloped sites upstream of the proposed development will be captured into a storm sewer system and routed to the proposed water quality and detention ponds.

On-site Water

Silt fencing will be placed along the boundary line of the majority of the tract. Inlet protection and triangular filter dikes will be placed as necessary. These Temporary BMPs will be installed along the down-gradient boundary of the property to filter all runoff that originates on site and sequenced as indicated in the report. A temporary construction entrance will be installed to prevent tracking materials offsite. In addition, a concrete truck washout pit will be placed on-site and be accessible to all exiting traffic leaving the site. By this, the Temporary BMPs will prevent pollution of surface water that originates on-site.



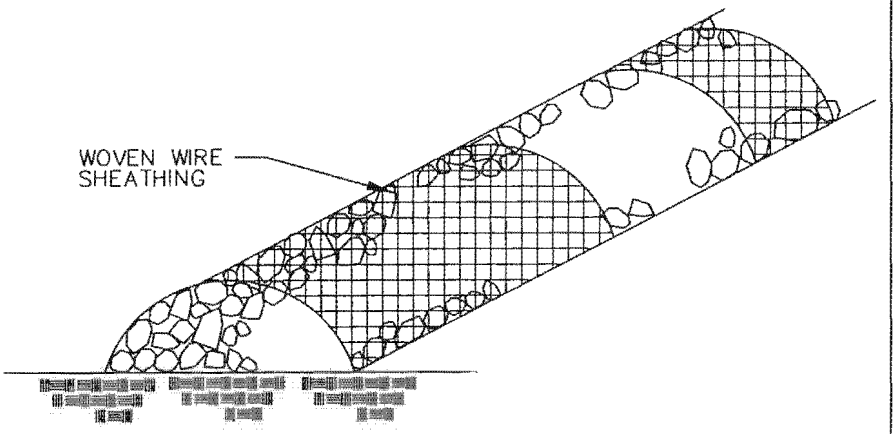


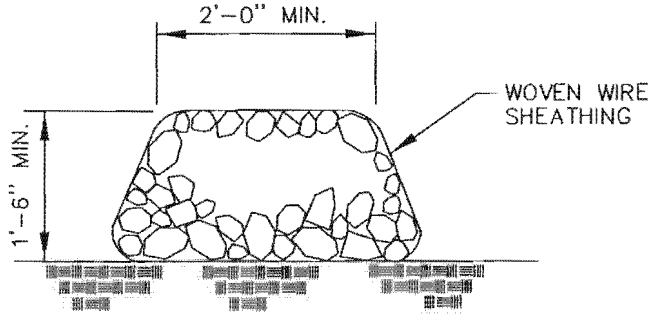
PLAN VIEW
20" DIAMETER TREE (EXAMPLE)

TREE PROTECTION CONSTRUCTION FENCE

EXHIBIT B1

SCALE: NTS	**WESTPOINTE VILLAGE UNIT 3** **SWC SH 46 AND** **INDEPENDENCE DRIVE** **NEW BRAUNFELS, TEXAS**	Bury+Partners ENGINEERING SOLUTIONS 922 Isom Road, Suite 100 San Antonio, TX 78216 Tel. (210)525-9090 Fax (210)525-0529 TBPE Registration Number F-1048 Bury+Partners-SA, Inc. ©Copyright 2010
DRAWN: AL		
DATE: Mar 03, 2010		
SHEET: 1 OF 10		





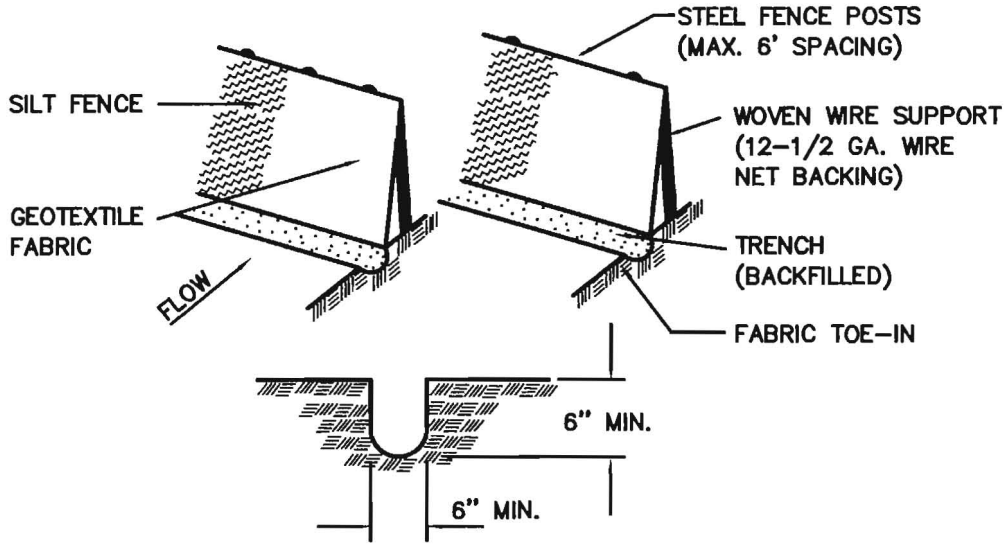
NOTES:

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 OPENINGS AND MINIMUM WIRE DIAMETER 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 SUCH A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE 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 AN APPROVED MANNER.

ROCK BERM

EXHIBIT B2

SCALE: NTS	**WESTPOINTE VILLAGE UNIT 3 SWC SH 46 AND INDEPENDENCE DRIVE NEW BRAUNFELS, TEXAS**	Bury+Partners ENGINEERING SOLUTIONS 922 Isom Road, Suite 100 San Antonio, TX 78216 Tel. (210)525-9090 Fax (210)525-0529 TBPE Registration Number F-1048
DRAWN: AL		
DATE: Mar 03, 2010		
SHEET: 2 OF 10		



TRENCH CROSS-SECTION

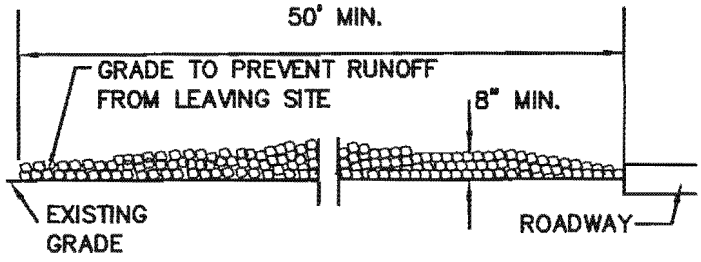
GENERAL NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CAN NOT BE TREATED IN (e.g. pavement) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POSTS OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

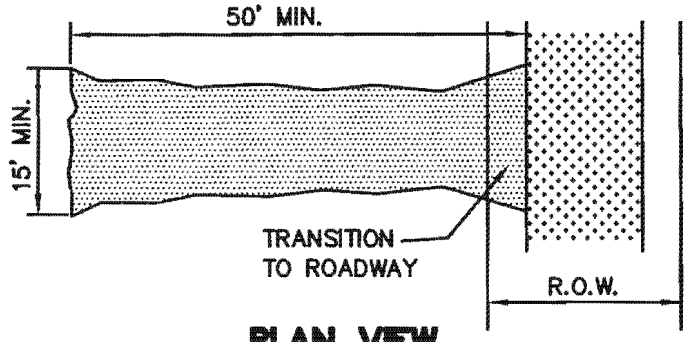
SILT FENCE

EXHIBIT B3

SCALE: NTS	**WESTPOINTE VILLAGE UNIT 3 SWC SH 46 AND INDEPENDENCE DRIVE NEW BRAUNFELS, TEXAS**	Bury+Partners ENGINEERING SOLUTIONS 922 Isom Road, Suite 100 San Antonio, TX 78216 Tel. (210)525-9090 Fax (210)525-0529 TBPE Registration Number F-1048
DRAWN: AL		
DATE: Mar 03, 2010		
SHEET: 3 OF 10		



PROFILE
N.T.S.



PLAN VIEW
N.T.S.

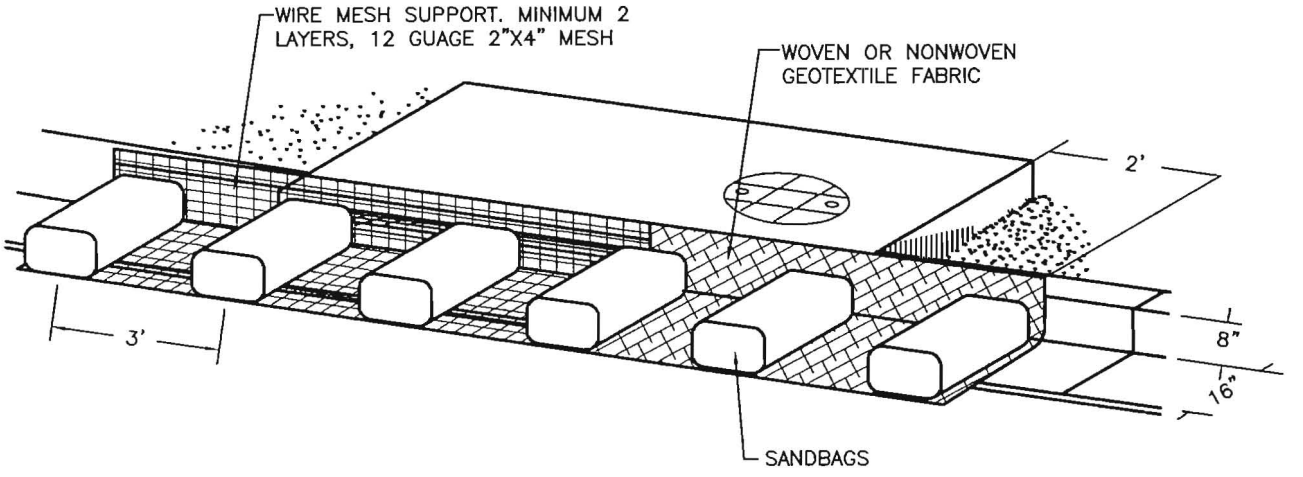
GENERAL NOTES:

1. STONE SIZE– 3 TO 5 INCH OPEN GRADED ROCK.
2. LENGTH– AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
3. THICKNESS– NOT LESS THAN 8 INCHES.
4. WIDTH– NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WASHING– WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE– THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT 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 MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE– ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

STABILIZED CONSTRUCTION ENTRANCE

EXHIBIT B4

SCALE: NTS	**WESTPOINTE VILLAGE UNIT 3**	Bury+Partners
DRAWN: AL	**SWC SH 46 AND**	ENGINEERING SOLUTIONS
DATE: Mar 03, 2010	**INDEPENDENCE DRIVE**	922 Isom Road, Suite 100
SHEET: 4 OF 10	**NEW BRAUNFELS, TEXAS**	San Antonio, TX 78216
		Tel. (210)525-9090 Fax (210)525-0529
		TBPE Registration Number F-1046



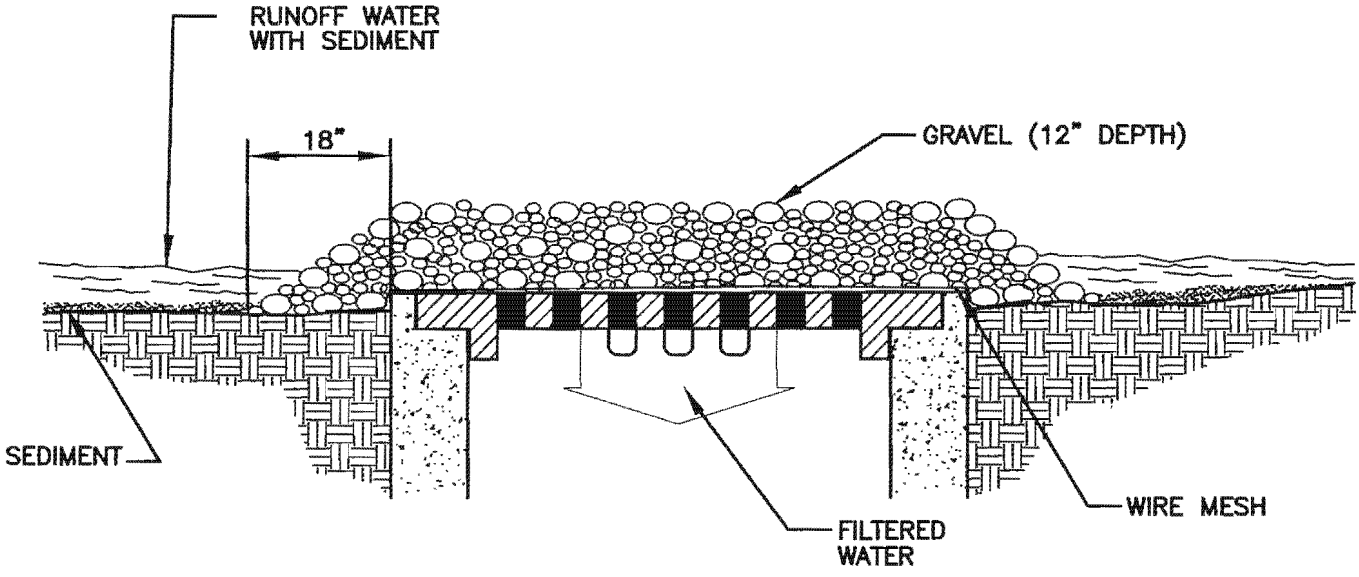
NOTES:

1. WHEN A SANDBAG IS FILLED WITH MATERIAL, THE OPEN END OF THE SANDBAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CHORD.
2. INLET PROTECTION SHALL BE PLACED OVER THE MOUTH OF THE INLET WITH A 2 FOOT OVERLAP ONEITHER SIDE.
3. THE FABRIC COVER AND SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE.
4. THE SKIRT SHALL BE WEIGHTED WITH ONE 18"X24"X6" SANDBAG EVERY 3 FEET.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF FOUR INCHES, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
7. AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN NOTE 6 ABOVE.

CURB INLET PROTECTION BARRIER

EXHIBIT B5

SCALE: NTS	**WESTPOINTE VILLAGE UNIT 3 SWC SH 46 AND INDEPENDENCE DRIVE NEW BRAUNFELS, TEXAS**	Bury+Partners ENGINEERING SOLUTIONS 922 Isom Road, Suite 100 San Antonio, TX 78216 Tel. (210)525-9090 Fax (210)525-0529 TBPE Registration Number F-1048
DRAWN: AL		
DATE: Mar 03, 2010		
SHEET 5 OF 10		Bury+Partners-SA, Inc. ©Copyright 2010



NOTE:

A. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS AND MINIMUM WIRE DIAMETER OF 24 GAUGE SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.

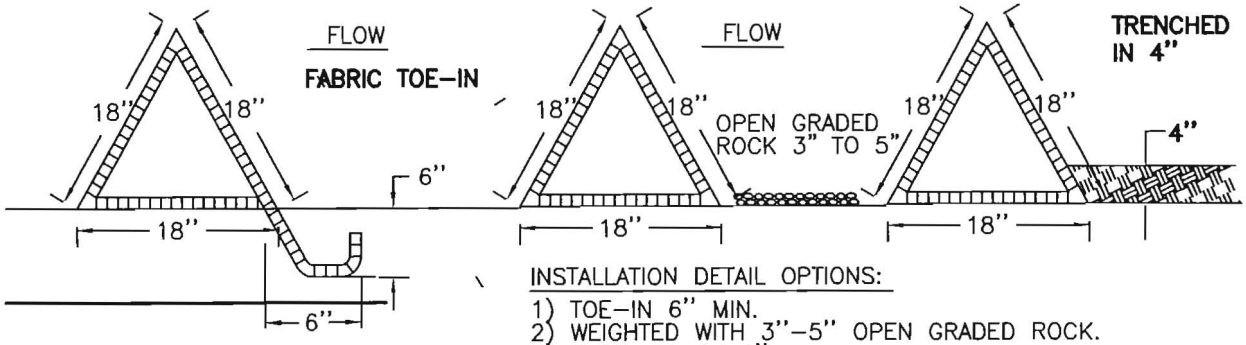
B. AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED ABOVE. THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.

C. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS IT'S FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.

INLET PROTECTION/SEDIMENT FILTER

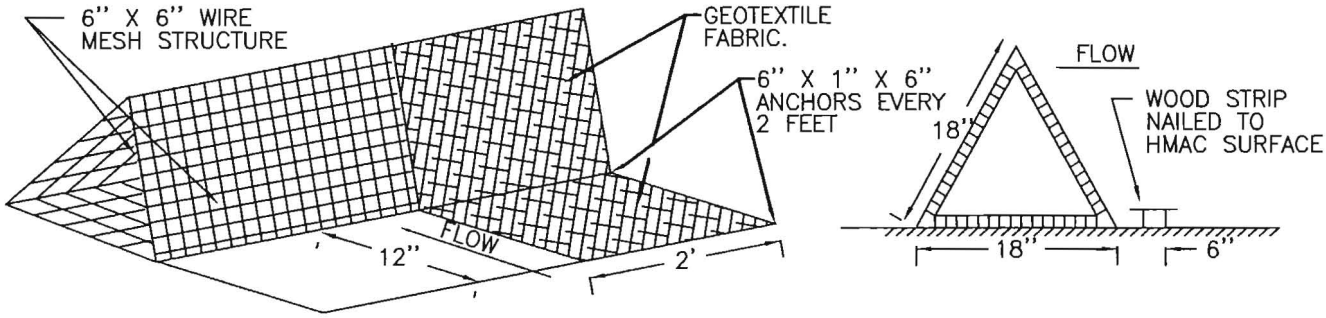
EXHIBIT B6

SCALE: NTS	**WESTPOINTE VILLAGE UNIT 3 SWC SH 46 AND INDEPENDENCE DRIVE NEW BRAUNFELS, TEXAS**	Bury+Partners ENGINEERING SOLUTIONS 922 Isom Road, Suite 100 San Antonio, TX 78216 Tel. (210)525-9090 Fax (210)525-0529 TBPE Registration Number F-1048
DRAWN: AL		
DATE: Mar 03, 2010		
SHEET 6 OF 10		



INSTALLATION DETAIL OPTIONS:

1) TOE-IN 6" MIN.
2) WEIGHTED WITH 3"-5" OPEN GRADED ROCK.
3) TRENCHED IN 4".



NOTES:

1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.
2. THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SHIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE.
3. THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF 3"-5" OPEN GRADED ROCK, OR TOED-IN 6" WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED IN 4" INCHES.
4. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 6 INCH WIRE STAPLES ON 2 FOOT CENTERS ON BOTH EDGES AND SKIRT, OR STAKED USING 3/8 INCH DIAMETER REBAR WITH TEE ENDS.
5. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 6 INCHES TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
6. THE DIKE STRUCTURE SHALL BE 6 GA. 6" X 6" WIRE MESH, 18 INCHES ON A SIDE.
7. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
8. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF SIX INCHES, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
9. AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN NOTE 8 ABOVE.

TRIANGULAR FILTER DIKE

EXHIBIT B7

SCALE: NTS	**WESTPOINTE VILLAGE UNIT 3 SWC SH 46 AND INDEPENDENCE DRIVE NEW BRAUNFELS, TEXAS**	Bury+Partners ENGINEERING SOLUTIONS 922 Isom Road, Suite 100 San Antonio, TX 78216 Tel. (210)525-9090 Fax (210)525-0529 TBPE Registration Number F-1048
DRAWN: AL		
DATE: Mar 03, 2010		
SHEET 7 OF 10		Bury+Partners-SA, Inc. ©Copyright 2010

CONSTRUCTION SEQUENCE

1. OBTAIN REQUIRED PERMITS.
2. INSTALL ALL EROSION CONTROL MEASURES AND DEVICES THAT CAN BE INSTALLED PRIOR TO SITE CLEARING.
3. CLEAR SITE.
4. INSTALL ANY REMAINING CONTROL MEASURES AND DEVICES THAT COULD NOT BE INSTALLED PRIOR TO SITE CLEARING.
5. GRADE SITE.
6. INSTALL ALL UNDERGROUND UTILITIES. INSTALL EROSION CONTROL AROUND CATCH BASINS AND INLETS.
7. INSTALL PAVEMENT.
8. INSPECT AND MAINTAIN ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED OFFSITE & ONSITE AREAS HAVE BEEN HYDROMULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLAN AND A MOWABLE STAND OF GRASS IS ACHIEVED.

EROSION AND SEDIMENTATION CONTROL NOTES

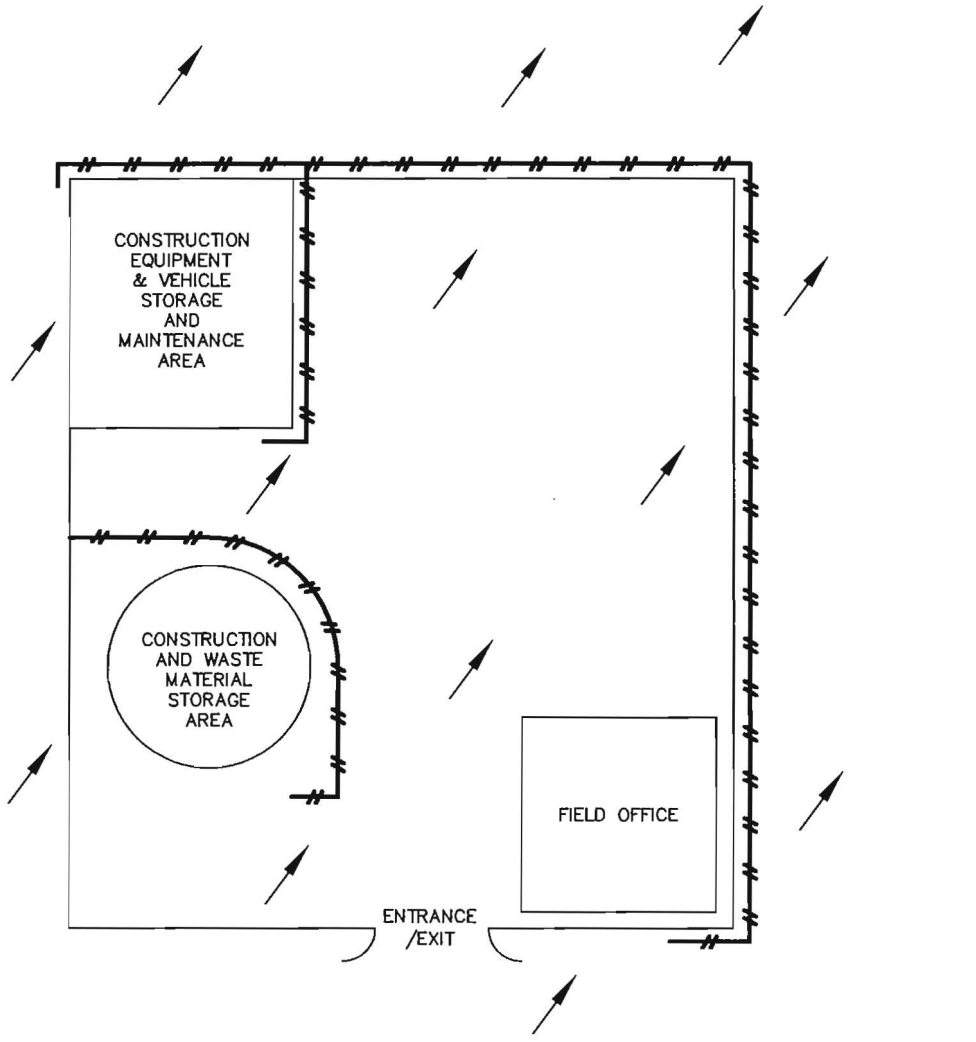
1. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS FOR THIS PROJECT AS WELL AS THE CITY'S GENERAL REQUIREMENTS, WHICH PERTAIN TO THIS PROJECT.
2. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURE OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED. (IN ACCORDANCE WITH LANDSCAPE PLANS)
3. BRUSH BERMS, HAY BALES, SEDIMENTATION BASINS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS, SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. ADDITIONAL MEASURES MAY BE REQUIRED IF, THEY ARE WARRANTED.
4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE CITY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE CITY.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.

TPDES REQUIREMENT NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING NOTICE OF INTENT (NOI) TO TCEQ FOR THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) 48 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, OR POSTING A CONSTRUCTION SITE NOTICE 48 HOURS PRIOR TO CONSTRUCTION ACTIVITIES.
2. CONTRACTOR SHALL HAVE THIS PLAN AND THE TPDES STORM WATER POLLUTION PREVENTION PLAN ON SITE AT ALL TIMES THROUGHOUT DURATION OF PROJECT.
3. ALL DISTURBED AREAS NOT ADDRESSED BY LANDSCAPE ARCHITECT SHALL BE HYDROMULCHED PER SPECIFICATION DESCRIBED IN THE GENERAL NOTES.
4. CONTRACTOR SHALL PROVIDE TRIANGULAR SEDIMENT FILTER DIKE PER EXHIBIT B7 WHERE SILT FENCE IS REQUIRED BUT NOT INSTALLABLE.
5. CONTRACTOR SHALL SUBMIT NOTICE OF TERMINATION (NOT) TO THE TCEQ UPON PROJECT COMPLETION AS DESCRIBED IN THE PROJECT TPDES STORM WATER POLLUTION PREVENTION PLAN. IF PROJECT IS A PHASE I PROJECT ($\geq$ 5 ACRES), ELSE STABALIZE PROJECT TO WITHIN 10% OR COMPLETE CONSTRUCTION.
6. CONTRACTOR TO RETAIN THE TPDES STORM WATER POLLUTION PREVENTION PLAN ALONG WITH ALL COMPLETED INSPECTION REPORTS AND PLAN MODIFICATIONS DOCUMENTATION FOR A PERIOD OF THREE (3) YEARS FROM DATE OF FINAL STABILIZATION, AS REQUIRED BY THE TCEQ.

EXHIBIT B8

SCALE: NTS	**WESTPOINTE VILLAGE UNIT 3**	Bury+Partners
DRAWN: AL	**SWC SH 46 AND**	ENGINEERING SOLUTIONS
DATE: Mar 03, 2010	**INDEPENDENCE DRIVE**	922 Isom Road, Suite 100
SHEET 8 OF 10	**NEW BRAUNFELS, TEXAS**	San Antonio, TX 78216
		Tel. (210)525-9090 Fax (210)525-0529
		TBPE Registration Number F-1048



LEGEND

SILT FENCE

FLOW ARROWS

TYPICAL CONSTRUCTION STAGING AREA

EXHIBIT B9

SCALE: NTS	**WESTPOINTE VILLAGE UNIT 3** **SWC SH 46 AND** **INDEPENDENCE DRIVE** **NEW BRAUNFELS, TEXAS**
DRAWN: AL	
DATE: Mar 03, 2010	
SHEET: 9 OF 10	

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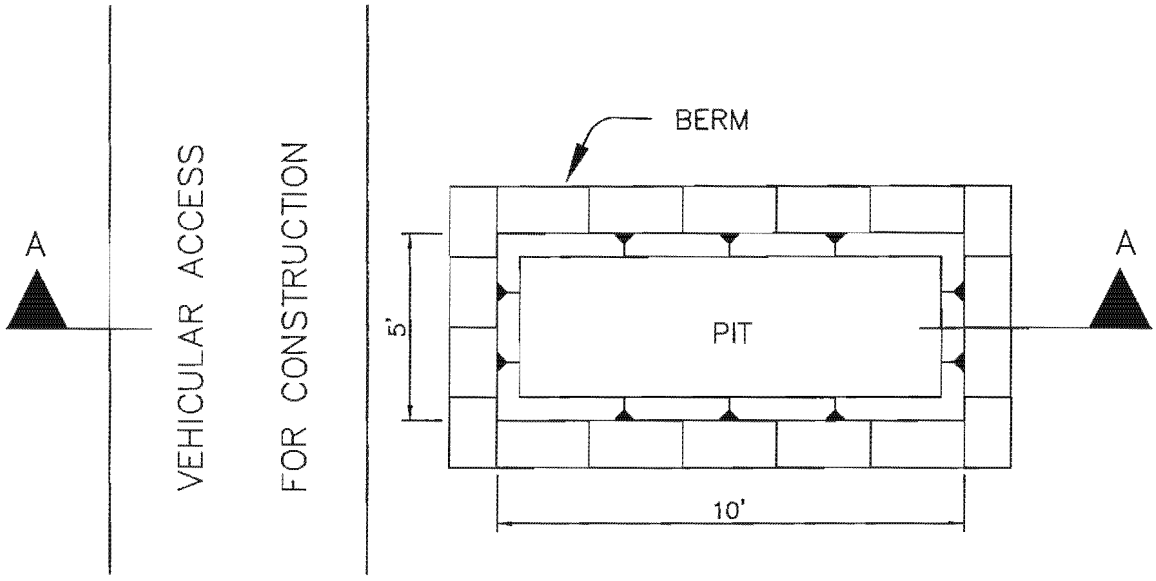
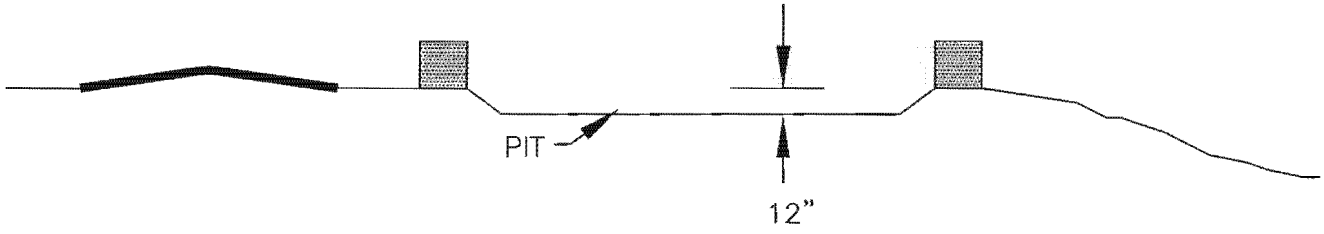
922 Isom Road, Suite 100
San Antonio, TX 78216
Tel. (210)525-9090 Fax (210)525-0529
TBPE Registration Number F-1048



PLAN



SECTION A–A

GENERAL NOTES:

1. Detail illustrates minimum dimensions. Pit can be increased in size depending on expected frequency of use.
2. Washout pit shall be located in an area easily accessible to construction traffic.
3. Washout pit shall not be located in areas subject to inundation from storm water runoff.

CONCRETE TRUCK WASHOUT PIT

EXHIBIT B10

SCALE: NTS	**WESTPOINTE VILLAGE UNIT 3 SWC SH 46 AND INDEPENDENCE DRIVE NEW BRAUNFELS, TEXAS**	Bury+Partners ENGINEERING SOLUTIONS 922 Isom Road, Suite 100 San Antonio, TX 78216 Tel. (210)525-9090 Fax (210)525-0529 TBPE Registration Number F-1046
DRAWN: AL		
DATE: Mar 03, 2010		
SHEET 10 OF 10		

ATTACHMENT E

REQUEST TO TEMPORARILY SEAL A FEATURE
(Not Applicable)

ATTACHMENT F

STRUCTURAL PRACTICES

STRUCTURAL PRACTICES

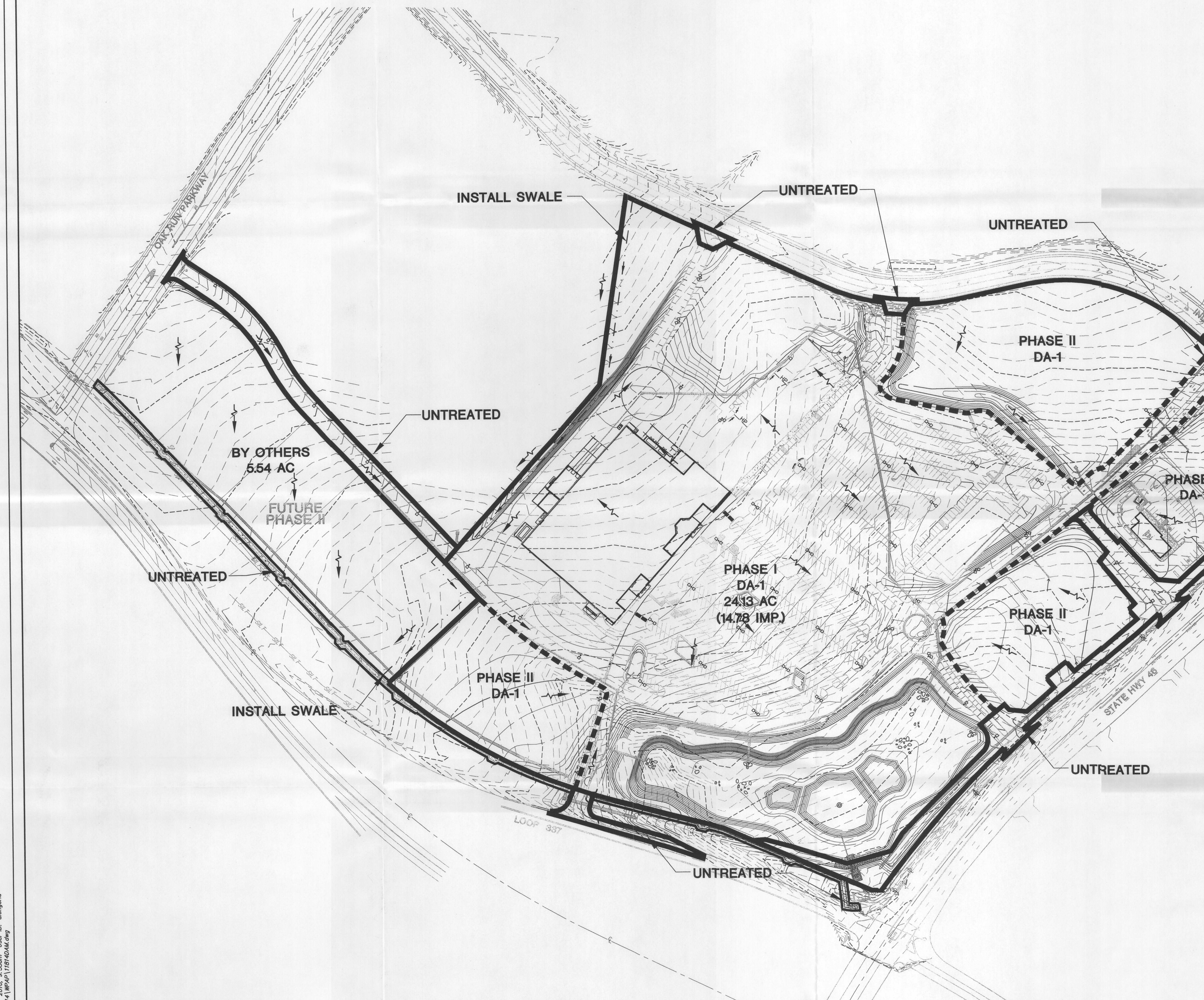
Silt fencing, triangular sediment filter dikes, inlet protection devices, and stabilized construction entrances will be incorporated as temporary erosion control devices and will be removed after permanent stabilization is established.

Silt fencing shall be incorporated throughout the construction process. The placement of the silt fencing shall be perpendicular to runoff flow. Refer to project construction documents for quantity and actual locations of these erosion control devices. In areas where silt fencing is to be situated but is non-installable, triangular filter dikes shall be incorporated.

Stabilized construction entrances will be employed during the construction of this development to help minimize vehicle tracking of sediments. Paved streets adjacent to these site entrances shall be cleaned regularly to remove any excess mud, dirt or rock tracked from the site. Refer to the project construction documents for actual locations of these erosion control devices. Staging areas will be utilized in locations as decided by the project general contractor and validated by the civil engineer. If the contractor determines the need for additional stabilized construction entrances, construction staging areas or pits, their locations shall be agreed upon by the contractor and the engineer.

ATTACHMENT G

DRAINAGE AREA MAP



DRAINAGE AREAS:

DEVELOPED	AREA	IMPERVIOUS AREA	PERCENT
PHASE I	24.13	14.09	58%
UNTREATED	2.64	1.34	51%

PROPOSED	AREA	IMPERVIOUS AREA	PERCENT
DA-1 PHASE II LOT 10	1.16	0.80	69%

FUTURE	AREA	IMPERVIOUS AREA	PERCENT
DA-1 PHASE II REMAINDER	9.43	8.48*	90%
DA-1 ULTIMATE	34.72	24.62*	71%

*ASSUMED IMPERVIOUS COVER. A WPAP MODIFICATION WILL BE REQUIRED FOR ANY IMPERVIOUS COVER NOT INCLUDED IN PHASE I.

NOTE: SEE WATER QUALITY POND CALCULATION SHEET FOR POND SIZING AND LOAD REMOVAL CALCULATIONS. CALCULATIONS ARE BASED ON THE EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL, SECTION 3.3.2.

NOTES:

1. ALL WATER QUALITY PONDS ARE OVERSIZED TO ACCOUNT FOR THE AREAS NOT WITHIN THE CAPTURE BASINS.
2. ALL ROOFTOP DRAINAGE WILL BE COLLECTED INTO THE RESPECTIVE BUILDING ROOFTOP DRAINAGE SYSTEM AND TIE INTO THE PROPOSED DRAINAGE LINES AND COLLECTED BY THE PROPOSED WATER QUALITY PONDS

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY (R.O.W.) LINE
678	678	CONTOUR
	DA-X XXX AC.	DRAINAGE AREA NUMBER
		DRAINAGE DIVIDE
		DIRECTION OF FLOW
		EARTHEN SWALE

DATE	NO.	REVISION	APPROVAL

Bury+Partners
ENGINEERING SOLUTIONS
922 Isom, Suite 100
San Antonio, TX 78216
Tel. (210)525-9090 Fax (210)525-0529
TBPE Registration Number F1048

STATE OF TEXAS
MARK ROBERT JOHNSON
82680
LICENSED
PROFESSIONAL ENGINEER
3/5/10

DRAINAGE AREA MAP

WESTPOINTE VILLAGE

SH46 AND LOOP 337
NEW BRAUNFELS, TX

PLOTTING SCALE: 1"= 1'
DATE REVISED: Mar 05, 2010
FILE: G:\118\14\WPAP\11814DAM.dwg
DRAWN BY: KB
DESIGNED BY: CC
REVIEWED BY: AN
PROJECT NO.: 827-02

SHEET
EXH

Date: Mar 05, 2010, 9:33am User ID: alongoria
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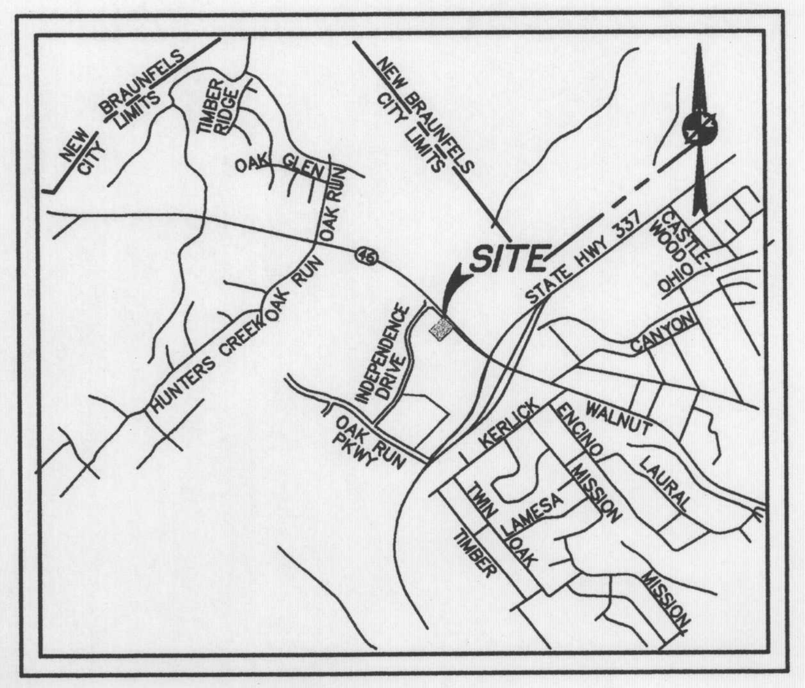
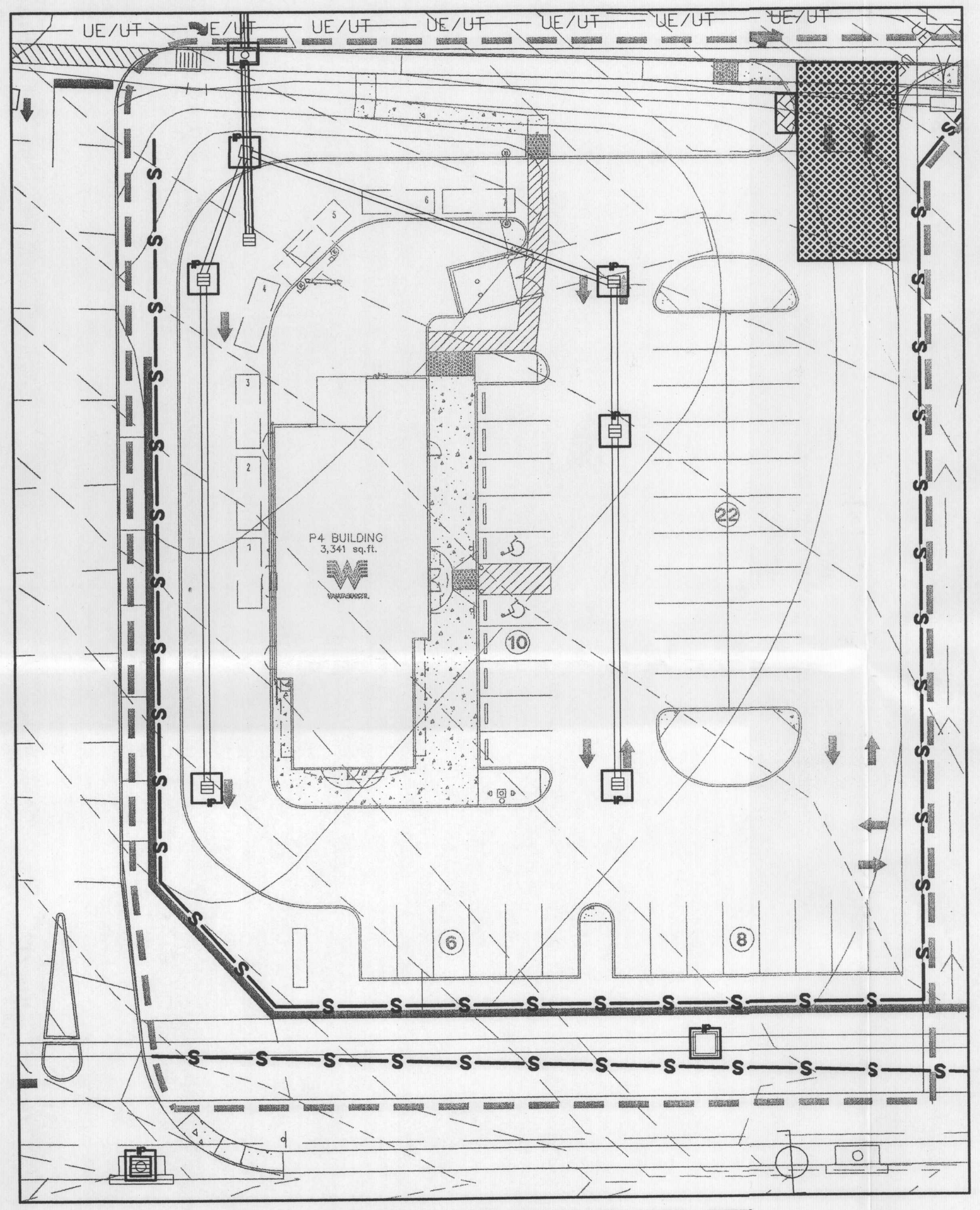
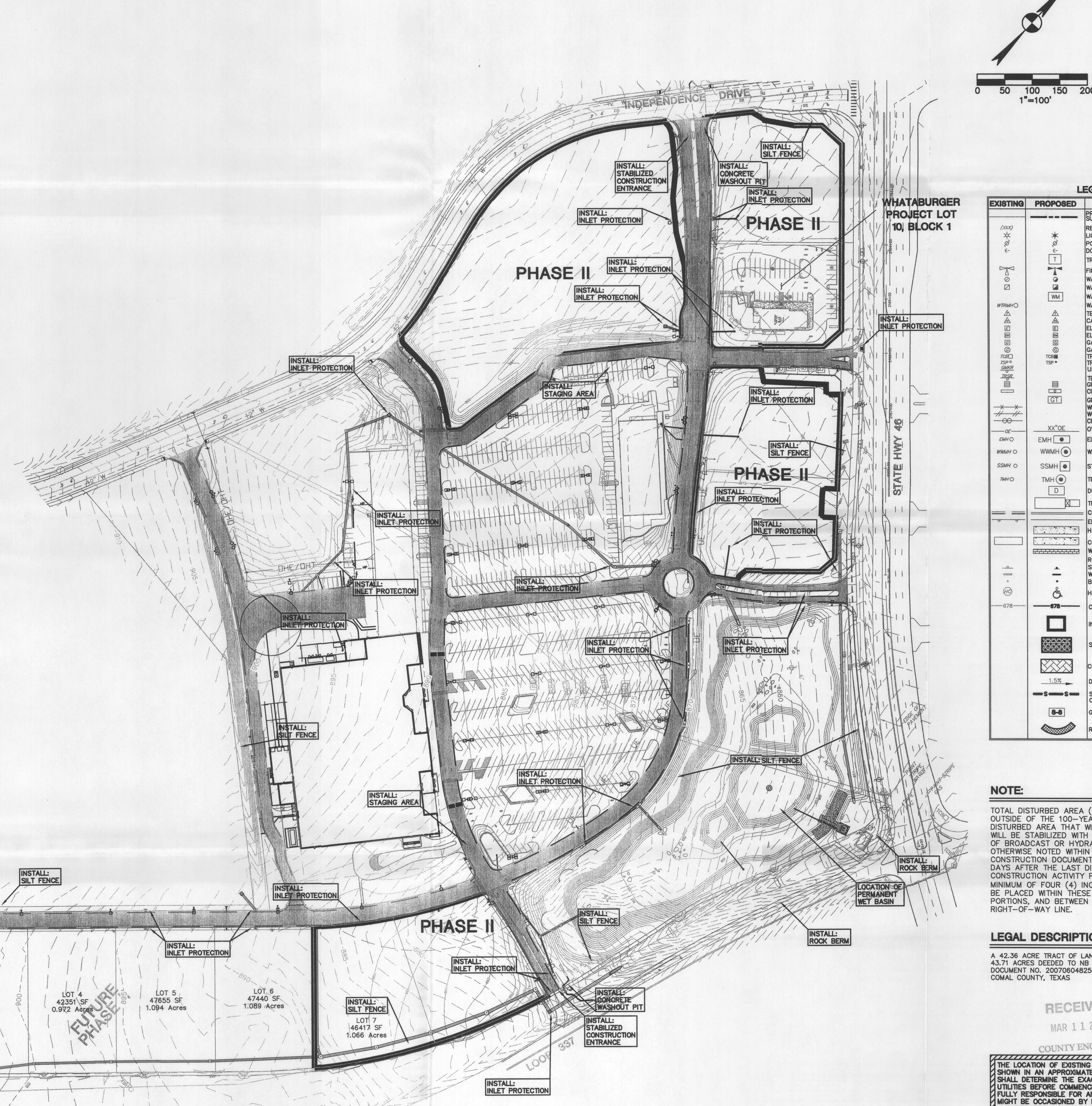


VICINITY MAP
N.T.S.
NEW BRAUNFELS, TEXAS



TCEQ SITE PLAN FOR WHATABURGER SITE
LOT 10, BLOCK 1
WESTPOINTE VILLAGE SUBDIVISION



DEVELOPMENT TCEQ SITE PLAN

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY (R.O.W.) LINE/ SUBDIVISION BOUNDARY
(XXX)		RECORD INFORMATION
		LIGHT POLE
		POWER POLE
		DOWN GUY
	T	TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
	WM	WATER METER VAULT
WTRMH		WATER MANHOLE
		TELEPHONE RISER
		CABLE TV RISER
		ELECTRIC BOX
		ELECTRIC METER
		GAS METER
		GAS VALVE
TCB	TCB	TRAFFIC CONTROL BOX
TSP	TSP	TRAFFIC SIGNAL POST
GMKR		UNDERGROUND GAS LINE MARKER
TRSR		TELEPHONE RISER
		GRATE INLET
		CURB INLET (SIZE VARIES)
	GT	GREASE TRAP (SIZE VARIES)
		WIRE FENCE
		WOOD FENCE
		CHAIN LINK FENCE
OE	XX"OE	OVERHEAD ELECTRIC
EMH	EMH	ELECTRIC MANHOLE (SIZE VARIES)
WWMH	WWMH	WASTEWATER MANHOLE (SIZE VARIES)
SSMH	SSMH	STORMSEWER MANHOLE (SIZE VARIES)
TMH	TMH	TELEPHONE MANHOLE (SIZE VARIES)
	D	DUMPSTER
		TRASH COMPACTOR
		CONCRETE CURB
		EDGE OF PAVEMENT
		HANDICAP ACCESS ROUTE
		CONCRETE SIDEWALKS
		WALL (SEE PLAN)
		ROCK WALL
		SIGN
		WHEELSTOP
		BOLLARD
HC		HANDICAP SPACE
678	678	CONTOUR
		INLET PROTECTION
		STABILIZED CONSTRUCTION ENTRANCE
		CONCRETE WASHOUT PIT
	1.5%	DIRECTION OF FLOW
	S S	SILT FENCE & LIMITS OF CONSTRUCTION
	S-8	GEOLOGICAL FEATURE
		ROCK BERM

NOTE:

TOTAL DISTURBED AREA (33.60 ACRES) IS OUTSIDE OF THE 100-YEAR FLOODPLAIN. DISTURBED AREA THAT WILL REMAIN PERVIOUS WILL BE STABILIZED WITH VEGETATION BY MEANS OF BROADCAST OR HYDRAULIC SEEDING, UNLESS OTHERWISE NOTED WITHIN THE PROJECT CONSTRUCTION DOCUMENTS, NO LATER THAN 14 DAYS AFTER THE LAST DISTURBANCE OR WHEN CONSTRUCTION ACTIVITY PERMANENTLY CEASES. A MINIMUM OF FOUR (4) INCHES OF TOPSOIL WILL BE PLACED WITHIN THESE DISTURBED PERVIOUS PORTIONS, AND BETWEEN THE CURB AND RIGHT-OF-WAY LINE.

LEGAL DESCRIPTION:

A 42.36 ACRE TRACT OF LAND BEING A PORTION OF THE 43.71 ACRES DEEDED TO NB RETAIL, LTD., RECORDED IN DOCUMENT NO. 200706048255 OF THE OFFICIAL RECORDS, COMAL COUNTY, TEXAS

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

DATE	NO.	REVISION	APPROVAL

Bury+Partners
ENGINEERING SOLUTIONS
922 Isom, Suite 100
San Antonio, TX 78216
Tel. (210)525-9090 Fax (210)525-0529
TBPE Registration Number F1048

STATE OF TEXAS
MARK ROBERT JOHNSON
82680
LICENSED PROFESSIONAL ENGINEER
3/5/10

TCEQ SITE PLAN

WESTPOINTE VILLAGE

SH46 AND LOOP 337
NEW BRAUNFELS, TX

PLOTTING SCALE: 1"= 1'
DATE REVISED: Mar 05, 2010
FILE: G:\118\14\WPAP\11814SPN.dwg
DRAWN BY: KB
DESIGNED BY: CC
REVIEWED BY: AN
PROJECT NO.: 827-02

SHEET
EXH

Date: Mar 05, 2010, 9:29am User ID: alongoria
File: G:\118\14\WPAP\11814SPN.dwg

ATTACHMENT H

TEMPORARY SEDIMENT POND(S)
PLANS AND CALCULATIONS
(Not Applicable)

ATTACHMENT I

INSPECTION AND MAINTENANCE FOR BMPs

INSPECTIONS

Each contractor will designate a qualified person (or persons) to perform the following inspections:

1. Disturbed areas and areas used for storage of materials that are exposed to precipitation will be inspected for evidence of, or the potential for, pollutants entering the drainage system.

2. Erosion and sediment control measures identified in the plan will be observed to ensure that they are operating correctly.

3. Where discharge locations or points are accessible, they will be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

4. Locations where vehicles enter or exit the site will be inspected for evidence of offsite sediment tracking.

5. Permanent seeding and planting will be inspected for bare spots, washouts and unhealthy growth.

The inspection shall be conducted by the responsible person at least once every seven (7) calendar days and within 24 hours after a storm providing 1/2 inches of rainfall or greater. If one or more of the following conditions apply, the frequency of inspections shall be conducted at least once every month:

1. The site has been either finally or temporarily stabilized.

2. Where runoff is unlikely due to winter conditions (i.e. site is covered with snow, ice, or where frozen ground exists.

3. During seasonal arid periods in arid areas (areas with an average annual rainfall of 0 to 10 inches) and semi-arid areas (areas with an average annual rainfall of 10 to 20 inches).

The information required within an inspection and maintenance report are as follows:

1. Summary of the scope of the inspection.

2. Name(s) and qualifications of personnel making the inspection.

3. The date(s) of the inspection.

4. Major observations relating to the implementation of the storm water pollution prevention plan.

5. Changes required to correct damages or deficiencies in the control measures.

In addition to the required routine inspections, the following record of information will also be maintained:

1. The dates when major grading activities occur.

2. The dates when construction activities temporarily or permanently cease on a portion of the site.

3. The dates when stabilization measures are initiated.

Inspection and maintenance reports as well as all records required by this Storm Water Pollution Prevention Plan shall become part of the Storm Water Pollution Plan. Copies of example forms to be used for the inspection and maintenance reports as well as related records are included in the project's Texas Pollution Discharge Elimination System (TPDES) Report.

MAINTENANCE

Based on the results of the inspection, any changes required to correct damages or deficiencies in the control measures shall be made within seven (7) calendar days after the inspection. If existing stabilization/erosion controls need modification or additional stabilization/erosion controls are necessary, implementation shall be achieved prior to the next anticipated storm event. If, however, the execution of this requirement becomes impractical, then the implementation will occur as soon as possible, with the incident duly noted with an explanation of the impracticality, in the inspection report.

Sediment accumulation at each control will be removed and properly disposed when the depth of accumulation equals or exceeds six (6) inches. If sediment accumulation is found to be contaminated, its disposal shall be off-site in a manner which conforms to the appropriate applicable regulations.

ATTACHMENT J

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION

During Construction:

The methodology for handling pollution of on-site or up-gradient storm water during construction will include the following:

1. Silt fencing and rock berms will be used as a temporary erosion and sedimentation controls.

2. Stabilized construction entrances/exits will be put into place to reduce the dispersion of sediment from the site, and to aid in accessibility to the site.

3. A construction staging area will also be put into place for material stockpiles, machinery storage, and machinery maintenance.

4. Concrete truck washout pits will be put into place to prevent contamination of storm water runoff and to aid in the removal of sediments from the site.

5. As required by the TCEQ General Permit, disturbed areas on which construction activity has ceased (temporarily or permanently) and which will be exposed for more than 21 days shall be stabilized within 14 days. Areas receiving less than 20 inches of annual rainfall should be stabilized as soon as practicable and only to pre-project conditions.

6. If construction stops for more than 14 days, hydro-seeding, sod or other TCEQ approved method will be applied to re-stabilize vegetation.

After Construction:

This site will provide the following permanent pollution abatement measures to prevent the pollution of storm water originating on-site or upgradient from the project site:

1. Storm water will be directed to grate inlets via curbing and grading and discharged into the sedimentation/filtration basins. The sedimentation/filtration basins have been designed to capture and filter the required runoff from the individual watersheds. The basin has been designed in accordance with the TCEQ Technical Guidance Manual. Each basin will be constructed as that particular phase is built.

2. Native grasses will be used on-site to help reduce the use of fertilizers and this will in turn reduce the levels of phosphates present in the stormwater runoff.

3. Where possible drainage will be directed across vegetated areas to provide some pretreatment prior to discharge into the filter basin.

Permanent Erosion Control:

1. All disturbed areas shall be restored as noted below:

    - A minimum of 4" of topsoil shall be placed in all drainage channels (except rock) and between the curb and R.O.W. property lines.

2. Broadcast Seeding:

    - From September 15 to March 1, seeding shall be with a combination of 2 pounds per 1,000 SF of unhulled Bermuda and 7 pounds per 1000 SF of Winter Rye with a purity of 95% with 90% germination.

    - From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 2 pounds per 1000 SF with a purity of 95% with 85% germination.

3. Fertilizer shall be a pelleted or granular slow release with an analysis of 15-15-15 to be applied once at planting and once during the period of establishment at a rate of 1 pound per 1,000 SF.

4. Hydraulic Seeding:

    - From September 15 to March 1, seeding shall be with a combination of 1 pound per 1,000 SF of unhulled Bermuda and 7 pounds per 1,000 SF of Winter Rye with a purity of 95% with 90% germination.

    - From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 7 pounds per 1,000 SF with a purity of 95% with 85% germination.

5. Fertilizer shall be a water soluble fertilizer with an analysis of 15-15-15 at a rate of 1 to 1.5 pounds per 1,000 SF (45-65 pounds per acre).

6. Mulch type used shall be hay, straw, or mulch applied at a rate of 45 pounds per 1,000 SF with a soil tackifier at a rate of 1.4 pounds per 1,000 SF.

7. The planted area shall be irrigated or sprinkled in a manner that will not erode the topsoil but will sufficiently soak the soil to a depth of 6". The irrigation shall occur at ten-day intervals during the first two months. Rainfall occurrences of ½" or more shall postpone the watering schedule for one week.

8. Restoration shall be acceptable when the grass has grown at least 1½" high with 95% coverage, provided no bare spots larger than 16 square feet exist.

PERMANENT STORM WATER 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: WestPointe Village

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.

N/A **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.**

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

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

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

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

_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" 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.

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

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.

N/A 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.

N/A **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:

Mark R. Johnson, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

3/5/10
Date

ATTACHMENT A

20% OR LESS IMPERVIOUS COVER WAIVER
(Not Applicable)

ATTACHMENT B

BMPs FOR UPGRADIENT STORM WATER

BMPs FOR UPGRADIENT STORM WATER

Upgradient water from undeveloped sites upstream of the proposed development will be captured into a storm sewer system and routed to the proposed water quality and detention ponds.

ATTACHMENT C

BMPs FOR ON-SITE STORM WATER

BMPs FOR ON-SITE STORM WATER

The best management practice implemented for this site will consist of a single wet basin. The wet basin will serve the respective drainage areas providing sufficient storage volumes to treat 80% of all TSS produced by the proposed development. All BMP's have been designed in accordance with the TCEQ's Technical Guidance Manual. All TSS produced from impervious cover that was not routed to the proposed wet basin, which includes private drives with insufficient grades to be routed through a storm sewer system or the private road located on the southeast portion of the proposed tract, where accounted for by providing over treatment.

ATTACHMENT D

BMPs FOR SURFACE STREAMS

BMPS FOR SURFACE STREAMS

There are no surface streams on-site. Furthermore, there are no sensitive features identified on the Geological Assessment.

ATTACHMENT E

REQUEST TO TEMPORARILY SEAL A FEATURE
(Not Applicable)

ATTACHMENT F

CONSTRUCTION PLANS

CONSTRUCTION PLANS

The Construction Plans for the Approved Wet Basin at WestPointe Village (EAPP ID No. 2873.01) remain current and will not be modified with this submittal. The Construction Plans have been provided in the Modification of a Previously Approved WPAP Section within this document.

ATTACHMENT G

INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN
FOR
WESTPOINTE SHOPPING CENTER
(SH 46 AND LOOP 337)

The owner of the lot where a sedimentation/filtration basin is located is responsible for the inspection, maintenance, and repair of the water quality pond(s).

- ***Mowing.*** The side-slopes, embankment, and emergency spillway of the basin should be mowed at least twice a year to prevent woody growth and control weeds.

- ***Inspections.*** Wet 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 basin is functioning properly. There are many functions and characteristics of these BMPs that should be inspected. The embankment should be checked for subsidence, erosion, leakage, cracking and tree growth. The condition of the emergency spillway should be checked. The inlet, barrel, and outlet should be inspected for clogging. The adequacy of upstream and downstream channel erosion protection measures should be checked. Stability of the side slopes should be checked. Modifications to the basin structure and contributing watershed should be evaluated. During semi-annual inspections, replace any dead or displaced vegetation. Replanting of various species of wetland vegetation many be required at first, until a viable mix of species is established. 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. The inspections should be carried out with as-built pond plans in hand.

- ***Debris and Litter Removal.*** As part of periodic mowing operations and inspections, debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the riser, and the outlet should be checked for possible clogging.

- ***Erosion Control.*** The basin side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion. Corrective measures such as regrading and revegetation may be necessary. Similarly, the riprap protecting the channel near the outlet may need to be repaired or replaced.

- ***Nuisance Control.*** Most public agencies surveyed indicate that control of insects, weeds, odors, and algae may be needed in some ponds. Nuisance control is probably the most frequent maintenance item demanded by local residents. If the ponds are properly sized and vegetated, these problems should be rare in wet ponds except under extremely dry weather conditions. Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.). Biological control of

algae and mosquitoes using fish such as fathead minnows is preferable to chemical applications.

Non-Routine Maintenance

- ***Structural Repairs and Replacement.*** Eventually, the various inlet/outlet and riser works in the wet basin will deteriorate and must be replaced. Some public works experts have estimated that corrugated metal pipr (CMP) has a useful life of about 25 years, while concrete barrels and risers may last from 50 to 75 years. The actual life depends on the type of soil, pH of runoff, and other factors. Polyvinyl chloride (PVC) pipe is a corrosion resistant alternative to metal and concrete pipes. Local experience typically determines which materials are best suited to the site conditions. Leakage or seepage of water through the embankment can be avoided if the embankment has been constructed of impermeable material, has been compacted, and if anti-seep collars are used around the barrel. Correction of any of these design flaws is difficult.

- ***Sediment Removal.*** Wet ponds will eventually accumulate enough sediment to significantly reduce storage capacity of the permanent pool. As might be expected, the accumulated sediment can reduce both the appearance and pollutant removal performance of the pond. Sediment accumulated in the sediment forebay area should be removed from the facility every two years to prevent accumulation in the permanent pool. Dredging of the permanent pool should occur at least every 20 years, or when accumulation of sediment impairs functioning of the outlet structure.

- ***Harvesting.*** If vegetation is present on the fringes or in the pond, it can be periodically harvested and the clippings removed to provide export of nutrients and to prevent the basin from filling with decaying organic matter.

Type of Inspection:
- ☐ Bi-Annually
- ☐ 2 Year
- ☐ 20 Year

WEST CAMPUS APARTMENTS
WATER QUALITY POND
REGULAR MAINTENANCE CHECKLIST

WET POND

Date Completed | **Required Work**

Bi-Annually

_____ • Mow side-slopes, embankment, and emergency spillway.

_____ • The basin should be kept free of debris which could potentially clog the outlet structure. Periodic checks should be performed to ensure debris removal from outlet, basin floor and gabion filter wall. The embankment should be inspected for erosion and cracking. Replanting of various species of wetland vegetation may be required. The inspection should be carried out with the as-build pond plans in hand. Automatic water valve should be checked to make sure pond remained at the required water surface elevation.

Every Two Years

_____ • Sediment Forebays should be dredged of sediment.

_____ • Replant wetland vegetation that may have been damaged by removal of sediment.

Every 20 Years

_____ • Permanent pool should be dredged of sediment.

_____ • Replant wetland vegetation that may have been damaged by removal of sediment.

Additional Observations: _____

_____

_____

_____

Note: All bills, receipts, notes, work orders must be retained for proof of maintenance.

Inspector: _____ Company: _____

_____ Phone: _____

(Signature)

ATTACHMENT H

PILOT-SCALE FIELD TESTING PLAN
(Not Applicable)

ATTACHMENT I

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

Once construction is completed, the runoff will be captured by a storm sewer system through a series of inlets. These inlets discharge into the proposed wet basin where the water is treated within a time period of 24–48 hours. Once treated, the storm water will be released into existing culverts along TxDOT right-of-way. The release rate will be within TCEQ specifications and will not have any adverse impact to habitable structures located downstream of the site. The wet basin will utilize erosion prevention devices to mitigate the effects of erosion to the natural grade.

AUTHORIZATION AND APPLICATION FORMS

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

I WILLIAM VANDENBOSCH,
Print Name

Vice President,
Title - Owner/President/Other

of NB Retail, Ltd,
Corporation/Partnership/Entity Name

have authorized Bury + Partners-SA, 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.

William VandenBosch VP
Applicant's Signature

2/25/10
Date

THE STATE OF TEXAS §

County of BEXAR §

BEFORE ME, the undersigned authority, on this day personally appeared WILLIAM VANDENBOSCH 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 25th day of February, 2010.

NOTARY PUBLIC

Typed or Printed Name of Notary

MY COMMISSION EXPIRES: _____

Dina M Miranda
Notary Public, State of Texas
My Commission Expires:
October 29, 2010

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

NAME OF PROPOSED REGULATED ENTITY: WestPointe Village
REGULATED ENTITY LOCATION: SWC of SH 46 and Independence Drive
NAME OF CUSTOMER: Whataburger Restaurants, LP (c/o Bury+Partners)
CONTACT PERSON: Mark R. Johnson, Michael Sharp PHONE: (210) 525-9090
(Please Print)

Customer Reference Number (if issued): CN 603253170 (nine digits)

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

Austin Regional Office (3373) ☐ Hays ☐ Travis ☐ Williamson

San Antonio Regional Office (3362) ☐ Bexar ☒ Comal ☐ Medina ☐ Kinney ☐ 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):

☐ **Austin Regional Office**

☐ **Mailed to TCEQ**:
TCEQ – Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☒ **San Antonio Regional Office**

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

Site Location (Check All That Apply): ☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	Size		Fee Due
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling		Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks		Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	1.2	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

02/25/10
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 Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications
Contributing Zone Plans and Modifications

PROJECT	PROJECT AREA IN ACRES	FEE
One Single Family Residential Dwelling	< 5	$650
Multiple Single Family Residential and Parks	< 5 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100 ≥ 100	$3,000 $4,000 $5,000 $6,500 $8,000 $10,000

Organized Sewage Collection Systems and Modifications

PROJECT	COST PER LINEAR FOOT	MINIMUM FEE MAXIMUM FEE
Sewage Collection Systems	$0.50	$650 - $6,500

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	$650	$650 - $6,500

Exception Requests

PROJECT	FEE
Exception Request	$500

Extension of Time Requests

PROJECT	FEE
Extension of Time Request	$150