RESOLUTION NO. 3013

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF KELLER, TEXAS, APPROVING AN AMENDED SITE PLAN FOR CAPITAL ONE BANK, A 8,049 SQUARE-FOOT BANK BUILDING, LOCATED ON A 1.37-ACRE LOT ON THE SOUTHEAST CORNER OF KELLER PARKWAY (FM 1709) AND SOUTH MAIN STREET (U.S. HIGHWAY 377), AT 100 KELLER PARKWAY, BEING LOT 1, BLOCK A, HIBERNIA-KELLER ADDITION, AND ZONED R-OTK (RETAIL-OLD TOWN KELLER OVERLAY), IN THE CITY OF KELLER, TARRANT COUNTY, TEXAS.

WHEREAS, Capital One Bank, owner and Levinson Alcoser Associates, LP., applicant, have submitted a site plan (SP-10-0010), which has been reviewed by the City Staff and recommended for approval with conditions by the Planning and Zoning Commission of the City of Keller.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF KELLER, TEXAS:

Section 1: THAT, the above findings are hereby found to be true and correct and are incorporated herein in their entirety.

Section 2: THAT, the amended site plan for Capital One Bank, a 8,049 square-foot bank building, located on a 1.37-acre lot on the southeast corner of Keller Parkway (FM 1709) and South Main Street (U.S. Highway 377), at 100 Keller Parkway, being Lot 1, Block A, Hibernia-Keller Addition, and zoned R-OTK (Retail-Old Town Keller Overlay) is hereby approved, attached hereto with Exhibit "A" as amended by Exhibit "B", and incorporated herein as if fully set forth with the following conditions:

1. The variance request to reduce the amount of ornamental trees within the north landscape buffer from eleven (11) ornamental to five (5) ornamental trees shall be allowed.

2. The variance request to reduce the amount of ornamental trees within the west landscape buffer from seven (7) ornamental trees to four (4) ornamental trees shall be allowed.

3. The variance request to waive the required trees to be added in barren areas within the west landscape buffer shall be allowed.

4. The variance request to waive the required trees within one (1) landscape parking island on the east side of the drive-thru banking lanes shall be allowed.

5. The variance request to waive the required foundation plantings on the north, west, and east sides of the building shall be allowed.

6. All requirements and conditions of Resolution No. 2220, approving the site plan for Hibernia National Bank, shall continue to be applicable.

AND IT IS SO RESOLVED.

Passed and approved by a vote of 3 to 2 on this the 16th day of November, 2010.

CITY OF KELLER, TEXAS

BY: _____
P.H. McGrail, Mayor

ATTEST:

_____
Sheila Stephens, City Secretary

Approved as to Form and Legality:

_____
D. Stanton Lowry, City Attorney

LEVINSON • ALCOSER
ASSOCIATES, LP

October 21, 2010

City of Keller
Development Review Committee
Planning and Zoning Commission
City Council

RE: Variances to Unified Development Code for Capital One Bank at 100 Keller Parkway, Keller, TX 76248

To Whom It May Concern:

The variance being requested is for the Capital One Bank Building on the southwest corner of FM 1709 and 377. The building and drive thru paving are experiencing foundation distress due to heaving of the subgrade soils, some areas as much as 2 ½" within the building. A swell test was performed by a Geotechnical Engineer and provided results that indicated the building would experience an additional 1 ½" of swelling of the subgrade soils. It was recommended to isolate the active soils under and around the building and drive thru to prevent further migration of water into the subgrade soils.

This building foundation was constructed in June 2005 and the bank was completed in November 2005. Capital One has been in ownership of the building since April 2008. The building has had foundation issues prior to March 2008 when we were notified and asked to review the situation. We do not believe that there are any alternatives available to save the landscape surrounding this building that will accomplish the same recommendations to eliminate the foundation heave potential that we are trying to achieve with this construction. The site has been tested for leaks and other sources of water infiltration under the foundation; however no leaks were found. It was determined that source of the heaving soil was from water and groundwater infiltration through the exposed landscaping areas. The bank was constructed with grade beams and a slab on grade. We are currently investigating five other branches that are experiencing the same type of swelling and heaving. We are proposing to install similar hardscape at all the branches and groundwater walls at those branches that are experiencing groundwater migration. Capital One has since changed the prototype design criteria to require structural slabs in all their new branches to prevent this problem from occurring.

The following variances are being requested:

1) The variance request to Section 9.03 (F.2.b) of the Unified Development Code (UDC) to reduce the required amount of ornamental trees within the north landscape buffer from eleven (11) ornamental trees to five (5) ornamental trees.

Levinson ▪ Alcoser Associates, L.P. ▪ 1177 West Loop South, Suite 900 Houston, Texas 77027-9006
713.787.0000 phone ▪ 713.850.8250 fax ▪ www.levinsonalcoser.com ▪ info@levinsonalcoser.com

LEVINSON • ALCOSER
ASSOCIATES, L.P.

2) The variance request to Section 9.03 (F.2.b) of the Unified Development Code (UDC) to reduce the required amount of ornamental trees within the west landscape buffer from seven (7) ornamental trees to four (4) ornamental trees.

3) The variance request to Section 9.03 (F.2.d) of the Unified Development Code (UDC) to waive the requirement of new trees to be added to barren areas within the west landscape buffer.

4) The variance request to Section 9.03 (F.3.f) to waive the required landscaping within one (1) parking island to the east of the building adjacent to the drive-thru banking lanes.

5) The variance request to Section 9.03 (F.3.j) of the Unified Development Code (UDC) to waive the required five foot (5') foundation plantings along the north, east and west sides of the building.

6) All requirements and conditions of Resolution No. 2220, approving the Site Plan for Hibernia National Bank, shall continue to be applicable.

Justification for variance items 1-5 above: The existing bank building foundation is in distress and experiencing heave under the building and drive thru due to moisture compromising the subgrades. The plans submitted for approval include the installation an 8' deep Groundwater Cut-Off Trench that will surround the existing building and drive-thru. The removal of existing landscape and irrigation and the installation of hardscape in these areas are necessary to prevent future water from infiltrating the areas surrounding the building.

After reviewing the site, it has come to our attention that trees have been removed without the appropriate permits. Four (4) protected trees have been removed along with nine (9) required trees (four (4) required canopy trees and five (5) required ornamental trees). Capital One will install replacements for the seven (7) of the nine (9) removed required trees, omitting two (2) required ornamental trees along Keller Parkway that are proposed to be removed as part of the Site Plan Amendment application. In the event that the Site Plan Amendment is not approved as proposed, Capital One Bank will install replacements for the two (2) required ornamental trees that were removed from Keller Parkway. Capital One Bank is also making a request to the Tree Board to pay in lieu of mitigating the deficit of the 61.4 caliper inches (resulting from removal of four (4) protected trees) with replacement trees.

Sincerely,

Amanda Buckson

Amanda Buckson, RLA, LEED AP
Levinson Alcoser Assoc., LP.

GEOTECHNICAL DISTRESS STUDY

CAPITAL ONE BANK

KELLER BRANCH

KELLER, TEXAS

Reported to
Capital One Bank
Plano, Texas

Prepared by
Kenneth E. Tand & Associates, Inc.
Geotechnical & Materials Engineers
Houston, Texas

Project No. 10-113

March, 2010

KENNETH E. TAND & ASSOCIATES, INC.
GEOTECHNICAL & MATERIALS ENGINEERS

March 22, 2010

Capital One Bank
5718 Westheimer Rd., Suite 1850
Houston, Texas 77057
Attn: Ms. Beth Tiderman

Ref: Geotechnical Distress Study
Capital One Bank
Keller Branch
Keller, Texas

Dear Ms. Tiderman:

KETA has completed our geotechnical engineering studies directed at evaluating the cause of heave of the ground supported floor slab, and providing conceptual recommendations for remedial repairs. This report summarizes our findings and presents our conclusions.

Introduction

The branch bank is located on the southwest corner of SH 377 (N. Main) and FM 1709 (Keller Blvd.). The structure is a 1-story steel frame building with an attached drive thru teller. It was previously a Hibernia bank, and it was constructed in 2005.

The geotechnical investigation report for the bank was performed by HBC/Terracon (report 94045200) in November 2004. The architect-of-record was Oglesby Holtman, and the structural engineer-of-record was the Structural Studio. The foundation system (sheet S-3.2) is underreamed piers bearing at a depth of 18 feet below finished floor.

Scope of Work

The purpose of our geotechnical engineering studies was to render an opinion as to the probable cause of the distress, and to make conceptual recommendations for remedial repair. The scope of work included the following:

1. I made an initial site visit on 2/19/10 to observe the problems occurring in the building.
2. I reviewed the geotechnical investigation report prepared by HBC/Terracon to evaluate the subsoil conditions as to how they may have contributed to the building distress.
3. I reviewed the foundation plans prepared by the Structural Studio.
4. KETA's subcontractor, Cut-N-Shoot, cored thru the concrete slab at two locations. Our geotechnical staff then drilled two borings to depths of 15 feet using hand auger equipment. Somewhat undisturbed samples were taken on two foot centers by driving 3-inch Shelby tubes into the clays using a sledge hammer. The samples were left in the Shelby tubes for transport to our office. Disturbed samples from the auger cuttings were also obtained when drilling the borings. The boring logs and a boring location plan are enclosed in the Appendix.

5. KETA's laboratory staff performed Atterberg limit, suction, and swell tests to evaluate the swell potential. Pocket penetrometer tests were performed to evaluate the shear strength of the clay subsoils. The test results are summarized on the boring logs, and on the summary of swell and suction tests in the Appendix.

6. This report was prepared by Kenneth E. Tand, P.E. summarizing our findings, and making recommendations for remedial repair.

Area Geology

The site is located on Grayson Marl/Main Street Limestone formation (Geology Atlas of Texas/Dallas Sheet). The upper soils are characteristic of the Grayson Marl. "The marl is yellowish-brown and locally contains pyrite seams and fossils, gypsum, and interspersed thin limestone bands…" (The Geology of Tarrant County – 1931).

Subsoil Conditions

The subsurface stratigraphy is shown in detail on each of the boring logs. The stratigraphy can be generalized as follows:

Depth –ft.	Description	Unified Classification
0 - .5	Concrete floor slab	—
.5 – 1.5	Fill: Very stiff sandy clay (1)	CL
1.5 – 10	Fill: stiff clay/silty clay (2)	CH/CL
10 – 12	Very stiff to hard clay (3)	CH
12 – 15	Hard shaley clay (4)	CH

(1): The liquid limit ranged from 32 to 44 with an average of 37 The plasticity index ranged from 15 to 26 with an average of 21 **The sandy clay fill would be classified as having a medium shrink/swell potential (**Chen 1988**).**

(2): The liquid limit ranged from 45 to 51, with an average of 48. The plasticity index ranged from 27 to 31, with an average of 29. **The shrink/swell potential of the clay fill would be classified as high (**Chen 1988**).**

(3): The average liquid limit was 75, and the plasticity index was 44. **The shrink/swell potential of the clay subsoils would be classified as high (**Chen 1988**).**

(4). The average liquid limit is 54, and the plasticity index is 33. **The shrink/swell potential of the shaley clay is high (**Chen 1988**).**

HBC/Terracon (June 2004) did not encounter groundwater when drilling the 2 borings under the building. Also, KETA's geotechnical staff did not observe free water when drilling.

Differential Movement of the Floor Slab

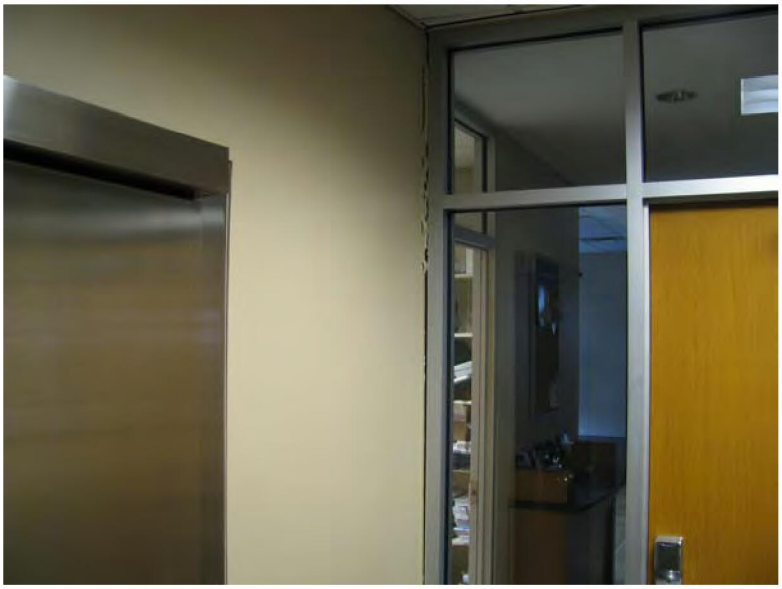
Jacobs/Carter Burgess (March, 2008) and Webb Surveying (October, 2009) performed elevation surveys on the ground supported floor slab. The floor slab is not level, and the measured differential movement is ±2½ inches. Comparison of the two surveys suggests that ± 1½ inches of heave occurred between March 2008 and October 2009. Discussions with the maintenance personnel indicates that movements are still occurring.

The elevations only reflect relative movement between different spots on the floor. Our experience indicates that construction tolerances are commonly ± ½ inch, but sometimes differences are as much as ±1 inch (or more) if the contractor exercises poor elevation control.

The clays of the Grayson Marl formation are highly overconsolidated, but some short and long term settlement of the underreamed piers can be expected. It is my opinion that ± ¼ inch of load induced settlement of the piers could be expected.

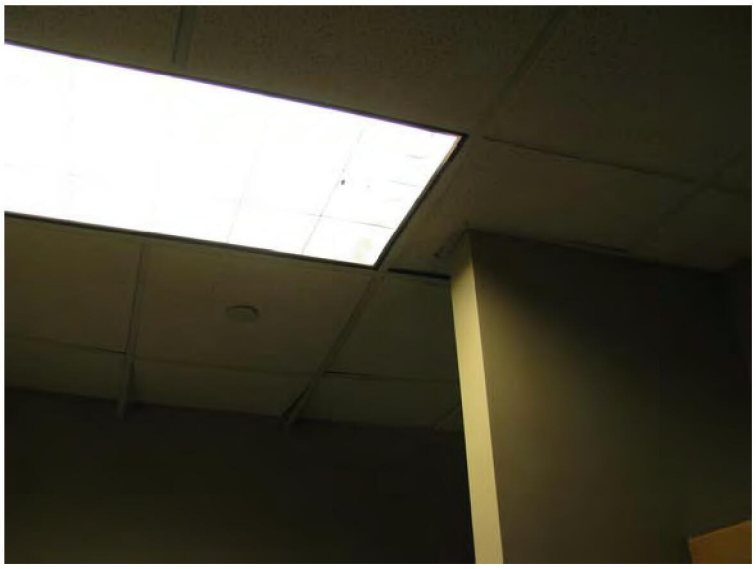
It is not possible to determine how much settlement of the underreamed piers actually occurred, or how much heave of the expansive clays occurred because a deep benchmark had not been set at the time of construction to provide a reference between construction and post construction elevations. It is KETA's opinion that the probable heave is ± 2 inches.

Differential movement caused cracks in interior sheetrock walls and tile floors, unlevel floors, sticking doors, movement of ceiling tiles, and cracks in exterior walls. The doors have been adjusted, and cracks in the dry wall have been fixed as they occurred. Photos were taken in March 2008, and August 2009 documenting the on going problems.



Separation between door frame and dry wall

Sticking bathroom door



Movement of Ceiling Tiles

Underreamed Piers

HBC/Terracon specified a bearing depth of 18 feet (ref. 2004 datum) in their geotechnical investigation report. Reed Engineering's "Report of Pier Observation" indicated that the "as built" depth of the piers was 17.5 ± 3 feet. The piers were sized for an allowable bearing pressure of 5,000 pounds per square foot (psf). The footing depth and bearing pressure are consistent with local practice.

Potential Vertical Rise (PVR)

HBC/Terracon estimated that the PVR of the untreated clay subsoils was 2 to 3 inches. In their report, they discussed that structural suspension of the floor slab was the "only method of assuring the absence" of vertical movements distressing the foundation and floor slab. Furthermore, they discussed support of the floor slab on 8 feet of reworked (moisture conditioned) fill as an alternate solution if some slab movements were tolerable (PVR ~ 1 inch). They recommended placement of a minimum of 12 inches of select fill (PI between 6 and 15), or 6 inches of lime stabilized clay above the moisture conditioned fill to minimize moisture loses during construction.

KETA used the subsoil data in HBC/Terracon's borings (minimal number of Atterberg limit tests had been performed), and computed a PVR (Tex 124-E) of 2 inches for swell from dry conditions. An active depth of 15 feet depth was assumed, but this depth could be greater if long term saturation of the clays occur. This value is within the PVR values reported by HBC/Terracon.

KETA computed a PVR (Tex 124-E) of ¾ inch assuming swell from optimum condition for the 10 feet of fill, and dry condition of the expansive clays to 15 feet. A surcharge pressure of 1 psi was added to consider the confining pressure of the slab resulting from diaphragm action.

The ±2 inches of measured swell has exceeded HBC/Terracon's predicted swell of 1 inch, and the Tex 124-E prediction of ¾ inch. Plausible explanations are that the swell potential was not adequately reduced when reworking the clays at a moisture content of +4 percentage points above the optimum moisture (ASTM D 698), the upper portion of the clay fill dried out during construction, or that an appreciable amount of heave of the clays below the moisture conditioned fill occurred.

KETA computes that the potential heave is presently ±1½ inches using results of the swell tests. These calculations assumed that the active depth is 15 feet below top of slab, and that the clays become 100 percent saturated. The probability of the clays becoming 100 percent saturated is low unless there is a long term plumbing leak, or standing water at the perimeter of the building. It is KETA's opinion that the potential heave is presently ±1¼ inch, and the actual heave will depend upon the future moisture changes.

Moisture for Swelling

There must be a source of moisture for swelling to occur. Some heave will generally occur do to a change in suction resulting from placing a floor slab at the surface, especially if the building is air conditioned. However, it is our experience that the magnitude of heave will generally be small.

The wetting front is generally top/down in a barren field, and results from rain. However, the wetting front will change when a slab is placed on ground because the slab prevents

infiltration of water into the subsoils. The source of moisture to cause swelling below the floor slab is generally from rainfall or irrigation in landscape areas close to the slab, or from seepage thru cracks and joints in paving next to the slab.

However, the high moisture content of the clay fill could be due to leaks in underground utilities. This fact is unknown, and it must be studied further before remedial repairs can be made. Also, it is possible that the water source is infiltration of rainfall or irrigation water into landscape areas close to the building and then horizontal seepage under the floor slab thru utility trench backfill or void spaces below grade beams.

Moisture Conditioned Fill Pad

It is common practice in the greater Dallas/Fort Worth metroplex to support floor slabs on moisture conditioned clay fill to minimize foundation movements due to heave of the expansive clay subsoils. Review of Reed Engineering's "Report of Field Density Tests" indicates that the fill met HBC/Terracon's recommendations within accepted industry tolerances. However, I question whether the +4 percent moisture criteria was adequate to reduce the PVR to 1 inch or less.

Trench Backfill and Clay Plugs

It is KETA's experience that water can backflow from exterior planter beds to interior portions of the slab if sand had been used as backfill in the trenches. Also, a leak in an interior utility line would allow water to flow along a sand filled trench causing heave of the floor slab to occur in areas well beyond the leak. HBC/Terracon recommended use of clay backfill to seal the underground utilities from migration of water, and use of a "cut off"at the perimeter of the building to seal out exterior water. No field exploration has been performed to determine whether HBC/Terracon's recommendations had been implemented.

Remedial Repairs

The first step is to locate the source of water causing heaving of the expansive clays. KETA recommends that a leak detection company be employed to check the underground utilities for leaks. This would include inspecting the underground utility lines using a camera, and performing leak detection tests as required. Also, the ends of the utility lines where they exist the building should be checked for the presence of sand backfill. If present, a bentonite clay plug should be placed at the end so that water can not flow from outside of the building back under the floor slab through the permeable backfill. This includes the exterior cleanouts since they slope back under the building.

The most positive procedure to minimize the effects of future movements is to remove the ground supported floor slab, and replace it with a structural slab cast with a minimum 6 inch void space below the slab. This would require installation of additional underreamed piers or auger cast-in-place piles (ACIP) under the new floor slab. However, the heave was less than 1½ inches

in most areas of the building and the building is serviceable. This method of remedial repair would be disruptive, not to mention very costly.

The most practical method of repair is to control moisture considering the high cost of a structural slab, and the disruption that would occur. As discussed above, all leaks in underground utilities should be repaired, if any exist, and a moisture barrier should be installed around the three unpaved sides of the building. A vertical moisture barrier next to the building penetrating 8 feet below grade is the most positive system. However, this would require removing the sidewalks and would be disruptive.

A horizontal moisture barrier would not be as effective as a vertical barrier, but would be less disruptive and less costly. Conceptually, the horizontal barrier should consist of removing the landscaping and concreting the area. An option (not equal) is placement of a plastic liner such as Stego Wrap buried 2 ½ feet deep below the top of the landscape beds, and the existing sidewalks and paving will seal the remaining surface. The liner should penetrate below the sidewalks, and it should be glued to the grade beams. An underdrain can be installed on top of the liner away from the building to collect water in the landscape beds to minimize root rot.

Summary

Webb's October 2009 elevation survey suggests that ±2½ inches of heave of the clay subsoils has occurred. About 1½ inches of heave occurred between March 2008 and October 2009. Discussions with the maintenance personnel indicates that movement is still occurring. It is KETA's opinion that most of the initial heave was due to swelling of the clay fill, but I suspect that swelling of the deeper clays is presently occurring.

Results of KETA's swell tests indicate that ±1½ inches of additional heave could occur. However, this would require 100 percent saturation to 15 feet, and it is KETA's opinion that ±1 inch is a more plausible expectation.

Changes in the moisture content of the clay subsoils is required for swelling to occur. Thus, the most plausible method to minimize additional heave is to control moisture variations with use of a vertical or horizontal moisture barrier.

Limitations

The two soil borings drilled by KETA for this study actually present an extremely small area of the site. Somewhat differing subsoil conditions should be expected across the site due to the heterogeneous nature of the subsoil deposits typical of the Grayson Marl/Main Street Limestone formation. Such unknowns are typical for this type of study, and there are also unknowns regarding the "as built" foundations.

The scope of this report did not include a detailed forensic study. KETA was not provided a complete set of the plans and specifications, RFI's and other documents submitted during construction, or all of the testing reports prepared during construction. KETA did not perform

standard Proctor density tests on the fill, nor did we mold samples to test the swell potential at the specified moisture criteria. Also, KETA did not check the utility lines for the presence of sand backfill, or for a "cut off" barrier at the perimeter. Additional studies will be required if this matter proceeds to litigation.

The options for remedial repair discussed in this report are conceptual in nature. A set of detailed plans and specifications prepared by an architect and structural engineer will be required prior to start of construction. KETA performed this geotechnical engineering study with the skill and care commonly practiced by other registered geotechnical engineers practicing in the State of Texas at the time this study was performed. There is no warranty, either expressed or implied, other than performing our work to these standards.

Closure

We appreciate the opportunity of working with you on this phase of the project. If you have any questions regarding this report, please call on us.

Sincerely,

E-Signed by Ken Tand
VERIFY authenticity with ApproveIt

Kenneth E. Tand, P.E.
Texas Firm No.: F-2977

KET/sbs
X:\10-113 Keller Branch (Capital One)\Geotech\10113_03.doc

ec: Levinson Alcoser (Mark Fieglein)

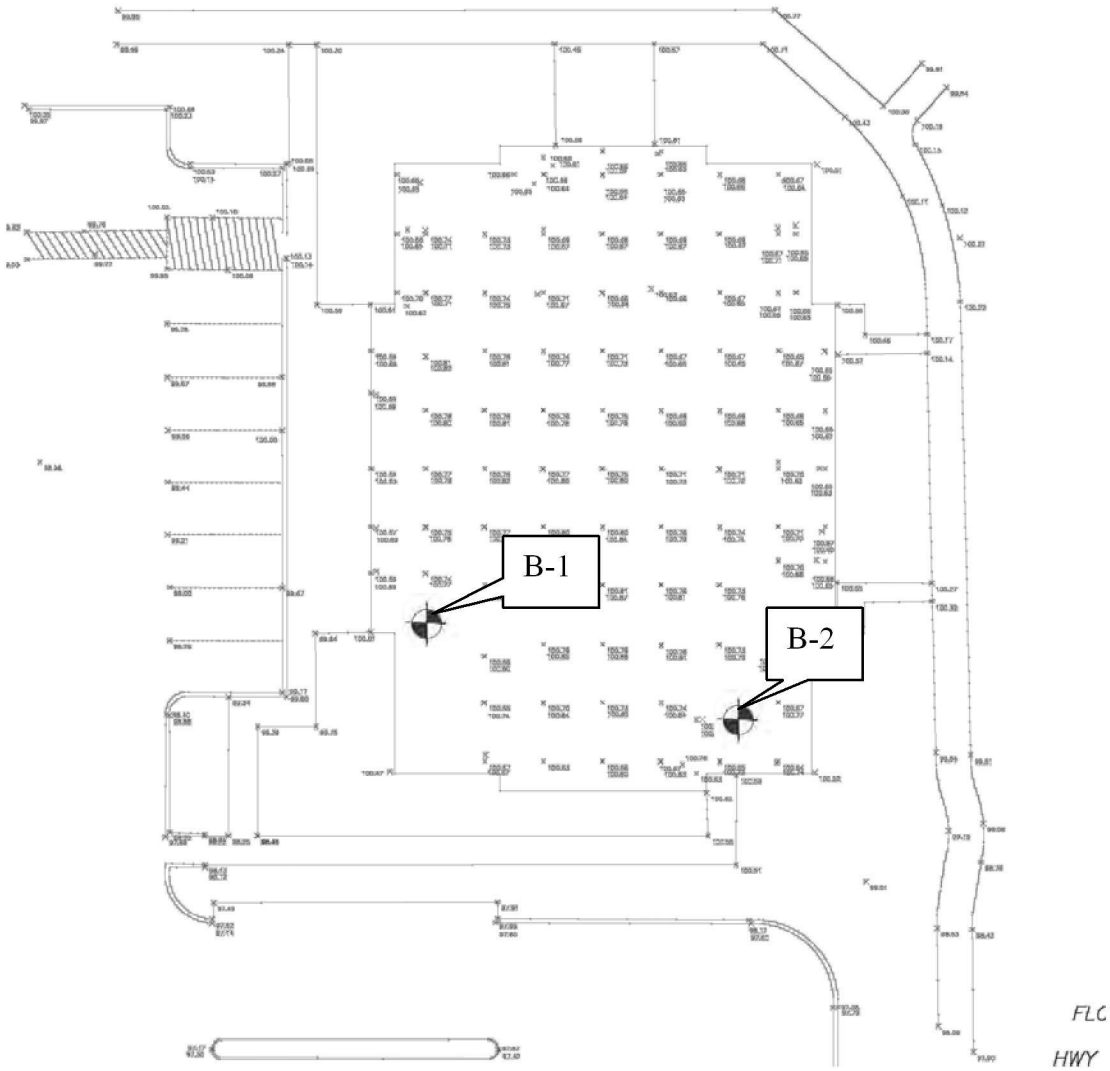
APPENDIX

Boring Location Plan

Log of Borings

Key Symbol Sheet

Summary of Swell & Suction Tests



Boring Location Plan
Keller Branch Bank
Keller, Texas
KETA No.: 10-113

Kenneth E. Tand & Associates, Inc.
2817 Aldine Bender
Houston, Texas 77032

LOG OF BORING NO. B-1

Project Name: Keller Branch Bank
Location: Keller, Texas
KETA No.: 10-113

Depth, feet	Material Description	Samples	SPT Test, Blows/ft.	Pocket Pen, tsf	Compression, tsf	Type Failure	Strain, %	Moisture, %	Dry Density, pcf	Liquid Limit, %	Plasticity Index, %	% Passing #200
	5.8" concrete slab											
	Fill: Very stiff brown sandy clay, with roots & gravel							15		32	15	
	Fill: very stiff dark gray clay/silty clay			2.5				17		44	26	
	-color change to tan & gray at 2', with gravels & plastic							18				
	-stiff below 3'			2.2				23		51	31	
5								17				
	-color change to dark gray & gray at 5', with roots			1.2				21		45	27	
	-color change to tan & gray at 6', with calcareous nodules							20				
				1.4				21		48	27	
								23				
				1.4				17		49	31	
10								24				
	Very stiff to hard tan & light gray clay (weathered marl), blocky			4.5+				21		77	44	
								22				
	Hard tan & light gray shaley clay (weathered marl), blocky							19				
				4.5+				16		53	31	
15	Refusal to hand auger equipment at 15 ft.											
20												

Completion Depth (ft.): 15 ft.
Date Started: 2/21/10
Logged By: LB
Edited By: KT
Free Water Observed During Drilling (ft.): None
Water Level (ft/hr.):

Kenneth E. Tand & Associates, Inc.
2817 Aldine Bender
Houston, Texas 77032

LOG OF BORING NO. B-2

Project Name: Keller Branch Bank
Location: Keller, Texas
KETA No.: 10-113

Depth, feet	Material Description	Pocket Pen, tsf	Moisture, %	Liquid Limit, %	Plasticity Index, %
	5.1" concrete slab				
	Fill: stiff reddish brown & gray sandy clay, with gravels		20	36	22
	Fill: very stiff tan, gray & dark gray clay/silty clay	2.7	16		
	-color change to tan & light gray at 2'		23		
		1.4	20		
	-with fine roots at 4'		21		
5		2.3	22		
	-color change to tan & dark gray at 6', with fine roots		20		
	-color change to tan & light gray at 7'	1.2	24		
			24		
		1.2	22	53	30
10	Very stiff to hard tan & light gray clay (weathered marl), blocky		23		
		3.0	28	75	44
	Hard tan & light gray shaley clay (weathered marl), blocky		24		
			22		
15		4.5+	23	55	35
	Refusal to hand auger equipment at 15 ft.				
20					

Completion Depth (ft.): 15 ft.
Date Started: 2/21/10
Logged By: DT
Edited By: KT
Free Water Observed During Drilling (ft.): None
Water Level (ft/hr.):

KEY TO SOIL CLASSIFICATION AND SYMBOLS

SOIL TYPES


Gravel (GW, GP, GM, GC)


Silt (ML)


Sand (SW, SP)


Sandy Silt (ML)


Silty Sand (SM)


Silty or Sandy Clay (CL)


Clayey Sand (SC)


Clay (CH)

CONSISTENCY OF COHESIVE SOILS

Description	Shear Strength-KSF
Very Soft	Less than 0.25
Soft	0.25 – 0.50
Medium Stiff	0.50 – 1.00
Stiff	1.00 – 2.00
Very Stiff	2.00 – 4.00
Hard	Greater than 4.00

RELATIVE DENSITY OF COHESIONLESS SOIL

Description	Relative Density-%
Very Loose	0 – 15
Loose	15 – 35
Medium Dense	35 – 65
Dense	65 – 85
Very Dense	85 – 100

SOIL STRUCTURE

CALCAREOUS NODULES — Nodules of calcium carbonate
FERROUS NODULES — Nodules of ferrous material
SLICKENSIDED — Having planes of weakness that are slick and glossy
BLOCKY — Having inclined planes of weakness that are frequent and rectangular in pattern
LAMINATED — Composed of thin lenses of varying soil type and texture
FISSURED — Containing shrinkage cracks frequently filled with fine sand
INTERBEDDED — Composed of alternate layers of different soil types

SAMPLE SYMBOLS


Shelby Tube Sample


Standard Penetration Test


Auger or Wash Sample


No Recovery

FAILURE DESCRIPTION (COMPRESSION TEST)

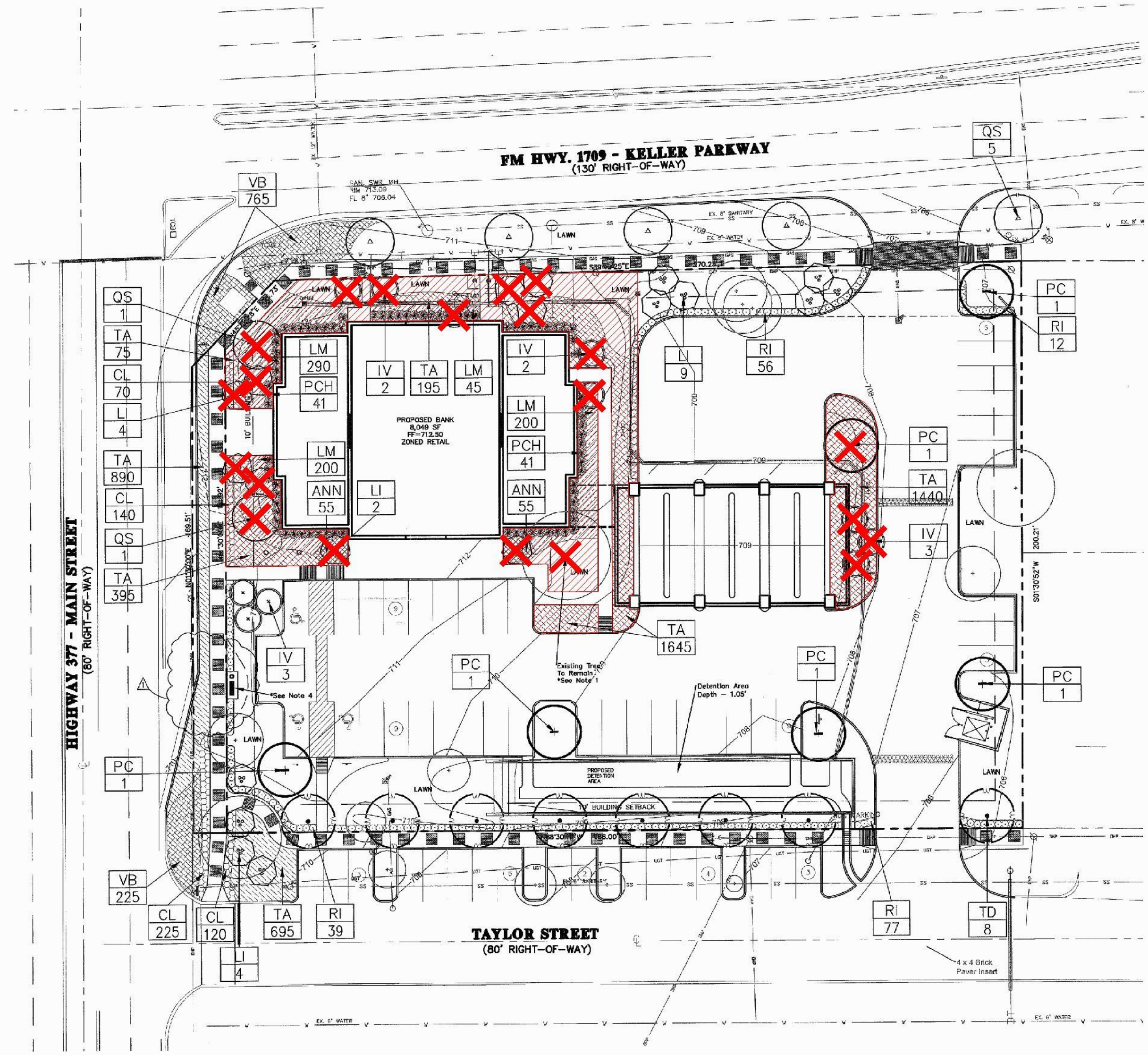
B — Bulge
S — Shear
M/S — Multiple Shear
SLS — Failure surface occurring along slickensided plain
SAS — Failure surface occurring along or in sand seam
SS — Failure surface occurring in or along other secondary structure such as calcareous pockets

TABLE 1
Summary of Swell & Suction Tests

Keller Branch Bank
Keller, Texas
KETA No.: 10-113

Boring No.	Depth -ft-	Moisture Content Initial -%-	Moisture Content Final*	Liquid Limit -%-	Plasticity Index -%-	Suction PF -%-	Confined Swell Tests Swell -%-	Confined Swell Tests Pressure -psi-	Confined Swell Tests Swell -%-	Confined Swell Tests Pressure -psi-
B-1	1 – 2	17.4	18.6	44	26	3.64	1.1	2	1.5	1
	3 – 4	22.6	23.3	51	31	3.58	0.1	3	0.8	2
	5 – 6	21.0	21.8	45	27	3.66	0.3	5	0.8	2
	7 – 8	21.6	22.3	48	27	3.63	0.0	7	0.7	2
	9 – 10	17.1	18.1	49	31	3.70	0.2	8	1.2	2
	11-12	21.2	24.3	77	44	4.02	2.0	10	5.1	2
	14-15	16.4	18.6	53	31	4.16	1.1	12	3.1	2
B-2	9 – 10	22.1	24.0	53	30	4.06	1.1	8	3.0	2
	11-12	27.7	30.8	75	44	4.01	1.3	10	4.5	2
	14-15	23.2	26.2	55	35	4.07	1.8	12	4.8	2

* Under Confining Pressure of 2 psi.



GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

Landscape Tabulations:

Street Tree Requirements:		
-FM 1709 :	Canopy Trees Required: 8 Canopy Trees Provided: 8 Ornamental Trees Required: 11 Ornamental Trees Provided: 11 *See Note 5	REMOVING: 6 - ORNAMENTAL TREES
-US 377(Main Street) :	Canopy Trees Required: 7 Canopy Trees Provided: 5 Ornamental Trees Required: 7 Ornamental Trees Provided: 8 *See Note 6	REMOVING: 2 - CANOPY TREES 4 - ORNAMENTAL TREES
-Taylor St. :	Canopy Trees Required: 10 Canopy Trees Provided: 12	

Interior Landscape Requirements:
Required: 5' Wide Foundation Planting Area
Provided: Varying Width Foundation Planting Area (7' min.)

REMOVING:
FOUNDATION PLANTING AREA

Parking Lot Requirements:		
Screen Requirement:	100% Screening From Adj. Streets	REMOVING:
Screen Provided:	Shrub Screen 3' high @ 30" O.C.	7648 SF LANDSCAPE AREA
Required Landscape Area:	5,500 sf	8 - TREES
Provided Landscape Area:	14,640 sf	
Required Trees:	11	
Provided Trees:	12	

Tree Mitigation Requirements:		
Non-Exempt Protected Trees (in caliper inches):	283"	REMOVING:
Total Protected:	237"	1 - PRESERVED TREE (CALIPER INCHES UNKNOWN)
Total Allowed Removal (20% of total):	56.6"	
Total Removed:	46"	

The SITE PLAN shall NOT be modified without the approval of the Community Development Department.

APPROVED BY COMMUNITY DEVELOPMENT DEPARTMENT

Date 10-12-05

Approved By Richard E. Luedke

NOTES:

1 – REFERENCE SHEET SP-6 FOR EXISTING TREE DETAILS
2 – OWNER OF PROPERTY IS RESPONSIBLE FOR ALL MAINTENANCE OF LANDSCAPED AREAS. REF. UNIFIED DEVELOPMENT CODE, ARTICLE (8.07.D)
3 – ALL LANDSCAPED AREAS WILL BE IRRIGATED AS PER THE DETAILED IRRIGATION PLANS SUBMITTED WITH THE CONSTUCTION PLANS.
4 – BENCH AND TRASHCAN TO MATCH EXISTING BENCHES AND CANS INSTALLED UNDER 'OLD TOWN KELLER – MAIN STREET SUBDISTRICT' GUIDELINES. REF. UNIFIED DEVELOPMENT CODE, ARTICLE (8.04.C.4.b.4)
5 – CANOPY TREES PROVIDED BY 5 NEW AND 3 PRESERVED EXISTING CANOPY TREES. ORNAMENTAL TREES PROVIDED BY 9 NEW AND 2 PRESERVED EXISTING ORNAMENTAL TREES.
6 – PER TXDOT REVIEW, TREES MAY NOT BE PLANTED BETWEEN BOC AND SIDEWALK. HEAVY PLANTING ALONG US 377(MAIN STREET) IS INTENDED TO COMPENSATE.

No.	Date	Revisions	App.
1	10/3/05	REMOVED EXISTING TREE (#1) AND REVISED ...	JWL

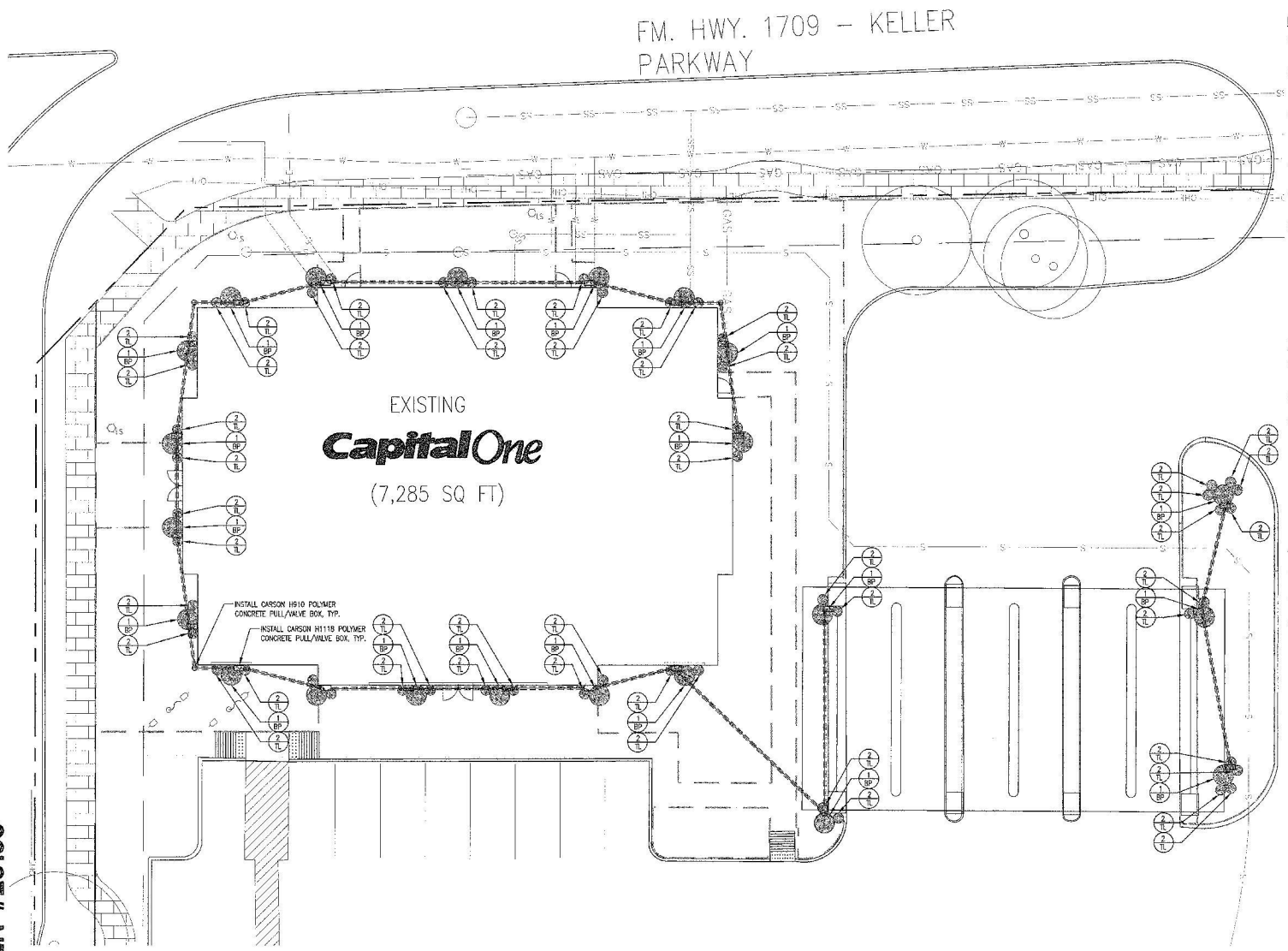
Kimley-Horn and Associates, Inc.
801 Cherry Street, Suite 1025, Unit 11 Fort Worth, Texas 76102
Tel. No. (817) 335-6511 Fax No. (817) 335-5070

HIBERNIA NATIONAL BANK
MAIN STREET
KELLER, TEXAS

LANDSCAPE PLAN

Scale: AS SHOWN
Designed by: JAF
Drawn by: JAF
Checked by: JWL
Date: OCTOBER 2005
Project No. 067244006

SHEET
L–1
OF



IRRIGATION NOTES

1. WITHIN LIMITS OF LANDSCAPE REMOVAL, EXISTING IRRIGATION LINES AND COMPONENTS DOWNSTREAM OF ZONE VALVES SHALL BE REMOVED. LINES SHALL BE CAPPED AT LIMITS OF LANDSCAPE DEMOLITION.
2. EXISTING IRRIGATION MAIN SUPPLY LINE SHALL BE LOCATED AND REMAIN INTACT AS NECESSARY FOR PROPOSED DRIP IRRIGATION CONNECTIONS. SERVICE TO EXISTING IRRIGATION TO REMAIN SHALL NOT BE INTERRUPTED.
3. CONNECTION FITTINGS TO MAIN SUPPLY LINE SHALL BE PLACED IN A CARSON H910 ROUND PULL/VALVE BOX. PULL/VALVE BOX LOCATIONS NOT SHOWN OR THAT DIFFER FROM THOSE SHOWN MUST BE APPROVED PRIOR TO INSTALLATION BY LANDSCAPE ARCHITECT OF RECORD.
4. PRIOR TO HARDSCAPE INSTALLATION, A ZONE VALVE SHALL BE INSTALLED ON MAIN SUPPLY LINE AND PLACED IN A PULL/VALVE BOX.
5. DRIP IRRIGATION WILL BE INSTALLED THROUGH PULL/VALVE BOXES TO IRRIGATE PROPOSED POTTED PLANTS, AS SHOWN ON PLANS. SEE SHEET C-8 FOR DETAILS.
6. NEW ZONE VALVE(S) SHALL BE WIRED BACK TO EXISTING IRRIGATION CONTROLLER VIA EXISTING OR NEW SLEEVES. CONTRACTOR SHALL COORDINATE CONNECTION PATHS PRIOR TO HARDSCAPE INSTALLATION.

LANDSCAPE NOTES

1. PLANTER POTS MAY BE ORDERED FROM: OLD TOWN FIBERGLASS, ATTN: NICK LIMSNUKAN, PHONE: 714.633.3732, 456 SOUTH MONTGOMERY WAY, ORANGE, CA 92868-4015
2. DRIP IRRIGATION SHALL BE INSTALLED TO IRRIGATE PROPOSED POTTED PLANTS, AS SHOWN IN DETAILS, SHEET C-8.
3. SLEEVES SHALL BE INSTALLED BELOW PROPOSED PAVEMENT.

LEGEND

- PROPERTY LINE
- IRRIGATION SLEEVES, 2 - 2" SCHEDULE 40 PVC, TO DAYLIGHT IN PROPOSED PULL/VALVE BOXES
- IRRIGATION LATERAL LINE, 3/4" CLASS 200 PVC TO STUB UP IN PROPOSED PULL/VALVE BOXES
- LIMITS OF LANDSCAPE DEMOLITION
- CARSON H1118 HEAVY DUTY POLYMER CONCRETE 12" STANDARD H-20 BOX
- CARSON H910 HEAVY DUTY POLYMER CONCRETE 10" ROUND H-20 BOX
- OLD TOWN FIBERGLASS PLANTER POT, GRECIAN URN MODEL NO. GR2424, COLOR TO BE DET.
- OLD TOWN FIBERGLASS PLANTER POT, GRECIAN URN MODEL NO. GR4242, COLOR TO BE DET.
- PLANT QUANTITY / PLANT LABEL

PLANT SCHEDULE

SHRUBS/ PERENNIALS				
LABEL	QTY.	COMMON NAME	BOTANICAL NAME	SIZE & CHARACTERISTICS
BP	22	BLUE PLUMBAGO	Plumbago auriculata	7 GAL., MIN. 24" SPREAD, MIN 24" HEIGHT, PLACED AT RATE OF ONE PER 40" PLANTER POT.
TL	98	TRAILING LAVENDER LANTANA	Lantana montevidensis	1 GAL., MIN. 12" SPREAD, MIN 12" HEIGHT, PLACED AT RATE OF TWO PER 24" PLANTER POT.

N

0 10 20 30
SCALE: 1" = 10'

DFW-XX KELLER #29190

FILE INFO(P:\Projects_Foundation Issues\29190.000 Keller Foundation Issues\Drawings\CDs\C-6 Landscape & Irrigation Plan.dwg PLOTTED: Sep 15, 2010 8:51am BY:mfall

CAPITAL ONE
KELLER
FOUNDATION DISTRESS REMEDIATION
S MAIN STREET AT KELLER PKWY
KELLER, TX

CapitalOne Bank

Capital One
Design/Construction, Southern Franchise
201 St. Charles Ave, Suite 2200
New Orleans, LA 70170

LEVINSON · ALCOSER
ASSOCIATES, L.P.
TEXAS REGISTERED ENGINEERING FIRM F-10364
1177 W. Loop South, Suite 900 Houston, Texas 77027
tel 713.787.0000 fax 713.850.8250
Architecture • Planning • Engineering
Interior Design • Landscape Architecture

REVISIONS	REV.BY:

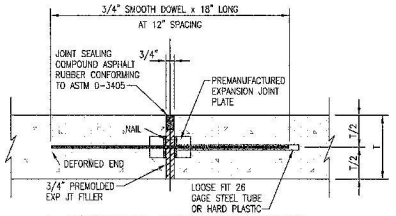
STATE OF TEXAS · AMANDA ROOME · 15410 · LICENSED LANDSCAPE ARCHITECT
9-15-10

REGISTERED LANDSCAPE ARCHITECT · AMANDA D. ROOME · NO. 2457 · STATE OF TEXAS
9-18-10

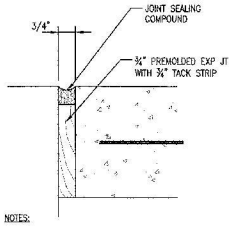
LAALP Project Number: 29190.002

LANDSCAPING & IRRIGATION PLAN
C-6

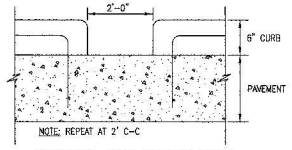
Issued For Permit:	9/15/2010
Issued For Pricing:	9/15/2010
Issued For Construction:	*



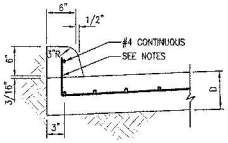
TYPICAL EXPANSION JOINT
NTS



ISOLATION JOINT DETAIL
NTS

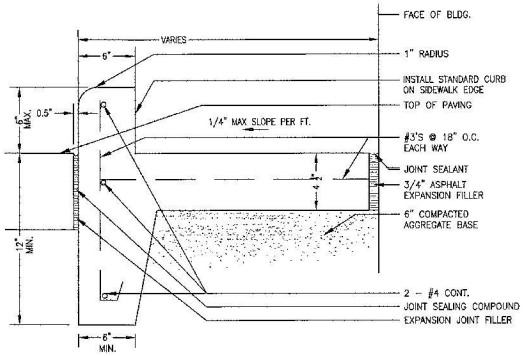


SECTIONAL CURB OPENING DETAIL
NTS

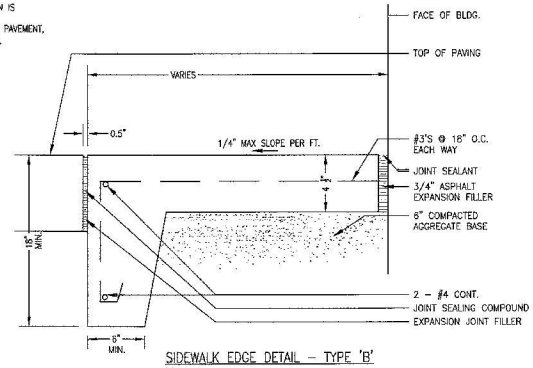


NOTE:
1. SET #4 DOWELS, 25" LONG AT 12" C-C WHEN PAVEMENT SECTION IS POURED.
2. WHEN CONCRETE CURB IS TO BE PLACED ON EXISTING CONCRETE PAVEMENT, USE #4 @ 18" x 10" LONG, DOWELED AND SET IN EPOXY GROUT.

STANDARD CONCRETE CURB
NTS



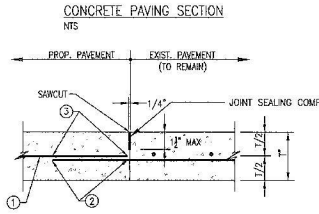
SIDEWALK EDGE DETAIL – TYPE 'C'
NTS



SIDEWALK EDGE DETAIL – TYPE 'B'
NTS

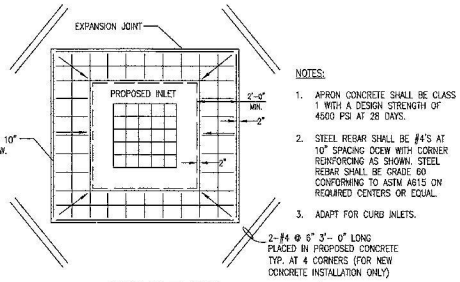
CONCRETE PAVING SECTION
NTS

CONTROL JOINT DETAIL
NTS



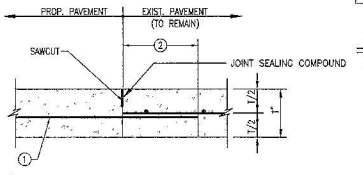
① REINFORCING CENTERED IN PROPOSED PAVEMENT, 3" CLEAR AT EDGES.
② EXPOSE 15" EXISTING STEEL
③ 12" BAR LAP MINIMUM

CONCRETE TO CONCRETE STANDARD PAVEMENT TIE-IN FOR UTILITY TRENCH REPAIR
NTS



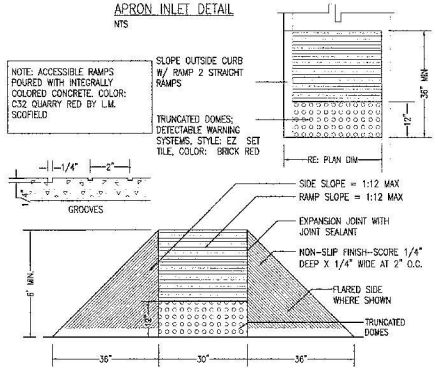
NOTES:
1. APRON CONCRETE SHALL BE CLASS 1 WITH A DESIGN STRENGTH OF 4500 PSI AT 28 DAYS.
2. STEEL REBAR SHALL BE #4'S AT 10" SPACING OCEW WITH CORNER REINFORCING AS SHOWN. STEEL REBAR SHALL BE GRADE 60 CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.
3. ADAPT FOR CURB INLETS.

APRON INLET DETAIL
NTS

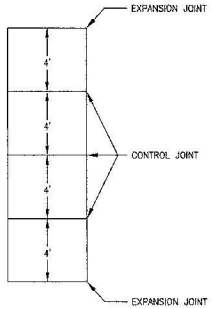


① REINFORCING CENTERED IN PROPOSED PAVEMENT, 3" CLEAR AT EDGES.
② DOWEL INTO EXISTING CONCRETE AT LEAST 12" AND EPOXY REBAR IN PLACE ON 12" O.C.

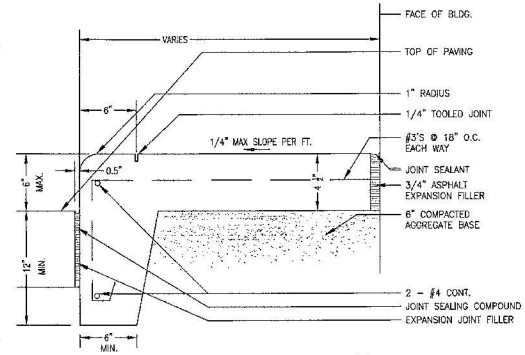
CONCRETE TO CONCRETE STANDARD PAVEMENT TIE-IN FOR FULL DEPTH SAWCUT
NTS



ACCESSIBLE RAMP DETAIL
NTS



SIDEWALK JOINT SPACING
NTS



SIDEWALK EDGE DETAIL – TYPE 'A'
NTS

CAPITAL ONE
KELLER
FOUNDATION DISTRESS
REMEDIATION

S MAIN STREET AT KELLER PKWY
KELLER, TX

Capital One
Design/Construction, Southern Franchise
201 St. Charles Ave, Suite 2200
New Orleans, LA 70170

LEVINSON · ALCOSER
ASSOCIATES, L.P.
TEXAS REGISTERED ENGINEERING FIRM F-10384
1177 W. Loop South, Suite 900 Houston, Texas 77027
tel 713.787.0000 fax 713.850.8250
Architecture • Planning • Engineering
Interior Design • Landscape Architecture

REVISIONS	REV.BY:

STATE OF TEXAS
MARK W. FIEGLEN
88906
LICENSED PROFESSIONAL ENGINEER
9/15/10

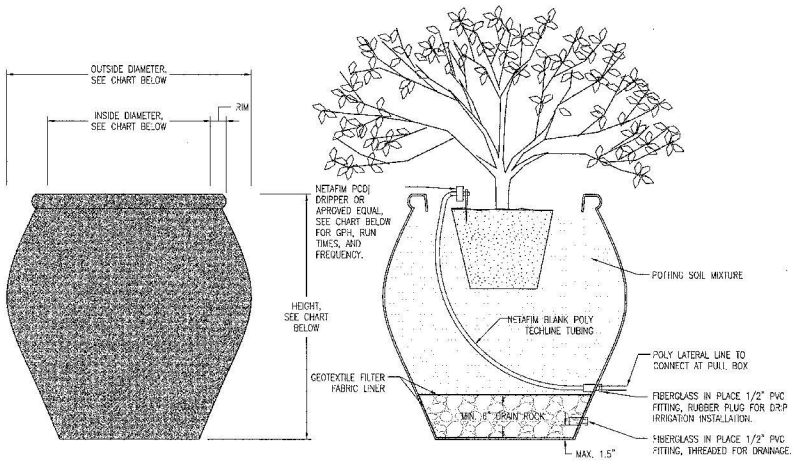
LAALP Project Number: 29190.002

DETAILS

C-7

Issued For Permit:	9/15/2010
Issued For Pricing:	9/15/2010
Issued For Construction:	*

DFW-XX KELLER #29190



OLD TOWN FIBERGLASS MODEL: GRECIAN URN

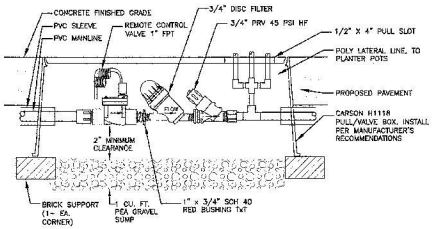
MODEL NO.	OUTSIDE DIAMETER	INSIDE DIAMETER	HEIGHT	RIM	WEIGHT (LBS)
GR2424	24"	16"	24"	2"	26
GR4242	42"	30"	42"	3"	84

NETAFIM PCDJ DRIPPERS

PLANTER MODEL	GPH	RUN TIME	FREQUENCY
GR2424	0.5	4 MIN.	DAILY
GR4242	1.0	6 MIN.	DAILY

PLANTERS MAY BE ORDERED FROM:
OLD TOWN FIBERGLASS
ATTN: NICK LIMSNUKAN
PHONE: 714.633.3732
456 SOUTH MONTGOMERY WAY
ORANGE, CA 92868-4015

PLANTER POT AND DRIP IRRIGATION DETAIL
NTS



LOW VOLUME CONTROL ZONE ASSEMBLY P/N LVCZ10075-HF
NTS

DFW-XX KELLER #29190

CAPITAL ONE
KELLER
FOUNDATION DISTRESS REMEDIATION
S MAIN STREET AT KELLER PKWY
KELLER, TX

Capital One Bank
Capital One
Design/Construction, Southern Franchise
201 St. Charles Ave, Suite 2200
New Orleans, LA 70170

LEVINSON · ALCOSER
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TEXAS REGISTERED ENGINEERING FIRM F-10364
1177 W. Loop South, Suite 900 Houston, Texas 77027
tel 713.787.0000 fax 713.850.8250
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Interior Design • Landscape Architecture

REVISIONS	REV.BY:

STATE OF TEXAS — AMANDA DOOMS — 15410 — LICENSED INTERIOR DESIGNER — 9.15.10
REGISTERED LANDSCAPE ARCHITECT — AMANDA D. ROSS — 2357 — STATE OF TEXAS — 9-15-10

LAALP Project Number: 29190.002

LANDSCAPE AND IRRIGATION DETAILS
C-8

Issued For Permit:	9/15/2010
Issued For Pricing:	9/15/2010
Issued For Construction:	

EXHIBIT "B"

Capital One Bank

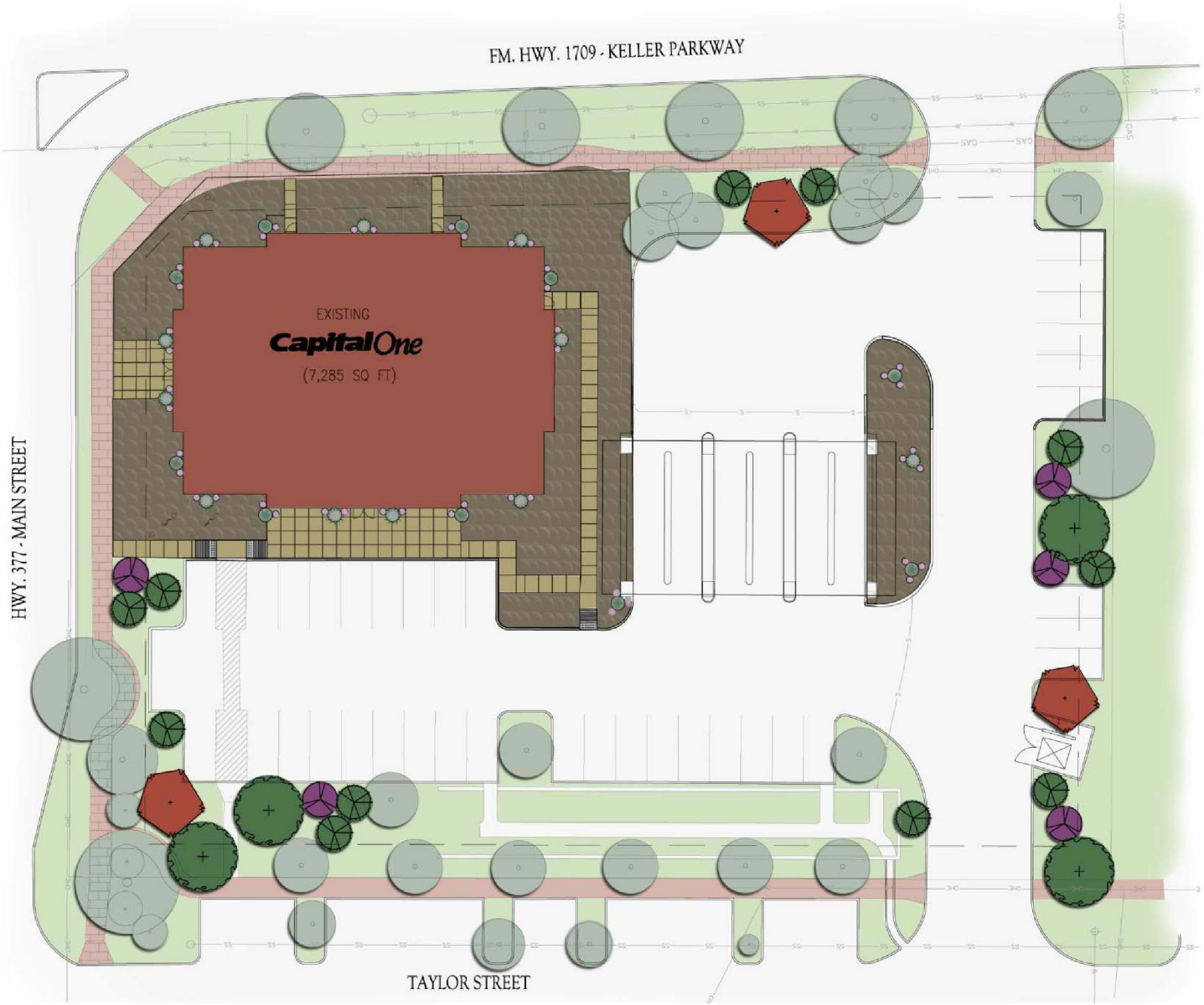
Southeast Corner of South Main St. & Keller Parkway
Keller, Texas

Foundation Distress Remediation

November 16, 2010

LEVINSON · ALCOSER
ASSOCIATES, L.P.

Capital One Bank



NORTH

0 15 30 45

SCALE: 1" = 30'

PROPOSED LEGEND

OLD TOWN FIBERGLASS 42" & 24" GRECIAN URNS, PLANTED WITH SAGO PALMS, BLUE POINT JUNIPER, LANTANA AND SEASONAL COLOR

EUROPEAN FAN STAMPED, STAIN CONCRETE. SIM STAIN COLOR: MAHOGANY

SCORED AND STAINED CONCRETE SIDEWALK. SIM STAIN COLOR: PERSIMMON

4 – LIVE OAK, Quercus virginiana, 2" CAL.

3 – TEXAS RED OAK, Quercus texana, 2" CAL.

5 – EASTERN REDBUD, Cercis canadensis, 1.25" CAL.

11 – YAUPON HOLLY, Ilex vomitoria, 1.25" CAL.

TOTAL CANOPY TREES = 7
TOTAL ORNAMENTAL TREES = 16
TOTAL CALIPER INCHES = 34

LEVINSON · ALCOSER
ASSOCIATES, L.P.

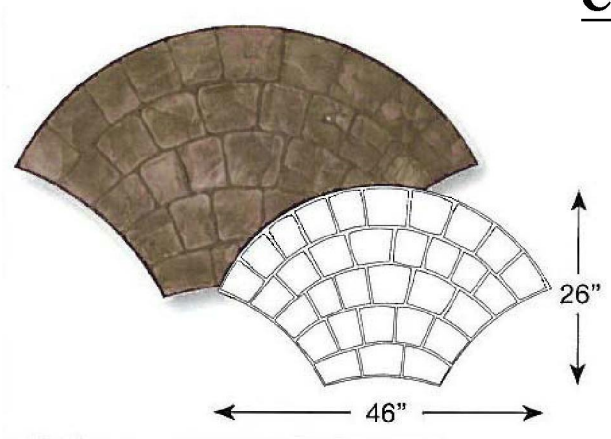
VARIANCE EXHIBIT

CAPITAL ONE BANK
KELLER, TEXAS
NOVEMBER 16, 2010

Capital One Bank

PROPOSED COLORS & MATERIALS

ACCENT PAVING STAMP



EUROPEAN FAN

RAMPS

RUST

TRUNCATED DOMES:
COLONIAL RED

SIDEWALKS

PERSIMMON

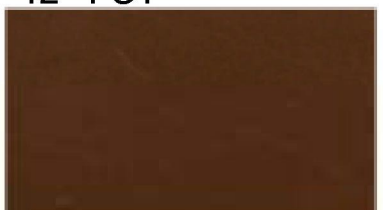
ACCENT PAVING

MAHOGANY

24” POT

Taupe 19-(add suffix G, M, S or O)

42” POT



Dark Wine 14-(add suffix G, M, S or O)

GRECIAN URN

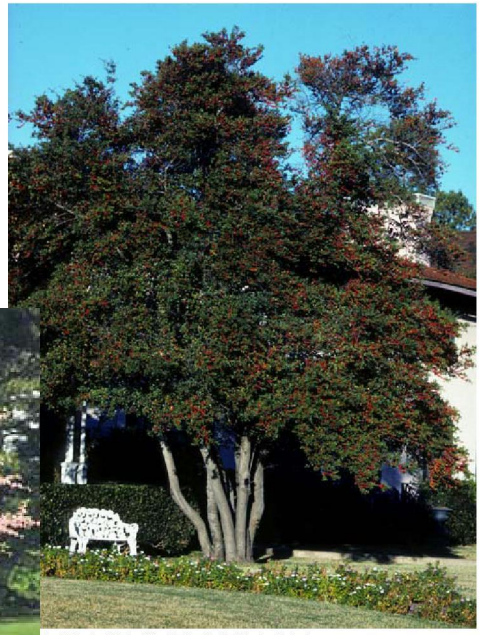
PROPOSED PLANT PALLET

CANOPY TREES

LIVE OAK

TEXAS RED OAK

ORNAMENTAL TREES

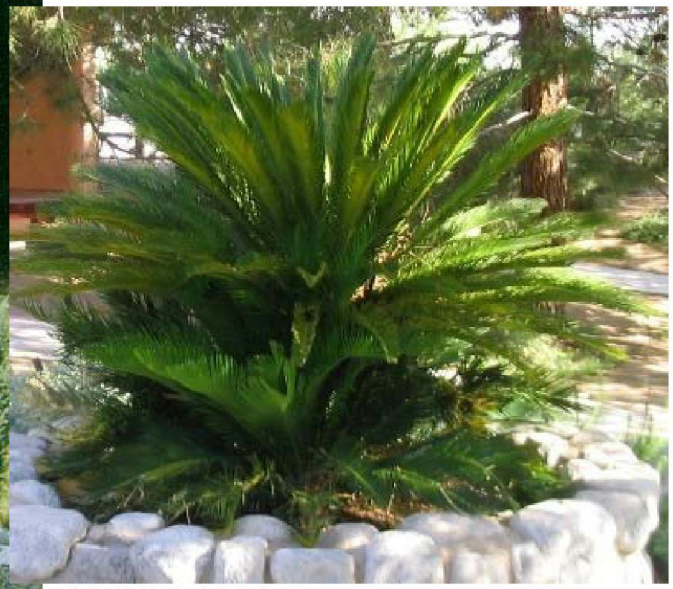


YAUPON HOLLY

EASTERN REDBUD

POTTED PLANTS

BLUE POINT JUNIPER



SAGO PALM

POTTED ACCENT

TRAILING LANTANA

LEVINSON · ALCOSER
ASSOCIATES, L.P.

PERSPECTIVE RENDERING
CAPITAL ONE BANK
KELLER, TEXAS
NOVEMBER 16, 2010

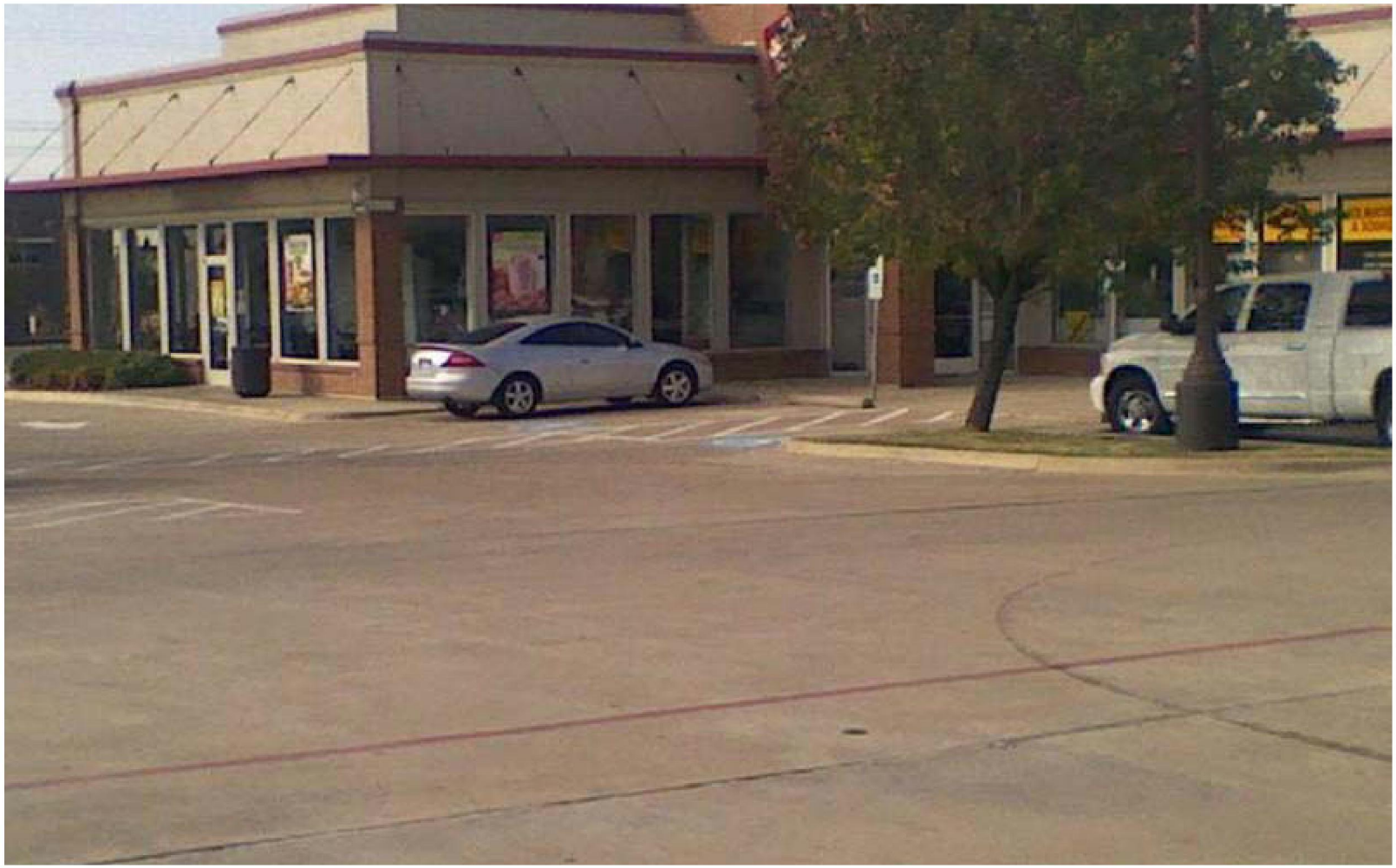
Capital One Bank

NEIGHBORING BUIDLING

SOUTHWEST CORNER OF SOUTH MAIN STREET AND KELLER PARKWAY

NEIGHBORING BUIDLING

SOUTHWEST CORNER OF SOUTH MAIN STREET AND KELLER PARKWAY



NEIGHBORING BUIDLING

NORTHWEST CORNER OF SOUTH MAIN STREET AND KELLER PARKWAY

NEIGHBORING BUIDLING

NORTHWEST CORNER OF SOUTH MAIN STREET AND KELLER PARKWAY