

# BUTTERCUP RETAIL

## PRELIMINARY PLAT ONLY-NOT FOR RECORDATION

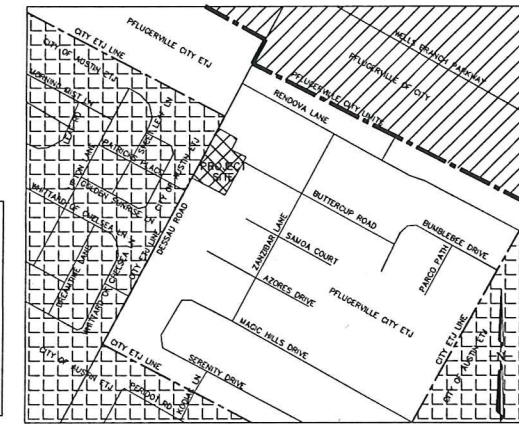
### E.T.J. BUTTERCUP ROAD PFLUGERVILLE, TRAVIS COUNTY, TEXAS

CLIENT  
**GRADS, LLC.**  
1147 C.R. 227, GIDDINGS, TX 78942  
(512) 507-4108 FAX (979) 542-5172

CONSULTING ENGINEERS

**PROFESSIONAL StruCIVIL ENGINEERS**

CONSULTING CIVIL AND STRUCTURAL ENGINEERS  
12710 RESEARCH BLVD., SUITE 390, AUSTIN, TEXAS 78759  
(512) 238-6422 FAX (512) 258-8095



**SITE LOCATION MAP**  
GRID #P-35 & MAPSCO PAGE #467

**STANDARD PRELIMINARY PLAT NOTES:**

1. THIS PLAT LIES WITHIN THE CITY OF PFLUGERVILLE ETJ.
2. WATER AND WASTEWATER SHALL BE PROVIDED BY CITY OF PFLUGERVILLE.
3. A 10-FT. PUBLIC UTILITY EASEMENT ADJACENT TO ALL PUBLIC RIGHT-OF-WAY IS HEREBY DEDICATED.
4. STREETLIGHTS SHALL BE INSTALLED AND IN FULL WORKING ORDER WITH THE PUBLIC IMPROVEMENTS. ALL STREETLIGHTS SHALL BE IN CONFORMANCE WITH ALL CITY OF PFLUGERVILLE ORDINANCES INCLUDING BUT NOT LIMITED TO BEING DOWNCAST AND FULL CUT OFF TYPE.
5. A SIX (6) FOOT WIDE SIDEWALK SHALL BE PROVIDED AT TIME OF SITE DEVELOPMENT.
6. THIS SUBDIVISION IS SUBJECT TO ALL CITY OF PFLUGERVILLE ORDINANCES RELATED TO TREE PRESERVATION.
7. NO OBJECTS INCLUDING BUT NOT LIMITED TO BUILDINGS, FENCES, OR LANDSCAPING SHALL BE ALLOWED IN A DRAINAGE EASEMENT.
8. THE PROPERTY OWNER SHALL PROVIDE ACCESS TO DRAINAGE AND UTILITY EASEMENTS AS MAY BE NECESSARY AND SHALL NOT PROHIBIT ACCESS FOR INSPECTION, OPERATION, AND MAINTENANCE.
9. ALL DRAINAGE EASEMENTS ON PRIVATE PROPERTY SHALL BE MAINTAINED BY THE PROPERTY OWNER OR HIS/HER ASSIGNS.
10. ALL ELECTRIC UTILITY INFRASTRUCTURE INCLUDING BUT NOT LIMITED TO TELEPHONE, CABLE TELEVISION, ELECTRIC UTILITY LATERAL AND SERVICE LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF PFLUGERVILLE ENGINEERING DESIGN GUIDELINES.
11. LOT #1, #2 & #3 ARE REQUIRED TO PROVIDE ONSITE DETENTION AND WATER QUALITY PONDS PER CITY OF PFLUGERVILLE AND TRAVIS COUNTY REQUIREMENTS AT THE TIME OF SITE DEVELOPMENT.

LIST OF DRAWINGS	
1	COVER SHEET
2	SITE LAYOUT
3	GRADING SITE PLAN
4	EROSION/ SEDIMENTATION/ T.P. PLAN
5	DRAINAGE & CALCULATIONS
6	WATER & WASTEWATER PLAN
7	FIRE LANE SITE PLAN

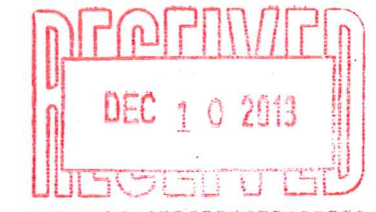
LAND USE TABLE

LOT NO.	ACREAGE	USE
LOT 1	2.019	COMMERCIAL DEVELOPMENT
LOT 2	0.705	COMMERCIAL DEVELOPMENT
LOT 3	(3.93)	COMMERCIAL DEVELOPMENT
0.392 ACRE FOR CUL-DE-SAC RIGHT-OF-WAY		

REVISIONS / CORRECTIONS

NO.	DESCRIPTION	REVISE (R) ADD (A) VOID (V) SHEET NOS.	TOTAL NO OF SHEETS IN PLAN SET	NET CHANGE IMP. COVER SQ.FT.	TOTAL SITE IMP. COVER SQ.FT. / %	APPROVAL / DATE	DATE IMAGED

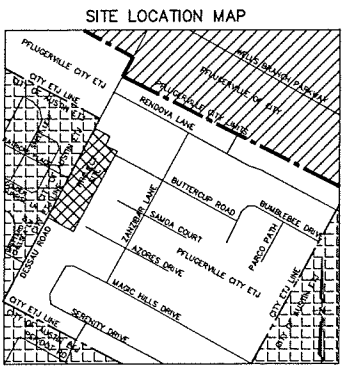
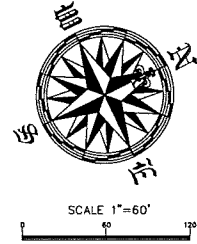
DATE OF SUBMITTAL : 09/23/2013  
 PROJECT TITLE : BUTTERCUP RETAIL CENTER  
 STREET ADDRESS : BUTTERCUP ROAD, PFLUGERVILLE, TRAVIS COUNTY, TEXAS  
 PROPERTY OWNER : CUNNINGHAM SUSANN SCHOEN  
 2016 KENWOOD AVE, AUSTIN, TEXAS 78704-4438  
 CONTACT: ADAM AWAD (512) 507-4108 FAX (979) 542-5172  
 DESIGNER COMPANY : PROFESSIONAL StruCIVIL ENGINEERS  
 12710 RESEARCH BLVD., SUITE #390, AUSTIN, TEXAS 78759.  
 (512) 238-6422  
 CONTACT: MIRZA TAHIR BAIG  
 NAME OF WATERSHED : GILLELAND CREEK TRIBUTARY 2  
 AND CLASSIFICATION : N/A  
 100-YEAR FLOOD PLAIN : NO PORTION OF THE PROPERTY DESCRIBED HEREON IS LOCATED IN ZONE "X" AS SHOWN ON THE FEDERAL INSURANCE ADMINISTRATION FLOOD HAZARD BOUNDARY MAP, PANEL NO. 48453C 0270 H, DATED: SEPTEMBER 26, 2008.  
 LEGAL DESCRIPTION OF PROPERTY LOT : 2.929 ACRES, ALEXANDER WALTERS SURVEY 67 ABSTRACT 791, CITY OF PFLUGERVILLE, TRAVIS COUNTY, TEXAS.



NOTE: ENGINEER'S REPORT AND HYDROLOGY ANALYSIS DATED AUGUST 5, 2013 BY PROFESSIONAL STRUCIVIL ENGINEERS, INC.

NO.	REVISION DESCRIPTION	REVIEWED BY:	DATE

**PROFESSIONAL LAND SURVEYORS**  
 C. RICHARD RALPH, R.P.L.S. NO. 4758  
 1515 CHESTNUT STREET  
 BASTROP, TEXAS 78602  
 PH: (512) 303-0952  
 FAX: (512) 332-0961  
 PROF.LANDSURV@AOL.COM



6.859 ACRES, ALEXANDER WALTERS SURVEY 67 ABSTRACT 791  
CITY OF PFLUGERVILLE  
TRAVIS COUNTY, TEXAS

Revision	Date	Description
0		ISSUED FOR APPROVAL
1		ISSUED FOR APPROVAL
2		ISSUED FOR APPROVAL
3		ISSUED FOR APPROVAL
4		ISSUED FOR APPROVAL

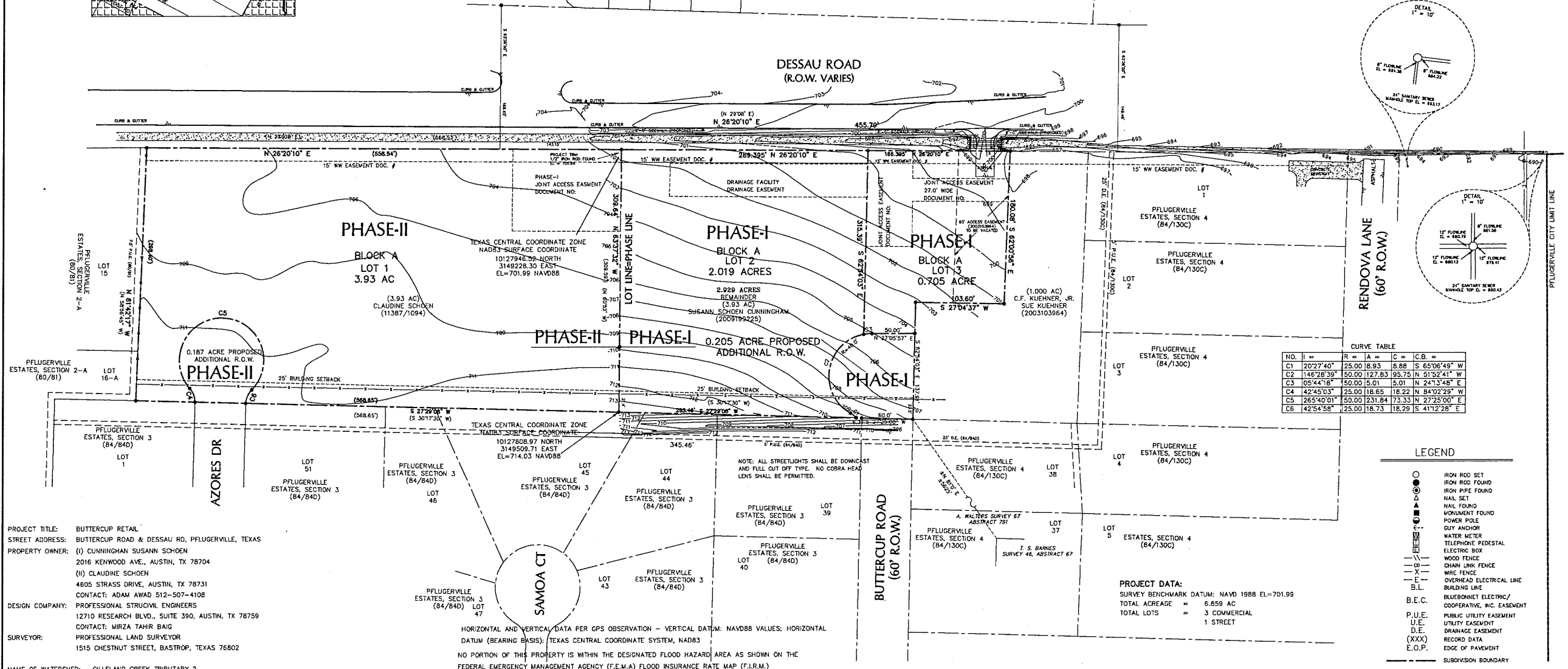
**PROFESSIONAL STRUCTURAL ENGINEERS, INC.**  
CONSULTING CIVIL AND STRUCTURAL ENGINEERS  
12710 RESEARCH BLVD., SUITE 300, AUSTIN, TX 78759 | TEL: 512.238.6422 | FAX: 512.238.6095

**PROJECT:** BUTTERCUP RETAIL, BUTTERCUP RD & DESSAU ROAD, PFLUGERVILLE, TX 78660

**THE:** SITE LAYOUT PLAN

PROJECT: 29470

SHEET: 2 OF 7



**CURVE TABLE**

NO. II =	R =	A =	C =	C.B. =
C1	20'27'40"	25.00	8.93	8.88 S 65°06'49" W
C2	146'28'39"	50.00	127.83	95.75 N 51°52'41" W
C3	05'44'18"	50.00	5.01	N 24'13'48" E
C4	42'45'03"	25.00	18.65	118.22 N 84°02'29" W
C5	265'40'01"	50.00	231.84	173.33 N 27°25'00" E
C6	42'54'58"	25.00	18.73	118.29 S 41°12'26" E

**LEGEND**

- IRON ROD SET
- IRON ROD FOUND
- IRON PIPE FOUND
- NAIL SET
- NAIL FOUND
- MONUMENT FOUND
- POWER POLE
- GUY ANCHOR
- WATER METER
- TELEPHONE PEDESTAL
- ELECTRIC BOX
- WOOD FENCE
- CHAIN LINK FENCE
- WIRE FENCE
- OVERHEAD ELECTRICAL LINE
- BUILDING LINE
- B.L.C.
- BLUEBONNET ELECTRIC/COOPERATIVE, INC. EASEMENT
- P.U.E.
- U.E.
- D.E.
- (XXX)
- E.O.P.
- SUBDIVISION BOUNDARY

**PROJECT TITLE:** BUTTERCUP RETAIL  
**STREET ADDRESS:** BUTTERCUP ROAD & DESSAU RD, PFLUGERVILLE, TEXAS  
**PROPERTY OWNER:** (I) CUNNINGHAM SUSANN SCHOEN, 2016 KENWOOD AVE., AUSTIN, TX 78704  
(II) CLAUDINE SCHOEN, 4605 STRASS DRIVE, AUSTIN, TX 78731  
**DESIGN COMPANY:** PROFESSIONAL STRUCTURAL ENGINEERS, 12710 RESEARCH BLVD., SUITE 300, AUSTIN, TX 78759  
**SURVEYOR:** MIRZA TAHIR BAIG, PROFESSIONAL LAND SURVEYOR, 1515 CHESTNUT STREET, BASTROP, TEXAS 78602

**NAME OF WATERSHED:** GILLELAND CREEK TRIBUTARY 2

**100-YEAR FLOOD PLAIN:** NO PORTION OF THE PROPERTY DESCRIBED HEREON IS LOCATED IN ZONE "X" AS SHOWN ON THE FEDERAL INSURANCE ADMINISTRATION FLOOD HAZARD BOUNDARY MAP, PANEL NO. 48453C 0270 H, DATED: SEPTEMBER 26, 2008.

**LEGAL DESCRIPTION:**  
(1) 2.929 ACRES, ALEXANDER WALTERS SURVEY 67 ABSTRACT 791, CITY OF PFLUGERVILLE, TRAVIS COUNTY, TEXAS.  
(2) 3.93 ACRES, ALEXANDER WALTERS SURVEY 67 ABSTRACT 791, CITY OF PFLUGERVILLE, TRAVIS COUNTY, TEXAS.

**GENERAL NOTES:**

1. DRAINAGE EASEMENTS
  - A. NO OBJECTS, INCLUDING BUT NOT LIMITED TO, BUILDINGS, FENCES, OR LANDSCAPING SHALL BE ALLOWED IN A DRAINAGE EASEMENT EXCEPT AS APPROVED BY TRAVIS COUNTY.
  - B. PROPERTY OWNER AND/OR HIS/HER ASSIGNS SHALL PROVIDE FOR ACCESS TO THE DRAINAGE EASEMENT AS MAY BE NECESSARY AND SHALL NOT PROHIBIT ACCESS BY TRAVIS COUNTY FOR INSPECTION OR MAINTENANCE OF SAID EASEMENT.
  - C. ALL DRAINAGE EASEMENTS ON PRIVATE PROPERTY SHALL BE MAINTAINED BY THE OWNER AND/OR HIS/HER ASSIGNS.
2. A TRAVIS COUNTY SITE DEVELOPMENT PERMIT IS REQUIRED PRIOR TO CONSTRUCTION ON THIS SITE.
3. PARKLAND FEES WILL BE SATISFIED PRIOR TO FINAL PLAT APPROVAL.
4. THIS SUBDIVISION IS IN THE COUNTY OF TRAVIS AND IN CITY OF PFLUGERVILLE'S EXTRA TERRITORIAL JURISDICTION.
5. THIS SUBDIVISION REQUIRES DETENTION AND WATER QUALITY PONDS FOR EACH LOT IN ACCORDANCE WITH TRAVIS COUNTY CHAPTER 82.945.

**LAND USE TABLE**

LOT NO.	ACREAGE	USE
LOT 1	2.019	COMMERCIAL DEVELOPMENT
LOT 2	0.705	COMMERCIAL DEVELOPMENT
LOT 3	(3.93)	COMMERCIAL DEVELOPMENT
0.392 ACRE FOR CUL-DE-SAC RIGHT-OF-WAY		

**PROFESSIONAL LAND SURVEYORS**

1515 CHESTNUT STREET, BASTROP, TEXAS 78602

PH: (512) 303-0952  
FAX: (512) 332-0951  
PROFLANDSURV@aol.com

C. RICHARD RALPH  
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 4758  
PROFESSIONAL LAND SURVEYORS  
1515 CHESTNUT STREET, BASTROP, TEXAS 78602

DATE: 11/12/2013

Table 2 - Culvert Summary Table: upstream culvert

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Outlet Elevation (ft)	Flow Type	Normal Depth (ft)	Outlet Depth (ft)	Talwater Depth (ft)	Outlet Velocity (ft/s)	Talwater Velocity (ft/s)
0.00	0.00	709.62	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3.00	3.00	707.12	0.480	0.002	1.511	0.117	0.260	1.065	0.704
6.00	6.00	707.58	0.782	0.003	1.511	0.230	0.413	1.522	0.866
7.80	7.80	707.80	0.937	1.183	1.511	0.295	0.492	1.736	1.123
12.00	12.00	708.23	1.109	1.612	1.511	0.426	0.656	2.146	1.366
15.00	15.00	708.48	1.289	1.837	1.511	0.490	0.760	2.390	1.568
18.00	18.00	708.74	1.454	2.089	1.511	0.528	0.829	2.608	1.746
21.00	21.00	708.92	1.610	2.301	1.511	0.609	0.962	2.808	1.872
24.00	24.00	709.12	1.765	2.497	1.511	0.681	1.040	2.966	2.009
27.00	27.00	709.30	1.896	2.680	1.511	0.754	1.123	3.155	2.128
30.00	30.00	709.47	2.000	2.853	1.511	0.753	1.207	3.313	2.264

Inlet Elevation (invert): 706.62 ft. Outlet Elevation (invert): 706.00 ft  
 Culvert Length: 44.00 ft. Culvert Slope: 0.0141

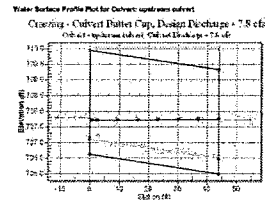
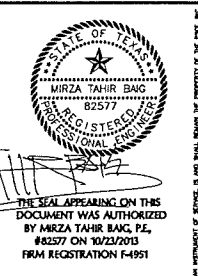
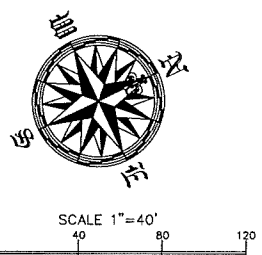


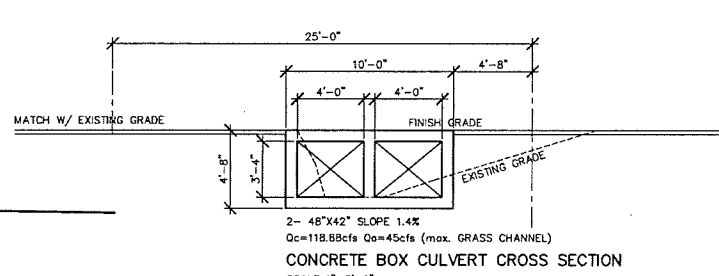
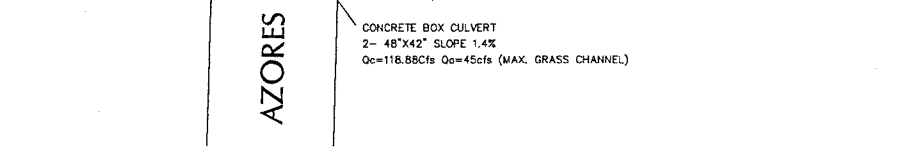
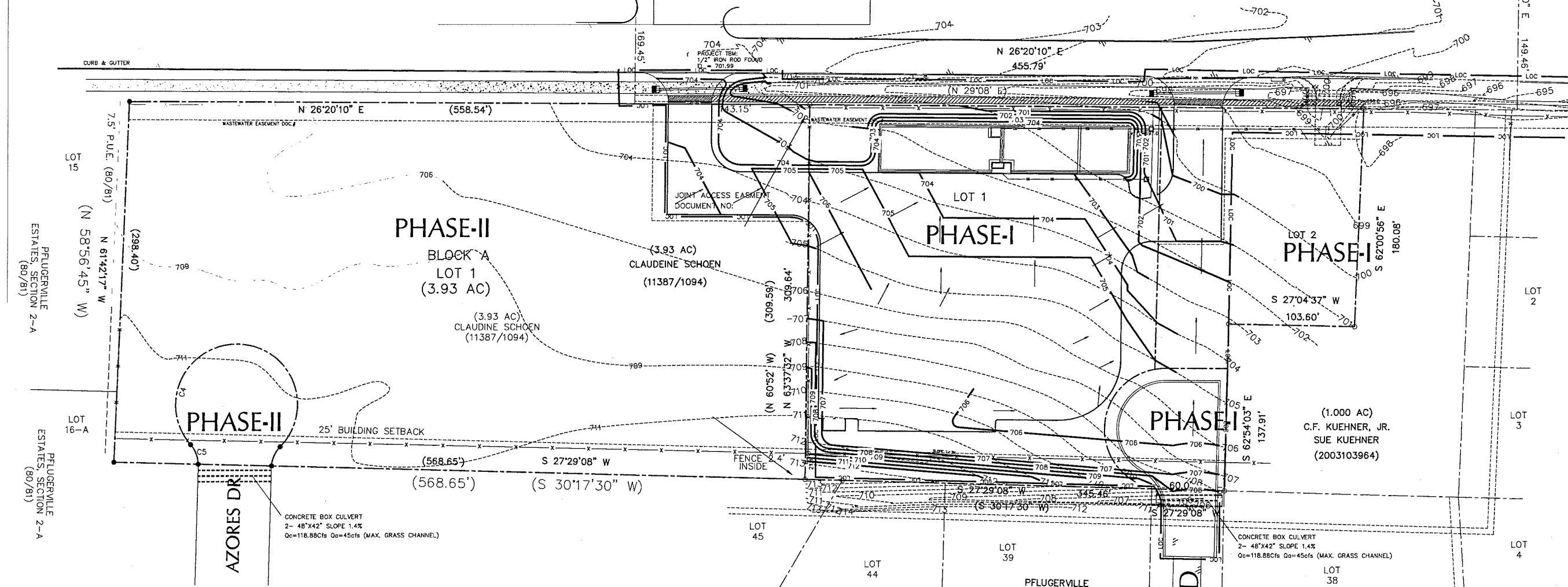
Table 2 - Downstream Channel Rating Curve (Crossing: Culvert Butler Cup)

Flow (cfs)	Water Surface Elevation (ft)	Water Surface Elevation (ft)	Water Surface Elevation (ft)	Water Surface Elevation (ft)
0.00	706.00	706.00	706.00	706.00
3.00	707.12	707.12	707.12	707.12
6.00	707.58	707.58	707.58	707.58
7.80	707.80	707.80	707.80	707.80
12.00	708.23	708.23	708.23	708.23
15.00	708.48	708.48	708.48	708.48
18.00	708.74	708.74	708.74	708.74
21.00	708.92	708.92	708.92	708.92
24.00	709.12	709.12	709.12	709.12
27.00	709.30	709.30	709.30	709.30
30.00	709.47	709.47	709.47	709.47

Table 2 - Downstream Channel Rating Curve (Crossing: Culvert Butler Cup)  
 Project Name: Pflugerville Estates, Section 2-A  
 Project No.: 29470  
 Drawing No.: 3  
 Date: 10/22/2013  
 Scale: 1"=40'



DESSAU ROAD



Project: BUTTERCUP RETAIL, BUTTERCUP RD & DESSAU ROAD, PFLUGERVILLE, TX 78660

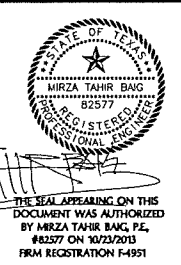
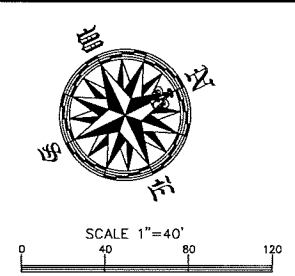
This: GRADING & DRAINAGE SITE PLAN

Project No.: 29470

Sheet: 3 OF 7

Revision	Date	Description
1	08/05/13	ISSUED FOR APPROVAL
2	10/04/13	ISSUED FOR APPROVAL
3	10/22/13	ISSUED FOR APPROVAL
4		
5		
6		
7		
8		
9		

PROFESSIONAL STRUCTURAL ENGINEERS, INC.  
 CONSULTING CIVIL AND STRUCTURAL ENGINEERS  
 12710 RESEARCH BLVD., SUITE 300, AUSTIN, TX 78759 | TEL: 512.238.8421 | FAX: 512.238.8096



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MIRZA TAHIR BAQ, P.E. #82577 ON 10/23/2013 FROM REGISTRATION F-4951

Revision	Date	Description
6		
5	11/23/13	ISSUED FOR APPROVAL
4	10/28/13	ISSUED FOR APPROVAL
3	10/28/13	ISSUED FOR APPROVAL
2	08/05/13	ISSUED FOR APPROVAL
1	08/05/13	ISSUED FOR APPROVAL
0	03/27/13	ISSUED FOR APPROVAL

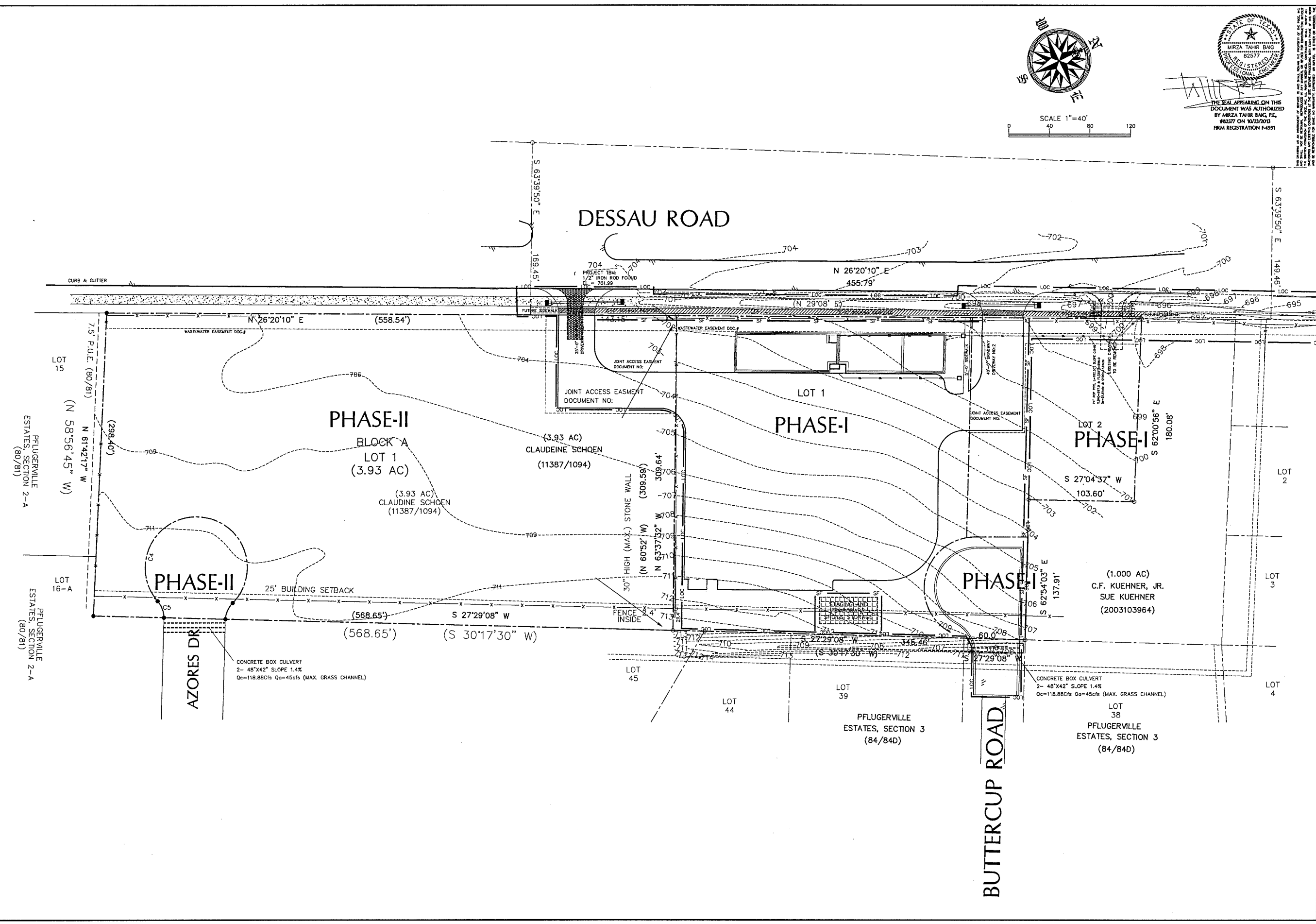
**PROFESSIONAL STRUCTURAL ENGINEERS, INC.**  
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P	P	P	P	P
E	E	E	E	E

**Project:**  
BUTTERCUP RETAIL  
BUTTERCUP RD & DESSAU ROAD  
PFLUGERVILLE, TX 78660

**Title:**  
EROSION/SEDIMENTATION SITE PLAN

PROJECT	P
29470	
SHEET	4
OF 7	



Node ID	Return Type Event	HYG Vol ac-ft	Trun	Opeck hrs	Opeck cfs	Max WSEL ft	Pond Storage ac-ft
DA #1	AREA	100	1.851	12.2500	16.67		
DA #1	AREA	25	1.263	12.2500	11.55		
DA #1	AREA	10	.920	12.2500	8.48		
DA #1	AREA	2	.371	12.2500	3.39		
*OUT	JCT	100	1.851	12.2500	16.67		
*OUT	JCT	25	1.263	12.2500	11.55		
*OUT	JCT	10	.920	12.2500	8.48		
*OUT	JCT	2	.371	12.2500	3.39		

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Manning's n .3000  
 Hydraulic Length 150.00 ft  
 2yr, 24hr P 4.2000 in  
 Slope .029000 ft/ft  
 Avg. Velocity .14 ft/sec

Segment #1 Time: .2959 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 401.18 ft  
 Slope .029000 ft/ft  
 Unpaved  
 Avg. Velocity 2.75 ft/sec

Segment #2 Time: .0406 hrs

Total Tc: .3364 hrs

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %	Adjusted CN
Open space (Lawns, parks etc.) - Goo 79	79	2.929		79.00

COMPOSITE AREA & WEIGHTED CN ---> 2.929 79.00 (79)

Name: DA #A  
 RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %	Adjusted CN
Open space (Lawns, parks etc.) - Goo 79	79	2.060		79.66

COMPOSITE AREA & WEIGHTED CN ---> 2.060 81.66 (82)

Name: DA#B  
 RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %	Adjusted CN
Open space (Lawns, parks etc.) - Goo 79	79	.438		71.84

COMPOSITE AREA & WEIGHTED CN ---> .438 82.61 (83)

Name: DA#C  
 RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %	Adjusted CN
Open space (Lawns, parks etc.) - Goo 79	79	.429		50.30

COMPOSITE AREA & WEIGHTED CN ---> .429 68.56 (69)

\*\*\*\* COMPOSITE OUTFLOW SUMMARY \*\*\*\*

Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Notes
699.75	.00			Free Outfall WD
700.00	.28			Free Outfall WD
700.25	.80			Free Outfall WD
700.50	1.46			Free Outfall WD
700.75	2.25			Free Outfall WD
701.00	3.14			Free Outfall WD
701.25	4.13			Free Outfall WD
701.50	5.21			Free Outfall WD
701.75	6.36			Free Outfall WD
702.00	7.59			Free Outfall WD
702.25	8.89			Free Outfall WD
702.50	10.26			Free Outfall WD
702.56	10.60			Free Outfall WD +WI
702.75	18.90			Free Outfall WD +WI
703.00	38.58			Free Outfall WD +WI
703.25	64.60			Free Outfall WD +WI
703.50	95.63			Free Outfall WD +WI
703.75	130.94			Free Outfall WD +WI
704.00	170.05			Free Outfall WD +WI

Node ID	Return Type Event	HYG Vol ac-ft	Trun	Opeck hrs	Opeck cfs	Max WSEL ft	Pond Storage ac-ft
DA #A	AREA	100	1.854	12.1000	17.15		
DA #A	AREA	25	1.148	12.1000	12.67		
DA #A	AREA	10	.887	12.1000	9.95		
DA #A	AREA	2	.443	12.1000	5.18		
DA#B	AREA	100	.341	12.1000	3.68		
DA#B	AREA	25	.248	12.1000	2.73		
DA#B	AREA	10	.193	12.1000	2.15		
DA#B	AREA	2	.098	12.1000	1.14		
DA#C	AREA	100	.316	12.1000	3.33		
DA#C	AREA	25	.226	12.1000	2.43		
DA#C	AREA	10	.173	12.1000	1.88		
DA#C	AREA	2	.082	12.1000	.92		
*OUT	JCT	100	2.241	12.1500	12.68		
*OUT	JCT	25	1.623	12.1500	8.81		
*OUT	JCT	10	1.252	12.1500	6.58		
*OUT	JCT	2	.623	12.1500	3.00		
POND 10	IN POND	100	1.900	12.1000	20.48		
POND 10	IN POND	25	1.374	12.1000	15.09		
POND 10	IN POND	10	1.060	12.1000	11.92		
POND 10	IN POND	2	.525	12.1000	6.10		
POND 10	OUT POND	100	1.900	12.2500	10.74	702.56	.466
POND 10	OUT POND	25	1.374	12.3000	7.37	701.95	.356
POND 10	OUT POND	10	1.060	12.3000	5.49	701.56	.285
POND 10	OUT POND	2	.525	12.3500	2.47	700.81	.151

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sq(A1*A2) (acres)	Volume (ac-ft)	Volume Sum (ac-ft)
699.75	----	.0000	.0000	.000	.000
700.00	----	.1635	.1635	.014	.014
701.00	----	.1790	.5135	.171	.185
702.00	----	.1802	1.5368	.180	.364
703.00	----	.1802	3.5406	.180	.545
704.00	----	.1802	5.5406	.180	.725

Name: DA #A  
 TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Manning's n .0160  
 Hydraulic Length 150.00 ft  
 2yr, 24hr P 4.0000 in  
 Slope .021900 ft/ft  
 Avg. Velocity 1.28 ft/sec

Segment #1 Time: .0325 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 627.56 ft  
 Slope .021900 ft/ft  
 Paved  
 Avg. Velocity 3.01 ft/sec

Segment #2 Time: .0579 hrs

Total Tc: .0904 hrs

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MRZA TAHR BAK, P.E. #82577 ON 10/23/2013 FROM REGISTRATION F-4951

Name: DA#B  
 TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Manning's n .0160  
 Hydraulic Length 150.00 ft  
 2yr, 24hr P 4.0000 in  
 Slope .025900 ft/ft  
 Avg. Velocity 1.37 ft/sec

Segment #1 Time: .0304 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 312.63 ft  
 Slope .025900 ft/ft  
 Unpaved  
 Avg. Velocity 2.80 ft/sec

Segment #2 Time: .0334 hrs

Total Tc: .0638 hrs

Calculated Tc < Min Tc  
 Use Minimum Tc = .0633 hrs

Name: DA#C  
 TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Manning's n .0160  
 Hydraulic Length 150.00 ft  
 2yr, 24hr P 4.0000 in  
 Slope .008700 ft/ft  
 Avg. Velocity .89 ft/sec

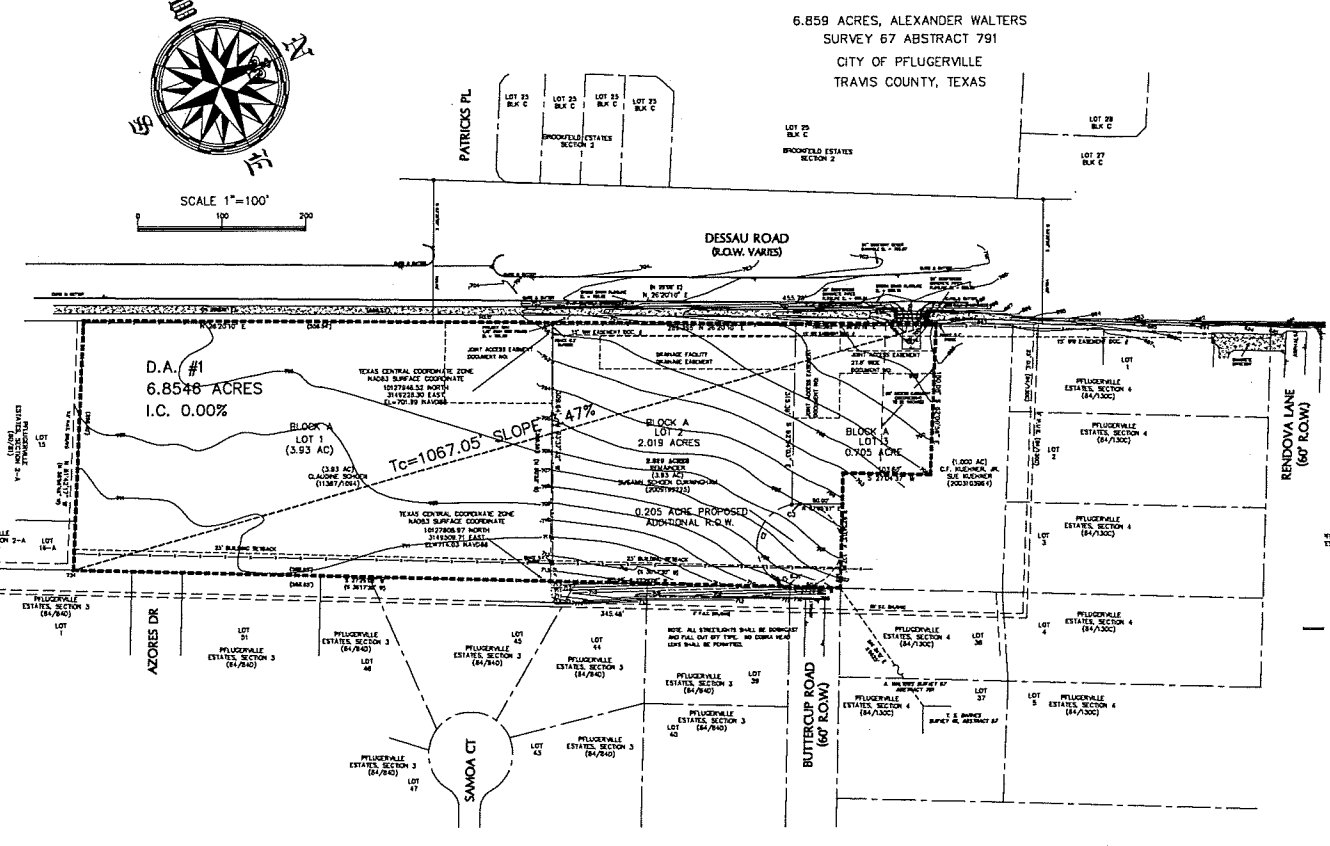
Segment #1 Time: .0470 hrs

Segment #2: Tc: TR-55 Shallow

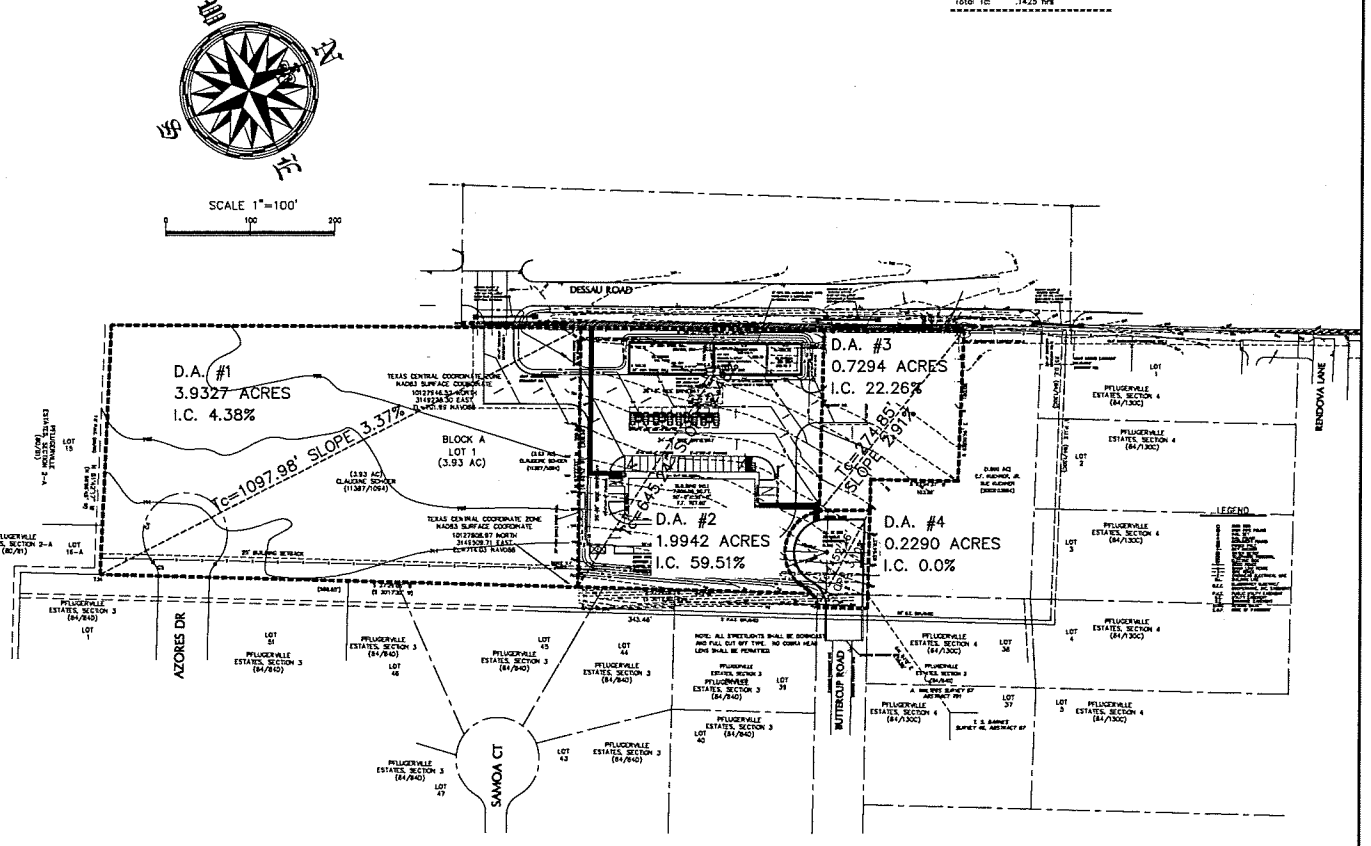
Hydraulic Length 652.10 ft  
 Slope .008700 ft/ft  
 Paved  
 Avg. Velocity 1.90 ft/sec

Segment #2 Time: .0554 hrs

Total Tc: .1024 hrs



PRE DEVELOPED CONDITIONS



POST DEVELOPED CONDITIONS

Professional Seal: MIRZA TAHR BAK, P.E. #82577, REGISTERED PROFESSIONAL ENGINEER, STATE OF TEXAS.

Professional Strucivul Engineers, Inc. Consulting Civil and Structural Engineers. 12710 Research Blvd., Suite 300, Austin, TX 78759 | Tel: 512.298.4422 | Fax: 512.298.6095

Project: BUTTERCUP RD & DESSAU ROAD, PFLUGERVILLE, TX 78660

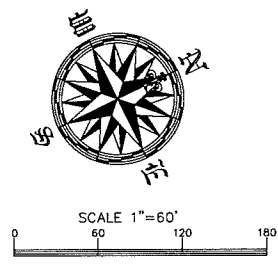
Sheet: 29470, 5 of 7

Approval Table:

Revision	Date	Description
1	08/07/13	ISSUED FOR APPROVAL
2	08/07/13	ISSUED FOR APPROVAL
3	08/27/13	ISSUED FOR APPROVAL
4	10/23/13	ISSUED FOR APPROVAL



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MRZA TAHR BAG, P.E. #82577 ON 10/23/2013 FROM REGISTRATION F-4951



STATION 16+26.77  
48" M.H. #8 PROPOSED  
PHASE-II  
REFER DTL #WW-02  
ON GENERAL DTLS #9  
8" WWL FL(N)=701.08  
8" WWL FL(OUT)=701.18

STATION 13+55.77  
48" M.H. #7 PROPOSED  
PHASE-II  
REFER DTL #WW-02  
ON GENERAL DTLS #9  
8" WWL FL(N)=697.98  
8" WWL FL(OUT)=698.10

STATION 8+13.67  
48" M.H. #5 PROPOSED  
REFER DTL #WW-02  
ON GENERAL DTLS #9  
8" WWL FL(N)=692.02  
8" WWL FL(OUT)=691.92  
4" WWL FL(N)=692.02

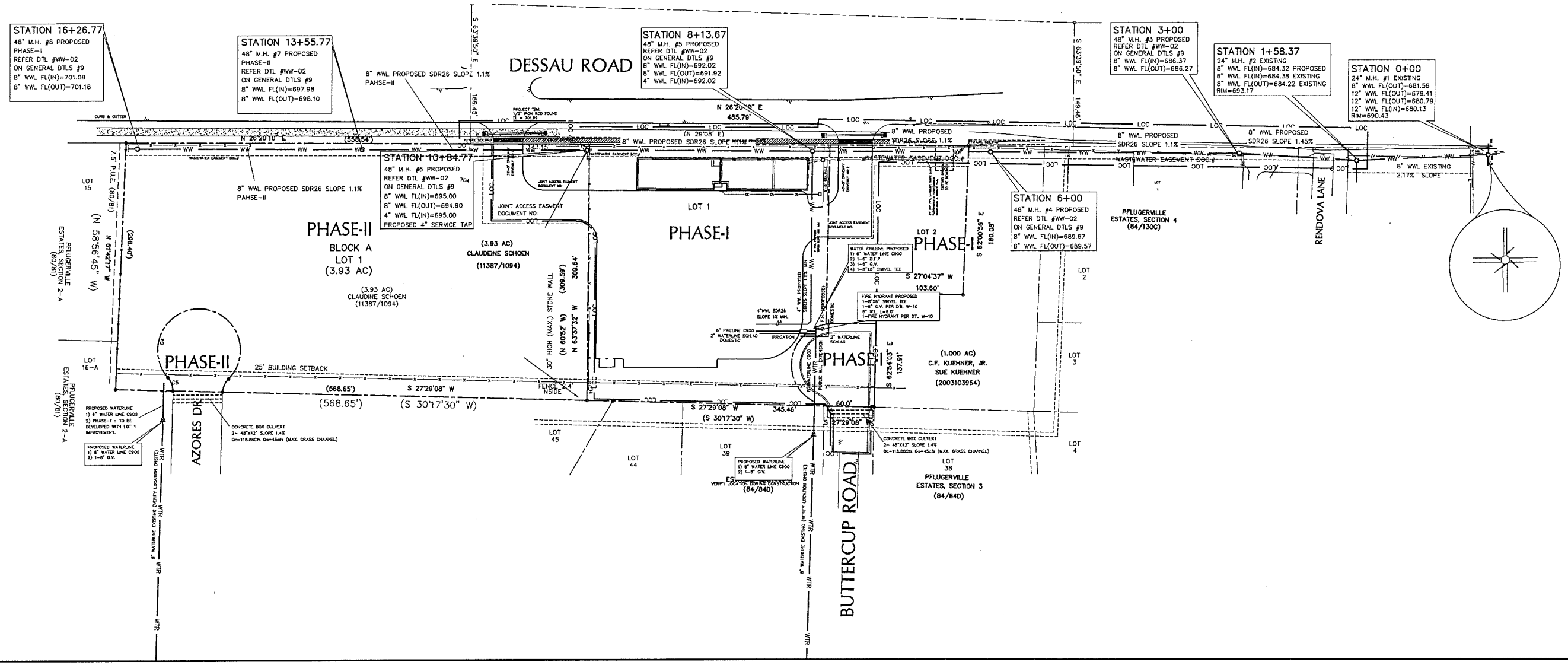
STATION 3+00  
48" M.H. #3 PROPOSED  
REFER DTL #WW-02  
ON GENERAL DTLS #9  
8" WWL FL(N)=686.37  
8" WWL FL(OUT)=686.27

STATION 1+58.37  
24" M.H. #2 EXISTING  
8" WWL FL(N)=684.32 PROPOSED  
6" WWL FL(N)=684.39 EXISTING  
8" WWL FL(OUT)=684.22 EXISTING  
RIM=693.17

STATION 0+00  
24" M.H. #1 EXISTING  
8" WWL FL(OUT)=681.55  
12" WWL FL(OUT)=679.41  
12" WWL FL(OUT)=680.79  
12" WWL FL(N)=680.13  
RIM=690.43

STATION 10+84.77  
48" M.H. #6 PROPOSED  
REFER DTL #WW-02  
ON GENERAL DTLS #9  
8" WWL FL(N)=694.90  
4" WWL FL(N)=695.00  
PROPOSED 4" SERVICE TAP

STATION 6+00  
48" M.H. #4 PROPOSED  
REFER DTL #WW-02  
ON GENERAL DTLS #9  
8" WWL FL(N)=689.67  
8" WWL FL(OUT)=689.57



Revision	Date	Description
6		
5		ISSUED FOR APPROVAL
4		ISSUED FOR APPROVAL
3		ISSUED FOR APPROVAL
2		ISSUED FOR APPROVAL
1		ISSUED FOR APPROVAL
0		ISSUED FOR APPROVAL

PROFESSIONAL STRUCTURAL ENGINEERS, INC.  
CONSULTING CIVIL AND STRUCTURAL ENGINEERS  
12710 RESEARCH BLVD., SUITE 300, AUSTIN, TX 78759 | TEL: 512.238.6622 | FAX: 512.238.6095


Project:  
BUTTERCUP RETAIL  
BUTTERCUP RD & DESSAU ROAD  
PFLUGERVILLE, TX 78660

Sheet:  
WATER & WASTEWATER PLAN

PROJECT	P
29470	
SHEET	F
6	
OF 7	

**PFLUGERVILLE TEXAS**

**Fire Hydrant Flow Test Request Form**

Flow Test results will be delivered within 7 business days of submitted request. Incomplete or illegible forms will not be processed. Each request form must be accompanied by an exhibit illustrating which hydrants are to be tested (static & residual) and a check for \$200 payable to the City of Pflugerville. Hydrants only located within Public Right of Way or dedicated Public Easement will be tested. All results must be submitted to the City of Pflugerville Engineering Department.

Property Address: Ilwaco Road Zip Code: 78602  
 Contact Name: Franz Deibel Phone Number: (512) 238-6422  
 Mailing Address: 12710 Research Blvd., Box 340  
 City: Austin State: Texas Zip Code: 78759  
 Email Address: franz@franz.com Date: 3/28/2013  
 Signature: [Signature]

The following to be completed by the City of Pflugerville:

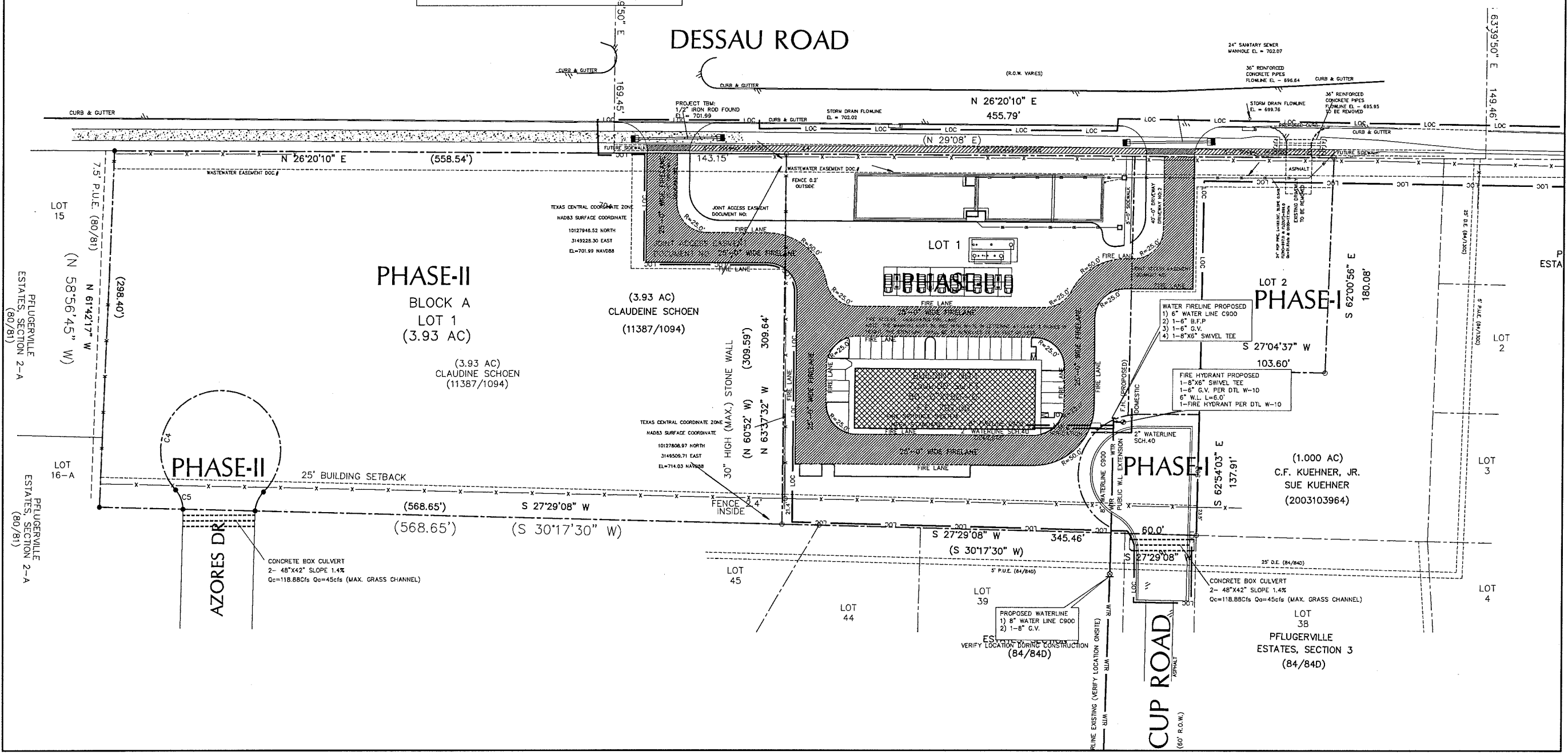
Flow Hydrant	Hydrant ID: <u>#1</u>	Coefficient of Roughness: <u>90% 10% 70%</u>
Static Pressure (psi)	<u>40</u>	Flow (gpm): <u>1000</u>
Residual Hydrant	Hydrant ID: <u>#2</u>	Static Pressure (psi): <u>66</u>
		Residual Pressure (psi): <u>42</u>

City of Pflugerville Engineering Dept.  
 2004 E. Peace Street  
 Pflugerville, TX 78661

- PFLUGERVILLE FIRE PROTECTION NOTES:**
- ACCESS ROADS MUST BE DESIGNED TO SUPPORT 75,000lb FIRE APPARATUS UNDER ALL WEATHER CONDITIONS.
  - A SEPARATE BUILDING PERMIT IS REQUIRED FOR ALL PROPOSED STRUCTURES ON THE PROPERTY USED FOR COMMERCIAL USE. THE ISSUANCE OF THE SITE PLAN DOES NOT ALLOW CONSTRUCTION OF ANY COMMERCIAL USE STRUCTURES WITHOUT APPROVAL FROM THE TRAVIS COUNTY FIRE MARSHAL'S OFFICE.
  - GRADE FOR FIRE DEPARTMENT ACCESS DOES NOT EXCEED 10%.
  - ACCESS DRIVEWAY IS CONCRETE FINISH.
  - THE PROJECT SHALL COMPLY WITH IBC 2012, IFC 2012, AND ALL LOCAL CITY & COUNTY CODES.
  - THE ADDRESS FOR THIS FACILITY MUST BE POSTED SO IT IS CLEARLY VISIBLE FROM THE PUBLIC STREET. NUMBERS MUST BE A MINIMUM OF SIX INCHES IN HEIGHT AND MUST CONTRAST WITH THEIR BACKGROUND. THE ADDRESS MUST BE POSTED ON ANY SIGN LOCATED AT THE STREET WHICH IDENTIFIES THIS FACILITY.
  - A KNOX BOX WILL BE REQUIRED FOR THIS FACILITY. THE KNOX BOX MUST BE MOUNTED IN AN APPROVED LOCATION ADJACENT TO THE MAIN ENTRANCE TO THE BUILDING. THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING THE FIRE DEPARTMENT FOR INFORMATION REGARDING INSTALLATION OF THE KNOX BOX.
  - WATER PROVIDER : CITY OF PFLUGERVILLE
  - NO LPG FOR THIS DEVELOPMENT.
  - PER AGREEMENT WITH THE CITY OF PFLUGERVILLE, THE FIRE FLOW FOR THIS FACILITY HAS BEEN REDUCED TO 1,000 GPM WITH A MINIMUM RESIDUAL PRESSURE OF 20 PSI. WITH THIS FLOW A SINGLE HYDRANT IS REQUIRED. THIS REDUCTION IS DUE TO THE INSTALLATION OF AN AUTOMATIC FIRE SPRINKLER SYSTEM IN THE BUILDING. THE SPRINKLER SYSTEM IS NOT REQUIRED BY CODE. THIS AGREEMENT HAS BEEN ADDRESSED AS AN ALTERNATE METHOD OF COMPLIANCE AUTHORIZED BY SECTION 104.9 OF THE FIRE CODE. BUILDING WILL BE PROTECTED BY A SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH NFPA STANDARD 13.
  - APPROVAL OF THE SITE PLAN DOES NOT IMPLY APPROVAL TO CONSTRUCT A BUILDING AT THIS LOCATION. BUILDING PLANS MUST BE SUBMITTED TO TRAVIS COUNTY EMERGENCY SERVICES DISTRICT 2 FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
  - ALL UNDERGROUND FIRE LINES MUST BE INSTALLED PER CITY OF PFLUGERVILLE DETAILS. THE GENERAL CONTRACTOR MUST CONTACT OUR OFFICE AT (512) 969-4531 PRIOR TO STARTING UTILITY WORK FOR THIS PROJECT.



- FIRE LANE NOTE:**
- CURBS ALONG DESIGNATED FIRE LANES SHALL BE PAINTED RED. IN AREAS WITHOUT CURBS MARKING SHALL CONSIST OF SIX-INCH WIDE STRIPING THAT IS RED IN COLOR. WHITE LETTERING SHALL BE PROVIDED WHICH READS "NO PARKING FIRE LANE". THE LETTERING SHALL BE FOUR-INCHES IN HEIGHT AND SHALL BE SPACED AT INTERVALS NOT EXCEEDING 25 FEET.
  - A MINIMUM VERTICAL CLEARANCE OF 14 FEET WILL BE MAINTAINED FOR THE ENTIRE LENGTH AND WIDTH OF THE DESIGNATED EMERGENCY ACCESS DRIVES.
  - SIGNS SHALL BE POSTED AT BOTH ENDS OF THE FIRE ZONE.



Project:	29470
Sheet:	7 of 7
Client:	BUTTERCUP RETAIL BUTTERCUP RD & DESSAU ROAD PFLUGERVILLE, TX 78660
Engineer:	MIRZA TAHIR BAIG, P.E. #82577 ON 10/23/2013 FROM REGISTRATION F-4951
Professional:	PROFESSIONAL STRUCTURAL ENGINEERS, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS 12710 RESEARCH BLVD., SUITE 300, AUSTIN, TX 78759   TEL: 512.238.6421   FAX: 512.258.8096