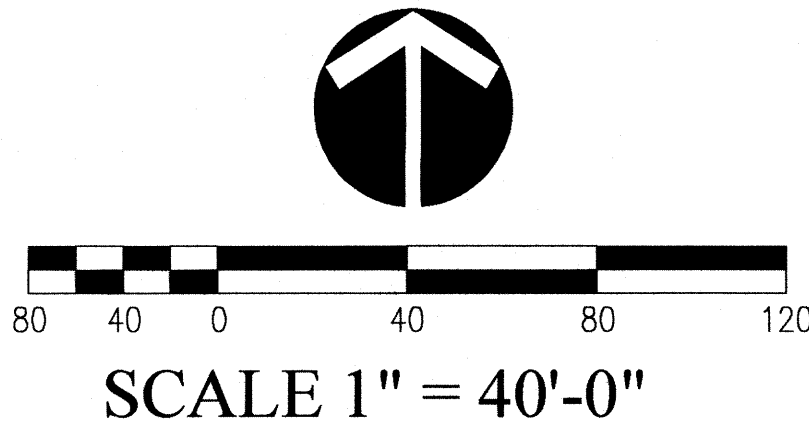




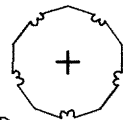
RESIDENTIAL

COMMERCIAL

RETAIL

PD-R

PD-R

PLANT SCHEDULE				
<u>BEE CAVE PKWY BUFFER TREES</u>		<u>BOTANICAL NAME / COMMON NAME</u>	<u>CAL</u>	<u>QTY</u>
		Cercis canadensis var. texensis / Texas Redbud	2"	20
		Ilex vomitoria / Yaupon Holly	2"	20
		Quercus virginiana / Southern Live Oak	4"	11
		Ulmus crassifolia / Cedar Elm	3"	17
<u>MITIGATION TREES</u>		<u>BOTANICAL NAME / COMMON NAME</u>	<u>CAL</u>	<u>QTY</u>
		Quercus texana / Texas Red Oak	4"	12
		Quercus virginiana / Southern Live Oak	4"	20
<u>PARKING LOT TREES</u>		<u>BOTANICAL NAME / COMMON NAME</u>	<u>CAL</u>	<u>QTY</u>
		Quercus texana / Texas Red Oak	4"	11
		Quercus virginiana / Southern Live Oak	4"	14
		Ulmus crassifolia / Cedar Elm	4"	6
<u>SKAGGS DRIVE BUFFER TREES</u>		<u>BOTANICAL NAME / COMMON NAME</u>	<u>CAL</u>	<u>QTY</u>
		Quercus virginiana / Southern Live Oak	4"	9
<u>SHRUBS</u>		<u>BOTANICAL NAME / COMMON NAME</u>	<u>CONT</u>	<u>QTY</u>
		Rosa x "Knockout"™ / Rose	5 gal	215
		Ilex coccinea "Dwarf Burfordii" / Dwarf Burford Holly		
		Elaeagnus pungens / Elaeagnus		
		Ligustrum japonicum / Waxleaf Ligustrum		
		Abelia x grandiflora / Abelia		
		SAVED PROTECTED TREE OVER 12"		
		REMOVED PROTECTED TREE OVER 12"		
		SAVED TREE		
		REMOVED TREE		
		*SAVED TREE OFFSITE (NOT INCLUDED IN CALCULATIONS)		



LEE
AND ASSOCIATES

6101 WEST COURTYARD DR.
BUILDING 3, SUITE 100
AUSTIN, TEXAS 78730
(512) 345-8477
www.leeandassociates.net

Revision Block		Comments
No.	Date	

DATE	2-6-2015
PROJ. NO.	1484
FILE NAME	1484 ocp 7
XREF	
XREF	

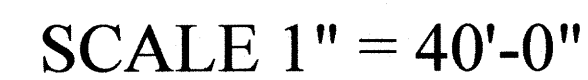
HILL COUNTRY INDOOR REDESIGN

BEE CAVE, TEXAS

LANDSCAPE ORDINANCE PLAN



THIS SEAL CERTIFIES THAT THE PLAN MEETS
THE REQUIREMENTS OF CITY OF BEE CAVE
ORDINANCE #201



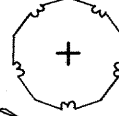
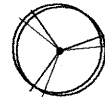
RESIDENTIAL

COMMERCIAL



PD-R

PD-R

PLANT SCHEDULE				
<u>BEE CAVE PKWY BUFFER TREES</u>		<u>BOTANICAL NAME / COMMON NAME</u>	<u>CAL</u>	<u>QTY</u>
		<i>Cercis canadensis</i> var. <i>texensis</i> / Texas Redbud	2"	20
		<i>Ilex vomitoria</i> / Yaupon Holly	2"	20
		<i>Quercus virginiana</i> / Southern Live Oak	4"	11
		<i>Ulmus crassifolia</i> / Cedar Elm	3"	17
<u>MITIGATION TREES</u>		<u>BOTANICAL NAME / COMMON NAME</u>	<u>CAL</u>	<u>QTY</u>
		<i>Quercus texana</i> / Texas Red Oak	4"	12
		<i>Quercus virginiana</i> / Southern Live Oak	4"	20
<u>PARKING LOT TREES</u>		<u>BOTANICAL NAME / COMMON NAME</u>	<u>CAL</u>	<u>QTY</u>
		<i>Quercus texana</i> / Texas Red Oak	4"	11
		<i>Quercus virginiana</i> / Southern Live Oak	4"	14
		<i>Ulmus crassifolia</i> / Cedar Elm	4"	6
<u>SKAGGS DRIVE BUFFER TREES</u>		<u>BOTANICAL NAME / COMMON NAME</u>	<u>CAL</u>	<u>QTY</u>
		<i>Quercus virginiana</i> / Southern Live Oak	4"	9
<u>SHRUBS</u>		<u>BOTANICAL NAME / COMMON NAME</u>	<u>CONT</u>	<u>QTY</u>
		<i>Rosa</i> x "Knockout" TM / Rose	5 gal	215
		<i>Ilex coccinea</i> "Dwarf Burfordii" / Dwarf Burford Holly		
		<i>Eleagnus pungens</i> / Eleagnus		
		<i>Ligustrum japonicum</i> / Waxleaf Ligustrum		
		<i>Abelia x grandiflora</i> / Abelia		



LEE
AND ASSOCIATES

6101 WEST COURTYARD DR.
BUILDING 3, SUITE 100
AUSTIN, TEXAS 78730

(512) 345-8477
www.leeandassociates.net

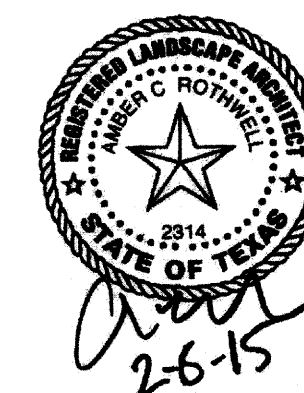
[illegible]

DATE	2-6-2015
PROJ. NO.	1484
FILE NAME	1484 ocp 7
XREF	

HILL COUNTRY INDOOR REDESIGN

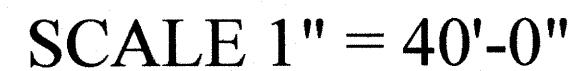
BEE CAVE, TEXAS

PROPOSED TREES



THIS SEAL CERTIFIES THAT THE PLAN MEETS
THE REQUIREMENTS OF CITY OF BEE CAVE
ORDINANCE #201

SHEET 21 OF 41



COMMERCIAL



(512) 345-8477
www.leeandassociates.net

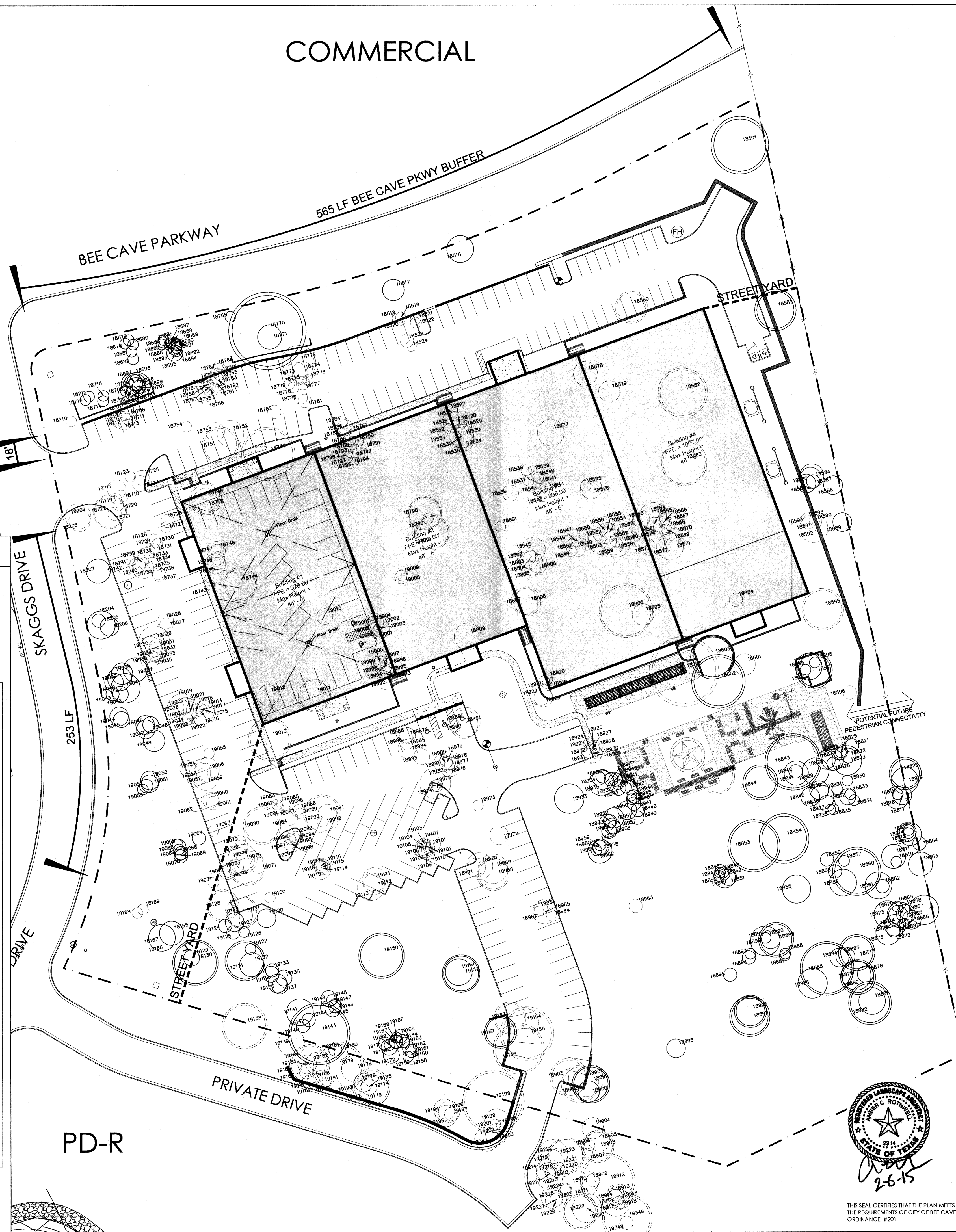
DATE	2-6-2015
PROJ. NO.	1484
FILE NAME	1484 ocp 7
XREF	

SHEET 23 OF 4

*SAVED TREE OFFSITE (NOT INCLUDED IN CALCULATIONS)

TREE

18165 LIVE OAK 9	18586 LIVE OAK 7	18740 LIVE OAK 7-6-4	18842 CEDAR 5	19035 LIVE OAK 7-5	19208 LIVE OAK-6	19211 LIVE OAK-5	19214 LIVE OAK 15
18166 LIVE OAK 9	18587 LIVE OAK 7	18740 CEDAR 13 5 4	18843 CEDAR 13 5 4	19036 CEDAR 5	19209 LIVE OAK-8	19212 LIVE OAK 10	19215 LIVE OAK 10
18167 LIVE OAK 9	18588 LIVE OAK 7	18741 LIVE OAK 8	18844 CEDAR 13 5 4	19037 LIVE OAK 7	19210 LIVE OAK-9	19213 LIVE OAK 11	19216 CEDAR 10
18168 LIVE OAK 9	18589 LIVE OAK 7	18742 LIVE OAK 10	18845 CEDAR 10-6	19038 LIVE OAK 4	19211 CEDAR-6	19214 LIVE OAK 5	19217 CEDAR 9
18169 LIVE OAK 9	18590 LIVE OAK 7	18743 LIVE OAK 10	18846 LIVE OAK 4	19039 LIVE OAK-5	19212 LIVE OAK-5	19215 LIVE OAK 6	19218 LIVE OAK 4
18170 LIVE OAK 9	18591 LIVE OAK 7	18744 LIVE OAK 4	18847 LIVE OAK 4	19040 LIVE OAK 4	19213 LIVE OAK-6	19216 LIVE OAK 4	19219 CEDAR 9
18171 LIVE OAK 9	18592 LIVE OAK 6-5-4	18745 LIVE OAK 4	18848 LIVE OAK 4	19041 LIVE OAK 4	19214 LIVE OAK-6	19217 LIVE OAK 4	19220 LIVE OAK 4
18172 LIVE OAK 9	18593 LIVE OAK 6	18746 LIVE OAK 4	18849 LIVE OAK 6	19042 LIVE OAK 4	19215 LIVE OAK-6	19218 LIVE OAK 4	19221 LIVE OAK 11
18173 LIVE OAK 9	18594 LIVE OAK 6	18747 LIVE OAK 4	18850 LIVE OAK 4	19043 LIVE OAK 4	19216 LIVE OAK-6	19219 LIVE OAK 4	19222 LIVE OAK 11
18174 LIVE OAK 9	18595 LIVE OAK 6-5-4-4	18748 LIVE OAK 4	18851 LIVE OAK 4	19044 LIVE OAK 4	19217 LIVE OAK-6	19220 LIVE OAK 4	19223 LIVE OAK 11 5
18175 LIVE OAK 9	18596 LIVE OAK 6-5-4-4	18749 LIVE OAK 4	18852 LIVE OAK 4	19045 LIVE OAK 4	19218 LIVE OAK-6	19221 LIVE OAK 4	19224 LIVE OAK 11
18176 LIVE OAK 9	18597 LIVE OAK 6-5-4-4	18750 LIVE OAK 4	18853 LIVE OAK 4	19046 LIVE OAK 4	19219 LIVE OAK-6	19222 LIVE OAK 4	19225 LIVE OAK 4
18177 LIVE OAK 9	18598 LIVE OAK 6-5-4-4	18751 LIVE OAK 4	18854 LIVE OAK 4	19047 LIVE OAK 4	19220 LIVE OAK-6	19223 LIVE OAK 4	19226 LIVE OAK 4
18178 LIVE OAK 9	18599 LIVE OAK 6-5-4-4	18752 LIVE OAK 4	18855 LIVE OAK 4	19048 LIVE OAK 4	19221 LIVE OAK-6	19224 LIVE OAK 4	19227 LIVE OAK 4
18179 LIVE OAK 9	18600 LIVE OAK 6-5-4-4	18753 LIVE OAK 4	18856 LIVE OAK 4	19049 LIVE OAK 4	19222 LIVE OAK-6	19225 LIVE OAK 4	19228 LIVE OAK 4
18180 LIVE OAK 9	18601 LIVE OAK 6-5-4-4	18754 LIVE OAK 4	18857 LIVE OAK 4	19050 LIVE OAK 4	19223 LIVE OAK-6	19226 LIVE OAK 4	19229 LIVE OAK 4
18181 LIVE OAK 9	18602 LIVE OAK 6-5-4-4	18755 LIVE OAK 4	18858 LIVE OAK 4	19051 LIVE OAK 4	19224 LIVE OAK-6	19227 LIVE OAK 4	19230 LIVE OAK 4
18182 LIVE OAK 9	18603 LIVE OAK 6-5-4-4	18756 LIVE OAK 4	18859 LIVE OAK 4	19052 LIVE OAK 4	19225 LIVE OAK-6	19228 LIVE OAK 4	19231 LIVE OAK 4
18183 LIVE OAK 9	18604 LIVE OAK 6-5-4-4	18757 LIVE OAK 4	18860 LIVE OAK 4	19053 LIVE OAK 4	19226 LIVE OAK-6	19229 LIVE OAK 4	19232 LIVE OAK 4
18184 LIVE OAK 9	18605 LIVE OAK 6-5-4-4	18758 LIVE OAK 4	18861 LIVE OAK 4	19054 LIVE OAK 4	19227 LIVE OAK-6	19230 LIVE OAK 4	19233 LIVE OAK 4
18185 LIVE OAK 9	18606 LIVE OAK 6-5-4-4	18759 LIVE OAK 4	18862 LIVE OAK 4	19055 LIVE OAK 4	19228 LIVE OAK-6	19231 LIVE OAK 4	19234 LIVE OAK 4
18186 LIVE OAK 9	18607 LIVE OAK 6-5-4-4	18760 LIVE OAK 4	18863 LIVE OAK 4	19056 LIVE OAK 4	19229 LIVE OAK-6	19232 LIVE OAK 4	19235 LIVE OAK 4
18187 LIVE OAK 9	18608 LIVE OAK 6-5-4-4	18761 LIVE OAK 4	18864 LIVE OAK 4	19057 LIVE OAK 4	19230 LIVE OAK-6	19233 LIVE OAK 4	19236 LIVE OAK 4
18188 LIVE OAK 9	18609 LIVE OAK 6-5-4-4	18762 LIVE OAK 4	18865 LIVE OAK 4	19058 LIVE OAK 4	19231 LIVE OAK-6	19234 LIVE OAK 4	19237 LIVE OAK 4
18189 LIVE OAK 9	18610 LIVE OAK 6-5-4-4	18763 LIVE OAK 4	18866 LIVE OAK 4	19059 LIVE OAK 4	19232 LIVE OAK-6	19235 LIVE OAK 4	19238 LIVE OAK 4
18190 LIVE OAK 9	18611 LIVE OAK 6-5-4-4	18764 LIVE OAK 4	18867 LIVE OAK 4	19060 LIVE OAK 4	19233 LIVE OAK-6	19236 LIVE OAK 4	19239 LIVE OAK 4
18191 LIVE OAK 9	18612 LIVE OAK 6-5-4-4	18765 LIVE OAK 4	18868 LIVE OAK 4	19061 LIVE OAK 4	19234 LIVE OAK-6	19237 LIVE OAK 4	19240 LIVE OAK 4
18192 LIVE OAK 9	18613 LIVE OAK 6-5-4-4	18766 LIVE OAK 4	18869 LIVE OAK 4	19062 LIVE OAK 4	19235 LIVE OAK-6	19238 LIVE OAK 4	19241 LIVE OAK 4
18193 LIVE OAK 9	18614 LIVE OAK 6-5-4-4	18767 LIVE OAK 4	18870 LIVE OAK 4	19063 LIVE OAK 4	19236 LIVE OAK-6	19239 LIVE OAK 4	19242 LIVE OAK 4
18194 LIVE OAK 9	18615 LIVE OAK 6-5-4-4	18768 LIVE OAK 4	18871 LIVE OAK 4	19064 LIVE OAK 4	19237 LIVE OAK-6	19240 LIVE OAK 4	19243 LIVE OAK 4
18195 LIVE OAK 9	18616 LIVE OAK 6-5-4-4	18769 LIVE OAK 4	18872 LIVE OAK 4	19065 LIVE OAK 4	19238 LIVE OAK-6	19241 LIVE OAK 4	19244 LIVE OAK 4
18196 LIVE OAK 9	18617 LIVE OAK 6-5-4-4	18770 LIVE OAK 4	18873 LIVE OAK 4	19066 LIVE OAK 4	19239 LIVE OAK-6	19242 LIVE OAK 4	19245 LIVE OAK 4
18197 LIVE OAK 9	18618 LIVE OAK 6-5-4-4	18771 LIVE OAK 4	18874 LIVE OAK 4	19067 LIVE OAK 4	19240 LIVE OAK-6	19243 LIVE OAK 4	19246 LIVE OAK 4
18198 LIVE OAK 9	18619 LIVE OAK 6-5-4-4	18772 LIVE OAK 4	18875 LIVE OAK 4	19068 LIVE OAK 4	19241 LIVE OAK-6	19244 LIVE OAK 4	19247 LIVE OAK 4
18199 LIVE OAK 9	18620 LIVE OAK 6-5-4-4	18773 LIVE OAK 4	18876 LIVE OAK 4	19069 LIVE OAK 4	19242 LIVE OAK-6	19245 LIVE OAK 4	19248 LIVE OAK 4
18200 LIVE OAK 9	18621 LIVE OAK 6-5-4-4	18774 LIVE OAK 4	18877 LIVE OAK 4	19070 LIVE OAK 4	19243 LIVE OAK-6	19246 LIVE OAK 4	19249 LIVE OAK 4
18201 LIVE OAK 9	18622 LIVE OAK 6-5-4-4	18775 LIVE OAK 4	18878 LIVE OAK 4	19071 LIVE OAK 4	19244 LIVE OAK-6	19247 LIVE OAK 4	19250 LIVE OAK 4
18202 LIVE OAK 9	18623 LIVE OAK 6-5-4-4	18776 LIVE OAK 4	18879 LIVE OAK 4	19072 LIVE OAK 4	19245 LIVE OAK-6	19248 LIVE OAK 4	19251 LIVE OAK 4
18203 LIVE OAK 9	18624 LIVE OAK 6-5-4-4	18777 LIVE OAK 4	18880 LIVE OAK 4	19073 LIVE OAK 4	19246 LIVE OAK-6	19249 LIVE OAK 4	19252 LIVE OAK 4
18204 LIVE OAK 9	18625 LIVE OAK 6-5-4-4	18778 LIVE OAK 4	18881 LIVE OAK 4	19074 LIVE OAK 4	19247 LIVE OAK-6	19250 LIVE OAK 4	19253 LIVE OAK 4
18205 LIVE OAK 9	18626 LIVE OAK 6-5-4-4	18779 LIVE OAK 4	18882 LIVE OAK 4	19075 LIVE OAK 4	19248 LIVE OAK-6	19251 LIVE OAK 4	19254 LIVE OAK 4
18206 LIVE OAK 9	18627 LIVE OAK 6-5-4-4	18780 LIVE OAK 4	18883 LIVE OAK 4	19076 LIVE OAK 4	19249 LIVE OAK-6	19252 LIVE OAK 4	19255 LIVE OAK 4
18207 LIVE OAK 9	18628 LIVE OAK 6-5-4-4	18781 LIVE OAK 4	18884 LIVE OAK 4	19077 LIVE OAK 4	19250 LIVE OAK-6	19253 LIVE OAK 4	19256 LIVE OAK 4
18208 LIVE OAK 9	18629 LIVE OAK 6-5-4-4	18782 LIVE OAK 4	18885 LIVE OAK 4	19078 LIVE OAK 4	19251 LIVE OAK-6	19254 LIVE OAK 4	19257 LIVE OAK 4
18209 LIVE OAK 9	18630 LIVE OAK 6-5-4-4	18783 LIVE OAK 4	18886 LIVE OAK 4	19079 LIVE OAK 4	19252 LIVE OAK-6	19255 LIVE OAK 4	19258 LIVE OAK 4
18210 LIVE OAK 9	18631 LIVE OAK 6-5-4-4	18784 LIVE OAK 4	18887 LIVE OAK 4	19080 LIVE OAK 4	19253 LIVE OAK-6	19256 LIVE OAK 4	19259 LIVE OAK 4
18211 LIVE OAK 9	18632 LIVE OAK 6-5-4-4	18785 LIVE OAK 4	18888 LIVE OAK 4	19081 LIVE OAK 4	19254 LIVE OAK-6	19257 LIVE OAK 4	19260 LIVE OAK 4
18212 LIVE OAK 9	18633 LIVE OAK 6-5-4-4	18786 LIVE OAK 4	18889 LIVE OAK 4	19082 LIVE OAK 4	19255 LIVE OAK-6	19258 LIVE OAK 4	19261 LIVE OAK 4
18213 LIVE OAK 9	18634 LIVE OAK 6-5-4-4	18787 LIVE OAK 4	18890 LIVE OAK 4	19083 LIVE OAK 4	19256 LIVE OAK-6	19259 LIVE OAK 4	19262 LIVE OAK 4
18214 LIVE OAK 9	18635 LIVE OAK 6-5-4-4	18788 LIVE OAK 4	18891 LIVE OAK 4	19084 LIVE OAK 4	19257 LIVE OAK-6	19260 LIVE OAK 4	19263 LIVE OAK 4
18215 LIVE OAK 9	18636 LIVE OAK 6-5-4-4	18789 LIVE OAK 4	18892 LIVE OAK 4	19085 LIVE OAK 4	19258 LIVE OAK-6	19261 LIVE OAK 4	19264 LIVE OAK 4
18216 LIVE OAK 9	18637 LIVE OAK 6-5-4-4	18790 LIVE OAK 4	18893 LIVE OAK 4	19086 LIVE OAK 4	19259 LIVE OAK-6	19262 LIVE OAK 4	19265 LIVE OAK 4
18217 LIVE OAK 9	18638 LIVE OAK 6-5-4-4	18791 LIVE OAK 4	18894 LIVE OAK 4	19087 LIVE OAK 4	19260 LIVE OAK-6	19263 LIVE OAK 4	19266 LIVE OAK 4
18218 LIVE OAK 9	18639 LIVE OAK 6-5-4-4	18792 LIVE OAK 4	18895 LIVE OAK 4	19088 LIVE OAK 4	19261 LIVE OAK-6	19264 LIVE OAK 4	19267 LIVE OAK 4
18219 LIVE OAK 9	18640 LIVE OAK 6-5-4-4	18793 LIVE OAK 4	18896 LIVE OAK 4	19089 LIVE OAK 4	19262 LIVE OAK-6	19265 LIVE OAK 4	19268 LIVE OAK 4
18220 LIVE OAK 9	18641 LIVE OAK 6-5-4-4	18794 LIVE OAK 4	18897 LIVE OAK 4	19090 LIVE OAK 4	19263 LIVE OAK-6	19266 LIVE OAK 4	19269 LIVE OAK 4
18221 LIVE OAK 9	18642 LIVE OAK 6-5-4-4	18795 LIVE OAK 4	18898 LIVE OAK 4	19091 LIVE OAK 4	19264 LIVE OAK-6	19267 LIVE OAK 4	19270 LIVE OAK 4
18222 LIVE OAK 9	18643 LIVE OAK 6-5-4-4	18796 LIVE OAK 4	18899 LIVE OAK 4	19092 LIVE OAK 4	19265 LIVE OAK-6	19268 LIVE OAK 4	19271 LIVE OAK 4
18223 LIVE OAK 9	18644 LIVE OAK 6-5-4-4	18797 LIVE OAK 4	18900 LIVE OAK 4	19093 LIVE OAK 4	19266 LIVE OAK-6	19269 LIVE OAK 4	19272 LIVE OAK 4
18224 LIVE OAK 9	18645 LIVE OAK 6-5-4-4	18798 LIVE OAK 4	18901 LIVE OAK 4	19094 LIVE OAK 4	19267 LIVE OAK-6	19270 LIVE OAK 4	19273 LIVE OAK 4
18225 LIVE OAK 9	18646 LIVE OAK 6-5-4-4	18799 LIVE OAK 4	18902 LIVE OAK 4	19095 LIVE OAK 4	19268 LIVE OAK-6	19271 LIVE OAK 4	19274 LIVE OAK 4
18226 LIVE OAK 9	18647 LIVE OAK 6-5-4-4	18800 LIVE OAK 4	18903 LIVE OAK 4	19096 LIVE OAK 4	19269 LIVE OAK-6	19272 LIVE OAK 4	19275 LIVE OAK 4
18227 LIVE OAK 9	18648 LIVE OAK 6-5-4-4	18801 LIVE OAK 4	18904 LIVE OAK 4	19097 LIVE OAK 4	19270 LIVE OAK-6	19273 LIVE OAK 4	19276 LIVE OAK 4
18228 LIVE OAK 9	18649 LIVE OAK 6-5-4-4	18802 LIVE OAK 4	18905 LIVE OAK 4	19098 LIVE OAK 4	19271 LIVE OAK-6	19274 LIVE OAK 4	19277 LIVE OAK 4
18229 LIVE OAK 9	18650 LIVE OAK 6-5-4-4	18803 LIVE OAK 4	18906 LIVE OAK 4	19099 LIVE OAK 4	19272 LIVE OAK-6	19275 LIVE OAK 4	19278 LIVE OAK 4
18230 LIVE OAK 9	18651 LIVE OAK 6-5-4-4	18804 LIVE OAK 4	18907 LIVE OAK 4	19100 LIVE OAK 4	19273 LIVE OAK-6	19276 LIVE OAK 4	19279 LIVE OAK 4
18231 LIVE OAK 9	18652 LIVE OAK 6-5-4-4	18805 LIVE OAK 4	18908 LIVE OAK 4	19101 LIVE OAK 4	19274 LIVE OAK-6	19277 LIVE OAK 4	19280 LIVE OAK 4
18232 LIVE OAK 9	18653 LIVE OAK 6-5-4-4	18806 LIVE OAK 4	18909 LIVE OAK 4	19102 LIVE OAK 4	19275 LIVE OAK-6	19278 LIVE OAK 4	19281 LIVE OAK 4
18233 LIVE OAK 9	18654 LIVE OAK 6-5-4-4	18807 LIVE OAK 4	18910 LIVE OAK 4	19103 LIVE OAK 4	19276 LIVE OAK-6	19279 LIVE OAK 4	19282 LIVE OAK 4
18234 LIVE OAK 9	18655 LIVE OAK 6-5-4-4	18808 LIVE OAK 4	18911 LIVE OAK 4	19104 LIVE OAK 4	19277 LIVE OAK-6	19280 LIVE OAK 4	19283 LIVE OAK 4
18235 LIVE OAK 9	18656 LIVE OAK 6-5-4-4	18809 LIVE OAK 4	18912 LIVE OAK 4	19105 LIVE OAK 4	19278 LIVE OAK-6	19281 LIVE OAK 4	19284 LIVE OAK 4
18236 LIVE OAK 9	18657 LIVE OAK 6-5-4-4	18810 LIVE OAK 4	18913 LIVE OAK 4	19106 LIVE OAK 4	19279 LIVE OAK-6	19282 LIVE OAK 4	19285 LIVE OAK 4
18237 LIVE OAK 9	18658 LIVE OAK 6-5-4-4	18811 LIVE OAK 4	18914 LIVE OAK 4	19107 LIVE OAK 4	19280 LIVE OAK-6	19283 LIVE OAK 4	19286 LIVE OAK 4
18238 LIVE OAK 9	18659 LIVE OAK 6-5-4-4	18812 LIVE OAK 4	18915 LIVE OAK 4	19108 LIVE OAK 4	19281 LIVE OAK-6	19284 LIVE OAK 4	19287 LIVE OAK 4
18239 LIVE OAK 9	18660 LIVE OAK 6-5-4-4	18813 LIVE OAK 4	18916 LIVE OAK 4	19109 LIVE OAK 4	19282 LIVE OAK-6	19285 LIVE OAK 4	19288 LIVE OAK 4
18240 LIVE OAK 9	18661 LIVE OAK 6-5-4-4	18814 LIVE OAK 4	18917 LIVE OAK 4	19110 LIVE OAK 4	19283 LIVE OAK-6	19286 LIVE OAK 4	19289 LIVE OAK 4
18241 LIVE OAK 9	18662 LIVE OAK 6-5-4-4	18815 LIVE OAK 4	18918 LIVE OAK 4	19111 LIVE OAK 4	19284 LIVE OAK-6	19287 LIVE OAK 4	19290 LIVE OAK 4
18242 LIVE OAK 9	18663 LIVE OAK 6-5-4-4	18816 LIVE OAK 4	18919 LIVE OAK 4	19112 LIVE OAK 4	19285 LIVE OAK-6	19288 LIVE OAK 4	19291 LIVE OAK 4
18243 LIVE OAK 9	18664 LIVE OAK 6-5-4-4	18817 LIVE OAK 4	18920 LIVE OAK 4	19113 LIVE OAK 4	19286 LIVE OAK-6	19289 LIVE OAK 4	19292 LIVE OAK 4
18244 LIVE OAK 9	18665 LIVE OAK 6-5-4-4	18818 LIVE OAK 4	18921 LIVE OAK 4	19114 LIVE OAK 4	19287 LIVE OAK-6	19290 LIVE OAK 4	19293 LIVE OAK 4
18245 LIVE OAK 9	18666 LIVE OAK 6-5-4-4	18819 LIVE OAK 4	18922 LIVE OAK 4	19115 LIVE OAK 4	19288 LIVE OAK-6	19291 LIVE OAK 4	19294 LIVE OAK 4
18246 LIVE OAK 9	18667 LIVE OAK 6-5-4-4	18820 LIVE OAK 4	18923 LIVE OAK 4	19116 LIVE OAK 4	19289 LIVE OAK-6	19292 LIVE OAK 4	19295 LIVE OAK 4
18247 LIVE OAK 9	18668 LIVE OAK 6-5-4-4	18821 LIVE OAK 4	18924 LIVE OAK 4	19117 LIVE OAK 4	19290 LIVE OAK-6	19293 LIVE OAK 4	19296 LIVE OAK 4
18248 LIVE OAK 9	18669 LIVE OAK 6-5-4-4	18822 LIVE OAK 4	18925 LIVE OAK 4	19118 LIVE OAK 4	19291 LIVE OAK-6	19294 LIVE OAK 4	19297 LIVE OAK 4
18249 LIVE OAK 9	18670 LIVE OAK 6-5-4-4	18823 LIVE OAK 4	18926 LIVE OAK 4	19119 LIVE OAK 4	19292 LIVE OAK-6	19295 LIVE OAK 4	19298 LIVE OAK 4
18250 LIVE OAK 9	18671 LIVE OAK 6-5-4-4	18824 LIVE OAK 4	18927 LIVE OAK 4	19120 LIVE OAK 4	19293 LIVE OAK-6	19296 LIVE OAK 4	19299 LIVE OAK 4
18251 LIVE OAK 9	18672 LIVE OAK 6-5-4-4	18825 LIVE OAK 4	18928 LIVE OAK 4	19121 LIVE OAK 4	19294 LIVE OAK-6	19297 LIVE OAK 4	19300 LIVE OAK 4
18252 LIVE OAK 9	18673 LIVE OAK 6-5-4-4	18826 LIVE OAK 4	18929 LIVE OAK 4	19122 LIVE OAK 4	19295 LIVE OAK-6	19298 LIVE OAK 4	19301 LIVE OAK 4
18253 LIVE OAK 9	18674 LIVE OAK 6-5-4-4	18827 LIVE OAK 4	18930 LIVE OAK 4	19123 LIVE OAK 4	19296 LIVE OAK-6	19299 LIVE OAK 4	19302 LIVE OAK 4
18254 LIVE OAK 9	18675 LIVE OAK 6-5-4-4	18828 LIVE OAK 4	18931 LIVE OAK 4	19124 LIVE OAK 4	19297 LIVE OAK-6	19300 LIVE OAK 4	19303 LIVE OAK 4
18255 LIVE OAK 9	18676 LIVE OAK 6-5-4-4	18829 LIVE OAK 4	18932 LIVE OAK 4	19125 LIVE OAK 4	19298 LIVE OAK-6	19301 LIVE OAK 4	19304 LIVE OAK 4
18256 LIVE OAK 9	18677 LIVE OAK 6-5-4-4	18830 LIVE OAK 4	18933 LIVE OAK 4	19126 LIVE OAK 4	19299 LIVE OAK-6	19302 LIVE OAK 4	19305 LIVE OAK 4
18257 LIVE OAK 9	18678 LIVE OAK 6-5-4-4	18831 LIVE OAK 4	18934 LIVE OAK 4	19127 LIVE OAK 4	19300 LIVE OAK-6	19303 LIVE OAK 4	19306 LIVE OAK 4
18258 LIVE OAK 9	18679 LIVE OAK 6-5-4-4	18832 LIVE OAK 4	18935 LIVE OAK 4	19128 LIVE OAK 4	19301 LIVE OAK-6	19304 LIVE OAK 4	19307 LIVE OAK 4
18259 LIVE OAK 9	18680 LIVE OAK 6-5-4-4	18833 LIVE OAK 4	18936 LIVE OAK 4	19129 LIVE OAK 4	19302 LIVE OAK-6	19305 LIVE OAK 4	19308 LIVE OAK 4
18260 LIVE OAK 9	18681 LIVE OAK 6-5-4-4	18834 LIVE OAK 4					



THIS SEAL CERTIFIES THAT THE PLAN MEETS
THE REQUIREMENTS OF CITY OF BEE CA
ORDINANCE #201

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell. Text shown in blue indicates location of instructions in the Technical Guidance Manual - RG-348. Characters shown in red are data entry fields. Characters shown in black (bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

Page 3-28 Equation 3.3: $L_d = 27.2(A_{\text{imp}} \times P)$

where:
 L_d TOTAL PROJECT = Required TSS removal resulting from the proposed development = 80% of increased load
 A_{imp} = 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	Travis	Acres
Total project area included in plan	31.36	acres
Predevelopment impervious area within the limits of the plan	0.00	acres
Total post-development impervious area within the limits of the plan	18.82	acres
Total post-development impervious cover fraction	0.60	
P	32	inches

L_d TOTAL PROJECT = 16381 lbs.

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls leaving the plan area = 1

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area	31.36	acres
Predevelopment impervious area within drainage basin/outfall area	0.00	acres
Post-development impervious area within drainage basin/outfall area	18.82	acres
Post-development impervious fraction within drainage basin/outfall area	0.60	
L_d TSS Basin	16381	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Extended Detention
Removal efficiency = 76 percent

Aquatic Cartridge Filter
Stormwater
Control Stormwater
Constructed Wetland
Extended Detention
Grass Swale
Retention / Irrigation
Sand Filter
Stormwater
Vegetated Filter Strips
Vortex
Wet Basin
Wet Vent

4. Calculate Maximum TSS Load Removal (L_d) for this Drainage Basin for the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: $L_d = (BMP \text{ efficiency}) \times P \times (A_{\text{imp}} \times 34.8 + A_{\text{p}} \times 0.54)$

where:

A_{imp} = Total On-Site drainage area in the BMP catchment area
 A_{p} = Impervious area proposed in the BMP catchment area
 A_{p} = Previous area remaining in the BMP catchment area
 L_d = TSS Load removed from this catchment area by the proposed BMP

A_{imp} = 31.36 acres
 A_{p} = 18.82 acres
 A_{p} = 12.84 acres
 L_d = 16791 lbs.

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

Desired L_d TSS Load = 16000 lbs.

F = 0.94

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth = 2.40 inches
Post Development Runoff Coefficient = 0.42
On-site Water Quality Volume = 146880 cubic feet

Calculations from RG-348

Pages 3-36 to 3-37

Off-site area draining to BMP = 0.00 acres
Off-site impervious cover draining to BMP = 0.00 acres
Impervious fraction of off-site area = 0
Off-site Runoff Coefficient = 0.00
Off-site Water Quality Volume = 0 cubic feet

Storage for Sediment = 22872 cubic feet

Total Capture Volume (required water quality volume) $\pm$ 1.20 = 137832 cubic feet

8. Extended Detention Basin System

Designed as Required in RG-348

Pages 3-46 to 3-51

Required Water Quality Volume for extended detention basin = 137832 cubic feet

Skaggs Property - Load Calculation Summary

Total TSS Load Increase

Page 3-28 Equation 3.2: $L_m = 27.2(A_{\text{imp}} \times P)$

includes an 80% factor for TCEQ load removal.

L_m (per TCEQ spreadsheet) = 16,381 lbs

Dividing by 0.8, the total increase in load is:

20,476 lbs

Bee Cave Required Removal

95%

19,462 lbs

Proposed Extended Det Pond Removal

14,900 lbs

Proposed Bio-retention Pond Removal

4,800 lbs

Total Proposed Removal

19,700 lbs

Total Removal Percentage

96.2%

LOT 1, BLOCK "B"
REPLAT OF THE
HOME DEPOT ADDITION
DOC# 200200218
D.R.T.C.T.

EDWARD A. MORGAN
VOL. 12361, PG. 1004
52.75 ACRES
TRACT 1

W.Q. AREA IN BEE CAVE PARKWAY
BASED ON CITY OF BEE CAVE
CONSTRUCTION PLANS.

EDWARD A. MORGAN
VOL. 12361, PG. 1004
52.75 ACRES
TRACT 1

TRACT I
TIM & BRENDA SKAGGS
VOL. 12007, PG. 1764
44.611 ACRES

PARCEL A
37.56 ac.

PARCEL C
6.31 ac.

PARCEL B

WHITE ROCK CEMETERY
(BEE CAVE CEMETERY)
VOL. 573, PG. 441
44.611 ACRES

TRACT III
TIM & BRENDA SKAGGS
VOL. 12007, PG. 1764
20' LORA EASEMENT
D.R.T.C.T.

HELEN HAMPTON
(12899/174)
13.782 ACRES

60' WIDE STORMWATER
RETENTION BASIN
20' BUILDING & PARK SETBACK

FUTURE BEE CAVE PARKWAY
(150' R.O.W.)
SURVEY 56
CO. SURVEY No. 2108

8. Indicate the proposed BMP Code for this basin.

Proposed BMP = Bio-retention
Removal efficiency = 80 percent

RG-348 Page 3-33 Equation 3.7: $L_d = (BMP \text{ efficiency}) \times P \times (A_{\text{imp}} \times 34.8 + A_{\text{p}} \times 0.54)$

where:

A_{imp} = Total On-Site drainage area in the BMP catchment area
 A_{p} = Impervious area proposed in the BMP catchment area
 A_{p} = Previous area remaining in the BMP catchment area
 L_d = TSS Load removed from this catchment area by the proposed BMP

A_{imp} = 31.36 acres
 A_{p} = 18.82 acres
 A_{p} = 12.84 acres
 L_d = 16799 lbs.

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

Desired L_d TSS Load = 4000 lbs.

F = 0.28

8. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth = 0.16 inches
Post Development Runoff Coefficient = 0.42
On-site Water Quality Volume = 7676 cubic feet

Calculations from RG-348

Pages 3-36 to 3-37

Off-site area draining to BMP = 0.00 acres
Off-site impervious cover draining to BMP = 0.00 acres
Impervious fraction of off-site area = 0
Off-site Runoff Coefficient = 0.00
Off-site Water Quality Volume = 0 cubic feet

Storage for Sediment = 1616 cubic feet

Total Capture Volume (required water quality volume) $\pm$ 1.20 = 9093 cubic feet

10. Bio-retention System

Designed as Required in RG-348

Pages 3-63 to 3-65

Required Water Quality Volume for Bio-retention Basin = 9093 cubic feet

LEGEND

- WATER QUALITY BOUNDARY
- WATER QUALITY AREA AND ACREAGE
- WATER QUALITY BUFFER ZONE
- 100yr. FLOODPLAIN
- PROPERTY LINE
- PROPOSED R.O.W.
- LOT LINE
- TIME OF CONCENTRATION PATH

REESE CO
PROPER
DOC# 20
D.R.T.

SKAGGS PROPERTY
SITE IMPROVEMENTS

WATER QUALITY PLAN

NO.	DATE	BY	REVISIONS	DESCRIPTION
1	12/19/11	DWR	JNC	WATER QUALITY PLAN

DATE: 12/19/11
DESIGNED BY: DWR
DRAWN BY: JNC
CHECKED BY: DWR
DRAWING NAME: WATER QUALITY PLAN

DANIEL RYAN
69458
LICENSED PROFESSIONAL ENGINEER

LJA Engineering, Inc.
5316 Highway 280 West
Suite 150
Austin, Texas 78735
Phone 512.438.4700
Fax 512.438.4716
FRN - F-1386

JOB NUMBER: A217-401
SHEET NO. 11
OF 16 SHEETS

WATER QUALITY PLAN NOTES:

- PROJECT INCLUDES W.Q. VOLUME FOR BEE CAVE PARKWAY (3.44 AC. I.C.)
- W.Q. POND IS SIZED FOR AVERAGE 60% I.C. ON AREA SERVED BY POND. ACTUAL I.C. SHALL BE VERIFIED WITH FUTURE SITE PLANS TO INSURE ADEQUACY OF POND SIZING.
- TCEQ CALCULATIONS INCLUDE BMPs IN SERIES TO REFLECT BIO RETENTION FOLLOWING EXTENDED DETENTION BASIN
- CLEANOUTS SHALL BE STUBBED AT GRADE.

WATER QUALITY POND NOTES:

- TOPSOIL MUST BE PLACED ON THE BASIN FLOOR AFTER EXCAVATED BOTTOM IS SCARIFIED TO A DEPTH OF 2 TO 3 INCHES. THE TOPSOIL MUST BE 6 TO 8 INCHES DEEP AND A SOIL MIXTURE OF 30-40% SAND OR GRANITE SAND, 60-70% TOPSOIL, AND SUGGEST 5-10% COMPOST OR PEAT. SOIL BLEND MUST HAVE CLAY CONTENT LESS THAN 20 PERCENT AND BE FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS LARGER THAN 1 INCH.
- NON WOVEN FILTER FABRIC WITH A MINIMUM OPENING OF 0.15 MM (U.S. SIEVE SIZE 100) SHALL BE WRAPPED AROUND THE RISER. THE RISER SHALL BE DOUBLE WRAPPED WITH FILTER FABRIC UNTIL THE CONTRIBUTING DRAINAGE AREA IS VEGETATED AND STABILIZED.
- NON WOVEN FILTER FABRIC WITH A 0.15 MM (U.S. SIEVE SIZE 100) OPENING SHALL BE PLACED ON THE GABION.
- DISCHARGE COEFFICIENTS FOR OUTLETS TO CONTROL DISCHARGE TIME ARE 0.6.

Water Quality Pond

Extended Detention			
Drainage Area to Control	31.36 Acres		
Drainage Area Impervious Cover	60.00%		
Water Quality Volume (C/P Area)	137,832 cf	Provided	142,501 cf @ 935.75
Sedimentation Pond Area			7,182 sf @ 930.00
Sedimentation Pond Volume (WQV*25%)	34,458 cf		57,495 cf @ 935.75
Main Pond Area			8,627 sf @ 930.00
Main Pond Volume			85,006 cf @ 935.75

Req'd Water Quality Elevation	935.75 ft
Elevation of Splitter Wall	935.75 ft
100-Year Design Peak Flow Rate	Q100 = 263.00 cfs
Length of Wall	Lwall = 68.0 ft
	d100 = 1.15 ft
	H100 = 936.80 ft
Top of Berm Elevation	938.00 ft
Freeboard Provided (100 yr) >0.25ft	1.10 ft

Pond Drawdown Time	maximum 48 hr	44 hr
Underdrain Office Size (diameter)	3.750 in	
Underdrain Office Size (area)	11.045 sq in	

Sediment Forebay Stage / Storage

STAGE	AREA (sf)	AREA (Ac)	INC. VOL.	STORAGE (cf)
927.00	0	0.000	0	0
928.00	0	0.000	0	0
929.00	0	0.000	0	0
930.00	7,182	0.165	3,596	3,596
931.00	7,914	0.182	7,353	11,149
932.00	8,654	0.199	8,294	19,433
933.00	9,427	0.216	9,041	28,474
934.00	10,231	0.235	9,829	38,303
935.00	11,067	0.254	10,649	48,952
936.00	11,716	0.269	11,544	59,495
937.00	12,331	0.285	12,382	70,451
938.00	12,914	0.301	13,286	81,118

Main Pond Stage / Storage

STAGE	AREA (sf)	AREA (Ac)	INC. VOL.	STORAGE (cf)
927.00	10	0.000	0	0
928.00	101	0.002	56	56
929.00	8,576	0.197	4,339	4,394
930.00	16,819	0.386	12,698	17,002
931.00	18,478	0.424	17,848	34,739
932.00	20,160	0.463	19,338	54,087
933.00	21,945	0.504	21,063	75,130
934.00	23,767	0.546	22,856	97,986
935.00	25,648	0.589	24,708	122,063
936.00	27,586	0.633	26,595	148,347
937.00	29,594	0.679	28,595	177,533
938.00	31,620	0.726	30,602	208,535

Combined Pond/Storage

STAGE	AREA (sf)	AREA (Ac)	INC. VOL.	STORAGE (cf)
927.00	10	0.000	0	0
928.00	101	0.002	56	56
929.00	8,576	0.197	4,339	4,394
930.00	16,819	0.386	12,698	17,002
931.00	18,478	0.424	17,848	34,739
932.00	20,160	0.463	19,338	54,087
933.00	21,945	0.504	21,063	75,130
934.00	23,767	0.546	22,856	97,986
935.00	25,648	0.589	24,708	122,063
936.00	27,586	0.633	26,595	148,347
937.00	29,594	0.679	28,595	177,533
938.00	31,620	0.726	30,602	208,535

STAGE	AREA (sf)	AREA (Ac)	INC. VOL.	STORAGE (cf)
927.00	2,294	0.052	0	0
928.00	3,534	0.081	2,909	2,909
929.00	4,800	0.106	4,067	6,976
930.00	5,825	0.134	5,214	12,190

LCRA HIGHLAND LAKES WATERSHED ORDINANCE

WATER QUALITY MANAGEMENT DESIGN TOOL - Water Quality BMP Design

Use on an individual drainage area basis.
All references to tables and figures can be found in the Highland Lakes Ordinance Water Quality Technical Manual
Cells shaded in light green are data input cells

Project	Reserve Equestrian Center
Drainage Area	ID No. Acres
	1 31.36
Impervious Cover Type	
Street/Parking	ac 0.00
Residential Lots	ac 0.00
Buildings	ac 5.64
Parking Lots	ac 13.17
Total IC ac	18.82
Impervious Cover %	60.0

STEP 3: WATER QUALITY BMP DESIGN

1-year, 3-hour rainfall =	in 1.93
Compute Runoff Volume for the 1-year storm =	in 1.08
Compute Water Quality Volume (WQV) =	cf 123,035

Primary BMP (needs secondary BMP in series)	Volume	cf
Extended Detention Basin		129,187

Extended Detention Basin			
upgradient of primary BMP	NVS	sf	261,776
	VFS	sf	129,510
	VIS	sf	89,806
Down-gradient of Primary BMP	NVS	sf	136,705
	VFS	sf	66,353
	VIS	sf	58,588
	Bioswale	sf	5,414
	Infiltration Basin	cf	15,995
	IT vol reduction	%	0
	Infiltration Trench Vol	cf	10,458

LCRA HIGHLAND LAKES WATERSHED ORDINANCE

WATER QUALITY MANAGEMENT DESIGN TOOL - Impervious Cover and Peak Flow Rates

Input fields are shaded light green

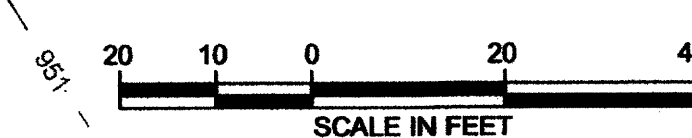
Impervious cover for subdivisions: measure roads, count lots - IC assumptions for single-family (SF) lots are per table 2-4
Impervious cover for commercial sites: measure roads, parking lots, and buildings.

Project	Skaggs
Drainage Area	ID Subarea No. Acres
	1 31.36

STEP 1: DETERMINE IMPERVIOUS COVER AREA (roads, parking lots, sidewalks, rooftops)

Parking Lot IC	IC 3	ac 13.17
Comm Bldg IC	IC 3	ac 5.64

Total Impervious Area	Subarea No. 1	ac 18.82
-----------------------	---------------	----------



NOTE: ALL STORM SEWER PIPE WITH FL BELOW 936.0 MUST BE WATERTIGHT.

SEDIMENT FOREBAY
VOLUME = 57,495 CF

EXTENDED DETENTION BASIN
VOLUME = 85,006 CF
WATER QUALITY VOLUME PROVIDED = 142,501 CF

INTAKE RISER
SEE DETAIL SHEET 13
FL = 927.50

TEMPORARY FLOATING INTAKE

TEMPORARY PUMP TO SEDIMENT BAGS FOR DEWATERING POND DURING CONSTRUCTION

SEDIMENT BAGS SEE DETAIL

TEMPORARY ACCESS TO POND ACCESS DRIVE 12' WIDE WITH 3' x 5' ROCK RIPRAP SEE DETAIL PAGE 2

TEMPORARY ACCESS TO POND ACCESS DRIVE 12' WIDE WITH 3' x 5' ROCK RIPRAP SEE DETAIL PAGE 2

172 LF 6" SCH. 40 PVC @ 5% SLOPE TYP.

6" SCH. 40 PERFORATED PVC @ 1% SLOPE TYP. 1/2" PERFORATIONS 12" O.C. @ 4 AND 8 O'CLOCK

6" SCH. 40 PERFORATED PVC @ 1% SLOPE TYP. 1/2" PERFORATIONS 12" O.C. @ 4 AND 8 O'CLOCK

6" SCH. 40 PERFORATED PVC @ 1% SLOPE TYP. 1/2" PERFORATIONS 12" O.C. @ 4 AND 8 O'CLOCK

6" SCH. 40 PERFORATED PVC @ 1% SLOPE TYP. 1/2" PERFORATIONS 12" O.C. @ 4 AND 8 O'CLOCK

6" SCH. 40 PERFORATED PVC @ 1% SLOPE TYP. 1/2" PERFORATIONS 12" O.C. @ 4 AND 8 O'CLOCK

6" SCH. 40 PERFORATED PVC @ 1% SLOPE TYP. 1/2" PERFORATIONS 12" O.C. @ 4 AND 8 O'CLOCK

6" SCH. 40 PERFORATED PVC @ 1% SLOPE TYP. 1/2" PERFORATIONS 12" O.C. @ 4 AND 8 O'CLOCK

SPLITTER BOX
SEE DETAIL SHEET 13
12"-18" ROCK RIPRAP
SEE DETAIL PAGE 2

PLUG 54" RCP
FL = 923.88

20 LF STUB
54" RCP
FL = 930.00

44.08 L.F. OF 18" RCP @ 0.5 %

18" STD. HEADWALL
SEE DETAIL SHEET 13
FL = 929.75

INSTALL CONCRETE S.E.T. OUTFLOW FL = 922.20
INSTALL REMOVABLE CAP
DRILL 1" ORIFICE
SEE DETAIL SHT. 2

INSTALL CONCRETE S.E.T. OUTFLOW FL = 925.60

6" SCH. 40 PERFORATED PVC @ 1% SLOPE TYP. 1/2" PERFORATIONS 12" O.C. @ 4 AND 8 O'CLOCK

6" SCH. 40 PVC @ 1% SLOPE

INSTALL 6" GATE VALVE

INSTALL CONCRETE SPLITTER BOX
OUTFLOW FL = 927
INSTALL REMOVABLE CAP
DRILL 3/4" ORIFICE
SEE DETAIL SHT. 13

FL = 922.76
C.O. FL = 922.85
C.O. FL = 923.01
C.O. FL = 923.17
C.O. FL = 923.33
C.O. FL = 923.49
C.O. FL = 923.65
C.O. FL = 923.81
C.O. FL = 923.97
C.O. FL = 924.13
C.O. FL = 924.29
C.O. FL = 924.45
C.O. FL = 924.61
C.O. FL = 924.77
C.O. FL = 924.93
C.O. FL = 925.09
C.O. FL = 925.25
C.O. FL = 925.41
C.O. FL = 925.57
C.O. FL = 925.73
C.O. FL = 925.89
C.O. FL = 926.05
C.O. FL = 926.21
C.O. FL = 926.37
C.O. FL = 926.53
C.O. FL = 926.69
C.O. FL = 926.85
C.O. FL = 927.01
C.O. FL = 927.17
C.O. FL = 927.33
C.O. FL = 927.49
C.O. FL = 927.65
C.O. FL = 927.81
C.O. FL = 927.97
C.O. FL = 928.13
C.O. FL = 928.29
C.O. FL = 928.45
C.O. FL = 928.61
C.O. FL = 928.77
C.O. FL = 928.93
C.O. FL = 929.09
C.O. FL = 929.25
C.O. FL = 929.41
C.O. FL = 929.57
C.O. FL = 929.73
C.O. FL = 929.89
C.O. FL = 930.05
C.O. FL = 930.21
C.O. FL = 930.37
C.O. FL = 930.53
C.O. FL = 930.69
C.O. FL = 930.85
C.O. FL = 931.01
C.O. FL = 931.17
C.O. FL = 931.33
C.O. FL = 931.49
C.O. FL = 931.65
C.O. FL = 931.81
C.O. FL = 931.97
C.O. FL = 932.13
C.O. FL = 932.29
C.O. FL = 932.45
C.O. FL = 932.61
C.O. FL = 932.77
C.O. FL = 932.93
C.O. FL = 933.09
C.O. FL = 933.25
C.O. FL = 933.41
C.O. FL = 933.57
C.O. FL = 933.73
C.O. FL = 933.89
C.O. FL = 934.05
C.O. FL = 934.21
C.O. FL = 934.37
C.O. FL = 934.53
C.O. FL = 934.69
C.O. FL = 934.85
C.O. FL = 935.01
C.O. FL = 935.17
C.O. FL = 935.33
C.O. FL = 935.49
C.O. FL = 935.65
C.O. FL = 935.81
C.O. FL = 935.97
C.O. FL = 936.13
C.O. FL = 936.29
C.O. FL = 936.45
C.O. FL = 936.61
C.O. FL = 936.77
C.O. FL = 936.93
C.O. FL = 937.09
C.O. FL = 937.25
C.O. FL = 937.41
C.O. FL = 937.57
C.O. FL = 937.73
C.O. FL = 937.89
C.O. FL = 938.05
C.O. FL = 938.21
C.O. FL = 938.37
C.O. FL = 938.53
C.O. FL = 938.69
C.O. FL = 938.85
C.O. FL = 939.01
C.O. FL = 939.17
C.O. FL = 939.33
C.O. FL = 939.49
C.O. FL = 939.65
C.O. FL = 939.81
C.O. FL = 939.97
C.O. FL = 940.13
C.O. FL = 940.29
C.O. FL = 940.45
C.O. FL = 940.61
C.O. FL = 940.77
C.O. FL = 940.93
C.O. FL = 941.09
C.O. FL = 941.25
C.O. FL = 941.41
C.O. FL = 941.57
C.O. FL = 941.73
C.O. FL = 941.89
C.O. FL = 942.05
C.O. FL = 942.21
C.O. FL = 942.37
C.O. FL = 942.53
C.O. FL = 942.69
C.O. FL = 942.85
C.O. FL = 943.01
C.O. FL = 943.17
C.O. FL = 943.33
C.O. FL = 943.49
C.O. FL = 943.65
C.O. FL = 943.81
C.O. FL = 943.97
C.O. FL = 944.13
C.O. FL = 944.29
C.O. FL = 944.45
C.O. FL = 944.61
C.O. FL = 944.77
C.O. FL = 944.93
C.O. FL = 945.09
C.O. FL = 945.25
C.O. FL = 945.41
C.O. FL = 945.57
C.O. FL = 945.73
C.O. FL = 945.89
C.O. FL = 946.05
C.O. FL = 946.21
C.O. FL = 946.37
C.O. FL = 946.53
C.O. FL = 946.69
C.O. FL = 946.85
C.O. FL = 947.01
C.O. FL = 947.17
C.O. FL = 947.33
C.O. FL = 947.49
C.O. FL = 947.65
C.O. FL = 947.81
C.O. FL = 947.97
C.O. FL = 948.13
C.O. FL = 948.29
C.O. FL = 948.45
C.O. FL = 948.61
C.O. FL = 948.77
C.O. FL = 948.93
C.O. FL = 949.09
C.O. FL = 949.25
C.O. FL = 949.41
C.O. FL = 949.57
C.O. FL = 949.73
C.O. FL = 949.89
C.O. FL = 950.05
C.O. FL = 950.21
C.O. FL = 950.37
C.O. FL = 950.53
C.O. FL = 950.69
C.O. FL = 950.85
C.O. FL = 951.01
C.O. FL = 951.17
C.O. FL = 951.33
C.O. FL = 951.49
C.O. FL = 951.65
C.O. FL = 951.81
C.O. FL = 951.97
C.O. FL = 952.13
C.O. FL = 952.29
C.O. FL = 952.45
C.O. FL = 952.61
C.O. FL = 952.77
C.O. FL = 952.93
C.O. FL = 953.09
C.O. FL = 953.25
C.O. FL = 953.41
C.O. FL = 953.57
C.O. FL = 953.73
C.O. FL = 953.89
C.O. FL = 954.05
C.O. FL = 954.21
C.O. FL = 954.37
C.O. FL = 954.53
C.O. FL = 954.69
C.O. FL = 954.85
C.O. FL = 955.01
C.O. FL = 955.17
C.O. FL = 955.33
C.O. FL = 955.49
C.O. FL = 955.65
C.O. FL = 955.81
C.O. FL = 955.97
C.O. FL = 956.13
C.O. FL = 956.29
C.O. FL = 956.45
C.O. FL = 956.61
C.O. FL = 956.77
C.O. FL = 956.93
C.O. FL = 957.09
C.O. FL = 957.25
C.O. FL = 957.41
C.O. FL = 957.57
C.O. FL = 957.73
C.O. FL = 957.89
C.O. FL = 958.05
C.O. FL = 958.21
C.O. FL = 958.37
C.O. FL = 958.53
C.O. FL = 958.69
C.O. FL = 958.85
C.O. FL = 959.01
C.O. FL = 959.17
C.O. FL = 959.33
C.O. FL = 959.49
C.O. FL = 959.65
C.O. FL = 959.81
C.O. FL = 959.97
C.O. FL = 960.13
C.O. FL = 960.29
C.O. FL = 960.45
C.O. FL = 960.61
C.O. FL = 960.77
C.O. FL = 960.93
C.O. FL = 961.09
C.O. FL = 961.25
C.O. FL = 961.41
C.O. FL = 961.57
C.O. FL = 961.73
C.O. FL = 961.89
C.O. FL = 962.05
C.O. FL = 962.21
C.O. FL = 962.37
C.O. FL = 962.53
C.O. FL = 962.69
C.O. FL = 962.85
C.O. FL = 963.01
C.O. FL = 963.17
C.O. FL = 963.33
C.O. FL = 963.49
C.O. FL = 963.65
C.O. FL = 963.81
C.O. FL = 963.97
C.O. FL = 964.13
C.O. FL = 964.29
C.O. FL = 964.45
C.O. FL = 964.61
C.O. FL = 964.77
C.O. FL = 964.93
C.O. FL = 965.09
C.O. FL = 965.25
C.O. FL = 965.41
C.O. FL = 965.57
C.O. FL = 965.73
C.O. FL = 965.89
C.O. FL = 966.05
C.O. FL = 966.21
C.O. FL = 966.37
C.O. FL = 966.53
C.O. FL = 966.69
C.O. FL = 966.85
C.O. FL = 967.01
C.O. FL = 967.17
C.O. FL = 967.33
C.O. FL = 967.49
C.O. FL = 967.65
C.O. FL = 967.81
C.O. FL = 967.97
C.O. FL = 968.13
C.O. FL = 968.29
C.O. FL = 968.45
C.O. FL = 968.61
C.O. FL = 968.77
C.O. FL = 968.93
C.O. FL = 969.09
C.O. FL = 969.25
C.O. FL = 969.41
C.O. FL = 969.57
C.O. FL = 969.73
C.O. FL = 969.89
C.O. FL = 970.05
C.O. FL = 970.21
C.O. FL = 970.37
C.O. FL = 970.53
C.O. FL = 970.69
C.O. FL = 970.85
C.O. FL = 971.01
C.O. FL = 971.17
C.O. FL = 971.33
C.O. FL = 971.49
C.O. FL = 971.65
C.O. FL = 971.81
C.O. FL = 971.97
C.O. FL = 972.13
C.O. FL = 972.29
C.O. FL = 972.45
C.O. FL = 972.61
C.O. FL = 972.77
C.O. FL = 972.93
C.O. FL = 973.09
C.O. FL = 973.25
C.O. FL = 973.41
C.O. FL = 973.57
C.O. FL = 973.73
C.O. FL = 973.89
C.O. FL = 974.05
C.O. FL = 974.21
C.O. FL = 974.37
C.O. FL = 974.53
C.O. FL = 974.69
C.O. FL = 974.85
C.O. FL = 975.01
C.O. FL = 975.17
C.O. FL = 975.33
C.O. FL = 975.49
C.O. FL = 975.65
C.O. FL = 975.81
C.O. FL = 975.97
C.O. FL = 976.13
C.O. FL = 976.29
C.O. FL = 976.45
C.O. FL = 976.61
C.O. FL = 976.77
C.O. FL = 976.93
C.O. FL = 977.09
C.O. FL = 977.25
C.O. FL = 977.41
C.O. FL = 977.57
C.O. FL = 977.73
C.O. FL = 977.89
C.O. FL = 978.05
C.O. FL = 978.21